1. Knowledge and Practices of Life Style Modifications among Obese Women of Reproductive Age Group  
   Sandeep Kaur, Anurag Bhai Patidar, Anurag Chaudhary, Harjot Kaur  
   Page 1

2. A Study on Awareness of Primary School Teachers Regarding Refractive Errors and its Early Identification among Primary School Children  
   Ambika K, Nisha P Nair  
   Page 6

3. Efficacy of Medicated Sitz Bath and Betadine Application in Axilla on the Growth of Bacteria in Leukemic Children  
   Anupama Kashyap, Sukhwinder Kaur, R K Marwaha, Malkit Singh  
   Page 10

4. Effect of Planned Nursing Interventions on Compliance among Persons Undergoing Maintenance Hemodialysis  
   Asha P Nair, J Silvia Edison  
   Page 15

5. A Comparative Study on Knowledge and Attitude Towards Nursing Profession among PCL and B.Sc. Nursing Students in A Selected Nursing Institute, Pokhara, Nepal  
   Ashalata W Devi  
   Page 20

6. Development and Validation of a Thermal Discomfort Scale in Febrile Children During Sponging  
   Athirarani M R, Rajamohanan K, Prasanna Kumari Y, Shyla P R, Muraleedharan Nair  
   Page 26

7. Care of Schizophrenic Patient is a Burden among Primary Caregivers: Review Article  
   N Balasubramaniam  
   Page 30

8. A Study to Assess the Psychosocial Problems among Families Residing at Arakkampakkam Village in Thiruvallur District, Tamil Nadu  
   M Baskaran  
   Page 35

9. Conceptual Framework for Quality Care among Clients with Sickle Cell Disease through Nurse-Led Information Desk  
   Chandrani Isac, Ramesh Venkatesaperumal, Melva Sheila D’Souza  
   Page 39

10. A Study to Assess the effectiveness of Planned Teaching Programme on Knowledge Regarding Osteoporosis among Hospital Aides in a Selected Hospital at Mangalore  
    Charlet Jasmine Vaz, Victoria D’Almeida  
    Page 44

11. Efficacy of Reflective Learning Package on Reflective Writing, and Critical Thinking Ability of Undergraduate Students on Head Injury in Selected Nursing Colleges of Udupi District  
    Daisy Josephte Lobo, Judith A Noronha, Ratna Prakash  
    Page 48

12. Learning Style Adopted by Post Graduate Nursing Students of Selected Nursing Colleges of Dakshina Kannada and the Strategies to Improve the Learning Styles of Learners  
    Daisy Josephte Lobo  
    Page 54

13. Job Stress among the Nursing Staff Working in Rural Health Care Set Up  
    Ashok Jondhale, Deepak Anap  
    Page 57
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Author(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Development of Nursing Assessment Tool: An Application of Roy’s Adaptation Theory</td>
<td>Harmeet Kaur, Rajinder Mahal</td>
<td>60</td>
</tr>
<tr>
<td>15</td>
<td>Blood Pressure, Stress and Body Mass Index (BMI) among Youngsters in South India</td>
<td>Helen Sheen</td>
<td>65</td>
</tr>
<tr>
<td>16</td>
<td>Perception to the Subjects Learnt in the Undergraduate Nursing</td>
<td>Hema Suresh</td>
<td>71</td>
</tr>
<tr>
<td>17</td>
<td>Effectiveness of Expectant Father’s Presence during First Stage of Labour</td>
<td>Janula R, Esther John</td>
<td>77</td>
</tr>
<tr>
<td>18</td>
<td>Effectiveness of Infrared Lamp on Reducing Pain and Inflammation due to Episiotomy Wound</td>
<td>Juby Mary Clacko, Sangeeta N Kharde, M K Swamy</td>
<td>82</td>
</tr>
<tr>
<td>19</td>
<td>Inter Professional Education in Health Care</td>
<td>Lina Shakman, Renu G, Arwa Obeidat</td>
<td>86</td>
</tr>
<tr>
<td>20</td>
<td>Acceptability of a Problem-Based Learning Approach in a Baccalaureate Nursing Programme- A Pilot Study</td>
<td>Juliana Limette D’Sa, Aparna Bhaduri</td>
<td>92</td>
</tr>
<tr>
<td>21</td>
<td>Health Care Reforms and Nurses as Essential and Integral Part</td>
<td>Larissa Martha Sams</td>
<td>97</td>
</tr>
<tr>
<td>22</td>
<td>A Study to Evaluate the effectiveness of Planned Teaching Programme on Growth Monitoring of Children Using Innovative Paediatric Growth Chart among the Third Year General Nursing and Midwifery Students in a Selected Institute at Mangalore</td>
<td>Leena Joseph</td>
<td>103</td>
</tr>
<tr>
<td>23</td>
<td>A Study to Assess the Level of Foot Care Practice among Patients with Diabetes Mellitus</td>
<td>M J Kumari, Jayagowri Subash</td>
<td>107</td>
</tr>
<tr>
<td>24</td>
<td>Effectiveness of IEC Programme on the Nursing Students with Regard to Management of Children with ARI (Pneumonia) and Diarrhea Based on IMNCI Guidelines</td>
<td>Mahesh Gupta, Urmila Bhardwaj, B Shaiju</td>
<td>110</td>
</tr>
<tr>
<td>25</td>
<td>Health Problems Faced by the Women during Pregnancy in Sunsari District of Nepal</td>
<td>Singh Sakun, Karni Basani, Shalsh Tara, Lamsal Shyam</td>
<td>116</td>
</tr>
<tr>
<td>26</td>
<td>Role of a Nurse in Non-invasive Positive Pressure Ventilation: A Conceptual Model for Clinical Practice</td>
<td>Ramesh Venkatesaperumal, Melha Sheila D’Souza, Shreedevi Balachandran, Jayanthi Radhakrishnan</td>
<td>119</td>
</tr>
<tr>
<td>27</td>
<td>Psychiatric Follow Up Services in Rural Community: An Exploratory Approach</td>
<td>Nageshwar V</td>
<td>124</td>
</tr>
<tr>
<td>28</td>
<td>A Study on Assessment of Obsessive Compulsive Symptoms among Schizophrenic Patients</td>
<td>Jessa G, Nalini M</td>
<td>129</td>
</tr>
<tr>
<td>29</td>
<td>A Qualitative Study on Expressed Views of Parents Regarding the Use of Mobile Phones and its Impact on Mental Health among their Children in Selected Urban Areas in Mangalore Taluk</td>
<td>Ebin Mathew Varughese, Nalini M</td>
<td>135</td>
</tr>
<tr>
<td>30</td>
<td>The Perceived Communication Barriers and Attitude on Communication among Staff Nurses in Caring for Patients from Culturally and Linguistically Diverse Background</td>
<td>Nareen Savio, Anice George</td>
<td>141</td>
</tr>
<tr>
<td>31</td>
<td>Ultraviolet Light Therapy and Psoriasis - Nursing Perspectives</td>
<td>Pavnavathi Nagarajan, Karaline Karunagari, DM Thappa, Deepthi Konda</td>
<td>147</td>
</tr>
</tbody>
</table>
32. Application of Nursing Informatics: Need to Transform into Reality ................................................................. 152
   Pramila R

33. Effectiveness of Individual Education Intervention (IEI) Regarding Therapeutic ......................................................... 157
   Regimen on Attitude and Compliance among Patients with end Stage Renal Disease
   Preethi Fernandes, Victoria D’Almeida

34. A Study to Assess the Awareness of Mothers on Danger Signs of Newborn Illnesses with a ........................................ 161
   View to Prepare an Information Booklet in Selected Hospitals at Mangalore
   Priya Janifer Fernandes, Rev Sr Winnifred D’Souza

35. Conceptualization of a Research Study: An Exemplar ........................................................................................................... 163
   Saleema Allana, Khurshid Khowaja, Tazeen Saeed Ali, Aamir Hameed Khan, Debra Moser

36. A Study to Determine the effectiveness of Planned Teaching Program on Adolescence ................................................. 167
   Girl’s Knowledge, Attitude and Practices Towards Menstrual Hygiene in
   Selected Schools of Hemja, Kaski, Nepal
   Shrestha Sandhya, Jaita Mondol, Rajina Thapa, Ashmita Shrestha

37. Client Satisfaction with Family Welfare Services among Women in Selected Primary .................................................... 175
   Health Centre: Descriptive Explorative Approach
   Sandya Kumari

38. Effectiveness of Structured Teaching Programme on Prevention and Management of ................................................... 181
   Pressure Ulcer for Caregivers of Hospitalized Immobilized Patients
   Das S, Supriya S

39. Strategies in the Promotion of Nursing as a Career among Second Level Students: An Irish Perspective .................. 184
   Sean Kelleher, Caroline Dalton O’Connor

40. Quality Assurance in Nursing: Standards ................................................................................................................................. 189
   V R Selva ambigai, Sumathi Kumaraswamy

41. Vertical Bullying in Nursing Education: Coping Behaviors of Turkish Students .............................................................. 193
   Serap Palaz

42. Study to Assess the Level of Satisfaction of the Patients Regarding New Milieu ................................................................. 198
   Therapy Provided by the Health Team in a Selected Psychiatric Hospital at Mangalore
   Shine Thomas, Chanu Bhattacharya

43. A Study to Assess the Side effects and Coping Strategies Adopted by Cancer Patients .................................................. 204
   Receiving Chemotherapy Treatment
   T Sivasadan

44. Determinants of Burnout among Nursing Personnel in Public and Private Tertiary ....................................................... 208
   Level Health Care Hospital Setting in Odisha
   Sonali Kar, Suman Roy, BC Das

45. An Exploratory Study on Knowledge and Attitude of Fathers Towards Breastfeeding in ................................................. 213
   Selected Hospitals at Mangalore
   Subin Mariya Jacob, Sujatha R

46. Comparison of Second and Third Year B.Sc. Nursing Students’ Clinical Competency for ........................................... 218
   Subcutaneous Insulin Administration and its Determining Factors
   Sushma Prabhu, Ratn Prakash, Daisy Lobo

47. Evaluation of Communication Skills Training Program for Nursing Students to ................................................. ........... 222
   Develop Supportive Ward Atmosphere During Care of Patients with Cancer
   Syed Imran
48. The effectiveness of Video Teaching over Lecture Cum Demonstration in Improving Knowledge and Skill of Nursing Students on Antenatal Examination

Scaria TM, Valsaraj PB, Pias M

49. Effectiveness of Educational Intervention of Women’s Participation in Cervical Cancer Screening by Acetic Acid Application on the Cervix Versus Pap Smear for Screening Precancerous Cervical Lesions

V Indra

50. Effectiveness of Guided Imagery on Intensity of Pain and Quality of Life among Patients with Cancer in a Selected Hospital at Mangalore

G Vasantha, Victoria D Almeida, R Kanagaraj

51. The efficacy of two Active Methods of Teaching on Students’ Competency

Mosalanejad L, Ghodsi Z, Ghobadifar M A

52. Effectiveness of Structured Teaching Programme on Contraceptive Methods in Terms of Knowledge of Women: a Community Based Interventional Study from Rural Haryana

Adiba Siddiqui, Jyoti Sarin, Poonam Sheoran, Abhishek Singh

53. Simulation: a Teaching Strategy in Nursing Education for Safe Practice

Jayanthi Radhakrishnan, Shreedevi Balachandran, Ramesh Venkatesaperumal, Melba Sheila D’Souza
Knowledge and Practices of Life Style Modifications among Obese Women of Reproductive Age Group

Sandeep Kaur1, Anurag Bhai Patidar1, Anurag Chaudhary2, Harjot Kaur3
1Lecturer, 2Professor and Head Department of Community Medicine, 3M. Sc Nursing Scholar College of Nursing, Dayanand Medical College and Hospital, Ludhiana

ABSTRACT

Objective: Obesity is increasing worldwide at an alarming rate in both developed and developing countries among women. The present study was aimed to assess knowledge and practices of life style modifications among obese women of reproductive age group in selected urban and rural area of district Ludhiana, Punjab.

Material and method: This comparative research study included 200 obese women of reproductive age group (15-45years) from urban and rural area by convenience sampling technique. Data was collected using structured questionnaires.

Results: Nearly half of the sample (46.5%) was in the age group of 26-35years and more than half of them (51.5%) had B.M.I above 25. One fourth of the obese women (26%) were educated up to secondary from urban and rural area. The prevalence of obesity was 51% and 30% in urban and rural area respectively. Almost similar percentage of women in both groups (69% and 70% in urban and rural area respectively) had sedentary life style.

Conclusion: Sufficient knowledge of life style modifications was present among obese women but they were not practicing that knowledge appropriately therefore, further studies are recommended to probe the situation which hinder them to practice healthy life style to prevent obesity.

Keywords: Knowledge and Practices, Life Style Modifications, Obese Women, Urban And Rural.

INTRODUCTION

Obesity is increasing worldwide at an alarming rate in both developed and developing countries and has become a serious problem in India despite the wide spread presence of under nutrition. While examining the body mass index (B.M.I) distribution of various adult populations worldwide, a WHO expert group has observed that, as a proportion of population with low BMI decreases, there is an almost symmetrical increase of the proportion with BMI above 23. Although a topic of some medical concern for centuries, obesity has gradually progressed from being an amusing curiosity to a major public health issue as well as a theme for sophisticated physiological and behavioural research. Even in countries like India, which are typically known for high prevalence of under nutrition, significant proportions of overweight now co-exist with the undernourished.

There are many factors that lead to obesity in women which includes excessive dietary calories, lack of physical activity, and genetic susceptibility. Previous research has showed that obesity is associated with increased food consumption (Litchman et al, 1992)1

Intake of excess dietary fat has been implicated as a major cause of obesity for decades (Lissner and Heitmann, 1995)2

Because of intake of high calorie diet, decrease in physical activities dependence of women on machine for household work, and other life style changes women are putting on extra weight that is posing a real threat to health in women all over the India. In addition to that participation of women in sports and aerobic physical exercises has also decreased. (K. Park, 2009)3

Multiple cohort and cross-sectional studies have also shown an association between obesity and physical inactivity (Williamson et al, 1993)4 Previous research has reported strong association of obesity and higher body weight with a sedentary life style and lack of physical activities in women (Martinez-Gonzalez et al, 1999)5.
Comparison of two major studies conducted by National family health survey (NFHS-2) in 1999 and NFHS-3 in 2006 showed that prevalence of obesity among Indian women has increased. The prevalence of obesity among women in Punjab is 38 per cent. The obesity level is distinctly higher in urban places than in rural areas. Nearly one in every two women in urban areas and one in every three in rural areas were recorded as obese. The obesity has been on the rise by one percent point every year since 1998-99.

Obesity is a first step, a gateway to the chronic disease. Health problems associated with obesity are infertility, diabetes mellitus, hypertension, dyslipidemia, coronary artery disease and some cancers. (Clark et.al, 1998)7

Obesity enhances the severity of other risk factors but it also been shown to be an independent risk factor for all causes of mortality (Leon, 1997)8. It increases the risk of death from coronary heart disease and diabetes mellitus as well as increases the risk of various diseases, particularly heart disease, type 2 diabetes, breathing difficulties during sleep, certain types of cancer (especially cancer of breast and uterus) reproductive disorders and osteoarthritis (Lashen et.al,2004)9. The modernization and industrialization have an adverse effect on health, leading to reduced life expectancy or increased health problem in women. (Agarwal and Mishra, 2004)10.

A study concluded that the life style modification of women which includes dieting and physical exercises are the mainstays of treatment for obesity. Moreover, it is important to improve diet quality of women by reducing the consumption of energy-dense foods such as those high in fat and sugars, and by increasing the intake of dietary fibre. Thirty minutes of moderate activities in each day improves the health status and decreases the risk of obesity (David, 2002)11.

Lifestyle modification programs typically encourage patients to eat conventional foods of their liking but to reduce their energy intake by 500 to 1000 kcal/day. Patients are also encouraged to exercise 30 minutes a day, five to six times a week. A study concluded that obese people spent significant less time in stepping and more time in a sitting or reclined position during the night (Benedetti, 2009)12.

Previous research revealed that women are more obese because of either deficiency in knowledge or wrong practice. Women have good knowledge about the risk factors, problem associated with obesity but their poor behaviour make them at high risk of becoming obese. In Northern India, females (12.6%) have more prevalence of obesity than males (5.5%). Urban slums too have almost same trend of obesity prevalence that is more in females (7.2%) than males (1.9%). In rural area, women are more involved in house hold activities and they are working hard. They are more involved in physical activity rather than having a sedentary life style thereby reducing the prevalence of obesity among them (Yadav and Krishnan, 2008)13. The present study was undertaken to compare the knowledge and practices of life style modifications among obese women of reproductive age group in selected urban and rural area of district Ludhiana, Punjab.

MATERIAL AND METHOD

Non-experimental comparative research design was used for the study. Research setting was urban and rural community health centre which are an integral part of the Department of community medicine and college of nursing, Dayanand Medical College & Hospital, Ludhiana.

A. Sample

Convenience sampling technique was used to recruit study sample. All the women who were obese as per W.H.O classification and between age of 15-45 years were included in the study except pregnant women, women suffering from chronic debilitating diseases, ethnic non-Punjabi population and subjects not willing to participate in the exclusion criteria. Total sample size was 200.

B. Tools and techniques

The research tools included:

Socio-bio-demographic profile sheet:- it included variables of age, education, marital status, habitat, religion, dietary habits, type of family, number of children, socio-economic status( according to Kuppuswamy’s socioeconomic status scale), physical activity and body mass index.

Life style modifications questionnaire: it consists of 16 items of knowledge to assess various aspects of life style modifications in relation to obesity such as physical activities and diet.

Life style modifications practice questionnaire: it consists of 17 items related to practices of obese women regarding life style modifications.

Tools validation was done by ten experts in the field of community medicine and nursing. The reliability of the tool was determined by test- retest method and reliability coefficient was found more than 0.9 for all questionnaires.
RESULTS

Nearly half of the women (46.5%) were in the age group of 26-35 years. More than half of the women (51.5%) were having BMI between 25-29.9 kg/m² in urban and rural area. Nearly one fourth of the obese women (26%) were educated up to secondary in both the groups. Most of the women (89%) were married; more than half of them (63.5%) were Sikh. Half of the urban obese women (51%) and (30%) rural obese women belonged to upper middle class and near to three-fourth of the obese women (69%) and (70%) belonged to sedentary work from urban and rural area respectively.

<table>
<thead>
<tr>
<th>Socio-demographic profile</th>
<th>Urban (n=100) (%)</th>
<th>Rural (n=100) (%)</th>
<th>Total (N=200) (%)</th>
<th>χ² statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.M.I (in kg/m²)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23-24.9</td>
<td>12</td>
<td>14</td>
<td>026(13.0)</td>
<td>χ² =1.087</td>
</tr>
<tr>
<td>25-29.9</td>
<td>49</td>
<td>54</td>
<td>103(51.5)</td>
<td>df =2</td>
</tr>
<tr>
<td>≥30</td>
<td>39</td>
<td>32</td>
<td>71(35.5)</td>
<td>p=0.581NS</td>
</tr>
<tr>
<td>Age (in years)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-25</td>
<td>10</td>
<td>12</td>
<td>22(11.0)</td>
<td>χ² =0.204</td>
</tr>
<tr>
<td>26-35</td>
<td>47</td>
<td>46</td>
<td>93(46.5)</td>
<td>df =2</td>
</tr>
<tr>
<td>36-45</td>
<td>43</td>
<td>42</td>
<td>85(42.5)</td>
<td>p=0.903NS</td>
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<td>13(06.5)</td>
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<td>Primary</td>
<td>1</td>
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<td>16(08.0)</td>
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<td>Middle</td>
<td>8</td>
<td>18</td>
<td>26(13.0)</td>
<td>p=0.001**</td>
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<td>31</td>
<td>21</td>
<td>52(26.0)</td>
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<td>15</td>
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<td>Graduate and above</td>
<td>30</td>
<td>19</td>
<td>49(24.5)</td>
<td></td>
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<tr>
<td>Married</td>
<td>88</td>
<td>90</td>
<td>178(89)</td>
<td>χ² =4.022</td>
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<tr>
<td>Unmarried</td>
<td>9</td>
<td>9</td>
<td>018(09)</td>
<td>df =3</td>
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<td>Divorced/ Separated</td>
<td>0</td>
<td>1</td>
<td>01(0.5)</td>
<td>p=0.259NS</td>
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<tr>
<td>Widow</td>
<td>3</td>
<td>0</td>
<td>03(1.5)</td>
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<tr>
<td>Habitat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>0</td>
<td>100</td>
<td>100(100)</td>
<td>χ² =200.00</td>
</tr>
<tr>
<td>Urban</td>
<td>100</td>
<td>0</td>
<td>100(100)</td>
<td>df =1</td>
</tr>
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<td>Religion</td>
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<tr>
<td>Sikh</td>
<td>50</td>
<td>77</td>
<td>127(63.5)</td>
<td>χ² =23.668</td>
</tr>
<tr>
<td>Hindu</td>
<td>50</td>
<td>19</td>
<td>69(34.5)</td>
<td>df =2</td>
</tr>
<tr>
<td>Muslim</td>
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<td>4</td>
<td>04(02.0)</td>
<td>p=0.001**</td>
</tr>
<tr>
<td>Type of family</td>
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</tr>
<tr>
<td>Nuclear</td>
<td>62</td>
<td>53</td>
<td>115(57.5)</td>
<td>χ² =1.657</td>
</tr>
<tr>
<td>Joint</td>
<td>38</td>
<td>47</td>
<td>85(42.5)</td>
<td>df =1</td>
</tr>
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</table>

Fig. 1: Percentage distribution of urban and rural obese women as per their physical activity level.
Table 2: Frequency and percentage distribution of urban and rural obese women according to levels of knowledge about their life style modifications

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Urban (n=100) (%)</th>
<th>Rural (n=100) (%)</th>
<th>Total (N=200) f (%)</th>
<th>χ² statistics</th>
</tr>
</thead>
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<tr>
<td>Excellent</td>
<td>25 (12.5)</td>
<td>10 (5.0)</td>
<td>35 (17.5)</td>
<td>11.15</td>
</tr>
<tr>
<td>Good</td>
<td>69 (34.5)</td>
<td>74 (37.0)</td>
<td>143 (71.5)</td>
<td>df=2</td>
</tr>
<tr>
<td>Average</td>
<td>6 (3.0)</td>
<td>16 (8.0)</td>
<td>22 (11.0)</td>
<td>p=0.004*</td>
</tr>
</tbody>
</table>

Maximum knowledge score = 16
Minimum knowledge score = 0

Table 3: Frequency and percentage distribution of urban and rural obese women according to levels of practices about their life style modifications

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Urban (n=100) (%)</th>
<th>Rural (n=100) (%)</th>
<th>Total (N=200) f (%)</th>
<th>χ² statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>3 (1.5)</td>
<td>3 (1.5)</td>
<td>6 (3.0)</td>
<td>0.634</td>
</tr>
<tr>
<td>Average</td>
<td>72 (36.0)</td>
<td>67 (33.5)</td>
<td>139 (69.5)</td>
<td>df=2</td>
</tr>
<tr>
<td>Poor</td>
<td>25 (12.5)</td>
<td>30 (15.0)</td>
<td>55 (27.5)</td>
<td>p=0.728NS</td>
</tr>
</tbody>
</table>

Maximum practices score = 17
Minimum practices score = 0

Table 4: Comparative mean knowledge and practices score of life style modifications among urban and rural obese women

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
<th>Mean difference</th>
<th>p-value</th>
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<tbody>
<tr>
<td>Knowledge</td>
<td>Urban</td>
<td>100</td>
<td>11.27±1.869</td>
<td>p=0.187</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>100</td>
<td>10.19±1.762</td>
<td>p=0.176</td>
<td></td>
</tr>
<tr>
<td>Practices</td>
<td>Urban</td>
<td>100</td>
<td>08.16±2.810</td>
<td>p=0.281</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>100</td>
<td>7.98±2.730</td>
<td>p=0.273</td>
<td></td>
</tr>
</tbody>
</table>

Maximum knowledge score = 16
Maximum practices score = 17
Minimum knowledge score = 0
Minimum practices score = 0

It was revealed that urban obese women had more knowledge and practices than rural obese women. This mean difference was statistically highly significant between the groups as per their knowledge, but difference was statistically non-significant between the groups as per their practices were concerned.

DISCUSSION

In the present study, more than half of the women 57.5% were from nuclear family whereas only 42.5% were from joint family in urban and rural area. Walker Susan (1998) also reported the similar findings. The present study revealed that most of the women (79.5%) were vegetarian whereas only 20.5% were non-vegetarian. It was observed that in category of sedentary work 70% obese women were from urban and rural area and in category of heavy work only 30% obese women were from urban and rural area. Tiwari et al (2005) also reported that 63.7% obese had sedentary work and only 6% obese women had heavy work. Similarly Singh B. Ram et al (1998) also concluded that 91% obese women had sedentary life style.

The present study revealed that 94% obese women had good knowledge regarding life style modifications in urban area whereas it was 84% in rural area. Three fourth of urban obese women had good practice of life style modifications whereas in comparison less than ¼ of rural women had good practice of life style modifications. Kantachuvesiri et al (2005) reported that 90.2% subjects had good knowledge in urban and rural area. On contrary, Jacoby E. et al. (2003) showed that only 54% women had good practices of life style modifications in urban and rural area.

Findings of the present study showed that urban obese women had more knowledge and practices as per their mean difference than rural obese women and this difference was statistically highly significant between the groups as per their knowledge, but the difference was statistically non-significant between the groups as per their practices.

Wilson et al. (2007) indicated that urban women had adequate knowledge but less practices of life style modifications. Similarly, RR Tiwari et al. (2009) revealed that rural women had not adequate knowledge and practices of life style modifications.

Mean knowledge score of life style modifications between the groups was statistically significant (p<0.05) as per their B.M.I, educational status, socio-economic status and physical activity but it was statistically non-significant (p>0.05) as per age, marital status, religion, dietary habits, number of children and type of family. Similar results were reported by Raina et al (2009) and Jacoby E.et al (2003).

Mean practices score of life style modifications between the group was statistically significant (p<0.05) as per their educational status, and physical activity but it was statistically non-significant (p>0.05) as per their body mass index, age, marital status, religion, dietary habits, no. of children, socio-economic status and type of family.

Similar findings were reported by Kantachuvesiri et al (2005) and Walker Susan (1998).
**Conclusion:** Sufficient knowledge of lifestyle modifications was present among obese women but they were not practicing that knowledge appropriately therefore, further studies are recommended to probe the situation which hinder them to practice healthy lifestyle to prevent obesity.

**Acknowledgement:** Nil

**Conflict of interest:** None

**REFERENCES**


13. Balaranjan Yarlini and Villamor Eduardo, nationally representative surveys show recent increases in the prevalence of overweight and obesity among women of reproductive age in India. The journal of nutrition.2009;139: 2139-44.


A Study on Awareness of Primary School Teachers Regarding Refractive Errors and its Early Identification among Primary School Children

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ABSTRACT

Background: Children form one of the major age groups requiring attention to refractive errors because of the high prevalence of myopia, hypermetropia and astigmatism. Visual problems in children are important because of their impact on the child’s development, education, future work opportunities and quality of life. School age children constitute a particularly vulnerable group where uncorrected refractive errors may have a dramatic impact on learning capability and educational potential.

Methods: The descriptive survey approach was adopted. The population consisted of primary school teachers in Mysore. Convenient sampling was used to obtain the sample of 60 primary school teachers in selected schools of Mysore. The data was collected using structured questionnaire to assess the awareness of primary school teachers regarding refractive errors and its early identification among primary school children.

Results: Majority of primary school teachers (60%) were in the age group of less than 30 years and majority (91.67%) were females. 33.33% of them had their educational qualification as B Sc B. Ed. 71.67% of them had less than 10 years of experience. None of them had previous experience of identification of visual problems in children. Majority (80%) of primary school teachers had adequate awareness regarding refractive errors in children, but none of them had previous experience of identifying visual problems in school children.

Conclusion: Childhood visual impairment due to refractive errors is a significant problem among school children and has a considerable impact on public health. Early detection of the refractive errors is very much important to prevent blindness and other complications. Therefore the knowledge regarding the refractive errors among school teachers is very much important to detect any manifestations of refractive errors in school children. Hence the researcher selected this study to find the knowledge of school teachers regarding refractive errors and also to provide additional information to them which will be helpful in detecting early manifestations of refractive errors in school children.

Keywords: Primary School Teachers, Refractive Errors, Primary School Children

INTRODUCTION

Eyes are the most treasured organ of human beings. School age is an initial period when most of the children experience interaction with different visual problems. Childhood visual impairment due to refractive error is one of the most common problems in school children and second leading cause of treatable blindness1.

School age begins with entrance into the school environment, which has a significant impact on developments and relationships. Regular vision testing is an important part of health care and supervision during school age children. The increased demands of school work make adequate vision essential for academic success.2

Children should receive prompt and proper eye care in order to avoid vision problems and eye morbidities, which could affect their learning ability, personality and adjustment in school. Vision is an important requirement for learning and communication. Complaints necessitating eye care consultation can originate from the child, parents or even teachers.3

WHO estimates that the number of people with visual impairment worldwide is 285 million and 90% of the visually impaired are in the developing countries.
Globally uncorrected refractive errors are the main cause of visual impairment. Recent studies have confirmed the existence of a large burden of uncorrected refractive errors, and it has an impact on economic development and quality of life. Severe refractive errors have been estimated to account for about 5 million blind people. An estimated 19 million children are visually impaired. Of these, 12 million children are visually impaired due to refractive errors, a condition that could be easily diagnosed and corrected.

In India, the prevalence of refractive errors in school children ranges from 1% to 23.3%. About 60-80% of visual impairment may be due to refractive error alone. Children form one of the major age groups requiring attention to refractive errors because of the high prevalence of myopia, hypermetropia and astigmatism. Myopia is a common cause of visual impairment which is usually acquired and nearly progressive. New cases appear throughout the childhood, particularly between the ages of 6-15 years.

A project was carried out in Madhya Pradesh assessing the effectiveness of using teachers to screen eyes of school going children. Teachers referred 3,822 children with eye defects for further examination and confirmed eye defects in 1242 children. In this, myopia was the most common eye problem.

A study was conducted to explore the perceptions among primary school teachers of visual problems affecting their pupils in Pakistan. The objectives of the study were to determine the ability of primary school teachers to recognise visual problems in their pupils and their knowledge about the nature of visual problems including refractive errors among their pupils. 16 teachers from 4 different primary schools were selected and individual interviews, focus group discussions and questionnaire were used to collect the data. The results showed that teachers had good knowledge but many of them had serious misconceptions. Teachers noted that children with eye problems “have difficulty seeing the blackboard well”, “screw up their eyes”, and “hold their books too close”. But they were not aware of other symptoms and signs of uncorrected refractive errors such as short attention span, difficulty writing in straight lines, headache, and low self-esteem. Teachers if equipped with necessary knowledge and skills can play a vital role in reducing the burden of uncorrected refractive errors.

**OBJECTIVES OF THE STUDY**

1. To assess the awareness of primary school teachers regarding refractive errors and its early identification among primary school children
2. To find out the association between the awareness of primary school teachers regarding refractive errors and its early identification among primary school children and their selected demographic variables

**HYPOTHESIS**

H₁. There will be significant association between the awareness of primary school teachers regarding refractive errors and its early identification among primary school children and their selected demographic variables

**METHODOLOGY**

The research approach and design adopted for the study was descriptive survey approach. The population consisted of primary school teachers in Mysore. Convenient sampling was used to obtain the sample of 60 primary school teachers in selected schools of Mysore. The data was collected using structured questionnaire to assess the awareness of primary school teachers regarding refractive errors and its early identification among primary school children. It consists of 2 parts. Part I consists of 18 items to assess the awareness of primary school teachers regarding refractive errors and part II consists of 17 statements regarding early identification of refractive errors among primary school children.

**FINDINGS**

**Part I – Sample characteristics**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Sample Characteristics</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AGE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>&lt;30 years</td>
<td>36</td>
<td>60</td>
</tr>
<tr>
<td>2.</td>
<td>31-40</td>
<td>21</td>
<td>35</td>
</tr>
<tr>
<td>3.</td>
<td>41-50</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>&gt;50 years</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>GENDER</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Male</td>
<td>5</td>
<td>8.33</td>
</tr>
<tr>
<td>2.</td>
<td>Female</td>
<td>55</td>
<td>91.67</td>
</tr>
<tr>
<td>3</td>
<td>EDUCATIONAL QUALIFICATION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>D.Ed/TTC</td>
<td>16</td>
<td>26.67</td>
</tr>
<tr>
<td>2.</td>
<td>B.A.B.Ed</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>3.</td>
<td>B.Sc B.Ed</td>
<td>20</td>
<td>33.33</td>
</tr>
<tr>
<td>4.</td>
<td>Post graduation</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>YEARS OF EXPERIENCE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>&lt;10 years</td>
<td>43</td>
<td>71.67</td>
</tr>
<tr>
<td>2.</td>
<td>11-20</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>3.</td>
<td>21-30</td>
<td>7</td>
<td>11.67</td>
</tr>
<tr>
<td>5</td>
<td>Do have any previous experience of identifying Visual problems in children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Yes</td>
<td>60</td>
<td>100</td>
</tr>
<tr>
<td>2.</td>
<td>No</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
The data presented in table 1 shows that majority of primary school teachers (60%) were in the age group of less than 30 years and majority (91.67%) were females. 33.33% of them had their educational qualification as BSc B. Ed. 71.67% of them had less than 10 years of experience. None of them had previous experience of identification of visual problems in children.

PART II Description of knowledge scores

Table 2- Mean, median, standard deviation and range of knowledge scores of primary school teacher’s regarding refractive errors and its early identification in primary school children

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>24.83</td>
<td>27</td>
<td>4.81</td>
<td>12-35</td>
</tr>
</tbody>
</table>

The data presented in table 2 shows that the awareness scores of primary school teachers regarding refractive errors and its early identification in primary school children ranged from 12-35. The mean score is 24.83 with standard deviation of 4.81.

Table 3- Frequency and percentage distribution of primary school teachers according to their level of knowledge regarding refractive errors and its early identification in primary school children

<table>
<thead>
<tr>
<th>Awareness</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate</td>
<td>48</td>
<td>80</td>
</tr>
<tr>
<td>Inadequate</td>
<td>12</td>
<td>20</td>
</tr>
</tbody>
</table>

It is evident from the table 3 that majority (80%) of primary school teachers had adequate awareness regarding refractive errors in children, but none of them had previous experience of identifying visual problems in school children.

Table 4. PART III Association between awareness of primary school teachers regarding refractive errors and its early identification in primary school children and their selected demographic variables

<table>
<thead>
<tr>
<th>Sample Characteristics</th>
<th>Awareness</th>
<th>Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inadequate</td>
<td>Adequate</td>
</tr>
<tr>
<td>Age</td>
<td>03 (5%)</td>
<td>33 (55%)</td>
</tr>
<tr>
<td>&lt;30 years</td>
<td>07 (11.66%)</td>
<td>14 (23%)</td>
</tr>
<tr>
<td>31-40</td>
<td>02 (3.33%)</td>
<td>01 (1.66%)</td>
</tr>
<tr>
<td>41-50</td>
<td>03 (5%)</td>
<td>17 (28.33%)</td>
</tr>
<tr>
<td>Gender</td>
<td>02(3.33%)</td>
<td>04 (6.66%)</td>
</tr>
<tr>
<td>Male</td>
<td>07 (11.66%)</td>
<td>14 (23%)</td>
</tr>
<tr>
<td>Female</td>
<td>02 (3.33%)</td>
<td>04 (6.66%)</td>
</tr>
<tr>
<td>Educational Qualification</td>
<td>04(6.66%)</td>
<td>12 (20%)</td>
</tr>
<tr>
<td>D.Ed/TTC</td>
<td>03(5%)</td>
<td>15 (25%)</td>
</tr>
<tr>
<td>B.A.B.Ed</td>
<td>03(5%)</td>
<td>17 (28.33%)</td>
</tr>
<tr>
<td>B.Sc.B.Ed</td>
<td>02(3.33%)</td>
<td>04 (6.66%)</td>
</tr>
<tr>
<td>Years of Experience</td>
<td>09(15%)</td>
<td>37 (71.66%)</td>
</tr>
<tr>
<td>&lt;10years</td>
<td>03 (4.9%)</td>
<td>05 (8.33%)</td>
</tr>
<tr>
<td>&gt;10years</td>
<td>03 (4.9%)</td>
<td>05 (8.33%)</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level of significance

The data presented in table 4 shows that the computed chi-square value for association between the level of awareness of primary school teachers regarding refractive errors and its early identification in primary school children and their selected demographic variables were not found to be not significant at 0.05 level except for age of samples.

CONCLUSION

Good eye health and clear vision are very important for the development of children. Children should receive prompt and proper eye care in order to avoid vision problems and eye morbidities, which could affect their learning ability, personality and adjustment in school. Vision is an important requirement for learning and communication. Complaints necessitating eye care consultation can originate from the child, parents or even teachers. Children spent a significant portion of their time in school. Therefore, teachers are in a position to identify the impairments in the early stage itself.

ACKNOWLEDGEMENT

We express our thanks to primary school teachers who participated in the study and the authorities who provided permission to conduct the study.

Conflict of Interest

Primary school teachers play a vital role in identifying visual problems among school children at the early stage. In the present study, primary school teachers of selected schools of Mysore had adequate awareness regarding refractive errors in children, but none of them had previous experience in identifying the visual problems among children, hence nurses need to encourage the school teachers to integrate the awareness with practice of identification of refractive errors in children.

ETHICAL CLEARANCE

Ethical clearance was obtained from the ethical committee of the school.

Funding sources

Not obtained any funds from any sources.

REFERENCES


Efficacy of Medicated Sitz Bath and Betadine Application in Axilla on the Growth of Bacteria in Leukemic Children

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ABSTRACT

Children with leukemia are immunocompromised as they have low neutrophil count and are prone to infections. In presence of neutropenia the normal flora which is present on skin in layers are invaded by bacterial pathogens. Skin disinfection is one of the goals of neutropenic precautions. Axilla and groin are the potential sites of bacterial growth than other sites of body. To stop the invasion of bacterial pathogens in leukemic patient, they are given medicated Sitz bath and Betadine application in axilla. The present study is aimed at analyzing the efficacy of Medicated Sitz bath and betadine application in axilla on the growth of bacteria in groin and axilla respectively. As no standard protocol are available till date. Therefore we do not have very sound base to analyze the efficacy of these two interventions given to leukemic children. The study was conducted in the Hematology Oncology Unit, Advanced Pediatric Centre, PGIMER, Chandigarh. All newly diagnosed Acute Lymphocytic Leukemia patients admitted during data collection period were taken. The sample taken for study was 30 Acute Lymphocytic Leukemia patients. Protocols were developed on Medicated Sitz bath, Betadine application in axilla and Collection and transport of culture swabs. The data was collected from newly diagnosed Acute Lymphocytic Leukemia patients consecutively for 5 days. Culture swab samples were taken from groin and axilla by rotating the swab sticks on skin of axilla and groin. Then child was given bath and clothings were changed. After that Medicated Sitz bath and Betadine application in axilla was given to the patient once a day in the morning. The culture swabs sample were collected and transported to Microbiology Department for incubation. After 24 hours of first sampling again culture swabs sample were taken from axilla and groin. The similar procedure was repeated consecutively for 5 days. Findings of the study revealed that the maximum percentage reduction of bacteria was on day 2 in both axilla and groin i.e. 12.28% and 20.43% respectively. It also reveals that minimum reduction of bacteria in axilla is on day 4 i.e. 6.39% and in groin it was on day 5 i.e. 6.82%. The maximum mean difference of bacterial growth in axilla and groin were on comparison of day 1 & 5. Hence this study leads to the conclusion that both these interventions are effective in reducing the growth of bacteria in leukemic children. If these interventions are practiced regularly for long time it will cause minimal bacterial growth in axilla and groin. The literature produced by this study will be beneficial for nursing profession in terms of practice, policies and protocol regarding Medicated Sitz Bath and Betadine application in axilla to be followed in the care of leukemic children.

Keywords: Efficacy, Medicated Sitz Bath, Betadine Application, Bacteria, Leukemic Children

INTRODUCTION

Cancer research has led to progress in leukemia treatment. Because of research, children with leukemia can look forward to a better quality of life and less chance of dying from the disease. From being 100 percent fatal in 1950s, the mortality in childhood cancer has come down to 50 percent in the 1980. In India, each year over 6000 children and in United States 2000 children < 15 years of age develop Acute Lymphocytic Leukemia.

The most common cancer in children 1 to 7 years old is acute lymphocytic leukemia (ALL). Septicemia is the main cause of death in leukemia patient. Septicemia can be reduced by following strictly neutropenic precautions. Skin disinfection is one of the goals of neutropenic precautions. In a disease condition during immune suppression the normal flora which is present on skin in layers are invaded by bacterial pathogens.
As this problem is of crucial nature, the skin of leukemia patient is disinfected by medicated Sitz bath and Betadine application in axilla. Medicated Sitz bath and Betadine application in axilla were practiced in Hematology Oncology Unit of PGIMER. But they are not following the standardized protocol for these practices. In Hematology oncology unit of PGIMER nurses were using Potassium Permanganate or Betadine for Sitz bath, and even not knowing the ratio of water, Potassium Permanganate and Betadine. Some nurses were directly applying Betadine to axilla and groin and not giving Sitz Bath. The true resident skin flora consists primarily Coagulase-negative Staphylococci (CONS), aerobic diptheroids (corynbacterium), the anaerobic diptheroids Propionibacterium acnes, the yeast Pityrosporum. Staphylococcus aureus is not a member of the resident flora. In this study the researcher is monitoring the reduction of only two bacteria in axilla and groin that are Coagulase-negative Staphylococci and Staphylococcus aureus.

However, there is great variance in the practice of neutropenic precautions from institution to institution. Currently, no studies exist to support isolating neutropenic patients in their own room as a means of preventing infection (Siegel et al., 2007; Zitella et al., 2006). The infection in neutropenic patients typically developed from their own microbial flora (Kenny & Lawson, 1999). However, experts believe that strict adherence to standard precautions and hand hygiene will reduce the spread of infectious pathogens (Duffy, 2009). There is agreement in the literature that further research is needed in this area to determine the efficacy of isolation for those who are neutropenic. Many of the early studies in Protective isolation included variables such as a low bacterial diet, oral and systemic antibiotics, and skin decontamination. Skin antisepsis reduces microbial counts, but data regarding the effect on infections are lacking.

Impairment of the host (heart failure or leukemia) or host defenses (due to immunosuppression, chemotherapy, or irradiation) may result in failure of the normal flora to suppress transient pathogens or may cause members of the normal flora to invade the host themselves. Skin microflora can be commensals, mutualistic or pathogens. Often they can be all three depending upon the strength of the person’s immune system. The resident microbes can cause skin diseases and enter the blood system creating life threatening diseases particularly in immunosuppressed people. Quantitative and qualitative variations exist between different body sites. Dry areas of the arms and legs possess, on average, an order of 10^6 organisms/sq cm, primarily of S. epidermidis. The moist axilla and groin will contain a range of 10^8 organisms/sq cm of both S.epidermidis and aerobic diptheroids.

Skin disinfection is one of the goals of neutropenic precautions. Axilla and groin are the potential sites of bacterial growth than other sites of body due to excessive sweating and ambient temperature condition for bacterial growth. To stop the invasion of bacterial pathogens in leukemic patient, they are given medicated Sitz bath and Betadine application in axilla. As no standard protocol are available till date. Therefore we do not have very sound base to analyze the efficacy of these two interventions given to leukemic children. Thus the present study was undertaken to study the efficacy of sitz bath and betadine application in axilla on the growth of bacteria in groin and axilla respectively.

**MATERIAL AND METHOD**

The descriptive analytical design was employed to carry out the study. The study was conducted in the Hematology Oncology unit of Advanced Pediatric centre at Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh. PGIMER, established in 1962 a premier institution for medical and health related research of the country is located in the city. The Advance Pediatric Centre building has 6 floor divided into four blocks of A, B, C and D. The beds of Hematology Oncology Unit are distributed in two wards of 4th and 5th floor in B block.

In a month more than 9 patients are newly admitted with diagnosis of Acute Lymphocytic Leukemia. All newly diagnosed Acute Lymphocytic Leukemia patients admitted in the Hematology Oncology Unit was the target population for the research study. ALL patients admitted during data collection period were taken. ALL patients who met the inclusion criteria were taken. Subjects/parents who refuse to participate in the study was excluded. The tools used for data collection were Protocol for medicated Sitz Bath, Protocol for Betadine application in axilla, Protocol for collection and transport of culture swabs from axilla and groin, Identification data sheet and Bacteriological culture report performa. An extensive review of literature, relevant to the areas of medicated sitz bath, betadine application in axilla, neutropenic precautions, growth of pathogenic bacteria. An informal
observation in the concerned area of study. Consultation with the guide and co-guides regarding the content and language validity of the tools. Tools were given to five experts from the field of research, nursing, education, pediatrics and microbiology to check for their contents and their language clarity. Tools are modified according to suggestion given by the experts. To assess the feasibility of the study a pilot study was conducted in Hematology Oncology unit, APC, PGIMER.

Data collection was done on all 7 days a week from 8 am to 5 pm. Permission for study was taken from the Head of the department, Hematology-Oncology, APC, PGIMER and Department Of Microbiology, PGIMER. The list of newly diagnosed ALL patients in Hematology Oncology unit was obtained from Hematology Oncology OPD and Ward. The placement of the patients in different locations of the unit was identified. The sample taken for study is 30 Acute Lymphocytic Leukaemia patients. Explanation regarding the research study was given to subjects/parents. Verbal consent was taken from subject/parents. Identification data sheet was filled. Culture swab samples were taken from groin and axilla by rotating the swab stick on skin of groin and axilla. Then parent was instructed to give bath to child and change clothing. Neutropenic precautions were given in the form of Medicated Sitz bath and Betadine application in axilla once a day as prescribed by physician. Culture swab sample was collected and transported to Microbiology Department. On next day i.e. approx. after 24 hours of first sampling again Culture swab samples were taken from axilla and groin by rotating the swab under the axilla and groin. Same procedure was repeated for next 5 days.

FINDINGS

The efficacy of 'Medicated Sitz bath' and 'Betadine application in axilla' on the growth of Bacteria in 30 Leukemic children was assessed for 5 consecutive days. Both descriptive and inferential statistics was applied to analyze the data. Subjects were distributed according to age groups and gender which depicts that one third of subjects was in the age groups of 3-4 years (30%). It also reveals that half of the mother had done high school (53.3%). It also reveals that majority of mother were housewife (83.4%).

Table 1 exhibits that from axilla the culture reports indicates the growth of Staphylococcus aureus in 9 (30%) subjects and Coagulase-negative Staphylococci (CONS) in 21 (70%) subjects respectively for 5 consecutive days of sampling. It was found that maximum number of CONS bacteria were present in axilla of the subjects i.e. 21(70%). It also exhibits that from groin the culture reports indicates the growth of Staphylococcus aureus 13 (43.3%) and CONS 17 (56.7%) subjects. It was found that maximum number of CONS bacteria were present in groin of the subjects i.e. 17 (56.7%).

Table 1: Proportions of bacteria isolated in axilla and groin

<table>
<thead>
<tr>
<th>Name of Bacteria</th>
<th>Axillan (%)</th>
<th>Groinn (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staphylococcus aureus</td>
<td>9 (30.0)</td>
<td>13 (43.3)</td>
</tr>
<tr>
<td>CONS</td>
<td>21 (70.0)</td>
<td>17 (56.7)</td>
</tr>
</tbody>
</table>

The table 2 depicts that the culture report showed growth of CONS in axilla of 16 (53.3%) males and 5 (16.7%) females. It also depicts that the growth of CONS in groin of 12(40.0%) males and 5 (16.7%) females. The other culture report showed growth of Staphylococcus aureus in axilla of 6 (20.0%) males and 3 (10.0%) females. The other culture report showed growth of Staphylococcus aureus in groin of 10 (33.3%) males and 3 (10.0%) females.

Table 2: Distribution of bacteria in axilla and groin of males and females

<table>
<thead>
<tr>
<th>Subjects</th>
<th>CONS</th>
<th>Staph aureus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Axilla</td>
<td>Groin</td>
</tr>
<tr>
<td>Males</td>
<td>16 (53.3)</td>
<td>12 (40)</td>
</tr>
<tr>
<td>Females</td>
<td>5 (16.7)</td>
<td>5 (16.7)</td>
</tr>
</tbody>
</table>

The value of p at 5% level of significance for one degree of freedom is .05 which was more than calculated significance .000 at all five days. So it is concluded that there was significant difference in the effectiveness of betadine application in axilla and sitz bath in groin on bacterial growth on all 5 days. Figure 1 depicts that the mean of bacterial growth in axilla was nearly twice than groin on all 5 days. The mean of bacterial growth was gradually reducing in axilla and groin on consecutive 5 days.
The present study revealed that the mean of bacterial growth in axilla was more than groin on all 5 days. The mean of bacterial growth was gradually reducing in axilla and groin day wise. As axilla is the potential site of bacterial growth than other sites of body due to excessive sweating and ambient temperature condition for bacterial growth.

The maximum percentage reduction of bacteria was on day 2 in both axilla and groin i.e. 12.28% and 20.43% respectively. It also reveals that minimum reduction of bacteria in axilla was on day 4 i.e. 6.39% and in groin it was on day 5 i.e. 6.82%.

The maximum mean difference of bacterial growth in axilla and groin were on comparison of day 1 & 5. It shows that there was marked difference in bacteria reduction from day 1 to day 5. Hence this study leads to the conclusion that ‘Medicated Sitz bath’ and ‘Betadine application in axilla’ both these interventions are effective in reducing the growth of Bacteria in leukemic children. If these interventions are practiced regularly by leukemic patients for long time it will cause minimal bacterial growth in axilla and groin. Thus it will reduce the chances of getting infection in immunocompromised condition. Hence based on the findings of the present study it is recommended that a more extensive trial over a longer period of time can be carried out for establishing the reduction of bacteria to minimal count. The literature produced by this study will be beneficial for nursing profession in terms of practice, policies and protocol regarding Medicated Sitz Bath and Betadine application in axilla to be followed in the care of leukemic children. This study can also be done on other immunocompromised patients (solid tumors patient, receiving chemotherapy, receiving antimicrobial drugs etc.)

CONCLUSION

It is concluded that the maximum mean difference of bacterial growth in axilla and groin were on comparison of day 1 & 5. It shows that there was marked difference in bacteria reduction from day 1 to day 5. Hence this study leads to the conclusion that ‘Medicated Sitz bath’ and ‘Betadine application in axilla’ both these interventions are effective in reducing the growth of Bacteria in leukemic children. If these interventions are practiced regularly by leukemic patients for long time it will cause minimal bacterial growth in axilla and groin. Thus it will reduce the chances of getting infection in immunocompromised condition. Hence based on the findings of the present study it is recommended that a more extensive trial over a longer period of time can be carried out for establishing the reduction of bacteria to minimal count. The literature produced by this study will be beneficial for nursing profession in terms of practice, policies and protocol regarding Medicated Sitz Bath and Betadine application in axilla to be followed in the care of leukemic children. This study can also be done on other immunocompromised patients (solid tumors patient, receiving chemotherapy, receiving antimicrobial drugs etc.)

DISCUSSION

Somervielle in his study has shown that Coagulase-negative Staphylococci (mostly S. epidermidis) is one of the true resident skin flora. It is a commensal of the skin, but can cause severe infections in immunosuppressed patients. Staphylococcus aureus is not a member of the resident flora except occasionally in the perineum.
9. Evidence-Based Nursing Practice to Prevent Infection in Hospitalized Neutropenic Patients with Cancer. Oncology Nursing Society. Oncology Nursing Forum, 2004 July; 31:717-725
Effect of Planned Nursing Interventions on Compliance among Persons Undergoing Maintenance Hemodialysis

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ABSTRACT

A quasi experimental study was conducted to assess the effect of planned nursing interventions on compliance among persons undergoing maintenance Hemodialysis from a selected hospital in Malappuram, Kerala. It was an evaluative approach and non equivalent pretest post test control group design. 60 patients diagnosed with ESRD undergoing maintenance Hemodialysis in the age group of 18-60 years were selected. After the pretest among experimental and control group, information booklet with adequate explanation was given to experimental group followed by a post test, one month later, for both groups using the same tool in the same setting. Out of 60 patients, (56.6%) were in the age group of 31-50 years and (80%) were males, (71.7%) were married and (33.3%) belonged to very low income group. After the implementation of planned nursing interventions among experimental group there was significant increase in knowledge, and psychological integrity. The mean pretest and post test knowledge score among the experimental group was 15.13 and 19.13 respectively. The mean pretest and post test psychological distress score among the experimental group was 18.97 and 16.47 respectively. The findings were statistically significant, 'p' value <0.05 for knowledge and psychological distress at level of significance 0.05.

Keywords: End Stage Renal Disease CAT- Compliances assessment tool

INTRODUCTION

Hemodialysis is a life supportive measure for those patients. But it requires a constant motivation from healthcare team members for the enhancement of compliance towards the treatment regimen and thereby improving the quality of life. Most of the reported deaths were due to the lack of awareness and compliance to the therapeutic regimens. The National Kidney Disease Education Program (NKDEP), an initiative of the National Institute of Diabetes and Digestive and Kidney Diseases, works to reduce the morbidity and mortality caused by chronic kidney disease (CKD) and its complications A report in the NKDEP, Chronic Renal Failure is considered as 'a worldwide public health problem'. NKDEP suggests plans to place a greater emphasis on patient education1.

Chronic kidney disease is a worldwide public health problem. According to the World Health Report and Global Burden of Disease project, diseases of the kidney and urinary tract contribute to the global burden of diseases, with approximately 850,000 deaths every year and 15,010,167 disability-adjusted life years. Kidney diseases are the 12th cause of death and the 17th cause of disability respectively. The presence of chronic kidney disease increases the risk of death of cardiovascular disease in patients with diabetes2.

Hemodialysis requires patients to commit considerable time to their treatment, to comply with strict dietary and fluid restrictions, and to take medication on a regular basis. Noncompliance among dialysis patients is a major problem, even though it has been shown to be inversely related to survival. Rates of noncompliance depend upon how it is defined3. Noncompliance with prescribed therapy significantly impacts dialysis patient care and outcome. At least one-half of Hemodialysis patients are likely to be noncompliant with some part of their treatment regimen4. Patient compliance is paramount in the effectiveness of therapeutic regimens. Without compliance therapeutic goals cannot be achieved, resulting in poorer patient outcomes5.

Depression is a prevalent and costly burden to dialysis patients impacting on a psychological and somatic level6. Depressive symptoms and depression
are the most frequent psychological problems reported by Hemodialysis patients. Another study about the feasibility of stage-specific educational interventions for patients with end-stage renal disease with psychological and psychiatric considerations and recommended that increased information about this disease and the treatment options available can be instrumental in improving patient’s quality of life.

MATERIAL & METHOD

Objectives of The Study

- To assess the pretest and post test Hemodialysis compliance among persons in both experimental and control group undergoing Hemodialysis.
- To find out the effect of planned nursing interventions on Hemodialysis compliance among persons in experimental group undergoing Hemodialysis.

HYPOTHESIS

$H_1$: There will be a significant difference between mean pre test and post test compliance score among samples in experimental and control group undergoing maintenance Hemodialysis.

$H_2$: There will be a significant difference between mean pre test and post test compliance score among samples in experimental group undergoing maintenance Hemodialysis.

METHOD

The research design adopted for the study was a quasi-experimental non equivalent pretest post test control group research design. It was a two group pre test and post test method. The compliance of 60 patients undergoing maintenance Hemodialysis was assessed in the pretest followed by a post test to all subjects using the same tool in the same setting after 30 days. The design used is depicted below.

\[ \begin{array}{c}
X \\
E_1 \\
C_1 \\
E_2 \\
C_2 
\end{array} \]

Selected Group | Pre Test | Intervention | Post Test
---|---|---|---
| Day One | After Pre Test Day One | Day 30th |
Patients who are on maintenance Hemodialysis | E, Experimental Group | Planned Nursing Intervention | E, Experimental Group |
| C, Control Group | C, Control Group |

Tool and Intervention

In the present study, semi structured interview schedule was used by the investigator regarding demographic data to assess the compliance of clients undergoing maintenance Hemodialysis. Compliance assessment tool for data regarding knowledge, serum and biophysiological values and psychological integrity was developed.

- **Section A** deal with demographic profile of the patient.
- **Section B** is Compliance Assessment Tool (CAT). It has three parts;
- **Section A** consisted of demographic variables such as age, sex, marital status, educational qualification, occupation, family income, religion, domicile, type of family, and frequency of Hemodialysis in a week, presence of major illness / illnesses and period under treatment. **Section B**: Compliance Assessment Tool, has three parts;
- **Part A** deals with knowledge, is a semi structured interview schedule which has 25 items. It covered the following aspects such as general information, Hemodialysis procedure, dietary modifications, care of vascular site and prevention of complications. The researcher read out the statements and the responses. The study subjects were expected to respond with a response which they feel is correct, and the investigator put a check mark against it to complete the interview. One mark has given for each correct answer. After finding out the mean knowledge score of all the respondents, three grades; adequate, moderate and inadequate were given for the respondents.

Grading of knowledge of clients undergoing Hemodialysis.

Based on knowledge level, clients with ESRD undergoing maintenance Hemodialysis are classified as below,

- Adequate Knowledge: Score above 15 (>80%)
- Moderate Knowledge: Score between 10-15 (60-80%)
- Inadequate Knowledge: Score below 10 (<60%)

**Part B** is a record review containing 10 items for obtaining serum chemistry & bio physiologic measurements. It include measurements of serum...
Creatinine, Urea, Potassium, Albumin, Fasting Blood sugar, Hemoglobin, Calcium, Phosphorous and biophysiological measurements such as Inter dialytic weight gain and Blood pressure. If the values were within the limit it is considered as desirable range and if the values were too high or too low, is considered as undesirable range.

Part C is a rating scale taken from Psychosocial Assessment Tool (PAT-5). It is a standardized tool for measuring psychosocial problems in Hemodialysis patients. It consists of 7 items and responses will be collected and interpreted against criteria. The overall scoring below 15 is mild, between 15-20 is moderate and above 21 is considered as severe psychological distress.

INFORMATION BOOKLET

Information booklet was developed based on the topic of the study, review of the related research publications and non-research literature. A blueprint of content pertaining to the information regarding renal function, renal failure, Hemodialysis, dietary management, medications and stress reduction strategies was prepared for the construction of Information booklet.

DATA COLLECTION PROCESS

After obtaining the verbal and written consent of the patients to participate in the study, they were interviewed using the semi-structured interview schedule. Planned nursing intervention was conducted for a period of 30-45 minutes for those in the experimental group; 4 clients in the morning and 4 clients in the evening.

FINDINGS

In order to find out the significance for difference in the mean pre test and post test knowledge and psychological integrity in both group, the data is subjected to independent sample t-test and the findings are presented in Table 1.

Table 1 Significance of difference in the mean pretest knowledge and Psychological Distress score among patients undergoing Hemodialysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>t' Value</th>
<th>'p' Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Experimental</td>
<td>15.13</td>
<td>2.816</td>
<td>-.573</td>
<td>0.569</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>15.63</td>
<td>3.399</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological Distress</td>
<td>Experimental</td>
<td>18.97</td>
<td>3.828</td>
<td>8.975</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>17.23</td>
<td>4.264</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 depicts the Significance of difference in the mean pretest knowledge and Psychological Distress score among patients undergoing Hemodialysis.

From the above table it is revealed that there is no statistically significant difference in the mean pretest knowledge scores of experimental and control group, (t (58) = -.573, p > 0.05). Table also revealed that the mean pretest psychological distress score of experimental and control group in the pretest is also not statistically significant (t (58) = 1.657, p > 0.05). This shows that the samples selected are homogenous with respect to knowledge and psychological distress.

Table 2. Significance of difference in the mean post test knowledge and psychological distress score of experimental and control group

Table 2 depicts the significance of difference in the mean post test knowledge and psychological distress score of experimental and control group.

The above table revealed that the mean post test knowledge score of experimental group is significantly higher than the mean post test knowledge of the control group (t (58) = 3.574, p <0.05). Hence it is evident that there is significant enhancement in knowledge in the experimental group after implementing planned nursing interventions. There is no statistically significant difference between mean post test psychological distress score of experimental and control group (t (58) = -0.520, p >0.05).

To assess significance of difference in mean pretest and post test scores of patients undergoing maintenance Hemodialysis in the experimental and control group, the data is subjected to paired t-test and the findings are presented in Table 3 and 4.

Table 3. Significance of difference in the mean pretest and post test knowledge and psychological distress of experimental group

<table>
<thead>
<tr>
<th>Variables</th>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>t' Value</th>
<th>'p' Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Pre Test</td>
<td>15.13</td>
<td>2.816</td>
<td>-7.780</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Post Test</td>
<td>19.13</td>
<td>2.862</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological Distress</td>
<td>Pre Test</td>
<td>18.97</td>
<td>3.828</td>
<td>8.975</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Post Test</td>
<td>16.47</td>
<td>3.702</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3 depicts significance of difference in the mean pretest and post test knowledge and psychological distress of experimental group.

From the above table it is evident that the mean post test score of knowledge in experimental group is significantly higher than the mean pretest scores, ($t(29) = -7.780, p<0.05$) and the mean post test score of psychological distress in experimental group is significantly higher than the mean pretest scores, ($t(29) = 8.975, p<0.05$). Thus the study findings indicate that planned nursing intervention is effective in improving knowledge and psychological distress of patients undergoing maintenance Hemodialysis.

The significance of difference in the pretest and post test knowledge and psychological distress scores of patients undergoing maintenance Hemodialysis in the control group is tested by paired ‘t’ test the finding were presented in Table 4.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Control Group</th>
<th>Mean</th>
<th>SD</th>
<th>‘t’ Value</th>
<th>‘p’ Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Pre Test</td>
<td>15.63</td>
<td>3.399</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post Test</td>
<td>16.13</td>
<td>3.598</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological Distress</td>
<td>Pre Test</td>
<td>17.23</td>
<td>4.264</td>
<td>-1.945</td>
<td>0.062</td>
</tr>
<tr>
<td></td>
<td>Post Test</td>
<td>17.00</td>
<td>4.226</td>
<td>1.651</td>
<td>0.109</td>
</tr>
</tbody>
</table>

Table 4 depicts the significance of difference in the mean pretest and post test knowledge and psychological distress scores of control group. The above findings shows there is no statistically significant difference between mean pretest and post test knowledge scores ($t(29)=-1.945, p>0.05$) and mean pretest and post test psychological distress scores ($t(29)=1.651, p>0.05$) of patients in the control group. Thus the intervention has no effect on patients in the control group.

**DISCUSSION**

In the total study population 56.6% of patients were of age group 31-50 years. With respect to sex; majority (80%) of them were males. most of the respondents (71.7%) were married. Among the respondents 41.7% were educated up to high school. (46.7%) were unemployed, presently not capable of doing any job. (33.3%) of respondents were in the very low income group. Among the 60 respondents, majority (91.7%) were Hindus and Muslims. In the total study population, 45.0% had nuclear family. More than half (71.7%) were from rural area.60% of the respondents undergo Hemodialysis for more than one year, and (66.7%) of the respondents were doing Hemodialysis thrice a week. Diabetes Mellitus (51.7%) was the most common co-morbidity among the clients undergoing maintenance Hemodialysis. The mean post test score of knowledge and psychological distress in experimental group is significantly higher than the mean pretest scores, ($t(29) = -7.780, p<0.05$) and ($t(29) = 8.975, p<0.05$). This revealed that planned nursing intervention is effective in improving the knowledge and psychological integrity of persons undergoing Hemodialysis.

**CONCLUSION**

On the basis of the findings, the researcher concluded that planned nursing intervention using information booklet with specific guidelines, to End Stage Renal Disease patients on maintenance Hemodialysis could significantly improve compliance. Nurses working with this group of patients can actively engage in compliance enhancement interventions such as patient education, motivation and stress reduction strategies.

**REFERENCES**

5. Cameron C. Patient compliance, recognition of factors involved and suggestions for promoting


A Comparative Study on Knowledge and Attitude Towards Nursing Profession among PCL and B.Sc. Nursing Students in a Selected Nursing Institute, Pokhara, Nepal

Ashalata W Devi
Assistant Professor, Manipal College of Medical Sciences (Nursing Programme), Kathmandu University, Pokhara, Nepal

ABSTRACT

Objectives: To explore and compare the knowledge and attitude of nursing students towards nursing profession.

Materials and Methods: A study was conducted among 183 (113 Proficiency Certificate Level and 70 Bachelor of Science) nursing students by using knowledge and attitude questionnaire on nursing profession.

Results: In both the groups of PCL and B.Sc. students, majority (94.69% and 88.57%) had fair knowledge about nursing profession.

Majority of the students had positive attitude towards the statement on the scope of nursing is very broad and highly demanded, a nurse is a professional liaison between the physician and the patient, nurses work with high technology, nurses are capable of independent practice, the service given by nurses is as important as that given by physicians, nurses with advanced degrees make important contributions to patient care, nurses feel good about what they do, a healthy nurse will be able to organize her work properly and confidently, a nurse must have a friendly and helpful nature and behaviour towards patient, a nurse should be able to cope with any kind of difficult situation, media concealed the role of nurse to the public, the public does not know the different cadres of nurses with different qualifications, nurses have limited voices with administrators, nurses receive little respect from other health care providers and society.

Majority of the students in both the groups were had negative attitude towards the statement on anyone can be a nurse easily, nurses make decisions by themselves, nurses follow the physician's orders without questions, nurses' work is just giving injection and care to patient and career ladder of nursing profession is limited.

Majority (67.25%) of the PCL students had negative attitude on there is no clear cut written policy for nursing profession in most of the nursing institutions and hospitals, whereas majority (78.57%) of the B.Sc. students had positive attitude on the same statement.

Conclusion: The result reveals that in both PCL and B.Sc. students, majority (94.69% and 88.57%) had fair knowledge about nursing, and had positive and negative attitude on various statements towards nursing profession.

Keywords: Knowledge, Attitude, Nursing Profession.

INTRODUCTION

A nurse is a health care professional who assists in the care of patients. Nursing is a healthcare profession focused on the care of individuals, families, and communities so they may attain, maintain, or recover optimal health and quality of life from conception to death. It is one of the most honesty and ethical standards of various professions. Today’s nurse is no longer confined to the bedside. A person who chooses a career in nursing should love to care for and work directly with people, despite the many challenges a job like this can present.

Historically, nursing has been perceived negatively by the public. Nursing has been considered a female
occupation focused on caring and simple curative practices. Nurses were taught to be subservient handmaidens of physicians, and to adhere to hospital policy rather than to foster scientific knowledge and problem-solving skills during their training. Because of the influence of gender discrimination and its historical training context, nursing professionals have had limited autonomy and minimal power in managing health services.¹

Nursing is as old as human life itself; however, the shortage of nurses is not a recent phenomenon, nor one restricted to a specific geographical location. The profession is said to have long suffered from public stereotyping and from being closely associated with feminity and powerlessness. The time has never been better for nurses to reach out to the public to change certain perceptions about nursing. Various people have different understandings of the nursing profession based on prior events in their lives since perceptions are subjective.²

A study to determine the reasons for selecting nursing career and factors influencing retention in the course in selected school/colleges, Udupi District, Karnataka, revealed that out of 78, twenty eight of the nursing students reported that they chose nursing because of its scope, eleven because of the job opportunity and another eleven owing to the financial problems, eleven considered nursing as a noble profession, five as a social work, three as the best course to serve the humanity and two as motivated by their own mother who are nurses, seven because of family pressure, three as they could not get the seat for the medical courses, one as her uncle called and asked to join as there was vacancy, one to help her father who is sick, and another as a responsibility to keep her family in good condition, one due to interest in creating a positive image of nursing as experienced negative image during her childhood, one of the students wanted to explore what nursing is.³

Most professions have a common entry-level standard that defines them as a profession. For nursing, there is no real common entry-level and this causes a great deal of confusion to young people looking at nursing as a professional career path. This issue is frustrating and causes great stress for nurses as they are deeply divided on entry-level themselves. Many nurses will claim that they receive little respect from other health care providers, including physicians, administrators and in some cases even advanced practice nurses. As a result of this direct lack of respect, nurses view their voice as limited in health care. Nurses today are placed in some of the most dangerous positions in relationship to providing care to patients. Nurses in some hospitals have far too many patients to safely care for. Nurses have limited voices with administrators and many nurses feel that the only way to have a voice is to join a union, which is not necessarily the answer.⁴

With the above background, this study was conducted with the following objectives:
1. to assess the knowledge of nursing students towards nursing profession.
2. to assess the attitude of nursing students towards nursing profession
3. to compare the knowledge and attitude of the PCL and B.Sc nursing students towards nursing profession.

MATERIAL AND METHOD

This cross-sectional study was undertaken in Manipal College of Medical Sciences (Nursing Programme), Pokhara, Nepal in the year 2012. MCOMS is an eminent health care institution providing health care facilities to Western Region of Kaski District, Nepal. MCOMS (Nursing Programme) runs two types of programmes, three years Proficiency Certificate Level (PCL) & four year B.Sc. Nursing. The study was undertaken on 113 PCL and 70 B.Sc. nursing students. A structured questionnaire was prepared for knowledge and attitude on nursing profession. Data was analyzed using SPSS-Package (version 12.0).

RESULT

Table 1 shows that in both the of PCL and B.Sc. students, majority (92.92% and 77.14%) were below the age of 20 years, (81.41% and 81.42%) belong to nuclear family, (60.17% and 74.28%) had family income above 25,000/- per month, and (77.87% and 82.85%) were staying in city. Majority (53.09%) of the PCL student’s fathers were in service while majorities (58.57%) of the B.Sc. student’s fathers were non-service and in both groups of the student’s mother (91.15% and 81.42%) were non-service (housewife). Majority (89.38% and 78.57%) in both groups of students had no family members in any health care service. More than half (50.44%) of the PCL students were Magar/Gurung, while (61.42%) of the B.Sc. students were Brahman community. In both the groups less than half (40.70% and 32.85%) chosen nursing to help/care for others, (68.14% and 58.57%) were self influenced to join as there was vacancy, one to help her father who is sick, and another as a responsibility to keep her family in good condition, one due to interest in creating a positive image of nursing as experienced negative image during her childhood, one of the students wanted to explore what nursing is.³

Most professions have a common entry-level standard that defines them as a profession. For nursing, there is no real common entry-level and this causes a great deal of confusion to young people looking at nursing as a professional career path. This issue is frustrating and causes great stress for nurses as they are deeply divided on entry-level themselves. Many nurses will claim that they receive little respect from other health care providers, including physicians, administrators and in some cases even advanced practice nurses. As a result of this direct lack of respect, nurses view their voice as limited in health care. Nurses today are placed in some of the most dangerous positions in relationship to providing care to patients. Nurses in some hospitals have far too many patients to safely care for. Nurses have limited voices with administrators and many nurses feel that the only way to have a voice is to join a union, which is not necessarily the answer.⁴
Table 2 shows that the range, minimum, maximum, mean, median and standard deviation of knowledge scores.

Fig 1 shows that 94.69% and 88.57% of the PCL & B.Sc. students had fair knowledge and 1.76% & 1.42% had poor knowledge respectively.

Table 3 shows that Range, Minimum, Maximum, Mean, Median and Standard Deviation of attitude scores.

Table 4 shows that the Attitude of the students towards nursing profession.

Table 1: Distribution of students on the basis of their sample characteristics

<table>
<thead>
<tr>
<th>Sample characteristics</th>
<th>PCL frequency(%)</th>
<th>n = 113</th>
<th>B.Sc. frequency (%)</th>
<th>n = 70</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Below 20 yrs.</td>
<td>105(92.92%)</td>
<td></td>
<td>54(77.14%)</td>
<td></td>
</tr>
<tr>
<td>b. Above 20 yrs.</td>
<td>8(7.07%)</td>
<td></td>
<td>16(22.85%)</td>
<td></td>
</tr>
<tr>
<td>Type of family:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Nuclear</td>
<td>92(81.41%)</td>
<td></td>
<td>57(81.42%)</td>
<td></td>
</tr>
<tr>
<td>b. Joint</td>
<td>21(18.58%)</td>
<td></td>
<td>13(18.57%)</td>
<td></td>
</tr>
<tr>
<td>Monthly family income in NRs:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Below 25,000</td>
<td>45(39.82%)</td>
<td></td>
<td>18(25.71%)</td>
<td></td>
</tr>
<tr>
<td>b. Above 25,000</td>
<td>68(60.17%)</td>
<td></td>
<td>52(74.28%)</td>
<td></td>
</tr>
<tr>
<td>Residence:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Village</td>
<td>25(22.12%)</td>
<td></td>
<td>12(17.14%)</td>
<td></td>
</tr>
<tr>
<td>b. City</td>
<td>88(77.87%)</td>
<td></td>
<td>58(82.85%)</td>
<td></td>
</tr>
<tr>
<td>Occupation of the Father:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Service</td>
<td>60(53.09%)</td>
<td></td>
<td>29(41.42%)</td>
<td></td>
</tr>
<tr>
<td>b. Non-service</td>
<td>53(46.90%)</td>
<td></td>
<td>41(58.57%)</td>
<td></td>
</tr>
<tr>
<td>Occupation of the Mother:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Service</td>
<td>103(91.15%)</td>
<td></td>
<td>57(81.42%)</td>
<td></td>
</tr>
<tr>
<td>b. Non-service</td>
<td>10(8.84%)</td>
<td></td>
<td>13(18.57%)</td>
<td></td>
</tr>
<tr>
<td>Family members in any health care profession:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Yes</td>
<td>12(10.61%)</td>
<td></td>
<td>15(21.42%)</td>
<td></td>
</tr>
<tr>
<td>b. No</td>
<td>101(89.38%)</td>
<td></td>
<td>55(78.57%)</td>
<td></td>
</tr>
<tr>
<td>Community belongs to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Magar/Gurung</td>
<td>57(50.44%)</td>
<td></td>
<td>14(20%)</td>
<td></td>
</tr>
<tr>
<td>b. Brahman/Chhetri</td>
<td>39(34.51%)</td>
<td></td>
<td>43(61.42%)</td>
<td></td>
</tr>
<tr>
<td>c. Newar</td>
<td>9(7.96%)</td>
<td></td>
<td>6(8.57%)</td>
<td></td>
</tr>
<tr>
<td>d. Others</td>
<td>8(7.07%)</td>
<td></td>
<td>7(10%)</td>
<td></td>
</tr>
<tr>
<td>Reason for choosing nursing:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Desire to help/care for others</td>
<td>46(40.70%)</td>
<td></td>
<td>23(32.85%)</td>
<td></td>
</tr>
<tr>
<td>b. Diversity of job opportunities</td>
<td>24(21.23%)</td>
<td></td>
<td>17(24.28%)</td>
<td></td>
</tr>
<tr>
<td>c. Status of professional degree</td>
<td>18(15.92%)</td>
<td></td>
<td>20(28.57%)</td>
<td></td>
</tr>
<tr>
<td>d. To go to abroad and earn money</td>
<td>28(24.77%)</td>
<td></td>
<td>10(14.28%)</td>
<td></td>
</tr>
<tr>
<td>Influenced the decision to choose nursing as a career:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Family influence</td>
<td>27(23.89%)</td>
<td></td>
<td>21(30%)</td>
<td></td>
</tr>
<tr>
<td>b. Social influence (friend/relatives)</td>
<td>9(7.96%)</td>
<td></td>
<td>6(8.57%)</td>
<td></td>
</tr>
<tr>
<td>c. Self influence</td>
<td>77(68.14%)</td>
<td></td>
<td>41(58.57%)</td>
<td></td>
</tr>
<tr>
<td>d. Any other influence</td>
<td>0</td>
<td></td>
<td>2(2.85%)</td>
<td></td>
</tr>
<tr>
<td>Area of nursing practice most interested:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Nursing educator</td>
<td>24(21.23%)</td>
<td></td>
<td>31(44.28%)</td>
<td></td>
</tr>
<tr>
<td>b. Community health</td>
<td>14(12.38%)</td>
<td></td>
<td>4(5.71%)</td>
<td></td>
</tr>
<tr>
<td>c. Clinical</td>
<td>58 (51.32%)</td>
<td></td>
<td>10(14.28%)</td>
<td></td>
</tr>
<tr>
<td>d. Undecided</td>
<td>17(15.04%)</td>
<td></td>
<td>25(35.71%)</td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Range, Minimum, Maximum, Mean, Median and Standard Deviation of knowledge scores.

<table>
<thead>
<tr>
<th>Range</th>
<th>Min. Score</th>
<th>Max. Score</th>
<th>Mean</th>
<th>Median</th>
<th>Standard</th>
<th>Score Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>13</td>
<td>4</td>
<td>17</td>
<td>11.72</td>
<td>12</td>
<td>1.99</td>
</tr>
</tbody>
</table>

Maximum possible score for knowledge = 20

The data were categorized as good, fair and poor knowledge.

Fig.1 Bar diagram regarding knowledge score

Fig.1 Represents that in both the groups of PCL and B.Sc. students (94.69% and 88.57%) had fair knowledge, (3.53% and 1.42%) had poor knowledge towards nursing profession.

In regard of knowledge about nursing profession, 94.69% of PCL and 88.57% of the B.Sc. nursing students were having fair knowledge towards nursing profession, its history, definition, components of professional nurse, functions of nurse, aim of nursing practice, nurses code of ethics, scope of nurses and criteria of nursing profession.

Table 3: Range, Minimum, Maximum, Mean, Median and Standard Deviation of attitude scores.

<table>
<thead>
<tr>
<th>Range</th>
<th>Min. Score</th>
<th>Max. Score</th>
<th>Mean</th>
<th>Median</th>
<th>Standard</th>
<th>Score Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>19</td>
<td>53</td>
<td>72</td>
<td>62.47</td>
<td>63</td>
<td>3.89</td>
</tr>
</tbody>
</table>

Maximum possible score for attitude = 80
Table 4: Attitude of the students towards nursing profession

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Statements</th>
<th>PCL students F (%) n=113</th>
<th>B.Sc. students F (%) n = 70</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Positive attitude</td>
<td>Negative attitude</td>
</tr>
<tr>
<td>1</td>
<td>Anyone can be a nurse easily</td>
<td>10 (8.84 )</td>
<td>103 (91.15 )</td>
</tr>
<tr>
<td>2</td>
<td>The scope of nursing is very broad and highly demanded</td>
<td>110(97.34 )</td>
<td>3(2.65 )</td>
</tr>
<tr>
<td>3</td>
<td>A nurse is a professional liaison between the physician and the patient</td>
<td>97(85.84 )</td>
<td>16(14.15 )</td>
</tr>
<tr>
<td>4</td>
<td>Nurses work with high technology</td>
<td>89(78.76 )</td>
<td>24(21.23 )</td>
</tr>
<tr>
<td>5</td>
<td>Nurses follow the physician’s orders without questions</td>
<td>21(18.58 )</td>
<td>92(81.41 )</td>
</tr>
<tr>
<td>6</td>
<td>Nurses are capable of independent practice</td>
<td>75(66.37 )</td>
<td>38(33.62 )</td>
</tr>
<tr>
<td>7</td>
<td>Nurses make decisions by themselves</td>
<td>46(40.70 )</td>
<td>57(50.44 )</td>
</tr>
<tr>
<td>8</td>
<td>The service given by nurses is as important as that given by physicians</td>
<td>106(93.80 )</td>
<td>7(6.19 )</td>
</tr>
<tr>
<td>9</td>
<td>Nurses with advanced degrees make important contributions to patient care</td>
<td>92(81.41 )</td>
<td>21(18.58 )</td>
</tr>
<tr>
<td>10</td>
<td>Nurses’ work is just giving injection and care to patient.</td>
<td>6(5.30 )</td>
<td>107(94.69 )</td>
</tr>
<tr>
<td>11</td>
<td>Nurses feel good about what they do</td>
<td>99(87.61 )</td>
<td>14(12.38 )</td>
</tr>
<tr>
<td>12</td>
<td>A healthy nurse will be able to organize her work properly and confidently</td>
<td>111(98.23 )</td>
<td>2(1.76 )</td>
</tr>
<tr>
<td>13</td>
<td>A nurse must have a friendly and helpful nature and behaviour towards patient</td>
<td>112(99.11 )</td>
<td>1(0.88 )</td>
</tr>
<tr>
<td>14</td>
<td>A nurse should be able to cope with any kind of difficult situation</td>
<td>113(100 )</td>
<td>0(0)</td>
</tr>
<tr>
<td>15</td>
<td>There is no clear cut written policy for nursing profession in most of the nursing institutions and hospitals</td>
<td>37(32.74 )</td>
<td>76(67.25 )</td>
</tr>
<tr>
<td>16</td>
<td>Media concealed the role of nurse to the public</td>
<td>64(56.63 )</td>
<td>49(43.36 )</td>
</tr>
<tr>
<td>17</td>
<td>The public does not know the different cadres of nurses with different qualifications.</td>
<td>98(86.72 )</td>
<td>15(13.27 )</td>
</tr>
<tr>
<td>18</td>
<td>Career ladder of nursing profession is limited</td>
<td>38(33.62 )</td>
<td>75(66.37 )</td>
</tr>
<tr>
<td>19</td>
<td>Nurses have limited voices with administrators</td>
<td>69(61.06 )</td>
<td>44(38.93 )</td>
</tr>
<tr>
<td>20</td>
<td>Nurses receive little respect from other health care providers and society</td>
<td>57(50.44 )</td>
<td>56(49.55 )</td>
</tr>
</tbody>
</table>

DISCUSSION

The present study findings reveal that majority of the students in both the groups (PCL & B.Sc.) had fair knowledge about nursing profession. Both the groups of the students had a negative attitude towards the statements on anyone can be a nurse easily, on nurses follow the physician’s orders without any questions, on nurses’ work is just giving injection and care to patient which is contradictory with the findings of the study conducted by Swamy DSV to assess the knowledge and attitude of public towards nursing profession in a selected hospital at Mangalore, India which reveals that about 90% of people have minimum knowledge regarding nursing, they consider nursing to be a simple task and that anyone can be a nurse and nurses are the physician’s assistants and perform menial work like cleaning, bathing, and grooming of patients.  

A study conducted in Ilala district, Dar Es Salaam, to assess the knowledge and attitude of secondary high school students towards nursing profession, findings revealed that Non-awareness was mostly about nurses being capable of independent practice, making decisions for themselves, working with high technology, following physician’s orders without questioning and feeling good about what they do. The present finding reveal that majority in both group of the students had negative attitude towards the statement on nurses make decisions for themselves and on nurses follow the physician’s orders without any questions which is supported by the above findings whereas majority of the both group students
shows positive attitude on nurses work with high technology, on nurses are capable of independent practice, and on nurses feel good about what they do which is contradictory with the above findings.  

A descriptive cross sectional study conducted to assess and compare the perception toward nursing profession and future life orientation among just admitted and outgoing nursing students of both B.Sc and GNM at College of Nursing, DMCH, Ludhiana, Punjab. Forty percent just admitted students were interested to work on bed side, whereas about 60% of the outgoing students were inclined towards bed side nursing. The present study finding shows that majority of the PCL students (51.32%) were interested to work in hospital (bed side) which is supported with the above finding, whereas majority of the B.Sc. students (44.28%) were interested to work as nursing educator which is contradicted the above finding.  

CONCLUSIONS

A professional nurse is a person who has completed a basic nursing education programme and is licensed in his/her country to practice professional nursing. A nurse teacher can certainly influence in a student and correct a few misconceptions. Teacher needs to be a facilitator in improving their knowledge and attitude towards nursing career and trying to build recognition of the profession during their study period itself by being a mentor. The views expressed by students in this survey help a nurse teacher to realize that the students have varied reasons for choosing a career. If we enroll students with interest, aptitude and favourable attitude towards the chosen profession, certainly we will be able to train and retain the professionals who will bring recognition and raise the image of the profession.

ACKNOWLEDGEMENT

My sincere gratitude and thank to Dr. B.M. Nagpal, Dean, MCOMS & CEO- MEMG, Nepal for his kind permission, Mrs. Sakun Singh, Principal, and all my faculty colleagues of MCOMS (Nursing Programme) for their kind support to carry out this study.

REFERENCE

Development and Validation of a Thermal Discomfort Scale in Febrile Children During Sponging

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ABSTRACT

Objectives:
- To Develop and validate a scale to measure the thermal discomfort in febrile children undergoing sponging.
- To Compare the thermal discomfort among febrile children undergoing either warm sponging or tepid sponging.

Materials and Method: This study consisted of two steps i.e preparation of a Thermal scale and the application of the scale to compare the thermal discomfort in a sample of febrile children undergoing either warm sponging or tepid sponging. It was conducted in two Phases. Qualitative approach for the preparation of scale & Quantitative approach to compare the thermal discomfort.

Result: The reliability of the instrument was estimated by Internal Consistency Reliability; Chronbach’s alpha = 0.7534 ± 0.8. The result showed that this scale has an Ideal Reliability index of 0.8. There was significant difference between the discomfort scores of warm sponging & tepid sponging (MW-U - 6381.50, P 0.0001)

Conclusion: Thermal discomfort scale developed as a composite outcome and it can be utilized in clinical setting to measure the thermal discomfort in children. The also revealed that warm sponging is better than tepid sponging in reducing thermal discomfort in children.

Keywords: Febrile Children, Thermal Comfort, Tepid Sponging, Warm Sponging

INTRODUCTION

Fever management is a concern for both healthcare professionals as well as parents. In the context of increasing incidence of emerging viral infections, fever has become one of the most disturbing symptoms. The use of tepid sponging for reduction of fever has been in practice for a long time. When treating fever, it is important to consider thermal comfort of the child. Thermal comfort is the affective perception of temperature; difference between thermoregulatory central set point and body temperature. It is affected by heat conduction, convection, radiation, and evaporative heat loss. Thermal comfort is maintained when the heat generated by human metabolism is allowed to dissipate, thus maintaining thermal equilibrium with the surroundings. Any heat gain or loss beyond this generates a sensation of discomfort (Fang, L., Wyon, D. P., Clausen, G., Fanger 2004)1.

This must be taken into consideration in the prescriptions and advice for febrile children (Chatonnet J. Cabanac M .2005)2. Controversy exists about the use of sponging in reducing fever in children. The use of tepid sponging for reduction of fever has been in practice for a long time (Meremikwu M. OyoI. 2006)3. When reducing fever, it is important to provide thermal comfort also. Making child comfortable reduces the anxiety of the mother (Corrard F...
Considering thermal comfort, recently it has been claimed that warm sponging is better than tepid sponging and that it has more physiological basis than tepid sponging as a supportive management for fever (Kinmonth AL, 1992). Even though Tepid Sponging is a nursing procedure, globally no attempts have been made for assessing thermal comfort in children. The present study carries several implications for clinical practice. Thus it is desirable to develop a scale to assess the thermal comfort in children.

Thermal comfort depends on the difference between thermoregulatory central set point and body temperature. Any measures which help to reduce this difference is felt as pleasant, and vice-versa. This must be taken into consideration in the prescriptions and advices for children with fever. Thus antipyretic therapy and face fanning are always felt as pleasant, while undressing and tepid baths may be felt as unpleasant (Corrard F 1999).

MATERIALS AND METHOD

This study consisted of two steps i.e preparing a scale and the application of the scale in a sample of febrile children undergoing either warm sponging or tepid sponging. It was conducted in two Phases Qualitative approach for the preparation of scale & Quantitative approach to compare the thermal discomfort.

Preparation of the scale

Research approach – Qualitative

For developing the scale purposive sampling method were used. Three Focus group discussions (FGD) were conducted among the mothers of febrile children and two FGDs with nurses working in the Pediatric wards. Rule of thumb for validation of tool were used for sample size estimation (Nunnaly J.C. 1975).

Steps in the development of scale

Item generation: Items were generated from expert opinion, literature review clinical observations, Focus group discussion with Nurses, mothers of febrile children, existing instruments and own experience in the area of study. Generated a pool of 12 items.

Item selection and Reduction: From this pool of items the most appropriate items were identified by asking the target population to grade them and selected the most frequently chosen items. Next, the instrument was given to 5 paediatricians for ranking the items. Items having 100% concordance were selected. At the end of this step the items were reduced to 6.

Sequencing and Formatting: - The items were appropriately placed so as to provide a logical flow, from general to specific. The level of measurement fixed as present (1) and absent (0)

Translation and Back translation :- The scale was intended to be used by the health care personnel. Thus translation and back translation was not done.

Pre test: - This was again reviewed/pretested in a sample of expert and target population. According to their opinion no changes were made in the scale.

Pilot study- The scale is administered in a sample of 50 children undergoing tepid sponging.

The steps are shown as in Figure 1

![Figure 1. Steps of development of the scale](image-url)

Assessment of reliability and validity

Finally the scale for measuring Thermal Discomfort was developed as a composite outcome of cry, irritability, piloerection and shivering. All the items were given an equal weight i.e. presence of any one of the items is given a score of one. Absence of any of these items was given a score of zero.

The reliability was estimated by Internal Consistency Reliability (ICR). ICR was expressed as Cronbach’ Alpha which is the preferred measure of
internal consistency reliability. This tells us about similarity in measurement across items within a sub scale. This is mathematically equivalent to the average of all possible split-half estimates.

Cronbach's alpha obtained for the scale was 0.7534 H’ 0.8. The result showed that this scale has an Ideal Reliability index of 0.8.

The face and content validity of the tool was ensured by the expert reviews in the initial development phase. The assessment of construct validity by Factor Analysis was not applicable in this scale because it has only 4 items.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Present</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cry</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Irritability</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Goosebumps</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Shivering</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Comparison of Thermal Discomfort among Febrile Children undergoing warm sponging and tepid sponging.

The participants were 268 children between the age group of 6 months to 5 years with fever (Temperature ≥100°F). They were recruited from the OPD of Taluk Hospital Chirainkeezu. The exclusion criteria were history of seizures, temperature more than ≥104°F and severely dehydrated children. This study was conducted as per the guidelines of Institutional Research & Human Ethical Committee, Govt. Medical College, Thiruvananthapuram. Informed consent was obtained from the parents of all the participants.

After checking the physician’s prescription the participants were randomly assigned into one of the two treatment groups (Warm sponging or tepid sponging, 134 participants in each group). The procedure was done by the researcher, the outcome assessment was done by the Research Assistant.

**INTERVENTION**

| Group I (Intervention group): | Oral Paracetamol 15mg/Kg body weight + Warm sponging |
| Group II (Control group):     | Oral Paracetamol 15mg/Kg body weight + Tepid sponging |

**Warm sponging:** Sponging with warm water; temperature 34-37°C (94-99°F) and done fast with long strokes. Duration is 15 minutes. The temperature of the water for warm is maintained with the help of a thermostat. The temperature of the water in thermostat is kept at a higher temperature i.e. at 45°C than the required temperature of 34-37 °C, based on the assumption of Newton's third law of rate of cooling. Because there will be reduction of temperature while immersing a sponge cloth in water & heat loss during the procedure(Jeonghwan C,Younjae K, Anand S 2003)7.

**Tepid sponging:** Sponging with water temperature 29-33°C (84-91°F) and with out long strokes (or friction) on the skin. Duration is 15 minutes. Tap water is used for tepid sponging, which collected in the morning and kept in a separate basin & temperature of the water is measured by a chemical (bath thermometer).

**MEASUREMENT OF TEMPERATURE**

Measuring temperature in children can be difficult, especially when they are uncooperative or restless(Craig JV et al 2000). There are different type of thermometers are available but the American Association of Paediatrics recommends that children under the age of 5 digital thermometer should be used & never use a mercury thermometer (Sehgal A et al 2002, Keeley D 1994)9,10. The axilla is a safe and accessible site but concerns have been raised about its accuracy and its correlation with core temperature(Schmitz T 1995).11.

In this study Digital thermometer used was Inficheck, Model MT-219 (CE 0044) with a measurement range 89.6°F to 109.4°F. The instrument has CE 0044 certification, which is the European standard for medical instruments. ICC of two thermometers were checked before the start of the intervention I.C.C. between Thermometer 1 & thermometer 2 is 0.9680, 95%CI 0.8887 - 0.9908.

**RESULT**

Discomfort was measured objectively as a composite outcome of cry, irritability, piloerection and shivering. All the items were given an equal weight i.e. presence of any one of the items is given a score of one. Absence of any of these items were given a score of zero.
Table 2. Mann Whitney test - comparison of difference in discomfort scores between Warm sponging & tepid sponging

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Number</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Test statistic</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difference in discomfort</td>
<td>134</td>
<td>115.12</td>
<td>15426.50</td>
<td>MW-U6381.500</td>
<td>0.0001*</td>
</tr>
<tr>
<td>Warm sponging</td>
<td>134</td>
<td>153.88</td>
<td>20619.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>268</td>
<td>153.88</td>
<td>20619.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant

Table 2. Showed that there was significant difference between the thermal discomfort scores of warm sponging & tepid sponging. Baseline comparison of cry, irritability, piloerection & shivering shows that there is no significant difference between the groups. This shows that these two groups are comparable. Whatever difference obtained between the groups would be due to the intervention alone.

DISCUSSION

Literature review showed that even though sponging is effective in reducing temperature; it adds additional discomfort to the children. Crying, irritability, piloerection and shivering were selected as the items for measuring discomfort. The newly developed tool has an ideal Cronbach’s Alpha as 0.7534. The distribution of the score had a skewed distribution and thus Mann Whitney U test was used for the comparison. The result showed that there was difference in scores of discomfort between groups (P value 0.0001). This result agree with the findings of similar studies but an important finding to report that if we use warm sponging the level of discomfort will be minimum. This result strongly supports the underlying biological plausibility, i.e. antipyretics acts on the thermostatic center in hypothalamus to reduce the elevated set point(core temperature). Physical cooling by sponging facilitates heat loss. In warm sponging the difference in temperature of peripheral & core temperature will be narrow, this will promote thermal comfort. Use of long strokes in warm sponging promotes vasodilatation and heat dissipated to the surrounding more rapidly.

ACKNOWLEDGEMENT

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REFERENCES

Care of Schizophrenic Patient is a Burden among Primary Caregivers: Review Article

N Balasubramanian
Head, Psychiatric Nursing, Shree Devi College of Nursing, Mangalore

ABSTRACT

Background: Caregiver is the person who involves in direct care for schizophrenic patient. However, when care is provided for long time, caregiver may experiences the burden.

Purpose: The purpose was to critically review the studies related to burden among caregivers of schizophrenic patients.

Method: A literatures were searched from databases: Pubmed, CINAHL, and Science Direct. Key words used to retrieve literature include caregiver burden and schizophrenic patient. Searching was limited in English language, full text article.

Results: Fifteen studies were reviewed in this paper. The result showed that the caregivers caring for patients with schizophrenia experience burden. Burden was defined as a negative impact of caring for the impaired person experienced by caregiver on their activity (objective burden) or feeling (subjective burden) that involves emotional, physical health, social life, and financial status.

Conclusion: Definition of burden has quite same meaning. Most of studies cannot be generalized due to small sample used in the study and that too conducted in western countries. For further research, the correlation between burden and resources of family caregiver should be investigated particularly in Asian country especially in India.

Recommendations: Psycho education, relaxation techniques, positive coping strategies are needed to reduce the burden among caregivers.

Keywords: Burden On Family Caregiver, Primary Caregiver, Caring, Schizophrenia, Schizophrenic Patient.

INTRODUCTION

Caregiver is the person belonging to the patient’s informal support system who takes the care and is responsible for the patient, and who commits most of his or her time to that task without receiving any economic retribution1. Homecare of schizophrenic patient is a health service provided in the patient’s place of residence for the purpose of promoting, maintaining, or restoring health or minimizing the effects of illness and disability2. However, homecare of a schizophrenic patient is a burden among caregivers.

Caregiver is the most important person who cares for the person with schizophrenia3. Caregiver usually help patient in performing their daily activities such as, bathing, eating, cooking, dressing; taking drug, and checking up. However, when care is provided for longer time, particularly for patients with schizophrenia, caregiver can experience burden that leads to negative consequences4. Burden of caregivers leads to negative consequences not only for themselves but also for patients, other family members, and health care system5. Schizophrenia is a chronic and disabling illness that affects approximately 1% of the world’s population. It is often accompanied by relapse even while on treatment6. Internationally, the factors commonly associated with relapse include poor adherence to treatment, substance abuse, co-morbid psychiatric illness, a co-morbid medical and/or surgical condition, stressful life events, and the treatment setting7,8.

Schizophrenia and caregiver burden

Caregiver burden is the extent to which caregivers perceived their emotional, physical health, social life,
and financial status as a result of caring for their ill relative. Burden consists of objective and subjective burden. Objective burden involves disruption to family/household life that is potentially verifiable and observable. However subjective burden is feeling that the caregiver share to others regarding the care giving for impaired person. Mostly caregiver who takes care for member with schizophrenia feels burden. Burden can be defined as negative impact experienced by caregiver while caring for the impaired person. Impact can be on household (objective burden) or on feeling (subjective burden). Schizophrenia is the paradigmatic illness of psychiatry. Schizophrenia was estimated to be the 10th leading cause of non-fatal burden, accounting for 26% of total years lived with disability, around the same percentage as congenital malformations. Evidence from nearly a century of epidemiological research indicates that schizophrenia occurs in all populations with prevalence in the range of 1.4 to 4.6 per 1000 and incidence rates in the range of 0.16–0.42 per 1000 population. Loss of social functioning alters communication patterns in the family, leads to occupational difficulties, and care burden, fear and embarrassment about illness signs and symptoms, uncertainty about course of the disease, lack of social support, and stigma puts a caregiver burden.

Impact and causes of burden among caregivers of schizophrenia

Burden among the caregivers has been documented in various studies. However, the cause of caregiver burden in schizophrenic patient is unclear and there are only a few hints from the literature. Being a caregiver can raise difficult personal issues about duty, responsibility, adequacy and guilt. The risk factors which contribute burden are high disability, very severe symptoms, poor support from professionals, poor support from social networks, less practical social support, violence. Factors affecting burden include a number of patient illness variables, such as the severity of symptoms, length of hospitalization, number of previous hospitalizations, and length of illness. Financial responsibilities, missed work, disturbance of domestic routines, constraints on social and leisure activities, and reduced attention to other family members are the causes of burden. Emotional impact is guilt, loss, helplessness, fear, vulnerability, and cumulative feelings of defeat, anxiety, resentment, and anger are commonly reported. Caregivers may feel isolated, restricted from pursuing their own activities, and may be overwhelmed by a lack of support from friends, family and treatment providers.

Review of studies on caregiver burden of schizophrenic patient:

A study was conducted to determine the level of burden on caregivers who are relatives of patients with schizophrenia. Zarit burden interview scale was used to assess burden, the findings revealed that the mean age of the respondents was 45.1±8.9 years. Most of the caregivers were female. A high level of burden was found in 47.3% of respondents. The level of burden experienced was significantly associated with place of residence and family size. Burden and coping strategies in caregivers of schizophrenic patients and to identify the relationship between burden and coping strategies in caregivers of schizophrenic patients was assessed by using Rudnick and ostama burden scale. The study findings indicate that the caregivers were suffering from high level of burden. The relation between socio-demographic characteristics and burden among caregivers of schizophrenic patients revealed no statistical significant association.

Tessler R.C., Gamache G.M., Family burden interview schedule was used to determine burden level and predictors of burden among primary care givers. Overall low levels of burden were typically found, with the exception of moderate levels on general concerns for the ill relative. Spouse of schizophrenic patient burden was assessed by using Pai and kapur family burden interview scale. The majority (52%) of spouses of male schizophrenia patients experienced moderate level of burden. The difference was statistically insignificant. Burden and attitude among relatives of schizophrenic patient was assessed by using Zarit Burden Interview scale. Attitudes among the relatives had significant association with burden.

A study was conducted to provide descriptive information about the negative consequences on the family (e.g. physical problems, restrictions in social life, tense relationships in the family) reported by the primary caregivers of persons with schizophrenia. The general negative consequences identified most frequently were tense relationships in the household, and the physical and emotional problems of the primary caregiver. The most common negative consequences directly related to the ill relative were the primary caregiver’s emotional problems, the
disturbance in the primary caregiver’s performance of work, and the disruption in the lives of other adults in the household.

Rammohan A, Kiran Rao, Subbakrishna D conducted study to assess burden among caregivers of schizophrenic patient by using Thara et al. burden assessment schedule. Spouses reported greater emotional burden. Parents used more of denial as a coping strategy, while spouses used more of negative distraction strategies. On stepwise regression analysis, patient’s age, educational level, and level of functioning and caregiver’s use of denial as a coping strategy emerged as significant predictors of caregiver burden.

Burden and coping of caregivers in relation to the level of functioning in patients with chronic schizophrenia was evaluated by using Thara et al Burden assessment schedule (BAS). As the level of functioning of the patient decreased, the significance with which the coping mechanisms influenced the burden, increased. The use of problem-solving coping by caregivers showed a significant correlation with higher level of functioning in patients.

Perception of burden by caregivers of patients with schizophrenia was assessed by using Thara et al Burden assessment schedule. The findings revealed that Caregivers of very young or old patients with schizophrenia felt a lesser burden of care giving as compared with caregivers of middle-aged patients. The positive results of this study are only weak indicators as the level of correlation is a very low positive and the correlation is unlikely to hold true for the entire population (p>0.05). The results, therefore, indicate little or no linear correlation between the identified variables and the felt burden. This study therefore highlights the need for further studies in this area, especially ones with non-linear correlation analytical designs.

Patients with schizophrenia and their key relatives were examined in Germany and Britain. Differences in family burden in both Countries were analyzed with regression models controlling for patient and caregiver characteristics. Family burden was associated with patient symptoms, male gender, unemployment and marital status, as well as caregivers’ coping abilities, patient contact and being a patient parent. However, even when these attributes were controlled for, British caregivers reported more burden than German caregivers.

The relationship between knowledge on schizophrenia and burden of care among caregivers of schizophrenic patient in Mzuzu, Malawi was measured with the Involvement Evaluation Questionnaire. Caregiver burden was associated with knowledge (p = 0.001), but contrary to hypothesis, greater knowledge was associated with greater burden.

The burden of the primary family caregivers of schizophrenic patients and the factors that affect caregiver burden was assessed through Caregiver Burden Inventory—Brief Version. The caregiver burden scores (25.9±10.7; range, 3±61) indicated a moderate burden level. Among the five dimensions of burden, caregiver anxiety (2.13± 0.86) was the highest, followed by dependency of the patient (1.85±1.02), feeling shame and guilt (1.56±1.02), and family interference (1.43±0.83). The burden level of stigmata (1.32±1.24) was the lowest. The relationship between caregivers burden and level of expressed emotions by the patients with schizophrenia in Indian setting was assessed the Burden Assessment Schedule (BAS) by Sell et al. The mean scores of both the Family emotional involvement and criticism scale and BAS revealed high level of EE by caregivers toward patients and high level of subjective burden among the caregivers.

DISCUSSION

The patients with schizophrenia may experience impairment in thinking process that influences their behavior. Generally, their behaviors are odd and sometimes harmful for themselves, such as committing suicide or violence to others. In addition, the disease may relapse during the treatment and recovery. Therefore, patients with schizophrenia are frequently hospitalized and usually need long term care and treatment. Even though there are some factors related to burden in caring for person with schizophrenia, but the most important is how the caregiver is able to use coping technique and utilize the social support. Results of various studies as discussed above showed that mostly caregiver who takes care for patient with schizophrenia feels burden.

CONCLUSIONS

To conclude this review, burden has same meaning, namely, difficulties faced by caregiver while caring for ill member involving physical, psychological, social and financial factors. Most of studies cannot be generalized due to small sample and most of the...
studies have been conducted in western countries. Indian studies concluded that spouse and parent burden is different however, both will experience burden.

**RECOMMENDATIONS**

This review has implication for practice and research. In term of practice, it will provide basic information for those who rendering care for caregivers of schizophrenic patient to decrease burden. Further, decrease in burden helps in prognosis of patient illness by adopting positive coping among caregiver. For research aspect, studies needs to investigate caregiver resources on decreasing burden, such as coping and social support.

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A Study to Assess the Psychosocial Problems among Families Residing at Arakkampakkam Village in Thiruvallur District, Tamil Nadu

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ABSTRACT

Psychosocial problems affect the psychological and social condition of the family based upon its type, intensity and frequency of the problem. The most distinctive feature of human life is its social characters. Two forces like physical and social condition determine pupil behaviours in society. Which he has been trying to understand and control from time immemorial.

Objective: To assess psychosocial problems among families residing at Arakkampakkam.

Design: Non-Experimental descriptive design.

Setting: The study was conducted at Arakkampakkam village in Thiruvallur district, Tamil Nadu, which is adopted by the Omayal Achi Community Health Centre.

Participants: 200 families who are residing at Arakkampakkam village.

Measurements and tools: The level of psychosocial problem was assessed by structured rating scale. Descriptive and inferential statistics were used to analyze the data.

Findings: The findings of the study revealed that psychosocial problems among families residing at Arakkampakkam. The most of the families (i.e.) 136(68%) had high psychological problems, 174(87%) had high social problem and 158(79%) had high psychosocial problems. The correlation level of social problems with psychological problems in families residing at Arakkampakkam village, the calculated r value was 0.960** at p< 0.01 level.

Conclusion: The study concluded that most of the families had high social problem than the psychological and psychosocial problems.

Implications: The community mental health nurse practitioners has a primary responsibility of preventing the psychosocial problems among families. Public health nurse working in the community needs to be trained in taking care of families with psychosocial problems.

Keywords: Psychological Problems, Social Problem, Psychosocial Problems

INTRODUCTION

Health has been recognized for the immemorial as a greatest potential to individual, community and the nation. Mental health is the balanced maturity leading a harmonious and healthy living

Dr. G. Usha Rani (2011)1 stated that the family is the first and most important primary group. It is defined as group of persons united by the ties of marriage, blood or adoption, constituting a single household, interacting and intercommunicating with each other in their respective social role of husband, and wife, mother and father, son daughter, sister and brother creating a common culture.

Suchday et al (2006)2 revealed that stress caused by chronic difficulties encountered by people residing in poor urban neighborhoods is associated with health problems and disease in developed countries, but the relationship between neighborhood stress and health in developing nations, such as India, has not been
assessed. The investigator administered the City Stress Inventory, a self-report measure assessing stress experienced as a function of environmental conditions unique to living in large cities that was validated in the United States, to 163 high school students in New Delhi, India. Components of urban stress in India, with some modifications, appear to be similar to components of urban stress reported by adolescents in the United States. Urban stress was predictive of high blood pressure as reported by the adolescents’ parents. In addition, urban stress also predicted health habits, such as chewing tobacco and alcohol use, and psychosocial characteristics, such as hostility. Adolescents’ reports of parental stress concerning money and social pressures were also associated with city stress. The current study indicates that the City Stress Inventory is valid in an Indian sample and is predictive of health problems.

Ajay et al (2009) conducted a study on practice patterns and treatment choices among psychiatrists in New Delhi, India. Comparative design and validate a survey distributed to a sample of 34 psychiatrists in New Delhi and 34 in Baltimore, Maryland who treat Indian patients. Results Delhi psychiatrists saw more patients daily (24.3 vs. 11, P < 0.001), and spent less time on new evaluations (33.3 vs. 69 min, P < 0.001). Both groups had similar approaches to major disorders. But, Delhi psychiatrists were less likely to combine medication treatment with psychotherapy (P < 0.05), and more likely to advise families to secretly administer medications in treatment refusal, such as in acute schizophrenia (P < 0.001) or major depression (P < 0.01).

OBJECTIVES OF THE STUDY

Objectives of the study were to

1. To assess the psychological problems, social problem and psychosocial problems among families residing at Arakkampakkam.
2. To compare the psychological problems and social problems in families residing at Arakkampakkam.
3. To correlate the social problems with psychological problems of families residing at Arakkampakkam.
4. To associate the psychosocial problem with selected demographic variables families residing at Arakkampakkam.

HYPOTHESES

H1: There will be a significant difference in level of psychological problems and social problems in families residing at Arakkampakkam village

H2: There will be a significant association of level of psychosocial problems with selected demographic variables of families residing at Arakkampakkam village

Projected Outcome

- The family will have high psychosocial problem.

MATERIAL AND METHOD

The research design used in the study Non-experimental descriptive comparative, correlation design. The population of the present study comprises of the 200 families who are residing at Arakkampakkam village. The accessible populations are those available at the time of conducting study. After getting the ethical committee clearance from Omayal Achi College of Nursing, Chennai and the formal permission from Omayal Achi Community Health Centre the data was collected by structured rating scale The sample of the study comprises all the families residing at Arakkambakkam village in Thiruvallur district and who fulfill the inclusive criteria that has been included in the study. Both descriptive and inferential statistics were used for data analysis.
FINDINGS

Table 1: Frequency and percentage distribution of level of psychological, social and psychosocial problem of families residing in Arakkampakkam village.

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Domains</th>
<th>HIGH &lt;50%</th>
<th>MODERATE 50%-75%</th>
<th>LOW &gt;75%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Psychological problems</td>
<td>NO</td>
<td>%</td>
<td>NO</td>
</tr>
<tr>
<td>2</td>
<td>Social problems</td>
<td>NO</td>
<td>%</td>
<td>NO</td>
</tr>
<tr>
<td>3</td>
<td>Psychosocial problems</td>
<td>NO</td>
<td>%</td>
<td>NO</td>
</tr>
</tbody>
</table>

With regard to psychological problem, 9(4.5%) families had high psychological problem, 55(27.50%) families had moderate psychological problems and 136(68%) had low psychological problems.

With regard to social problems, 1(0.5%) families had high social problems, 25(12.50%) families had moderate social problems and 174(87%) had low social problems.

With regard to psychosocial problem, 1(0.5%) families had high psychosocial problem, 41(20.50%) families had moderate psychosocial problems and 158(79%) had low psychosocial problems.

Table 2: Mean, standard deviation, range of psychological, and social and psychosocial problems of families residing at Arakkampakkam village.

<table>
<thead>
<tr>
<th>S.NO</th>
<th>DOMAINS</th>
<th>MEAN</th>
<th>S.D</th>
<th>MIN</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Psychological</td>
<td>15.93</td>
<td>3.032</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Social problems</td>
<td>16.89</td>
<td>2.231</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Psychosocial</td>
<td>33.98</td>
<td>4.235</td>
<td>19</td>
<td>40</td>
</tr>
</tbody>
</table>

The mean score of psychological problems of families was 15.93 with SD 3.032 and score ranged from 8 to 20, where as the mean score of social problems of families was 16.89 with SD 2.231 and score ranged from 8 to 20 and the mean score of psycho social problems of families was 33.98 with SD 4.235 and score ranged from 19 to 43.

Table 3: Comparison of level of psychological problems and social problems in families residing at Arakkampakkam village.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Dimension</th>
<th>No of Samples</th>
<th>Mean</th>
<th>Sd</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Psychological</td>
<td>200</td>
<td>15.93</td>
<td>3.032</td>
<td>1.824***</td>
</tr>
<tr>
<td>2</td>
<td>Social problems</td>
<td>200</td>
<td>16.89</td>
<td>2.231</td>
<td></td>
</tr>
</tbody>
</table>

*P<0.05, **P<0.01, ***P<0.001

It is elicited from above table that the t-value 1.824 at P<0.001 level is less than table value p=3.290, hence there was no statistically significant difference in the level of psychological problems and social problems in families residing at Arakkampakkam village.

Table 4: Correlation of level of social problems with psychological problems in families residing at Arakkampakkam village.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Domains</th>
<th>No of Samples</th>
<th>Mean</th>
<th>Sd</th>
<th>r-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Social problems</td>
<td>200</td>
<td>15.93</td>
<td>3.32</td>
<td>0.960**</td>
</tr>
<tr>
<td>2</td>
<td>Psychological</td>
<td>200</td>
<td>16.89</td>
<td>2.231</td>
<td></td>
</tr>
</tbody>
</table>

*P<0.05, **P<0.01

There is no statistically significant association of psychological problems with the selected demographic variables such as educational status, occupation, family income per month, type of family, number of family members, environmental status, physical health and mental health of families residing at Arakkampakkam village, since the table value (c² = 10.597*** ) was more than the calculated value at p<0.01 level.
NURSING PRACTICE

The community mental health nurse practitioners has a primary responsibility of preventing the psychosocial problems among families. Public health nurse working in the community needs to be trained in dealing with families with psychosocial problems.

RECOMMENDATIONS

- The study can be replicated in various settings.

CONCLUSION

The study concluded that most of the families had high social problem than the psychological and psychosocial problems.

ACKNOWLEDGEMENTS

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Conflict of Interest: Nil

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Conceptual Framework for Quality Care among Clients with Sickle Cell Disease through Nurse-Led Information Desk

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ABSTRACT

Sickle cell disease (SCD) is an inherited disease caused by an abnormal type of haemoglobin. It is one of the most common genetic blood disorders in the Gulf region, including Oman. The disease progresses through remissions and exacerbations and its intensity ranges from intense pain episodes to multi-system failure requiring admissions in the intensive care units (ICU). Many of these patients require frequent contact with the healthcare system and often find it difficult, or even impossible, to coordinate with all the required supportive services (physiotherapist, occupational therapist, dietician, etc) without assistance. Nurses are uniquely qualified to assume the responsibility of patient care coordination. The needs of SCD patients are diverse and comprises of pain management, transfusion & chelation therapy compliance, preventive of primary care issues and education. A Nurse-led information desk will serve as a useful vehicle in disseminating and modulating these issues. This store house of information aims at improving the Quality of Life among the SCD patients and also envisions at reducing the incidence of SCD in Oman. This paper conceptualizes the Nurse-led information and highlights the significance of such a structure in helping patients and their families manage the daily needs of living with a chronic disease. The conclusion emphasizes on the urgent establishment of this information desk to provide education and coordination services for the quantitative and qualitative improvement in the life-expectancy of patients with SCD in Oman. The empowering of the SCD patients and their communities will reflect in decreased re-hospitalizations and cost containment for the health care industry, which are the essence of quality care management.

Keywords: Nurse-led Information Desk, Clinical Nursing Practice, Sickle Cell Disease, Quality Care, Oman.

INTRODUCTION

Sickle Cell Disease (SCD) is an autosomal recessive disease caused by an abnormal type of haemoglobin, termed haemoglobin S (Hb S).¹ The disease progresses through remissions and exacerbations and its intensity ranges from intense pain episodes to multi-system failure requiring admissions in the intensive care units (ICU). The most common complications associated with SCD include vaso-occlusive pain crises (VOC), acute chest syndrome, severe anaemia, infection, cerebral vascular accidents, and multiorgan failure.² SCD is common in certain ethnic groups and is considered as one of the most common genetic blood disorders in the Gulf area, including Oman.³ The incidence of sickle cell disease and sickle cell trait in Omani neonates is 0.3% and 4.8% respectively.³ According to Oman Hereditary Blood Disorders Association (OHBDA 2011) statistics, Sickle Cell Disease spreads at a rate of about 6% among nationals, 0.2% of them are sufferers of the disease and a large proportion of them possess traits or are carriers of the gene. There is 25-50% chance of passing their genes to their children³⁵. Based on these burdening statistics, Al-Riyami⁶ suggested that future health planning for Oman should be undertaken by improving and strengthening the national programs for detection, genetic counseling and health education.

Davies⁷ emphasized that screening programs for SCD can reduce mortality and morbidity as a direct consequence of patient education and optimized clinical management. Petrou⁸ claims that testing, counseling and repeated education of individuals reinforces their knowledge and contributes to increasing awareness, such that individuals may consider this information when selecting a partner or prior to having children; women will present earlier
in pregnancy and are more likely to exercise their right to access prenatal diagnosis.

Nurses play a vital role in the preventive services of the health care industry. Their unique role in facilitating and coordinating health care services is well recorded in literature. Nurse-led clinics have significantly gained momentum over the past decades and is achieving greater heights with its innovative and dynamic strategies. Nurse-led clinics has introduced newer shades to the spectrum of caring within the health-illness continuum. Their focus vividly varies from preventive directives to palliative outcomes.

Literature articulates the widespread utility of nurse-led clinics in various facets of health specialty. A few evidences to these facts are the clinics for the management of non-communicable diseases, nurse-led care for asthma and nurse-led cardiac clinics. Not only are the diseases with worldwide prevalence targeted, but those significant to a region have also been successful. Some novel nurse initiated endeavors are reflected in the organization of palpitations clinic, telephone clinic for patients with intermittent claudication, radiology specialist nurse-led unit, and nurse-led clinics for childhood atopic eczema.

The strengths of these nurse-led clinics are multifaceted. Scott suggests that nurse-led palpitations clinic may provide a viable alternative to the traditional cardiology outpatient service for low risk cases. Kengne stated that nurse-led clinics (algorithm driven service delivery) stand as alternatives to overcome the shortage of trained physicians and other issues relating to access to care. Al-Dawoud emphasized that a structured follow-up system using a telephone clinic run by a skilled and specialized vascular nurse provides excellent support and effective surveillance in patients with intermittent claudication. Kengne noted a marked clinical improvement in most patients who attended a nurse-led asthma clinic at a primary level by the reduction in the number of their asthma attacks. Huang concluded that day-case diagnostic and interventional peripheral angiography procedures can be performed safely in a specialist nurse-led and administrated unit, with complication rates being within the accepted guidelines. According to Pagels the participants in the nurse-led clinic who chose home-hemodialysis rated their self care ability higher.

The role of a Nurse Practitioners in combating the war against SCD has been illuminated by Tany. She opines that Nurse Practitioners are in a key position to decrease the high rate of morbidity and mortality associated with this disease by providing consistent and comprehensive primary care. She compartmentalized the contribution of nurses in terms of effective monitoring and screening; effective pain treatment and continual education on prophylaxis. Lee emphasized that the improved survival rate among clients with SCD presents opportunities and challenges for home healthcare nurses in the management of adult patients with SCD. These endeavors has been summarized as the establishment of a self-care management and support system for adult patient with SCD.

The wide range utility and impact of nurse-led care arenas in the health care industry prompted the researchers to design a framework to implement a diverse information provision center for Sickle Cell Disease (SCD) in the Sultanate of Oman.

Conceptual Framework for Nurse-led Information Desk

The provision of structured information aimed at positively influencing clients to decide for establishing a healthy society requires to be built on a strong foundation. Cole claims that all Health Care Practitioners, knowingly or not, base their work on its theories and models. The use of Social Cognitive Model has greatly influenced the direction of preventive health behavior, as well as impacted on the way that we all deliver health care. Owing to its strong research foundation, Becker’s Health belief Model serves as the theoretical framework for establishing a nurse-led information desk on SCD. The model addresses the Client’s Perception as the baseline on which further decisions are to be conferred; Regulating Factors in terms of access to appropriate health professional support and Cues to Action as an intention to change with good social outcomes. The strong rationale to establish a healthy society through the provision of structured information has compelled the researchers to introduce concepts from Imogene King’s Theory of Goal Attainment to the proposed plan. According to Killeen A system is defined as a series of functional components connected by communication links exhibiting purposeful, goal directed behavior. King proposed a structure of three interrelated systems (personal, interpersonal and social systems) and concepts that define the physical and social environments within which human beings function. These three systems which make up King’s conceptual structure represent interconnected links for
communication of information in a high-tech world of health care and nursing.

Integrating the models to the current proposal, the Client’s Perception which is equated to Personal System in King’s model, is depicted as the personal concerns of clients with SCD (unpredictable trajectory, ineffective pain management, hopelessness & frustration); the Regulating Factors is projected as the Interpersonal System, which fosters a warm and cordial health talk with multidisciplinary health professionals to untangle their personal fears, anxieties and distressing expectations to life; the Cues to Action component is focused as the Social System, where in the individual with SCD decides based on the information obtained to improve the quality of his life and society.

**DISCUSSION**

Nurse Led information desk is an integral aspect of providing excellent care for patients with sickle cell disease. It serves as an asset for an individual with SCD (personal system) by encouraging them to become independent in their healthcare requirements. Family members also begin to relinquish their control on the decisions and care needed for the SCD patient. This letting go process is not easy and offering counseling and supportive assistance to patients and families is important. The scope of interpersonal function depicted in this model forecasts practicing nurses to provide information to the communities of clients with sickle cell disease and to offer themselves for workshops, speak up campaigns, and speaking engagements. This system of information outsourcing can alleviate the taboos of the disease and prepare the members in the community to predict & prevent potential complications for the SCD clients. The social system of the SCD clients is evolved as nurses liaison for the SCD community in the arena of education (school nurses, teachers, college professors) and employment (part-time employment). This horizon of roles played by nurses for SCD patients is within the scope of nursing and has been campaigned by Moore who emphasized that adequate time for education and demonstration of treatments can be achieved through nurse-led clinics.

The conceptual framework generated stems from an individual’s need and is made manifold by creating a health promotive web around the patient’s life events. Narayanasamy supports this stream of events and narrates the same phenomenon as ‘nurses incorporating individualized, holistic elements of care into practice and care delivery’.

The ultimate aim of these nurse-led clinics is to make their clients independent, well-informed and active participants in their own healthcare. Therefore, coordinating care through Nurse-led information desk must balance between, fostering independence and ensuring that patients receive optimal and appropriate healthcare. Lee summarizes this role of the nurses as a viable network to establish self-care management and support for adult patient with SCD. This network according to Lee serves as an essential component in the coordination of interdisciplinary health team members to reduce pain episodes and the potentially catastrophic complications of the SCD community. In addition, the home healthcare nurse serves as patient advocate for the transition from acute care to home, as well as advocate for healthcare maintenance.

The availability of nurse-led clinics will foster periodic health appraisal of the clients with SCD in Oman. This initiation from the client will help them to predict and prevent untoward effects in the well-being of the individual. The knowledge boosted significant others will help the affected individual to cope with their stressors in a therapeutic medium. These behaviors will contribute to early detection of complications, prompt hospitalization and efficient practice of post-hospitalization advice. Leschke’s cohort study among children and adults with sickle cell disease from 2003 to 2007 evidences that an outpatient visit is associated with lower rates of re-hospitalization. He concludes by saying that early follow-ups prevent subsequent hospitalization and improve care quality.
Implications for Nursing Practice

- Advocating for patients in the complex setting of today’s healthcare environment is a rewarding aspect to the clinical nurse’s daily experience of working with sickle cell patients.
- The autonomy role of the professional nurse is widened with nurse-led clinics which provide scope for expanded knowledge base, interdisciplinary collaboration and ground for research activity.
- The nurse-led clinic will serve as an example for evidence based nursing practice as it stems from a researched grounded conceptual framework.
- Empowering the SCD patients and their communities will result in prompt recognition of an exacerbation, early initiation of treatment, disability limitation which drastically reduces the hospital stay and cost containment for the health care industry.

CONCLUSION

The escalating prevalence of Sickle cell disease (SCD), poor screening programs and the existence of strong theoretically grounded framework should prompt researchers targeting on decreasing the dominance of SCD to initiate nurse-led information desk in countries with greater SCD population. It is hypothesized that the information provided to a small percentage of the population will reach many through Snow Ball sampling. The search for information is the most distressing and anxious-provoking situation for people with SCD or at risk for SCD. We as health professionals are strategically placed to provide information which can serve as the greatest asset to the SCD community. Davies’ concludes his article by stating that ‘any change-management process needs to be embedded on continuing professional education and, in addition, would benefit from the development of agreed multidisciplinary protocols and standards that can be audited for effectiveness and achievement’.

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A Study to Assess the effectiveness of Planned Teaching Programme on Knowledge Regarding Osteoporosis among Hospital Aides in a Selected Hospital at Mangalore

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ABSTRACT

Objectives: The study was conducted to assess the effectiveness of teaching programme on Osteoporosis among Hospital Aides

Materials and methods: Evaluative approach was employed with pre experimental one group pre test post test design. The sample consisted of 80 Hospital Aides selected using purposive sampling technique.

Results: The mean post-test knowledge score ($x_2=31.19$) was higher than the mean pre-test knowledge score ($x_1=17.15$). The post-test score ranged from 24-37 and that of pre-test ranged from 7-23. The mean difference between post-test and pre-test knowledge score was highly significant ($t_{79}=30.43$) ($t_{79}=1.66$ at 0.05 level). There was no significant association between pre-test knowledge scores and selected variable like age ($x^2_{1}=1.384$), family income ($x^2_{1}=2.043$), years of experience ($x^2_{1}=3.152$), and education ($x^2_{1}=0.075$) at $P > 0.05$.

Conclusion: Planned Teaching Programme was effective in enhancing the knowledge regarding Osteoporosis among Hospital Aides.

Keywords: Knowledge; effectiveness; Planned Teaching Programme; Hospital Aides

INTRODUCTION

Better medical care has made the elderly the fastest growing section of society and there is an increasing propensity to age related disorders, of the various disorders one which has not received sufficient attention till date is Osteoporosis.¹ Osteoporosis is a skeletal disease characterized by low bone mass and micro architectural deterioration of bone tissue with a consequent increase in bone fragility and susceptibility to fractures.¹

Osteoporosis is highly prevalent in India, an estimated 61 million people in India are reported to be affected by it out of total osteoporotic population 50% are women that is 30 million women. About 35% of the postmenopausal women are osteoporotic. It is projected by the year 2030 the population of postmenopausal women will be second highest in the world.²

It occurs more common in women than in men. It is estimated that up to 33% of women by age 90 will have experienced a hip fractures as a result of osteoporosis.³ By the year 2020 it is estimated that 50% of Americans older than 50 years will either have or be at risk for having osteoporosis.⁴ Most powerful tool to reduce the incidence of osteoporosis is prevention through health education.⁵

Osteoporosis has become a silent epidemic affecting many millions worldwide. Bone mass and bone density increases the most during childhood and adolescence and peak bone mass maximized by the age of 30. Young adults are targeted for Osteoporosis prevention.⁶ When a women is in her mid 30s begins losing bone mass at the rate of 0.5% to 1% every year. After menopause the loss speeds up, women may lose 15% of their bone mass in the following 5 years of menopause.⁷ Educating health care providers has potential to affect more women than educating women
directly, as each health care provider can, in turn, educate women. Women’s knowledge of Osteoporosis have been explored in number of settings shown low level of Osteoporosis knowledge.

MATERIAL AND METHOD

Settings and design

It was an evaluative study conducted in 3 hospitals of Mangalore, Karnataka in September 2010.

Sample size and sampling design

Based on the pilot study findings, the samples selected for this study were 80 Hospital Aides from selected hospital by Purposive Sampling technique

Study instrument

Mainly 2 tools were used to gather data from the participants. Background information of the participants was collected with the help of Tool 1: Baseline proforma. Knowledge on Osteoporosis was assessed by administering Tool 2: Structured knowledge questionnaire on Osteoporosis. Reliability was established and pilot study was conducted among nine Hospital Aides.

Study variables

Study had Independent variable like planned teaching programme on Osteoporosis and Dependent variables was Knowledge on Osteoporosis. Extraneous variables included in the study were Age, educational status, religion, family income, years of clinical experience as Hospital Aide, source of health information.

Data collection procedure

The study was approved by the ethical committee and permission was obtained from medical officers of respective hospitals. Written consent was obtained from all the participants.

Structured knowledge questionnaire on Osteoporosis was administered along with baseline proforma. After the assessment of knowledge planned teaching programme on Osteoporosis was provided using Lecture Cum Discussion method for 60 minutes with help of AV aids, charts and PowerPoint. Post test was conducted on 7th day of the teaching session.

Statistical application

Data gathered were analyzed using SPSS 16.0 version in terms of frequency and percentages. The effectiveness of planned teaching programme on Osteoporosis was analysed by paired ‘t’ test. Chi-square test was used to find the association of pre-test knowledge with selected baseline variables.

RESULTS

In the present study, majority 44% were in the age group between 18-24 years, 58% were married, 60% had completed secondary education, 45 % of them got health information from TV, Majority 51% had above 10 years of clinical experience as Hospital Aides

Study found that the pre-test knowledge of 50 (62.5%) of Hospital Aides was average but 50(62.5%) subjects post-test knowledge was good and 29(36.3%) subjects had excellent knowledge score in post test indicating that there was significant improvement in the knowledge scores of Hospital Aides after attending the planned teaching programme.[Table 1]

Chi-square test value computed between pre-test knowledge score and selected variables such as age ($\chi^2_{(2)}=1.384$), family income ($\chi^2_{(2)}=2.043$), religion ($\chi^2_{(1)}=0.440$), marital status ($\chi^2_{(1)}=0.416$), exercise ($\chi^2_{(2)}=0.747$), age of menarche ($\chi^2_{(2)}=1.578$), number of children ($\chi^2_{(1)}=1.071$), education ($\chi^2_{(1)}=0.075$), diet ($\chi^2_{(1)}=0.005$), years of experience ($\chi^2_{(1)}=3.152$) was not significant at 0.05 level and there is no significant association between pre-test knowledge level and the selected demographic variables.

Table 1: Distribution of Subjects According to the Grading of Pre-test and Post test Knowledge Score

<table>
<thead>
<tr>
<th>Range of knowledge score</th>
<th>Range of percentage</th>
<th>Category</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>0-16</td>
<td>0-40</td>
<td>Poor</td>
<td>30</td>
<td>37.5</td>
</tr>
<tr>
<td>17-24</td>
<td>41-60</td>
<td>Average</td>
<td>50</td>
<td>62.5</td>
</tr>
<tr>
<td>25-32</td>
<td>61-80</td>
<td>Good</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>33-40</td>
<td>81-100</td>
<td>Excellent</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Maximum score=40
Table 2: Area wise Mean Percentage and Mean Gain of Pre-test and Post-test Knowledge Score of Hospital Aides.

<table>
<thead>
<tr>
<th>Area</th>
<th>Mean %</th>
<th>Mean %</th>
<th>Actual gain(A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre-test</td>
<td>Post test</td>
<td></td>
</tr>
<tr>
<td>Meaning</td>
<td>48.54</td>
<td>73.33</td>
<td>24.79</td>
</tr>
<tr>
<td>Incidence</td>
<td>32.50</td>
<td>75.31</td>
<td>42.81</td>
</tr>
<tr>
<td>Risk factors</td>
<td>32.50</td>
<td>71.67</td>
<td>39.17</td>
</tr>
<tr>
<td>Clinical features</td>
<td>57.19</td>
<td>94.69</td>
<td>37.50</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>10.00</td>
<td>77.50</td>
<td>67.50</td>
</tr>
<tr>
<td>Types</td>
<td>47.50</td>
<td>65.00</td>
<td>17.50</td>
</tr>
<tr>
<td>Prevention</td>
<td>49.17</td>
<td>80.83</td>
<td>31.67</td>
</tr>
<tr>
<td>Treatment</td>
<td>39.46</td>
<td>72.32</td>
<td>32.86</td>
</tr>
<tr>
<td>Complication</td>
<td>46.88</td>
<td>96.25</td>
<td>49.37</td>
</tr>
</tbody>
</table>

The data in table 2 shows that the mean pre-test score is highest (57.19%) in the area of “clinical features” and least (10%) in the area of “diagnosis”. Maximum gain of knowledge (67.50%) is in the area of “diagnosis”. and knowledge score has increased in the areas of meaning, incidence, risk factors, clinical features, types, prevention and complication.

Table 3: Range, Mean, and Standard Deviation of Pre-test and Post-test Knowledge Score

<table>
<thead>
<tr>
<th>Knowledge Score</th>
<th>Range</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>7-23</td>
<td>17.15</td>
<td>3.261</td>
</tr>
<tr>
<td>Post test</td>
<td>24-37</td>
<td>31.19</td>
<td>3.195</td>
</tr>
</tbody>
</table>

The data in table 3 shows that range of post-test knowledge score(24-37) was higher than that of pre-test knowledge score(7-23). It was evident from the table that the mean post test knowledge score (x₂ = 31.19±3.195) was higher than the mean pre-test knowledge score (x₁ = 17.15±3.261).

Table 4: Mean, Mean Difference, Standard Deviation and ‘t’ value Between Pre-test and Post-test Knowledge Scores of Hospital Aides

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-test</th>
<th>Post test</th>
<th>Mean difference</th>
<th>SD difference</th>
<th>t value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge score</td>
<td>17.15</td>
<td>31.19</td>
<td>14.04</td>
<td>4.13</td>
<td>30.43*</td>
</tr>
</tbody>
</table>

The data in Table 4 shows that the mean post-test knowledge score (x₂ = 31.19) is higher than the mean pre-test knowledge score (x₁ = 17.15). The computed ‘t’ value (t₀₉₉₃.₀ₔ₃) is greater than the tabled value (t₀₉₉₀.₆₆₆, P<0.05). There was significant difference between the mean pre-test and mean post-test knowledge scores and the planned teaching programme was effective in increasing the knowledge level of the Hospital Aides.

DISCUSSION

Present study found significant improvement in post test knowledge scores on Osteoporosis compared to the pre test scores. A study conducted on the effectiveness of Planned Teaching Programme on knowledge about complementary feeding among mothers of infants. The findings are congruent with the present study in which the mean post-test knowledge (x₂ = 32) was higher than the mean pre-test knowledge score (x₁ = 14).10

The findings are consistent with another study conducted on college age women in Michigan, where mean pretest knowledge score mean=15.98, SD=3.59; t=12.40, p<0.05 and post test knowledge score mean=20.20, t=12.40.11

The strength of the study was that it empowered the Hospital Aides with knowledge on Osteoporosis which they can serve the society.

CONCLUSION

Present study made an effort to identify the existing knowledge of Hospital Aides on Osteoporosis and to provide them with planned teaching programme through AV Aids to enhance their knowledge by which they can serve the society in an effective manner. It was found that Hospital Aides had lack of knowledge on Osteoporosis in the pre test assessment which were significantly improved after attending the planned teaching programme. Hence the study concluded that the planned teaching program was very effective in enhancing the knowledge of Hospital Aides on Osteoporosis.

Source of Support: Nil

Conflict of interest: None declared.
REFERENCES

Efficacy of Reflective Learning Package on Reflective Writing, and Critical Thinking Ability of Undergraduate Students on Head Injury in Selected Nursing Colleges of Udupi District

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ABSTRACT

Reflective learning fosters the elaboration of thinking process. The study was aimed to determine the efficacy of reflective learning package in terms of reflective writing and critical thinking ability of students. A quasi experimental design was adopted using reflective essay writing (r = 0.90) and flow chart (r = 0.70) on closed head injury, questionnaire on critical thinking ability tools (r = 0.74), construct validity (r = 0.61) data was collected from 92 samples. On day one of the clinical posting pre-test was given for both the groups. On the eight day of the clinical posting the experimental group was introduced to reflective learning followed by group discussion and using simulated scenario. The post test was carried out on the on twenty eight day for both the groups. Results revealed there was difference in critical thinking ability scores among the experimental and control group subjects (t=32.729). Also there was a significant positive correlation between the pre-test scores of reflective learning ability (r = 0.910) and critical thinking ability (r = 0.937). It was concluded that reflective learning package was found to be effective in improving the reflective learning ability and critical thinking ability of nursing students.

Keywords: Reflective Learning, Reflective Writing, Critical Thinking, Undergraduate Nursing Students, Head Injury.

INTRODUCTION

Nurses in their professional practice are required to perform independent responsibilities and make sound judgments. The nature of problems encountered by nurses in the day to day clinical setting is multifarious. Actual problems often do not fit the theories taught in the class room. The challenge of professional education is the preparation of competent practitioners who can translate theory into practice. The practitioners need to learn to take into account the contextual variables in each human interaction, rather than taking text book knowledge for granted. Students have to learn to see the world for themselves because the teacher cannot see the world on behalf of the student. A reflective practice can help form a bridge between the worlds of theory and practice. In the Indian scenario reflective practices are not yet emerged. Hence the researcher planned to introduce the reflective learning concept in the form of teaching and learning package in a particular clinical area.

Reflection is a multifaceted concept. It consists of the intellectual and affective dimensions. Reflection occurs when the individuals acts on the feeling, recaptures the experience and makes the inferences, generalizations, and evaluations. Reflection helps to turn each experience in to another learning experience. Reflective education aims to help students to take each client encounter as unique and constantly arrive at a constantly new or revised interpretation of the meaning of an experience. This guides and validates subsequent action.
Reflection can be written or non-written/verbal. Journal writing, essay, flow charts, diary, logbook and dialogue are the commonly used strategies in promoting reflective learning among students. Reflective writing fosters the elaboration of thinking processing as one attempts to express and communicate one’s feelings and knowledge through words. It helps to capture or preserve thoughts. It serves to strengthen the linkage between theory and practice; develop insights and validate assumptions among students during disclosure. This helps in deeper understanding of the issues. Dialogue is a form of reflective conversation. Engaging in dialogue can enhances one’s ability to form perspectives.

**MATERIALS AND METHOD**

The study was conducted among 92 3rd year BSc Nursing degree students, control and experimental group was selected from the same group of institution considering the homogeneity theoretical knowledge and clinical exposure. A quasi experimental design with pre-test, post-test control group design was used for the study.

**STUDY INSTRUMENTS**

The study instruments were reflective writing ability tool and critical thinking ability tool. The reflective writing ability tool had two parts; Part-I included reflective learning essay and part-II included flow chart on closed head injury. The tool consisted of 6 areas. Rubric scoring system was adopted for scoring. Essay scoring areas were; Introduction with major components (with 5 scores), key points (22 key points with two scores each), Cause and effect relationship (with 2 scores each) restriction of wordings (two score), Time limits (two score), Logical organization of major components (one score). The total score was 66. The scores were arbitrarily classified as: unsatisfactory (0-21), satisfactory (22–44) and Good (45 - 66).

Part III flow chart on closed head injury; had following areas: title, terminology, logical organization, flow of arrows, cross links and neatness. The tool consisted of 21 terminology and 24 flows of arrows. Each terminology was scored as two points, if meaning is written it was scored as one point and each flow of arrows were scored as one point, six arrows had cross links, those, each arrows were scored as two points. Neatness score was one. Logical organization / hierarchy score was two points. Title score was one. The total maximum score was 81. The scores were arbitrarily classified as: unsatisfactory (0-26), satisfactory (27–53) Good (54-81). Rubric scoring system was adopted for scoring. The established reliability coefficient was 0.91.

**Rubric scoring system**

Rubrics are rating scales-as opposed to checklists-that are used with performance assessments. They are formally defined as scoring guides, consisting of specific pre-established performance criteria, used in evaluating student work on performance assessments. Rubrics are typically the specific form of scoring instrument used when evaluating student performances or products resulting from a performance task. There are two types of rubrics: holistic and analytic. Holistic requires the teacher to score the overall process or product as a whole, without judging the component parts separately. In contrast, in analytic the teacher scores separate, individual parts of the product or performance first, then sums the individual scores to obtain a total score.

There are six score points in the analytic scoring for an essay, each score points are: focus, support/elaboration/key points, organization, Conventions (word restriction, time limit), integration. The total points depend upon the focus and elaboration. The Integration score is multiplied by two points, rest of the areas two points is awarded. The total points are categorized as satisfactory and unsatisfactory or teacher can make templates under four category “beginning, developing, accomplishing and exemplary by converting to four scale score points. First two categories is considered as unsatisfactory and third and fourth category is considered as satisfactory. For the flow charts instead of integration flows of arrows / cross links are considered. Categorization is the same way as for an essay. In the present study total points were categorized to satisfactory and unsatisfactory.

Tool: 2 was critical thinking ability tool on head injury; The tool consisted of 39 items, which were of multiple choice types of questions. For every correct response a score of one was given, each incorrect response was scored as zero point. The maximum score was 39. The score were arbitrarily scored as: Poor (0-12), Average (13 - 25), and Good (26 - 30). The items were prepared based on the following areas of head injury; Anatomy and physiology, cranial nerves, pathophysiological mechanisms, clinical features, diagnosis, management and complications. The major
elements of critical thinking ability were interpretation, analysis, explanation, and inference. Construct validity of critical thinking ability tool Since no standardized tool was available on this particular topic, convergent construct validity was established by using Delphi technique. Constructs were identified from the tool. Blue print was prepared by categorizing the items under each construct. Along with the criteria checklist, tool was given to panel of experts for validation. Experts were requested to rate the tool in terms of “Strongly agree, Agree, Agree with modification”. Total variance and item variance was computed. Established reliability was 0.6029.5

Data collection procedure

On the day one pre-test was conducted for 47 students of the control group and on eight day post-test was done. The data of experimental group was conducted after control group. On day one pre-test was given. Followed by a session on reflective learning which included reflective activity (essay and flow chart development) a simulated scenario on mechanically ventilated open head injury patient and a closed head injury. Investigator initiated the discussion session with an opening question “what do you understand by reflective learning”? Followed by, introducing the students to reflective learning, by discussing the meaning, purpose and types of reflective learning. The students were requested to reflect back on their clinical exposure of a head injury patient on clinical presentation, diagnosis, management of the patient, whom they have taken care during their clinical posting. They were asked to relate the case to the present scenario. Further probing question were asked to make the concept clear. On the same day students were asked to complete the critical thinking questionnaire on head injury.

Students were asked to write down the component, and key points under each component. Randomly selected two students were asked to read out, what were the key points they had written down. The investigator added the additional component and the key points which the students had missed. Students were asked to elaborate the key points and write it under each component in paragraph. Further students were asked about the cause and effect relationships of these components, missed out points were explained to them by the investigator. Students were asked to score the reflective essay written by them, investigator also explained to the students about the scoring system of reflective essay. Then from the major component and key points, students were asked to develop a flow chart. Randomly two students were selected and were asked to read the flow chart prepared by them. The investigator then discusses about the major sections, terminology, flows of arrows and cross links and about the scoring system. The duration of the discussion session was one hour and 10 minutes. The post test was carried out on the twenty eight day that is at the end of their clinical posting, on closed head injury students were asked to prepare essay and flow chart on simulated scenario. On the same day post-test on critical thinking questionnaire on head injury was done.

RESULTS

Kolmogrov-Smirnov goodness Fit test was computed to ensure the normality. Pre-test and post-test reflective writing score (Essay on closed head injury) reveals the mean percentage pre-test score of the experimental group ranged from 0 to 30.77. Whereas in the post-test mean percentage score ranged from 60.3 to100 (Refer table 1).

<table>
<thead>
<tr>
<th>Areas on reflective writing</th>
<th>Maximum possible score</th>
<th>Mean percentage</th>
<th>Actual gain score%</th>
<th>Pretest Score%</th>
<th>Posttest Score %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Component</td>
<td>5</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>1</td>
</tr>
<tr>
<td>2. Key words</td>
<td>52</td>
<td>30.77</td>
<td>90.8</td>
<td>60.03</td>
<td>0.44</td>
</tr>
<tr>
<td>3. Logical organization</td>
<td>1</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>1</td>
</tr>
<tr>
<td>4. Cause &amp; effect relationship</td>
<td>4</td>
<td>0</td>
<td>100</td>
<td>100</td>
<td>1</td>
</tr>
<tr>
<td>5. Restriction of wordings</td>
<td>2</td>
<td>50</td>
<td>100</td>
<td>50</td>
<td>1</td>
</tr>
<tr>
<td>6. Restriction of timings</td>
<td>2</td>
<td>0</td>
<td>50</td>
<td>50</td>
<td>1</td>
</tr>
</tbody>
</table>

(Maximum score= 66)

The mean percentage pretest score of the experimental group ranged from 0 to100. The highest mean pretest percentage score was in the area of “terminology”. Whereas in the posttest mean percentage score ranged from 75 to100. (Refer table 2).
Table 2: Area wise mean percentage pretest and posttest reflective writing score (Flow chart on closed head injury) in actual gain and modified gain of experimental group.

<table>
<thead>
<tr>
<th>Areas on reflective writing (Flow chart)</th>
<th>Maximum possible score</th>
<th>Mean percentage</th>
<th>Actual gain score%</th>
<th>Pretest Score%</th>
<th>Posttest Score %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Terminology</td>
<td>32</td>
<td>37.5</td>
<td>87.5</td>
<td>50</td>
<td>0.80</td>
</tr>
<tr>
<td>2. Logical organization</td>
<td>4</td>
<td>25</td>
<td>100</td>
<td>60.03</td>
<td>0.80</td>
</tr>
<tr>
<td>3. Flow of arrows</td>
<td>12</td>
<td>33.33</td>
<td>100</td>
<td>67.67</td>
<td>1.01</td>
</tr>
<tr>
<td>4. Cross links</td>
<td>8</td>
<td>0</td>
<td>75</td>
<td>75</td>
<td>0</td>
</tr>
<tr>
<td>5. Neatness</td>
<td>1</td>
<td>100</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Maximum score = 66

The mean posttest scores of experimental group (66.266) was significantly higher than the pretest score (33.90). The ‘t’ value was found significant t(44)=32.58 (Refer table 3).

Table 3: Mean, Mean difference, Standard Error of Mean Difference on reflective learning ability in pre- test and post test scores of experimental group subjects.

<table>
<thead>
<tr>
<th>Mean</th>
<th>Mean M</th>
<th>SD</th>
<th>SD</th>
<th>SE</th>
<th>t</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>33.80</td>
<td>66.27</td>
<td>13.64</td>
<td>2.034</td>
<td>32.58</td>
<td>44</td>
<td>Significant</td>
</tr>
<tr>
<td>posttest</td>
<td>100.8667</td>
<td>100.8667</td>
<td>100.8667</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

t(44)=2.02 p<0.05

The mean post- test reflective learning ability scores (35.10) were apparently higher than their pretest score (32.51). The t value computed was 4.89, which was found to be significant at 0.05 level. This could be due to the effect of testing in control group (Refer table 4).

Table 4: Mean, Mean difference, Standard Error of Mean Difference and ‘t’ value of pre- test knowledge on reflective learning ability of control group subjects.

<table>
<thead>
<tr>
<th>Mean</th>
<th>Mean M</th>
<th>SD</th>
<th>SD</th>
<th>SE</th>
<th>t</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>32.51</td>
<td>2.59</td>
<td>3.64</td>
<td>0.530</td>
<td>4.90</td>
<td>46</td>
<td>Significant</td>
</tr>
<tr>
<td>posttest</td>
<td>35.11</td>
<td>35.11</td>
<td>35.11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

t(46)=2.02 p>0.05

The mean gain in reflective learning ability in experimental group (67.0667) was higher than the control group (2.5958). This indicates that the students exposed to reflective learning package had improved reflective writing scores. (Refer table 5).

Table 5: Mean, Standard deviation, Mean gain, Pretest and Post test scores of Experimental and Control group subjects.

<table>
<thead>
<tr>
<th>Reflective learning ability</th>
<th>Experimental group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean PretestPost test</td>
<td>33.80100.8667</td>
<td>32.510635.106</td>
</tr>
<tr>
<td>Standard Deviation PretestPost test</td>
<td>2.982.96</td>
<td>35.7912.53</td>
</tr>
<tr>
<td>Mean % PretestPost test</td>
<td>26.2027.20</td>
<td>26.2027.20</td>
</tr>
<tr>
<td>Mean Gain</td>
<td>67.0667</td>
<td>2.5958</td>
</tr>
</tbody>
</table>

The mean gain reflective writing scores among the experimental group subjects (67.07) and the control Group (2.59) and the ‘t’ value computed was t(90)=30.87 P< 0.05, indicating that the difference is a true difference. (Refer table 6).
Table 6: Mean Gain, Mean difference, Standard Error of Mean Difference and ‘t’ value of Reflective Learning Ability scores among experimental and control group subjects. 

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Gain</th>
<th>Mean D</th>
<th>SEMD</th>
<th>‘t’ value</th>
<th>df</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group</td>
<td>67.07</td>
<td>63.67</td>
<td>2.065</td>
<td>30.87</td>
<td>90</td>
<td>Significant</td>
</tr>
<tr>
<td>Control Group</td>
<td>2.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t(90) = 1.99 \ p<0.05 \]

The mean posttest critical thinking ability score the experimental group subjects (28.91) was higher than the mean of the pretest critical thinking ability score (11.47). Where as in control group subjects, the mean pretest and posttest scores were almost similar. Thus, indicating a gain in critical thinking ability score, within the experimental group subjects. (Refer table 7).

Table 7: Mean and Standard Deviation of Pretest and Posttest Critical Thinking Ability on Head injury in Experimental and Control Group Subjects. 

<table>
<thead>
<tr>
<th></th>
<th>Control Group</th>
<th>Experimental Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=47</td>
<td>N=45</td>
</tr>
<tr>
<td></td>
<td>Mean Range SD</td>
<td>Mean Range SD</td>
</tr>
<tr>
<td>Pretest</td>
<td>13.17 8-20 2.81</td>
<td>11.47 7-17 1.98</td>
</tr>
<tr>
<td>Posttest</td>
<td>12.51 9-18 2.08</td>
<td>28.91 20-35 2.99</td>
</tr>
</tbody>
</table>

Maximum possible score= 39

The posttest mean percentage score of experimental group ranged from 66.66 to 90.92. The maximum actual gain was in the area of explanation (0.67). (Refer table 8).

Table 8: Area wise Mean Percentage Pretest and Posttest, Actual Gain and Modified Gain Critical Thinking Ability score in Experimental Group subjects. 

<table>
<thead>
<tr>
<th>Areas on critical thinking ability</th>
<th>Maximum possible score</th>
<th>Mean percentage</th>
<th>Actual gain score%</th>
<th>Modified gain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest Score %</td>
<td>PosttestScore %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Interpretation</td>
<td>10 30</td>
<td>70</td>
<td>40</td>
<td>0.57</td>
</tr>
<tr>
<td>2. Analysis</td>
<td>9 22.22</td>
<td>88.88</td>
<td>66.66</td>
<td>0.86</td>
</tr>
<tr>
<td>3. Explanation</td>
<td>11 36.36</td>
<td>90.92</td>
<td>54.56</td>
<td>0.86</td>
</tr>
<tr>
<td>4. Inference</td>
<td>9 33.33</td>
<td>66.66</td>
<td>33.33</td>
<td>0.34</td>
</tr>
</tbody>
</table>

Maximum score= 39

There was a gain in mean critical thinking ability scores among the experimental group subjects (59.99). The ‘t’ value computed was \[ t=32.73 \ P< 0.05 \], indicating that the difference is a true difference (Refer table 9 and 10).

Table 9: Mean, Standard deviation, Mean gain, Pretest and Post test scores of Experimental and Control group subjects. 

<table>
<thead>
<tr>
<th>Critical thinking ability</th>
<th>Experimental group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>PretestPost test</td>
<td>13.1728.71</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>PretestPost test</td>
<td>1.982.99</td>
</tr>
<tr>
<td>Mean %</td>
<td>PretestPost test</td>
<td>33.7673.61</td>
</tr>
<tr>
<td>Mean Gain</td>
<td></td>
<td>51.99</td>
</tr>
</tbody>
</table>
Table: 10  Mean Gain, Mean difference, Standard Error of Mean Difference and ‘t’ value of critical thinking among experimental and control group subjects.

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Gain</th>
<th>Mean D</th>
<th>SEMD</th>
<th>‘t’ value</th>
<th>df</th>
<th>Level of Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental Group</td>
<td>51.99</td>
<td>18.05</td>
<td>0.55</td>
<td>32.73</td>
<td>90</td>
<td>Significant</td>
</tr>
<tr>
<td>Control Group</td>
<td>2.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$t(90) = 1.99 \ p<0.05$

The correlation between pretest critical thinking ability and reflective writing ability scores was highly significant ($r=0.937$), hence it was concluded that critical thinking ability and reflective writing ability was interdependent.

**DISCUSSION**

This finding is supported by Perry’s study on reflective writing, he reports that students need to develop an awareness of reflection and how these may be employed to develop better quality reflective writing and more controlled and informed assessment of that writing if required. The role of reflection in the learning process, and its link to deep learning in taxonomies of learning objectives. This study finding has very important implications towards nursing education. Considering quality of learning; Considering nursing research; Reflective learning can be implemented in every step of nursing practice. Further research studies needs to be conducted to develop standard reflective logs and diary.

**Conclusion:** If we wish our students to become effective learners, educators need to be concerned with the students’ approaches of learning, and how we can influence it. Students’ resistance, Teachers’ bears the responsibility.

**REFERENCES**

Learning Style Adopted by Post Graduate Nursing Students of Selected Nursing Colleges of Dakshina Kannada and the Strategies to Improve the Learning Styles of Learners

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ABSTRACT

Learning involves the acquisition of knowledge. This has learning implications towards how to teach, present information or to evaluate the learners in classroom as well as during their clinical exposure. This evaluation process shouldn’t be a mere rote assessment. It should focus on utilization of acquired knowledge. The learner receives and takes in information in different ways. The learning style adopted by learner would be different. Learning styles adopted by the post graduate nursing students of D Karnataka was assessed using a learning style inventory instrument. The study findings revealed that majority of the students adopted surface learning approaches.

Keywords: Learning Style, Post Graduate Students, Selected Colleges Of Nursing, Dakshina Kannada, Strategies.

INTRODUCTION

Learning is a holistic process of adaptation to the world. It is not just the result of cognition but involves the integrated functioning of the total person—thinking, feeling, perceiving, and behaving. Students preferentially take in and process information in different ways: by seeing and hearing, reflecting and acting, reasoning logically and intuitively, analyzing and visualizing, steadily and in fits and starts. When mismatches exist between learning styles of students in a class and the teaching style, the students may become bored and inattentive in class, do poorly on tests, get discouraged about the courses, the curriculum etc. The important implications for learning are differences in students’ learning styles which is the characteristic ways of taking in and processing information.

MATERIALS AND METHOD

A study was conducted to identify the learning styles adopted by the Post Graduate Nursing Students of Dakshina Kannada. Objectives of the study were to identify the learning style adopted by the post graduate nursing students. The study adopted a survey approach, sampling technique was purposive sampling, and sample size was 50 postgraduate students of Dakshina Kannada. Learning style inventory was used as a data collection instrument.

The study findings were as follows; sample characteristics; 40 (80%) of the samples belonged to 20 – 25 age group, 6(12%) of the samples belonged to 26 – 30 age group, and 4 (8%) of the samples belonged to 31 – 35 age group. None of them were 36 and above age group. Medical Surgical nursing specialty students were 16 (32 %), 18(36%) of the students belonged to Child Health Nursing Specialty, 10 (20%) of the students belonged to Obstetric and Gynecological Nursing Specialty, and 6 (12 %) of the students belonged to Community Health Nursing Specialty.

Majority of the students, 29(58%) had adopted surface learning approach under the category of Visual approach, none of them adopted auditory approach alone, whereas 26 of them had adopted visual and auditory approaches. Most of the students 9(18%) had adopted deep learning approach under the category of analytical, and 5 had adopted interpretive approach. Whereas 12 (24%) of them had adopted surface learning approach and deep learning approaches.

Strategies to improve the learning styles of learners

Today’s post graduate students are the future nurse
educators. They need to be made aware of the advantages and disadvantages of each learning styles. Always, deep learning approaches has greater benefit over surface learning approaches. Our teaching and learning styles need to be more focused on the deep learning approaches.

**Surface Learning And Deep Learning**

“Deep Learning” is with intrinsic motivation and “surface Learning” is with extrinsic, but they are not necessarily the same thing. Either approach can be adopted by a person with either motivation. The features of Deep and Surface approaches are summarized in Table 1. Tremendous efforts are required by teachers to convey that what they want is deep learning, by getting the surface learners to engage in more complex contextualizing exercises.

<table>
<thead>
<tr>
<th>Deep Learning</th>
<th>Surface Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus is on “what is signified”</td>
<td>Focus on unrelated parts of the task</td>
</tr>
<tr>
<td>Relates previous knowledge to new knowledge</td>
<td>Information for assessment is simply memorized</td>
</tr>
<tr>
<td>Relates knowledge from different courses</td>
<td>Facts and concepts are associated unreflectively</td>
</tr>
<tr>
<td>Relates theoretical ideas to everyday experience</td>
<td>Principles are not distinguished from examples</td>
</tr>
<tr>
<td>Relates and distinguishes evidence and argument</td>
<td>Task is treated as an external imposition</td>
</tr>
<tr>
<td>Organises and structures content into coherent whole</td>
<td>Emphasis is external, from demands of assessment</td>
</tr>
<tr>
<td>Emphasis is internal, from within the learner</td>
<td></td>
</tr>
</tbody>
</table>

Deep Learning focuses on the higher level of learning. That is the contextualized level of “understanding” which comes only with attempting to evaluate ideas and to try them out in new ways, or to “create” with them. Deep Learning approaches are analytical, interpretive, Problem Based learning, Reflective Practices, helps to achieve this contextualized level of “understanding” 3. It is expected at Master’s level, It should be instilled during the UG level itself. Is Examination a punishment for our learner? Or to showcase the expertise of the teacher. Yes, if we don’t prepare them. To prepare them, there should be planning, organization, and evaluation.

There is a third approach known as the “Achieving” or strategic approach. It is a very well-planned, organized and evaluated, form of deep learning approach through Surface approach, and in which the motivation is to get good scores / performance. The exercise of learning is construed as a game, so that acquisition of technique/skill/knowledge improves performance. 12 If the performance is found to be poor, a strategic assessment is required. Most focused strategic assessment is SWOT Analysis. The process of assessing the Strengths, Weakness, and Opportunities & Threats (SWOT) of particular system or organization based on strategic SMART objectives. Followed by– strategic actions, evaluation and revised action plans. 13 To achieve the strategic approach, we need to strengthen our evaluation system. The evaluation system should be more focused and strategic in clinical as well as the classroom learning activities. Have a look at the system of examination, are we focused, levels of question papers etc. Prepare the learners with the different levels of questions. Employing an effective strategic plan as a individualized blueprint for action can make a difference.

**CONCLUSION**

The most significant and unaccounted variable in educational innovation is enthusiasm. When teachers haven’t got it, regardless of the sophistication of their strategies, tactics and underlying theories we may not achieve our goal. With vibrant enthusiasm focused planning and evaluation reflecting appropriate learning styles we can achieve our ultimate goal of bridging the gap between theory and practice.
REFERENCE

12. SWOT Analysis is an Essential Tool in Strategic Planning, guided by templates article.tqmcasestudies.com retrieved on December 20, 2010.
Job Stress among the Nursing Staff Working in Rural Health Care Set Up

Ashok Jondhale1, Deepak Anap2

1Lecturer, School of Bioscience Management, 2Asso. Professor, COPT, PIMS, Loni

ABSTRACT

This paper describes the level of job stress among the nursing staff working in rural health care set up. A study was conducted aiming at assessment of job stress among staff nurses working in rural hospitals. Results of the study show that almost half of the nurses experience moderate level of job stress. This attributed to various situations in the ward over which nurses may or may not have direct control. Hazardous situations in the wards (1.40±0.22) causes more stress among nurses compared to any other areas. As nurses are directly involved in patient care who may be seropositive, abusive or violent; these all situations are hazardous for the nurses. Dealing with death and dying (0.84±0.062) is the second most stressful area for nurses; as over the period of time nurses may develop close and intimate relationship with the patients.

Keywords: Job Stress

INTRODUCTION

Different health care professionals are affected by their work environment. There are widespread reports of job stress amongst health care workers.1 Studies indicate that eight of the 12 most stressful jobs today are positions in health care. Job stress is a common problem across occupations and it impacts job performance. The nursing profession is increasingly characterized by occupational stress, frequent job turnover, and job dissatisfaction. Nurses attend to the emotional needs of patients and their families, as well as undertake managerial responsibilities such as supervising junior staff. The demands of these roles make nurses vulnerable to stress and psychological ill health2.

Nursing can be a rewarding and satisfying profession. It can also be extremely stressful. Nurses deal with pain and death in the very young and very old. They are often caught between doctors or supervisors and families or caretakers3. Occupational stress, a common occurrence among various professions worldwide, is regarded as a major occupational health problem for healthcare professionals especially nurses.

Occupational stress has been reported to affect job satisfaction and job performance among nurses, thus compromising nursing care and placing patients’ lives at risk. Stress is a complex phenomenon resulting from the interaction between individuals and the environment. Therefore, significant differences in occupational stress, job satisfaction and job performance among nurses may exist due to different work settings4.

Numerous researches have been conducted abroad shows high level of job stress among nurses. Studies also show that job stress adversely affects health and work performance of nurses. At the same time there is scarcity of researches assessing job stress among nurses in India. Hence, the study was undertaken to assess the job stress among hospital nurses.

MATERIAL AND METHOD

A cross sectional survey approach with descriptive study design was used to assess the job stress among hospital nurses.

The population for this study included staff nurses working in rural hospital set up. Purposive sampling technique was adapted for selection of samples. 20 staff nurses were chosen based on eligibility criteria and who showed willingness to participate in the study. All ethical principles were followed while recruiting the samples for the study.
Tool used for data collection included stress assessment scale. Tool consists of two sections. Section I consists of items related to demographic data; Section II consists of stress assessment scale having 35 items, which were classified into 7 areas such as dealing with death and dying, inadequate preparation, lack of support, conflict with health personnel, uncertainty concerning treatment, hazardous situations in the ward and miscellaneous. The stress assessment scale was adapted from standardized Expanded Nursing Stress Scale.

Reliability of the tool was established by using coefficient alpha method. The tool was found to be reliable ($r = 0.90$) and valid. The data was collected from 20 hospital nurses. The data was analyzed according to objectives of the study using descriptive and inferential statistics.

Results /Findings

The demographic data shows that all the participants were females, 90% were in the age group of 20-25 years, 95% were G.N.M. qualified, 90% were unmarried, all were experienced upto 5 years, 65% were working in inpatient wards, 60% are involved in care of 40-60 patients, and 55% work upto 40 hours per week.

Table 1: Level of job Stress among Participants

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Level of Stress</th>
<th>Stress Score</th>
<th>Participants (N)</th>
<th>% Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Low</td>
<td>1-26</td>
<td>11</td>
<td>55</td>
</tr>
<tr>
<td>2</td>
<td>Moderate</td>
<td>27-53</td>
<td>09</td>
<td>45</td>
</tr>
<tr>
<td>3</td>
<td>High</td>
<td>54-80</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>4</td>
<td>Extreme</td>
<td>81-105</td>
<td>00</td>
<td>00</td>
</tr>
</tbody>
</table>

Table 1 shows that 55% of the participants experience low stress, while 45% of the participants experience moderate level of job stress.

Level of Job Stress

Table 2: Area wise Assessment of Stress Level among Participants

<table>
<thead>
<tr>
<th>Stress area</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dealing with death and dying</td>
<td>0.84</td>
<td>0.062</td>
</tr>
<tr>
<td>Inadequate preparation</td>
<td>0.80</td>
<td>0.054</td>
</tr>
<tr>
<td>Lack of staff support</td>
<td>0.75</td>
<td>0.042</td>
</tr>
<tr>
<td>Conflict with health personal</td>
<td>0.61</td>
<td>0.042</td>
</tr>
<tr>
<td>Workload</td>
<td>0.55</td>
<td>0.039</td>
</tr>
<tr>
<td>Uncertainty concerning treatment</td>
<td>0.83</td>
<td>0.069</td>
</tr>
<tr>
<td>Hazardous situations</td>
<td>1.40</td>
<td>0.22</td>
</tr>
</tbody>
</table>

Table 2 shows that most stressful area for nurses is hazardous situations in the wards (1.40±0.22). Dealing with death and dying (0.84±0.062) and Uncertainty concerning treatment (0.83± 0.069) are almost equally stressful areas for nurses. Workload causes least stress among nurses. (0.55 ± 0.039)

DISCUSSION

Study findings shows that almost half of the nurses experience moderate level of job stress. This attributed to various situations in the ward over which nurses may or may not have direct control. Hazardous situations in the wards causes more stress among nurses compared to any other areas. As nurses are directly involved in patient care who may be seropositive, abusive or violent; these all situations are hazardous for the nurses. Dealing with death and dying is second most stressful area for nurses; as over the period of time nurses may develop close and intimate relationship with the patients. The least stressful area for nurses was found to be heavy workload. These all findings are supported by many studies conducted abroad, which also report moderate level of job stress among nurses. Strategies should be planned by nurses working at administrative posts and other managerial persons. These strategies must aim at reduction of job stress among nurses. Focus should be on reducing hazardous situations in the ward and training nurses to deal with theses situations.
CONCLUSION

This study showed significant associations between work environment and stress. Low to Moderate level of stress is experienced by the nursing staff working in the rural healthcare setup.

Recommendations: Based on findings of the study, following recommendations are given:

1. Similar study may be undertaken with large sample size.
2. A comparative study may be conducted on staff nurses working in public sector and private sector.
3. Stress reduction programmes for nurses can be undertaken.

Continuing Nursing Education programmes can be organized based on stress and its management

REFERENCES

Development of Nursing Assessment Tool: An Application of Roy's Adaptation Theory

Harmeet Kaur1, Rajinder Mahal2
1Principal, Chitkara School of Health Sciences, Chitkara University Punjab, 2Principal, College of Nursing, Mohan Dai Oswal Cancer Hospital, Ludhiana

ABSTRACT

It is well known that nursing theories are invaluable in providing the framework for the assessment of health problems and development of nursing care plan. Therefore in the present study authors aim to examine the Roy adaptation theory as a basis for the development of nursing assessment tool for the assessment of cardiac patients. Authors found the congruence between the concepts of cardiac nursing and Roy adaptation theory after in-depth review. Therefore this assessment tool was developed based on the concepts of Roy adaptation theory, in which the health problems of patients in all four modes and the relevant stimuli can be identified.

Keywords: Roy Adaptation Theory, Focal Stimuli, Contextual Stimuli, Residual Stimuli, Adaptation Modes.

INTRODUCTION

Health assessment is a process whereby a nurse obtains information that delineates clients’ responses to health problems, thus facilitating the planning of appropriate care. Nurses use assessment tools in their day to day practice but all the assessment tools are usually for doctors. As such there are no assessment tools which are especially developed for nursing assessment. Whereas nursing theories provide a very effective framework for assessment of all the health problems therefore there is need for the development tool based on nursing theories. Therefore researcher developed a nursing assessment tool based on Roy’s adaptation theory. The importance of Nursing theories and models for the growth and development of the profession of nursing is widely acknowledged. Nursing Models and theories are invaluable in the direction these provide for the nursing practice, education and research. The growth and development of the nursing profession is enhanced when its practice is guided by nursing theory.2

It is proposed that nurses who conduct their practice from nursing theory base, while assisting individuals and families to meet their health needs, are more likely to provide comprehensive, individualized care that exemplifies best practice.3 In order to contribute to more coherent body of knowledge and to advance the science4, it is recommended that studies should be based on conceptual and theoretical work.5,6 there are number of research studies in which nursing theories has been utilized and studied for better nursing care of clients by nurses.7,89 Thus conceptualization of this study is Roy’s Adaptation theory, which is used for the development of a comprehensive Nursing assessment tool for cardiac patients.

Roy adaptation Theory

Roy5 described person as biopsychosocial beings who are required to adopt to environmental stimuli. The environmental stimuli include Focal, Contextual and Residual Stimuli. The Focal stimuli are the internal and external factors that immediately confront the individual. The Contextual stimuli are defined as internal and external factors that act on person’s perception of focal stimulus, the contextual stimuli are all other stimuli that contributes directly to the individual or a group’s responses. Residual stimuli are unknown factors that may be affecting the individual or group. When a residual stimulus is identified, it usually becomes a contextual stimulus. Environmental Stimuli are directly related to coping processes and both directly and indirectly related to modes of adaptation. The indirect relation between environmental stimuli and modes of adaptation is mediated by coping process to filter environmental stimuli, which are called regulator and cognator mechanism. The regulator coping process encompasses basic neural, chemical and endocrine
channels that process stimuli in an automatic unconscious manner. The cognator coping process encompasses four cognitive-emotive channels for stimulus: perceptual/information processing, learning, judgment and emotion.3

Roy identified four modes of adaptation, which are the ways in which responses to environmental stimuli are expressed in people’s behavior. The physiological mode of adaptation incorporates individuals’ biological behaviors, such as vital signs and clinical laboratory values. The physiological mode of adaptation focuses on needs of the group for the basic resources needed to function. The Self concept mode of adaptation incorporates individual’s feelings about their bodies and personal selves. The interdependence mode of adaptation emphasizes interpersonal relationships and giving and receiving of social support. Roy adaptation theory based interventions involve managing environmental stimuli. Roy recommends focusing on managing focal stimulus, taking the contextual stimuli into account.

Objectives of the present study

To apply Roy Adaptation theory for the development of Nursing assessment tool for cardiac patients.

METHOD AND MATERIAL

Methodological study design was used for the development of nursing assessment tool. Nursing assessment tool based on Roy Adaptation theory was developed, after thorough review of literature, under the guidance of nursing experts from education, research and clinical field and after getting insight from the experiences of cardiac patients.

Concepts in nursing assessment tool for cardiac patients and Roy Adaptation theory

Underpinned by the four meta-paradigm concept formulated by Fawcett10 (1995), the following is an in-depth analysis comparing the concepts in cardiac nursing practice.

CONCEPT OF PERSON

During any cardiac illness, a person undergoes various physical, psychological and social stresses and for adapting to these stresses, they have to bring about lifestyle changes. This idea agrees with Roy’s propositions, which depict the person as a bio-psycho-social being who interacts constantly with the changing environment5,11

CONCEPT OF ENVIRONMENT

For a cardiac patient, environment includes the physiological, psychological and social changes that occur due to the cardiac illness. Any cardiac patient, either after surgery or after any intervention or who is on medications has to bring about various changes in his lifestyle in order to adapt to changes in his environment so that recurrence of symptoms can be prevented. Likewise Roy regarded the environment as all the conditions, circumstances, and influences that surround or affect the development and behavior of the persons’ adaptive systems.

CONCEPT OF HEALTH

The development of CVD is a significant source of distress for individuals and has major implications in terms of health and social gain, health related quality of life and living and adapting to a chronic illness. A substantial amount of scientific evidence is available which demonstrates that undertaking lifestyle changes such as changes to diet, smoking habit, increased physical activity and stress reduction reduces the risk of further coronary events and thus hospitalization. Similarly, Roy defined health as a state and a process of being and becoming an integrated whole. A person’s ability to remain healthy relies on having sufficient energy and ability to make positive adaptation to stimuli. When a person’s coping mechanism are ineffective, illness will occur.12

CONCEPT OF NURSING

A nurse takes care of cardiac patients’ physiological, psychological, social and spiritual needs. Nurse assesses the patients’ needs, plans and implements the care in order to maintain the health of the patient. She plans the care and health education to help the patient to bring about needed lifestyle changes to prevent the recurrence of the cardiac disease.

Equally, Roy stated that nursing is an external regulatory force that works to modify stimuli affecting adaptation by increasing, decreasing, or maintaining them. Nursing care is holistic by being centered on the person as a whole. It involves physical, psychological, social and spiritual aspects, recognizing that the entire person has particular unique features. The main goal of nursing is to promote adaptation in each of the four adaptive modes.

It can be concluded that cardiac nursing practice carries distinct characteristics, making it particularly
relevant to the propositions underpinning the Roy adaptation theory. Therefore using Roy adaptation theory to guide the development of nursing assessment tool for cardiac patients is justified.

**Nursing assessment tool for cardiac patients based on Roy Adaptation Model**

Nursing assessment tool based on Roy Adaptation theory was developed after thorough review of literature, under the guidance of nursing experts from education, research and clinical field and also after getting insight from the experiences of cardiac patients.

The Nursing assessment tool is divided into following sections:

First section covers the baseline information of patient that consists of Bio-data of patients, history, diagnosis, information regarding life style of patient, Lab investigations/examination, and medications/review medications.

A comprehensive, systematic patient assessment is necessary in the management and care of a patient with cardiac disease. Assessment can be described as ‘an orderly collection of information concerning the patient’s health status which aims to identity the patient’s current health status, actual and potential health problems and areas for health improvement’.

Therefore the first section covers the bio-data of the patient, which includes name, age, gender etc as various studies have shown the age and gender as risk factors of cardiac illness. Other information such as bed number, registration number, marital status, education, occupation is also included. First section covers another important aspects that is patients history. Patient history is frequently the first element in a systematic patient assessment. It includes an exploration of symptoms and the determination of past medical history, medications, family and social history together with an assessment of risk factors for cardiac disease. Much of the information about a potential diagnosis is ascertained by the history so that further findings from the actual examination and tests are to confirm the probable cause.

Second section of nursing assessment tool covers the first level assessment of patient in all four modes as described by Roy: Physiological, self concept, role function and interdependence mode and identified nursing problems.

**Assessment of the physiological mode**

The physiological mode of adaptation emphasizes the maintenance of the physiological integrity of the person. In any cardiac illness, a person has various changes in different organ systems such as respiratory system, circulatory system, central nervous system, gastrointestinal system, excretory system. As all the organ systems are interdependent, nurse need to do the thorough assessment of all the systems of the patient and document. According to Roy, the nine components: oxygenation, nutrition, elimination, activity, rest, protection (regulation), senses, fluid electrolyte and acid base balance, neurological function and endocrine functions form the basis of nursing assessment of the physiological mode of an individual.

**Assessment of the Self Concept Mode**

The self concept mode of adaptation addresses psychological and spiritual integrity, and focuses on the way one perceives one’s body and oneself. As the cardiac illness has the effect on persons’ physical as well personal self, therefore the effects of illness on self concept, likes and dislikes of patient about him/herself, personal strengths etc have been included in this mode assessment.

**Assessment of Role Function**

The role function mode of adaptation deals with social integrity by focusing on the performance of activities associated with various roles. Roy described role as the title given to the individual and the behaviors that society expects the individual to perform in order to maintain the title. An individual can have the changes in the roles due the effects of illness on the physical and psychological well being. Therefore the aspects such as present role of the person, change in the role function in family and at work place has been included in the assessment of role function mode.

**Assessment of interdependence mode**

Roy viewed interdependence as the balance between dependence on others and interdependence in achieving things for oneself. A cardiac patient has the need for the relationship in order to adapt to the
changes occurred in the body due to illness. Therefore assessment of cardiac patient’s family relationship, relationship with significant others, group, professional and community relations and to whom patient turns in times of stress; has been included in the assessment of interdependence mode.

Third section covers the assessment of environmental stimuli i.e. Focal, contextual and residual stimuli related to the problems identified.

After assessment of the all the problems in all the four modes; physiological mode, self concept mode, role function mode and interdependence mode, Third section of the assessment tool includes the assessment of stimuli responsible for the problems identified in all the four modes. So that based on the identification of stimuli, nurses can plan the interventions for the management of those problems.

Content validity of the Nursing Assessment tool

The evaluation of content validity of Nursing assessment tool was based on experts’ feedback. An expert panel of two academics and two cardiac nursing specialists were requested to rate the appropriateness of the content of the nursing assessment tool. Content Validity index was calculated and CVI was found to be 0.8 for relevancy, appropriateness and adequacy of the items.

Reliability of nursing assessment tool

Reliability of the tool cannot be checked as this tool is not a quantitative tool with scores but the tool was tested for its acceptability and usability by nurses through a cross-sectional survey using a likert scale, which is not the part of this paper. The tool was found to be acceptable to utilize in the clinical practice.

DISCUSSION

The development and utilization of a new assessment tool, based on a conceptual model, was an arduous task. Two main restraining forces were encountered while incorporating this Roy’s perspective into nursing practice; The first force dealt with the acquisition of the Roy’s perspective. The second force involved the shift from a mechanistic to a holistic force for nursing practice. This assessment tool enables the nurse to collect data in holistic manner which reflects the unique vision of nursing. The assessment tool promotes comprehensive data collection within the Roy’s conceptual framework. From this data collection concerns are identified by the nurse and the individual Interventions are then explored, and goals can be set by nurse. This in return, will enable the nurse to plan client centered interventions in a holistic manner. Since this assessment tool has been developed from the concepts, assumptions and propositions of Roy Adaptation theory, it advances refinement of this model. Use of this assessment tool in nursing practice, along with resultant modifications and revisions of the tool, will add to the existing knowledge of how the model can be applied to the real practice of nursing. Fawcett states emphatically that “nursing models were devised to move nursing away from ritualistic and task oriented care to thoughtful practice.” These were created to “shape nursing into what it ought to be.” Speedy claims that nursing theory explains our practice by changing the way nursing is understood. This is accomplished through testing of nursing theory in the clinical arena. Adapting basic scientific knowledge is the primary determinant of nursing practice. This assessment tool needs to be used in a variety of settings with an eclectic client population to determine its scope and utility in practice. The limitations encountered in utilizing this assessment tool included the length of time needed to complete a thorough data collection, and the need for a working and comprehensive knowledge of the terminology of the model Also, it was difficult to refine a working knowledge of the language of the model when so few nurses utilize the model in practice.

CONCLUSION

The essence of this paper was to link theory to practice within Roy adaptation theory perspective, provides a new world view which challenges the theory- practice gap. The availability of an assessment tool, which may be modified to suit the needs of an individual, demonstrates how a conceptual model may be used to guide nursing practice. Nurses can use this assessment tool in planning and implementing care to meet the needs of their clients.

REFERENCES

Blood Pressure, Stress and Body Mass Index (BMI) among Youngsters in South India

Helen Sheen
Lecturer, Community Health Nursing, Amrita College of Nursing, Amrita Institute of Medical Sciences, Kochi, Kerala, India

ABSTRACT

Background: Hypertension exists in worldwide estimated one billion people. Increasing trend of hypertension among young adults is a new phenomenon because of various stressors. Another common problem in youngsters is obesity.

Objectives: To determine the blood pressure, BMI, stress level. Compare the blood pressure, BMI and stress among various batches of students. Find the relationship between BMI, blood pressure, and stress level.

Methods: A descriptive correlational design used for this study on 200 BSc. Nursing students in Udupi District. Background information proforma, Stress rating scale, Sphygmomanometer and stethoscope, Weighing machine, measuring tape were used as tool. Non probability purposive sampling was used.

Results: While comparison significant difference was found in mean stress score of four groups of students. There is significant positive correlation between body mass index and BP. No significant relationship was found between stress and BP. There is significant negative relationship between body mass index and stress.

Keywords: Blood Pressure, Stress, Body Mass Index

INTRODUCTION

Early diagnosis of hypertension (HT) is an important strategy in its control. Tracking of blood pressure (BP) has been found useful in identifying persons with potential HT, particularly in youngsters. Most teens experience more stress when they perceive a situation as dangerous, difficult, or painful and they do not have the resources to cope. The prevalence of overweight and obesity has increased over the last decades and the overweight has become a global health problem.

MATERIAL AND METHOD

Survey approach used to correlate the blood pressure, stress and body mass index among BSc Nursing Students. A correlational research design explores the interrelationships among variables of interest without any active intervention on the part of the researcher. The design adopted for this study was “descriptive correlational design”. Schematic representation of research design is shown in fig:1.
VARIABLES

Key variables used for this study were Blood pressure (BP), Stress, Body mass index (BMI) Extraneous variables were Age, Gender, Birth order, Type of family, Religion, Frequency of exercise, Type of exercise, Traumatic experience in childhood, Socioeconomic status

RESEARCH SETTING

The setting selected for the study was Manipal College of Nursing, Manipal in Udupi district. Manipal College of Nursing started B.Sc Nursing course in the year 1990 and at present there are 372 students who are undergoing Basic B.Sc Nursing programme.

POPULATION

In this study, the target population comprised of B.Sc Nursing students of selected college of nursing in Udupi district

SAMPLING TECHNIQUE AND SAMPLES

Non probability purposive sampling technique for the present study and the sample size was 200. The criteria for selection of the samples were Students between the age group of 17-26 yr and students who were willing to participate in the study.

Development and Description of The Tools

Proforma on back ground information included age in years, gender, birth order, type of family, religion, frequency of exercise, type of exercise and traumatic experience in childhood. The items did not have any scoring as they were meant to collect factual information.

Socio economic status scale consists of educational status and occupational status of father & mother and per capita income. The total score was 30 which were arbitrarily classified as low class, middle class and high class.

Stress rating scale had 44 items. The item incorporated of stress related to family and college. The options were strongly agree, agree, disagree, and strongly disagree with the scoring of 4, 3, 2 and 1 respectively. Negative statements (1,2,4,8,9,10, 11,12,13,14,15,19,21,22,23,24,27,28,34,35,37, 38,39,40,41, 42and43) had reverse scoring. The total score was 176 which were arbitrarily classified as mild, moderate and severe stress.

Sphygmomanometer and stethoscope were calibrated used to measure the blood pressure.

Weighing machine and Measuring tape was used to check the body mass index of the subjects.

CONTENT VALIDITY OF THE TOOLS

To ensure content validity of proforma on back ground information, socioeconomic status scale and stress rating scale along with objectives, blue print and criteria checklists were given to seven experts from the various medical and nursing departments. Measuring tape was calibrated from Manipal Institute of Technology (MIT), Manipal and Sphygmomanometer, stethoscope and weighing machine were calibrated from Managing assets, negating hazards, enhancing standard (MNE) technology in Kasturba hospital.

PRETESTING

The tools were administered to five B.Sc Nursing Students in Udupi College of Nursing, Udupi in December 2008 with formal permission. The average time taken to complete the questionnaire was 20 minutes and did not have any difficulty in understanding the items.

RELIABILITY

Reliability of stress assessment scale was established by cronbach’s alpha by administering the tool in 20 B.Sc. Nursing Students of Vidyarathna College of Nursing, Udupi by two observers in December 2008. The alpha value of the same was 0.8. Interrater reliability was done for blood pressure value, height and weight and reliability was found to be 1.

PILOT STUDY

Pilot study was conducted with consent among 20 BSc nursing students, St.Ann’s College, Mulki who possessed the sample characteristics in January 2009. Total time needed to complete the questionnaire by sample element was 20 minutes. Analysis was done based on the objectives by testing hypotheses by using descriptive and inferential statistics. Thus the study was found to be feasible.

Procedure For Data Collection And Analysis

Formal administrative permission for collecting the data was sought from Dean, Manipal College of Nursing, and Manipal. Data were collected from the selected B.Sc. nursing students from January 24th 2009 to February 23rd 2009 with an informed consent.

Researcher checked the BP, BMI (calculated with the help of weight height) of the subjects and recorded.
the other tools administered on background information, socio economic status scale and stress rating scale analyzed in terms of descriptive statistics in frequency, median and percentage.

The null hypotheses H01 would be tested by computing kruskal-wallis test, H02, H03 and H04 would be tested by computing spearman rho coefficient correlation.

**NULL HYPOTHESES**

H01: There will be a significant difference among the mean blood pressure, BMI and stress level

H02: There will be a significant relationship between blood pressure and Body mass index (BMI).

H03: There will be a significant relationship between blood pressure and stress level

H04: There will be a significant relationship between body mass index (BMI) and stress level

All hypotheses were tested at 0.05 level of significance

**Description of sample characteristics**

The data were collected from 200 B.Sc. Nursing Students of Manipal College of Nursing, Manipal. The data describing sample characteristics are presented in table 1.

**Table 1: Frequency and percentage distribution of sample characteristics**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-20</td>
<td>134</td>
<td>67</td>
</tr>
<tr>
<td>21-24</td>
<td>66</td>
<td>33</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>46</td>
<td>23</td>
</tr>
<tr>
<td>Female</td>
<td>154</td>
<td>77</td>
</tr>
<tr>
<td>Birth order</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>115</td>
<td>57.5</td>
</tr>
<tr>
<td>Second</td>
<td>69</td>
<td>34.5</td>
</tr>
<tr>
<td>Third</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>Type of family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear</td>
<td>175</td>
<td>87.5</td>
</tr>
<tr>
<td>Joint</td>
<td>19</td>
<td>9.5</td>
</tr>
<tr>
<td>Extended</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hindu</td>
<td>33</td>
<td>16.5</td>
</tr>
<tr>
<td>Christian</td>
<td>163</td>
<td>81.5</td>
</tr>
<tr>
<td>Muslim</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Frequency of Exercise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once a day</td>
<td>52</td>
<td>26</td>
</tr>
<tr>
<td>twice a day</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Once in a week</td>
<td>59</td>
<td>24.5</td>
</tr>
<tr>
<td>Never</td>
<td>81</td>
<td>40.5</td>
</tr>
<tr>
<td>Type of exercise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jogging</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>Walking</td>
<td>68</td>
<td>34</td>
</tr>
<tr>
<td>Skipping</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Aerobics</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>Swimming</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Yogasanas</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>Nil</td>
<td>81</td>
<td>40.5</td>
</tr>
<tr>
<td>Traumatic experience in childhood from</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parents</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>Accidents</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>Teachers</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Nil</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Socio economic status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low class</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>Middle class</td>
<td>112</td>
<td>56</td>
</tr>
<tr>
<td>High class</td>
<td>81</td>
<td>40.5</td>
</tr>
</tbody>
</table>
The data presented in the table 1 on birth order show that 115 (57.5%) of the samples were first born. Regarding type of family 175(87.5%) were belongs to nuclear family. Majority of them were Christians 163 (81.5%). Among the subjects 81 (40.5%) were not doing any exercises, 59(24.5%) were doing once in a week and 68(34%) of them were only walking. Majority ie, 161(80.5%) did not experience any trauma during childhood. Data on socio economic status show that 112(56%) were from middle class.

The data describing year wise sample characteristics of blood pressure, body mass index and stress are presented in table 2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>First years</th>
<th>Second years</th>
<th>Third years</th>
<th>Forth years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>F</td>
<td>%</td>
<td>F</td>
</tr>
<tr>
<td>Blood pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>46</td>
<td>92</td>
<td>42</td>
<td>84</td>
<td>42</td>
</tr>
<tr>
<td>Pre-hypertension</td>
<td>4</td>
<td>8</td>
<td>7</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>Hypertension stage1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Hypertension stage2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Body mass index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight</td>
<td>14</td>
<td>28</td>
<td>10</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>Normal</td>
<td>35</td>
<td>70</td>
<td>37</td>
<td>74</td>
<td>30</td>
</tr>
<tr>
<td>Overweight</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Stress</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Moderate</td>
<td>49</td>
<td>98</td>
<td>48</td>
<td>96</td>
<td>48</td>
</tr>
<tr>
<td>Severe</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

The data presented in the table 2 show that among first years 46 (92%) are in normal range of blood pressure. But when coming to second, third and forth years, the percentage of blood pressure in normal category were 42(84%), 42(84%) and 40(80 %) respectively. With regard to body mass index only 1(2%) were overweight in first years. Instead in second and third years 3(6%) and 7(14%) were in the category of overweight. Data on stress show that among first years to fourth years 2(4%)of second years were in severe category of stress and 1(2%),2(4%)and 4(8%) were in mild category of stress.

Comparison of the blood pressure, BMI and stress level

In order to find the difference in BP, BMI and stress between various batches of students the following null hypothesis was stated.

H01: There will be no significant difference among mean blood pressure, BMI and stress level of various batches of BSc. Nursing students.

In order to test the null hypothesis H01, normality of the data was checked with Kolmogorov-Smirnov test. As the data were not following the normality, comparison was done with Kruskal-Wallis test.
In comparison between the various group of BSc nursing students for blood pressure, BMI, stress by Kruskal-Wallis test computation, Table 3 show that there was a significant difference between the four groups of students and stress score \( p=0.018 \). There is no relationship found with the other variables. Therefore, null hypothesis is partially accepted stating that there is no significant difference in blood pressure and BMI of various groups of BSc (N) students.

Relationship between BMI and blood pressure

In order to find the relationship between BMI and BP the following null hypothesis was stated.

\[ H_{02}: \text{There will be no significant relationship between blood pressure and Body mass index (BMI).} \]

In order to test \( H_{02} \) Spearman’s rho correlation coefficient was computed as the data were not following the normality. The null hypothesis is tested at 0.05 level of significance.

<table>
<thead>
<tr>
<th>Variables</th>
<th>r value</th>
<th>p value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBP BMI</td>
<td>0.295</td>
<td>0.001**</td>
<td>S</td>
</tr>
<tr>
<td>DBP BMI</td>
<td>0.330</td>
<td>0.001**</td>
<td>S</td>
</tr>
</tbody>
</table>

\( df(199) = .195 \)

Data presented in table 4 show the correlation coefficient computed between BMI, SBP and DBP. It reveals that there was significant positive relationship between body mass index (BMI) and systolic blood pressure (SBP) and diastolic blood pressure (DBP). Hence the null hypothesis is rejected and research hypothesis is accepted stating that as the body mass index (BMI) increases, SBP and DBP also increases.

Relationship between stress and blood pressure

In order to find the relationship between stress and BP the following null hypothesis was stated.

\[ H_{03}: \text{There will be no significant relationship between} \text{ blood pressure and stress level} \]

In order to test \( H_{03} \) Spearman’s rho correlation coefficient was computed as the data were not following the normality.

<table>
<thead>
<tr>
<th>Variables</th>
<th>r value</th>
<th>p value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBP Stress</td>
<td>0.038</td>
<td>0.594</td>
<td>NS</td>
</tr>
<tr>
<td>DBP Stress</td>
<td>-0.022</td>
<td>0.752</td>
<td>NS</td>
</tr>
</tbody>
</table>

\( df(199) = .195 \)

Data presented in table 5 show the correlation coefficient computed between stress and SBP and DBP. It reveals that there is no significant relationship between stress and systolic blood pressure (SBP). Negative relation was found between stress and diastolic blood pressure (DBP); but it was not significant. Hence the null hypothesis is accepted and research hypothesis is rejected stating that there is no relationship between SBP and DBP and stress level.

Relationship between stress and BMI

In order to find the relationship between stress and BMI the following null hypothesis was stated.

\[ H_{04}: \text{There will be no significant relationship between} \text{ body mass index (BMI) and stress level.} \]

Null hypothesis \( H_{04} \) was tested by computing Spearman’s rho correlation coefficient as the data were not following the normality.

<table>
<thead>
<tr>
<th>Variables</th>
<th>r value</th>
<th>p value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI Stress</td>
<td>-0.152</td>
<td>0.031*</td>
<td>S</td>
</tr>
</tbody>
</table>

\( df(199) = .195 \)

Data presented in table 6 show the correlation coefficient between BMI and blood pressure. It reveals that there is significant negative relationship between body mass index (BMI) and stress. Hence the null hypothesis is rejected and research hypothesis is accepted stating that as the stress level increases BMI also increases.

CONCLUSION

The study revealed that there are case of pre-hypertension, hypertension stage one and hypertension stage two according to JNC -7 classification. Most of the nursing students experience moderate Stress level. The study shown a significant difference was found in mean stress score of four groups of students and no difference in BMI & DBP and SBP of four groups of students. It is found a significant positive correlation found between body mass index and systolic blood pressure and diastolic blood pressure. The study shows a significant negative relationship found between body mass index and stress. The study determines a significant association between SBP and gender, DBP and gender, DBP and type of exercise. The study found significant association was between BMI and gender, BMI and religion, BMI and type of exercise. The study revealed a significant association between stress score and type of family, stress score and traumatic experience in childhood.
ACKNOWLEDGEMENTS

This thesis is the result of the work whereby I have been accompanied and supported by many people. It is a pleasant aspect that I have now the opportunity to express my gratitude to every one of them.

The study has been completed under the expert guidance of Mrs. Tessy Treasa Jose, Officiating Professor, and to my co-guide Mrs. Asha Nayak, Lecturer, Manipal College of Nursing, Manipal University, Manipal.

I extend my genuine gratitude to all principals of College of Nursing for permitting me to carry out the pretesting, reliability and pilot study.

My warmest thanks to all the experts those who validated the tool and thank all the young participants for their kind cooperation.

Conflict of Interest – Nil

REFERENCES


Perception to the Subjects Learnt in the Undergraduate Nursing Program among Students of a Selected College

Hema Suresh
Vice Principal, Meenakshi College of Nursing, Chennai

ABSTRACT
The nursing curriculum is consistently revised according to the changing scenario. With globalization and liberalization of the education policy a lot of private colleges have been established. The Indian Nursing Council revised the nursing curriculum to prepare nurses for the global front and the same was implemented since 2005. The objective of the study was to assess the perception of the subjects in the curriculum and the preferred area of work on completion among the B.Sc. Nursing students. Forty three final year students were asked to complete a four point rating scale which had all the subjects. Students also had to rank their preferred area of work and the reason. None of the subjects were perceived to be very difficult by the students. Less than 12% of the students perceived the subjects to be difficult. Majority of the students 35(84.1%) perceived fourth year subjects to be easy. Medical ward was ranked 1 and surgical ward was ranked 2 by majority of the students. The results showed that majority of the subjects in the curriculum were easy and very easy.

Keywords: Nursing Curriculum, Subjects, Area of Interest

INTRODUCTION
Nursing curriculum developed in a way that reflected medicine’s developing science and technology. According to Olivia Bevis1 and Jean Watson1 in “Toward a Caring Curriculum: A New Pedagogy for Nursing.” formal nursing education and curriculum can be traced to the 17th century. Until this time, untrained helpers, mostly servants, were nurses. When the order was formed in 1633, the prescribed course of study was a two-month probationary period followed by seven to eight months of instruction and supervision. The instruction consisted of lectures, quiz and religious exercises.

THE NIGHTINGALE MODEL
According to Bevis and Watson a significant advance in the nursing curriculum, occurred in 1860 due to the influence of Florence Nightingale. There was a year of training and a probationary period, followed by three years of hospital service. Curriculum was based upon the development of 12 personal characteristics and 13 functions and skills. Most experts consider it a well-organized and highly-structured curriculum and it was accepted worldwide. Even though “Nightingale Model,” is still a treasured piece of nursing history it has become obscure in modern education.

The Tyler Model
In 1949, Ralph Tyler, a consultant with the University of Washington School Of Nursing, introduced “Syllabus for Education 360,” which was then revised in 1950 to “Basic Principles of Curriculum and Instruction.”

Tyler identified four principles for teaching:
1. Defining appropriate learning objectives.
2. Establishing useful learning experiences.

Bevis and Watson point to the establishment of formal “Curriculum Guides” as being a turning point in the history of the development of the nursing curriculum. In 1917, the Education Committee of the League of Nursing Education produced its “Standard Curriculum.” It was designed to help nursing schools improve their programs and standards, as nursing requirements were minimal and not uniform. The work defined objectives, content and methods for each course. It provided lists of needed materials and equipment and bibliographies. The work was further revised in 1927 and 1937.
3. Organizing learning experiences to have a maximum cumulative effect.

4. Evaluating the curriculum and revising those aspects that did not prove to be effective.

This is considered the Classic Curriculum Model, one of the earliest ideas in education that led to the measurement of outcomes.

Perhaps according to Bevis and Watson the most significant advance in the nursing curriculum came when institutes of higher learning adopted nursing education programs. Based on the studies of Mildred Montag, in the late 1940s and 1950s, many two-year colleges developed associate of arts degree programs. Shortly thereafter, colleges introduced baccalaureate programs that based professional nursing education on two years of prerequisite courses and liberal arts.

NEED FOR THE STUDY

The history of nursing education in India started way back in 1871 with the inception of school of nursing in general hospital, Madras. In 1946 four years B.Sc. Nursing program was started in RAK College and CMC Vellore. In 1959 M.Sc. Nursing program was started in RAK College of Nursing. Nursing education started to flourish in India as many universities started to conduct the program. In 2005 Indian Nursing Council revised the B.Sc nursing curriculum and included pathology, pharmacology and genetics as one combined paper, introduction to computers, communication and educational technology in order to prepare nurses for the global front.

Perception is the act of interpreting a stimulus generated in the brain by one or more sense mechanism. Boring E.G. defines perception as the first event in the chain which leads from the stimulus to action. Thus perception is a highly individualized process that helps an organism, in organizing and interpreting a complex pattern of sensory stimulation for giving them, the necessary meaning, to initiate his/her behavioural response.

The process of detecting a stimulus and assigning meaning to it is called perception. This meaning is constructed based on both physical representation from the world and the existing knowledge. According to Gestalt theorists, Gestalt which means “pattern” or configuration in German, refers to peoples tendency to organize sensory information into patterns or relationships.

There are two other kinds of explanations in the information processing theory. The first is called feature analysis or bottom up processing because the stimulus must be analyzed into features or components assembled into a meaning full pattern from bottom up.

The other type of perception is called “top-down processing”. Patterns are rapidly recognized by other features like what is already known about the situation, what is know about words or pictures or the world generally operates.

The eligibility criteria for joining B.Sc. nursing is PCBE in 10+2. The investigator wanted to know about the perception of students to the basic subjects in the curriculum, the subject which interested them the most and the preferred area of work. As very few studies were found during the literature search this study was undertaken.

STATEMENT OF THE PROBLEM

Perception to the subjects learnt in the undergraduate nursing program among students of a selected college.

AIM OF THE STUDY

The aim of the study was to assess the perception of students’ regarding the various subjects learnt in the undergraduate nursing program among students of a selected college.

OBJECTIVES OF THE STUDY

1) To assess the level of perception of students regarding the subjects.
2) To assess the overall perception of students regarding the subjects.
3) To identify the preferred area of work

OPERATIONAL DEFINITIONS

Perception: Refers to the ability to become aware of something. In this study perception refers to the students’ expression to the subjects in terms of understandability according to their point of view.

Subjects: Subject in this study refers to the various subjects in the curriculum as per the revised syllabus as part of the B.Sc. (Nursing) program.
Undergraduate nursing program: Refers to the four year program following the INC syllabus with eligibility to enter the program with PCBE in 10+2 or any equivalent program.

Students: Refers to final year undergraduate nursing students.

ASSUMPTION
1) Individual differences exist among students.
2) Teaching also determines the perception regarding the subjects.
3) Previous exposure to the subjects may also influence the perception of the subjects.

RESEARCH METHOD
A retrospective research design was chosen to describe the perception of students.

SETTING OF THE STUDY
The study participants were the final year B.Sc. Nursing students of Meenakshi College of Nursing, Chennai. Since its inception in 1998 till now the college has rendered excellent service in the field of nursing education. The college conducts both B.Sc and M.Sc. Nursing program.

SAMPLE AND SAMPLING CRITERIA
A convenience sampling technique was adopted.

Inclusive Criteria
Final year students who had written their examination and waiting for examination results of B.Sc. Nursing Program.

Exclusive Criteria
The students who were not willing to participate in the study were excluded.

TOOL
Description of The Tool
The instrument used for the study was a rating scale with 2 aspects

Part A: Consisted of the gender, the medium of instruction and percentage of marks in 10+2.

Part B: Consisted of a 4 point rating scale (very easy, easy, difficult, very difficult) with all the subjects in the B.Sc. (Nursing) program as items.

Open ended questions with regard to the subjects they liked the most, area of preference to work with top three ranking and the reason for their choice was asked with a view to get further information.

Construction of the Tool
The tool was developed based on the literature review and consultation with the faculty.

Scoring and Interpretation
The rating scale had 4 points with a score of 4, 3, 2, and 1 for each point.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Year</th>
<th>Min Score</th>
<th>Max Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>First Year</td>
<td>9</td>
<td>36</td>
</tr>
<tr>
<td>2</td>
<td>Second Year</td>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>3</td>
<td>Third Year</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>Fourth Year</td>
<td>6</td>
<td>24</td>
</tr>
</tbody>
</table>

Interpretation

<table>
<thead>
<tr>
<th>Year of Course</th>
<th>Very Difficult</th>
<th>Difficult</th>
<th>Easy</th>
<th>Very Easy</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>9-Jan</td>
<td>18-Oct</td>
<td>19-27</td>
<td>28-36</td>
</tr>
<tr>
<td>Second</td>
<td>7-Jan</td>
<td>14-Aug</td>
<td>15-21</td>
<td>22-28</td>
</tr>
<tr>
<td>Third</td>
<td>3-Jan</td>
<td>6-Apr</td>
<td>9-Jul</td>
<td>12-Oct</td>
</tr>
<tr>
<td>Fourth</td>
<td>6-Jan</td>
<td>12-Jul</td>
<td>13-18</td>
<td>19-24</td>
</tr>
<tr>
<td>Over All</td>
<td>25-Jan</td>
<td>26-50</td>
<td>51-75</td>
<td>76-100</td>
</tr>
</tbody>
</table>

Data Collection Procedure
The students were approached in the classroom; the purposes of the study were clearly explained to the students and they were given the choice to decline from participation. In order to maintain anonymity, students were asked not to write their names. They were also assured about confidentiality. Each student was given the tool and the students were asked to complete at their own pace. Approximately each student took 15-20 min to complete the tool. A total of 43 students completed the tool.
Table 1. Frequency and Percentage Distribution of Students According to Demographic Variable

<table>
<thead>
<tr>
<th>S No</th>
<th>Demographic variable</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>23</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>20</td>
<td>47</td>
</tr>
<tr>
<td>2</td>
<td>Place of completing +2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TamilNadu</td>
<td>39</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>Kerala</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Andhra Pradesh</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Pondicherry</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Percentage of Marks in +2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>51-60</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>61-70</td>
<td>10</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>71-80</td>
<td>20</td>
<td>47</td>
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<tr>
<td></td>
<td>81-90</td>
<td>9</td>
<td>21</td>
</tr>
<tr>
<td>4</td>
<td>Medium of Instruction</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>English</td>
<td>40</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>Tamil</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 2. Frequency and Percentage Distribution of the Level of Perception to the Subjects Learnt among Students According to the Year

<table>
<thead>
<tr>
<th>S.No</th>
<th>Year</th>
<th>Difficult</th>
<th>Easy</th>
<th>Very Easy</th>
</tr>
</thead>
<tbody>
<tr>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
</tr>
<tr>
<td>1</td>
<td>I Year</td>
<td>2</td>
<td>4.65</td>
<td>24</td>
</tr>
<tr>
<td>2</td>
<td>II Year</td>
<td>2</td>
<td>4.65</td>
<td>29</td>
</tr>
<tr>
<td>3</td>
<td>III Year</td>
<td>1</td>
<td>2.33</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>IV Year</td>
<td>5</td>
<td>11.63</td>
<td>35</td>
</tr>
</tbody>
</table>

FINDINGS OF THE STUDY

With regard to the demographic variable (Table I) the sample had near equal male and female. Majority of the students (93%) passed the 10+2 examination from Tamil Nadu state. Majority of the students (91%) had studied in English medium in 10+2. Among the students (47%) had scored between 71-80 percentage of marks in 10+2.

The findings of the study (Table-2) stated the levels of perception regarding the subjects’ year wise. Majority of the students 35(84.1%) perceived fourth year subjects to be easy. None of the subjects were perceived to be very difficult by the students. Less than 12% of the students perceived the subjects to be difficult.

The overall level of perception to the subjects (Table-3) was easy 31(72%) and very easy 11 (25.6%) by the students. Among the 25 subjects the students perceived Biostatistics 1-16 (2.33%-37.29%), Medical Surgical Nursing (2%) and Nutrition 16(37%) as very easy subjects. Among the 25 subjects, 15 subjects were perceived as very difficult subjects, whereas English, nursing foundation, psychology, microbiology, introduction to computer, pathology, medical surgical nursing I and II, community health nursing-1 and psychiatry nursing were not perceived as ‘very difficult’ subjects by the students.
Fig 1 depicts the perception of students to nursing subjects. It was observed that as the subjects became more complex the students’ perception also varied.

The investigator also feels that among the students 93% had secured above 61% marks in 10+2 and the perception of the students to the various subjects may also be influenced to the academic preparation in 10+2.

For the open ended question, the subject which interested you the most, nearly half of the students 21(49%) responded to Medical Surgical Nursing as their subject of interest. Apart from other nursing subjects, pharmacology (2%) and microbiology (2%) were also liked by the students.

The response to the question (Table-4) the area students liked to work as staff nurse. Few students have failed to give the reason for their choice. Medical ward was ranked 1 by nearly more than half (55.81%) of the students and the reasons stated were ‘interesting’ 13(30%), ‘confident’ 4 (9%), ‘Life saving’ 2 (5%), ‘Easy’ 2(5%) and ‘Comfortable to work’ 3(7%).

Surgical area was ranked 2 by 17(40%) students. Psychiatry was ranked 1 by 21% of the students and the reasons stated were easy to understand and real life situation.

The investigator felt that in the curriculum the clinical hours of medical and surgical nursing is the highest and hence this would have led to majority of the students interest in medical surgical nursing subject and the clinical area rating. This finding is consistent with the findings of the study reported by Abedini.S et.al. 3 that nursing students’ perceived medical surgical nursing subject important and also expressed Anatomy and Physiology the basis for understanding nursing.

DELIMITATIONS

The data was collected after the completion of the course and not after completion of every year.

The data was collected by self administered tool and hence chances of “response bias” are likely to happen.

Implications of the study

The findings of the study will

1. Motivate nurse educators to understand about students’ perception regarding the subjects.
2. Enhance the provision of appropriate teaching - learning environment.
3. Encourage nurse administrators in the hospital to assign duties for fresh B.Sc graduates according to their interest.

Recommendations for further studies

1. Similar study can be done incorporating teaching methods, teaching styles and learning styles
2. A similar study can be done with a large sample.

Summary and Conclusion

The subjects of the first year were perceived easy comparing to the subjects in the other years. This may be because the students were from science background and the basic sciences in the first year program were considered easy. The nursing subjects were perceived to be difficult as it became complex.

Nurse educators should prepare students by using different teaching strategies. Students should be periodically reviewed with their test performance and the reasons for poor performance should be identified. Interest of the students should be identified and group learning should be encouraged.

ACKNOWLEDGEMENTS

I thank all the students for their cooperation and Dr. Lt. Col. N. Premakumari Principal, Meenakshi College of Nursing, Chennai for her constant support and guidance throughout the study.

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Effectiveness of Expectant Father’s Presence during First Stage of Labour

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²Principal, Ganga College of Nursing, Coimbatore, Tamil Nadu

ABSTRACT

Introduction: Natural Child birth is a profound and powerful human experience which is a mixture of feeling of empowerment, elation, and accomplishment. It is a challenging time for both men and women. Childbirth is such an exciting time that can lead to emotional changes which need support from the care giver.

Objective: To assess the effectiveness of expectant father’s presence during first stage of labour

Method: A quasi experimental (post test only control group) research design was adopted with convenient sample of 40 parturient in K.G Hospital, Coimbatore. It was divided into experimental and control group, 20 samples in each group. Expectant father was allowed inside the labour room after checking their attitude towards childbirth by using birth participation scale; he was instructed to give physical and emotional support during contractions. Control group samples received only routine intranatal care. Data were collected by Numeric pain intensity scale and State trait anxiety inventory scale from the parturient. Analysis was done by using descriptive and inferential statistics.

Results: There was a significant difference between experimental group and control group in relation to expectant father’s presence and perception of pain, level of anxiety, and duration of first stage of labour (value of 'z' was 2.03, 5.6, 2.56 respectively). There was an association between analgesics (χ²=5.2) during labor and pain score. Parity (χ²=6.4) and nature of conception (χ²=5.2) had an association with anxiety score at 5% level of significance. There was an association between parity (χ²=4.9) and duration of labor at 5% level of significance. Finally it was concluded that there was a positive relationship between expectant father’s presence and outcome of labour during first stage of labour.

Conclusion: Expectant father’s presence in birth helps mothers to have more positive experiences in all aspects of childbirth. Hence this study suggests that constant support by their partner during first stage of labour may be important for successful childbirth.

Keywords: Effectiveness, Expectant Father, First Stage of Labour.

INTRODUCTION

Childbirth is a thrilling, exciting and life changing experience. Giving birth is ecstasy. This is our birth right and our body’s intent. Natural Child birth is a profound and powerful human experience which is a mixture of feeling of empowerment, elation, and accomplishment. Pregnancy and childbirth is such an exciting time and with the changes that accompany pregnancy can lead to emotional changes which needs support from the caregiver. Since each pregnancy and birth are once in a life time events.

Women’s health is a major concern in the nation today, particularly in the areas of maternal health and family welfare. Maternal mortality rate is the critical indicator that reflects the need for strengthening the maternal health status of a community and country. India has one of the highest maternal mortality rates in the world. The maternal health challenges faced by India are more voluminous, more diverse, and more formidable than that of any other country in the world.

Historically, women were surrounded and cared by other women, family, and close friends during the
life changing event of giving birth (Lothian, 2001). Birth was considered as home event. When childbirth moved from the home to the hospital, mothers are attended by nurses and physicians in a restrictive, sterile medical environment that does not include supporting of others. Childbirth became a medical event.

Earlier all birth took place in homes, women learned about birth and cared for other laboring women as a central part of family and community life. This knowledge was lost when birth moved into the hospital and women were isolated from their loved ones during childbirth. In 2008, the last year with available data the rate of birth by cesarean section was 31.1% in United States and 24.5% in India, the highest it has ever been. India has one of the highest maternal mortality rates in the world.

The maternal health challenges faced by India are more voluminous, more diverse, and more formidable than that of any other country in the world. The presence of husband with the mother at the time of labour is very encouraging and gives her the feeling of highest safety as it has been a dangerous experience for many which she might have seen in her life. Hence the researcher would like to recommend the life partner’s presence in the labour room which will give a marvelous and wonderful experience to the mother undergoing the childbirth process. As well as to reduce the rate of Cesarean section, the mother needs constant support from their loved ones. Good support may reduce fear about labour. So the researcher has decided to do a study to assess the effectiveness of expectant father’s presence during first stage of labour to promote the outcome of labour.

OBJECTIVES

The objectives of the study were to

- assess the expectant father’s attitude towards childbirth by using Birth participation scale
- provide physical and emotional support to the parturient by their husband during first stage of labour in experimental group.
- assess the labour outcome of parturient during first stage of labour.
- assess the effectiveness of expectant father’s presence during first stage of labour To associate the findings with selected obstetrical variables and demographic variable

HYPOTHESIS

- There will be a significant relationship in Expectant father’s presence and outcome of labour

CONCEPTUAL FRAMEWORK

The conceptual framework in this study is based on Sister Callista Roy’s Adaptation model. The Roy’s Adaptation model views the person as an adaptive system in constant interaction with an internal or external environment containing variety of stimuli that either threaten or promote the person’s unique wholeness. As per Roy’s Adaptation model an individual’s behavior is based on the input, control process and feedback.

METHODOLOGY

Two groups quasi experimental (post test only control group) research design was adopted in this study. The researcher had 2 groups experimental and control group. 20 parturient without their husband for control group and 20 parturient low risk women and their husband were selected for experimental group.

Setting: The study was conducted in K.G. Hospital, Coimbatore, which is a 550 bedded multi speciality ISO 9002 certified hospital. It is situated in the heart of Coimbatore city, Tamilnadu.

Population: The population in this study comprised of primigravid women who met the inclusion criteria who were in first stage of labour.

Sample size: sample consisted of 40 samples.

Sampling Technique: Purposive sampling technique was used for this study. Selection of samples was done according to the sample criteria.

Description of the Tool

The researcher has developed the tool on the basis of the objectives of the study. The following steps were adopted prior to the development of the tool. Review of literature provided adequate content for the tool presentation. Personal experience of the investigator in the clinical field and expert opinion from the teachers of maternity department and gynecologists were of extreme help in devising this tool. The tool was developed in English and translated into Tamil.
The following tools included in the study.

1. Demographic and obstetrical profile of the women
2. Birth participation scale.
3. Spiel Berger’s State Trait Anxiety inventory scale
4. Numeric pain intensity scale
5. Partogram

Pilot Study: The investigator conducted a pilot study with 10 samples that fulfilled the inclusive criteria. After the pilot study the researcher found the need for minor modification in demographic data, obstetrical data, when analyzed, the results gave evidence that the tool was reliable. After the pilot study the investigator proceeded for the main study.

Description of Intervention

A written permission was obtained to conduct the study from the human ethical committee of K.G. Hospital, Coimbatore. Data collection was for a period of four weeks. The investigator personally explained the purpose of the study with the participants individually.

According to purposive sampling technique, the investigator had 2 groups and totally 40 samples, i.e. 20 samples in experimental group and 20 samples in control group. The participants those who were accompanied with their husband during the study were included in experimental group; the expectant father’s attitude was checked by using birth participation scale at the time of admission to the labor room. The participants who fulfilled the inclusive criteria and the expectant father who got the favorable score based on birth participation scale were included as samples of experimental group. Demographic data and obstetric data were collected by using structured questionnaire, when the participants came to the labor room.

In experimental group, the expectant father allowed inside the labor room to give physical and emotional comfort and relaxation for the mother from the admission to labor room till the end of first stage of labor. The husband was instructed to give physical and emotional support by gentle massaging, words of encouragement like “You’re doing so good, you’re so strong,” Encouraging her to do breathing exercises, spiritual support like prayer, mantras or slogans ,cool wiping of face, touching on her shoulder and suggesting her to relax, providing sips of water between contractions.

The anxiety level was checked by using State Trait Anxiety Inventory Scale for 3 times at 2 hours interval, first assessment was immediately after the admission to labour room. The average score was taken into consideration. The pain perception was assessed by using numeric pain intensity scale during the dilation of cervix between 4-6cm, 6-8 cm and 8-10cm. The average score was taken into consideration. The routine intrapartum care also given by the investigator.

In control group also as like experimental group anxiety level of the parturient were assessed by using state trait anxiety inventory scale and the pain perception was assessed by using numeric pain intensity scale. They received only routine intrapartum care during first stage of labour.

Finally a structured questionnaire of patient satisfaction which was prepared by the investigator was given to the mother next day of delivery to assess the effectiveness of expectant father’s presence during first stage of labour.

Plan for Data Analysis

Data analysis was done by using descriptive and inferential statistics.

Descriptive statistics was used to analyze the frequency, percentage of demographic and obstetric variables of the parturient. Inferential statistics was used to determine the relationship and association in control and experimental group

RESULT & DISCUSSION

The purpose of the study is to assess the effectiveness of expectant father’s presence during first stage of labor to promote the outcome of labour. The discussion of the present study is based on the findings obtained from statistical analysis of collected data.

1. To assess the expectant father’s attitude towards childbirth by using Birth participation scale

The parturient who were accompanied with their husband were expected to be the experimental group after checking their attitude towards child birth. The expectant father’s attitude was checked by using birth participation scale at the time of admission to labour room.

2. To provide physical and emotional support to the parturient by their husband

The parturient that fulfilled the inclusive criteria
and the expectant father who got the favorable score based on birth participation scale were included as the samples of experimental group. The husband was allowed inside the labour room from the time of admission till full dilatation of cervix. The husband was instructed to give physical and emotional support by gentle massaging, words of encouragement like “You’re doing so good, you’re so strong,” Encouraging her to do breathing exercises, spiritual support like prayer, mantras or slogans, cool wiping of face, touching on her shoulder and suggesting her to relax, providing sips of water between contractions.

3. To assess the labour outcome of parturient during first stage of labour

Percentage distribution was used to assess the labour outcome of parturient during first stage of labour.

Assessment of pain perception out of 20 women of experimental group 3(15%) had mild pain, 8(40%) had moderate pain and 9(45%) had severe pain; whereas in the control group 2(10%) had mild pain, 6(30%) had moderate pain and 12(60%) had severe pain.

Anxiety level of the mother out of 20 women of experimental group 4(20%) had mild anxiety 8(40%) had moderate anxiety and 8(40%) had severe anxiety, whereas in the control group 3(15%) had mild anxiety 4(20%) had moderate anxiety and 13(65%) had severe anxiety.

Duration of labour out of 20 women of experimental group 4(20%) had first stage last for 4-7 hours, 7(35%) had 7-10 hours, and 9(45%) had >10 hours, whereas in the control group 2(10%) had first stage last for 4-7 hours, 6(30%) it last for 7-10 hours and 12(60%) it last for >10 hours.

4. To assess the effectiveness of expectant father’s presence during first stage of labour in experimental group.

The z value computed for pain score of experimental and control group was significantly higher. Hence there was a significant difference between the experimental and control group at 5% level of significance.

The z value computed for anxiety score of experimental and control group was significantly higher. Hence there was a significant difference between the experimental and control group at 5% level of significance.

The z value computed for duration of labour of experimental and control group was significantly higher. Hence there was a significant difference between the experimental and control group at 5% level of significance.

Thus it implied that expectant father’s presence during first stage of labour was effective in reducing labour pain, anxiety and duration of labour.

5. To associate the findings with selected demographic & obstetric variables.

Chi-square test was used to identify the influence of selected demographic and obstetric variables on pain scores, duration of labour & anxiety level in experimental group and control group.

There was an association between analgesics during labor and pain score at 5% level of significance. Parity and nature of conception had an association with anxiety score at 5% level of significance. There was an association between parity and duration of labour at 5% level of significance.
RECOMMENDATION

The following recommendations were made by the investigator after the study.

- The similar study can be undertaken on a large sample.
- A similar study can be conducted separately for primigravidae and multigravidae.
- Similar study can be conducted in mothers in urban and rural areas and result can be compared.
- A comparative study can be performed to evaluate the effectiveness of different complimentary and alternative therapies.

CONCLUSION

The present study was supported by a series of other studies which confirmed that expectant father’s presence was effective in reducing labour pain and promotes comfort to the mother. The respondent revealed that expectant father’s presence during first stage of labour provide comfort relaxation and sense of well being. From the analysis and result it is concluded that expectant father’s presence during first stage of labour is effective in better labour outcome.

REFERENCE

Effectiveness of Infrared Lamp on Reducing Pain and Inflammation due to Episiotomy Wound

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ABSTRACT

The objective of the study was to assess the intensity of pain experienced by postnatal mothers due to episiotomy wound before and after infrared lamp therapy and to evaluate the effectiveness of use of infrared lamp on reducing pain and inflammation. Imogene M King’s theory of Goal attainment was used as a conceptual framework for this study. The study involves evaluative approach and the design was a single-blind randomized control trial. One hundred and twenty postnatal mothers were selected from maternity wards of K.L.E.S Dr. Prabhakar Kore Charitable hospital, Belgaum. The investigator collected the data for analysis and interpretation, using standardized scales such as Visual Analogue Scale (VAS) and REEDA scale. In order to examine the proposed association the data was tabulated, analyzed and interpreted using descriptive and inferential statistics.

The result revealed that the intensity of pain experienced by postnatal mothers before and after infrared lamp on day 1 and day 3 was 8.3 and 0 respectively whereas the intensity of inflammation due to episiotomy wound before infrared lamp therapy on day 1 was 9 and after infrared lamp therapy on day 3 was 0.32. The pain and inflammation was significantly low (p<0.05) with infrared lamp therapy and is an effective intervention for reduction of episiotomy wound pain and inflammation.

Keywords: Infrared Lamp Therapy, Episiotomy Wound, Pain, Inflammation, VAS, REEDA.

INTRODUCTION

Episiotomy refers to a surgical incision of the perineum performed by the accouchuer at the time of parturition. In women without an elective episiotomy, many experienced perineal laceration requiring surgical repair.¹

Routine episiotomy is one of the most common surgical procedures performed on women, it is found that it is steadily declining, though it is used in childbirth and widely practiced in many parts of the world. Many physicians and midwives use episiotomies because they believe that, it will lessen perineal trauma, minimize postpartum pelvic floor dysfunction by reducing anal sphincter muscle damage, reduce loss of blood at delivery, and protect against neonatal trauma.¹

Episiotomy rate has decreased by 8% to 10% but actual use is common in many hospital settings. Despite several decades of research, many interpret as definitive evidence against routine use of episiotomy, little professional consensus has developed about the appropriateness of routine use. Episiotomy is used widely among midwives and physicians study has shown that from 1987 to 2004, variation in rates of use, ranging from 13.3% to 84.6%. it shows what type of clinician, time of day, type of incision, size and location of episiotomy.²

Episiotomy pain often interferes with basic daily activities for the woman such as walking, sitting, passing urine and also negative impacts on motherhood experiences.³ Care of episiotomy wound begins immediately after delivery and should be included in a combination of local wound care and pain management.³ The general treatment and care for the episiotomy wound in postnatal wards are routine perineal care, vulval toileting and administration of analgesics for pain, taken care by nurses.

Apart from all these measures for general care, the most important and significant therapy is infrared
lamp therapy which is widely used in many different settings. It is proved efficacious in all phases of wound healing, arresting inflammation, alleviating pain, improving perfusion and activating the immune response.4

MATERIAL AND METHOD

The study involves evaluative approach and the design was a single-blind randomized control trial. Simple random sampling using envelop method was adopted to assign 120 postnatal mothers to either the experimental group or the control group. Infrared lamp radiation was given at a distance of 30cm from the episiotomy wound with the duration of 10 minutes per sitting for 3 days. The tool used was VAS and REEDA scale. Pre treatment and post treatment assessment of pain was done 1 hour before and 1 hour after the intervention whereas wound assessment with REEDA scale was done only on 1st day before intervention and on the 3rd day after intervention.

FINDINGS

1. The intensity of pain and inflammation experienced by postnatal mothers due to episiotomy wound before and after infrared lamp therapy was found by the mean of pretreatment and post treatment scores. (Table I,II &Fig 1).

2. The effectiveness of use of infrared lamp on reducing pain and inflammation was evaluated by Mann-Whitney test.(TableIII)

Table 1: Mean pre treatment score, Mean post treatment score, Mean difference and standard deviation for the pain assessment of mothers in experimental groups.

<table>
<thead>
<tr>
<th></th>
<th>MORNING</th>
<th></th>
<th>EVENING</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean pretreatment Score</td>
<td>Mean post</td>
<td>Difference ± SD</td>
<td>Mean pretreatment Score</td>
</tr>
<tr>
<td></td>
<td>Score</td>
<td>treatment</td>
<td></td>
<td>Score</td>
</tr>
<tr>
<td>DAY 1</td>
<td>8.3</td>
<td>6.5</td>
<td>-1.7±0.46</td>
<td>5.7</td>
</tr>
<tr>
<td>DAY 2</td>
<td>3.4</td>
<td>1.8</td>
<td>-1.56±0.69</td>
<td>1.20</td>
</tr>
<tr>
<td>DAY 3</td>
<td>0.1</td>
<td>0.02</td>
<td>-0.08±0.33</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Table 2: Mean pre treatment score, Mean post treatment score, Mean difference and standard deviation for the pain assessment of mothers in Control group.

<table>
<thead>
<tr>
<th></th>
<th>MORNING</th>
<th></th>
<th>EVENING</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean pretreatment Score</td>
<td>Mean post</td>
<td>Difference ± SD</td>
<td>Mean pretreatment Score</td>
</tr>
<tr>
<td></td>
<td>Score</td>
<td>treatment</td>
<td></td>
<td>Score</td>
</tr>
<tr>
<td>DAY 1</td>
<td>8.5</td>
<td>8.5</td>
<td>0±0</td>
<td>7.8</td>
</tr>
<tr>
<td>DAY 2</td>
<td>7.05</td>
<td>6.9</td>
<td>-0.11±0.32</td>
<td>6.6</td>
</tr>
<tr>
<td>DAY 3</td>
<td>5.8</td>
<td>5.8</td>
<td>-0.5±0.21</td>
<td>5.6</td>
</tr>
</tbody>
</table>

Fig1: Column graph showing Mean pre treatment score, Mean post treatment score and standard deviation for the assessment of inflammation of mothers in Experimental and Control groups.


Table 3: Mann-Whitney test for comparison of pain and inflammation between experimental and control group

<table>
<thead>
<tr>
<th>Observations</th>
<th>Z Value</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>D₈M 1</td>
<td>10.409</td>
<td>0.000(S)</td>
</tr>
<tr>
<td>D₈E 2</td>
<td>9.718</td>
<td>0.000(S)</td>
</tr>
<tr>
<td>D₉M 3</td>
<td>8.846</td>
<td>0.000(S)</td>
</tr>
<tr>
<td>D₉E 4</td>
<td>7.248</td>
<td>0.000(S)</td>
</tr>
<tr>
<td>D₁₀M 5</td>
<td>0.407</td>
<td>0.684(NS)</td>
</tr>
<tr>
<td>D₁₀E 6</td>
<td>0.582</td>
<td>0.560(NS)</td>
</tr>
<tr>
<td>REEDA7</td>
<td>9.101</td>
<td>0.000(S)</td>
</tr>
</tbody>
</table>

NS = No significance    S= Significance

Since the P value for episiotomy wound pain and inflammation is less than 0.05 the result is highly significant which states that the infrared lamp therapy is effective for reduction of episiotomy wound pain and inflammation.

DISCUSSION

The findings of the study are discussed below.

1. Findings on distribution of pain scores in experimental and control group.

   The findings in the experimental group revealed that the mean difference and standard deviation of pain experienced by postnatal mothers before infrared lamp therapy on day 1 was -1.7±0.46 and after infrared lamp therapy on day 3 was -0.01 ±0.13.

   Similar findings are obtained by Budhi Baruah 6, that the mean difference and standard deviation of pain experienced by postnatal mothers before infrared lamp therapy on day 1 was 2.88±0.33 and after infrared lamp therapy on day 3 was 1.20 ±0.40 making it highly significant.

   The findings of the study revealed that there was 100% reduction in pain scores in those who had infrared lamp therapy.

   Similarly in a study by Jincy Jacob 7, proved that the participants of infrared lamp presented with 100% decline in pain scores making infrared lamp therapy an effective intervention in pain reduction.

   The findings in the control group revealed that the intensity of pain experienced by postnatal mothers due to episiotomy wound without infrared lamp therapy on day 1 was 8.5 and on day 3 was 5.5 and the mean difference and standard deviation of pain experienced by postnatal mothers without infrared lamp therapy on day 1 was 0±0 and on day 3 was <0.03 ±0.18.

   These findings are similar to the study conducted by Budhi Baruah 6, that the mean difference and standard deviation of pain experienced by postnatal mothers without infrared lamp therapy on day 1 was 2.08±0.57 and on day 3 was 1.96 ±0.20 making it not significant.

2. Findings on distribution of inflammation scores in experimental and control group.

   The findings of the study revealed that in experimental group, the REEDA score was highly significant after intervention making the infrared lamp therapy highly effective while in control group, there was no significant reduction in inflammation.

   Similar findings were seen in a study conducted by Chaweewan Yusamran 8, in which the REEDA score was highly significant after intervention making the cold gel pack therapy highly effective in experimental group, while in control group with placebo there was no significant reduction in inflammation of episiotomy wound.

   The findings in the experimental group revealed that in experimental group, the REEDA score was highly significant after intervention making the infrared lamp therapy highly effective while in control group, there was no significant reduction in inflammation.

   The findings in the control group revealed that the intensity of pain experienced by postnatal mothers due to episiotomy wound without infrared lamp therapy on day 1 was 8.5 and on day 3 was 5.5 and the mean difference and standard deviation of pain experienced by postnatal mothers without infrared lamp therapy on day 1 was 0±0 and on day 3 was <0.03 ±0.18.

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   3. Findings related to effectiveness of infrared lamp therapy on reducing pain and inflammation due to episiotomy wound.

   Analysis was done with Mann – Whitney test to find the effectiveness of infrared lamp therapy on reducing pain and inflammation due to episiotomy wound.

   The study findings showed that infrared lamp therapy was highly effective for reduction of episiotomy wound pain and inflammation.

   Similar findings were seen in the study conducted by Budhi Barah 6 and V. Venkadalakshmi 9 in which she also proved that infrared lamp therapy reduces episiotomy pain and enhances wound healing in postnatal mothers with episiotomy.

   Similar findings were seen in the study conducted by Budhi Barah 6 and V. Venkadalakshmi 9 in which she also proved that infrared lamp therapy reduces episiotomy pain and enhances wound healing in postnatal mothers with episiotomy.

   Another contradictory findings were seen in one of the comparative study conducted by Jincy Jacob 7 in which she concluded that sitz bath was a better intervention on episiotomy wound healing than infrared lamp therapy. Further she concluded infrared lamp was superior only for pain control.

CONCLUSION

Based on the analysis of the findings of the study,
there was a significant reduction on episiotomy wound pain and inflammation among postnatal mothers after administration of infrared lamp therapy. Thus it was proved to be an effective treatment for episiotomy wound. Therefore, this intervention should be promoted as an institutional policy and implemented as a routine care for all postnatal mothers following episiotomy for effective management of wound.

ACKNOWLEDGEMENT

I extend my affectionate thanks to my esteemed teacher and guide, Prof. Sangeeta N. Kharde, Prof. Dr. M.K. Swami, Prof. Sudha A. Raddi, who provided me expert guidance on high quality work with overly enthusiasm and optimism.

Lastly, I offer my regards and blessings to all of those who supported me in any way during the completion of this dissertation.

Above all I thank God, the Almighty, for all the successes and blessings in my life.

Conflict of interest: None

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Inter Professional Education in Health Care

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ABSTRACT

This article is trying to explore the practicality of Inter professional education (IPE) in health care. Studying together with health professional will increase the acceptance of health care by other students. The goal of IPE is for students to learn to function in an interprofessional team, and improve patient outcomes through interprofessional collaboration in their future practices. Inter professional education and inter professional learning are the two terms which are used interchangeably. The author aims to research the promotion of Inter Professional Education among the health care professionals and its role in development of the professionals who can work collaboratively to increase the quality of patient care. This particular paper is focusing on the benefits of inter-professional education for the employers, universities and for the students.

Keywords: Inter professional Education, Inter Professional Learning, Students, University, Team

INTRODUCTION

Over the past decades legislative and social policies have required health and social care agencies to work collaboratively in partnership with service users.¹ The Department of Health has been explicit in its support of Interprofessional learning (IPL) stating, ‘the government intends to build on successful initiatives to make Inter professional education a key feature of National Health service education over the next few years’.²

Effective healthcare delivery in hospital and community sectors requires all health and social care professionals involved to work collaboratively within and between teams to ensure the best possible outcome for clients.²³ The aim of Inter Professional Education(IPE) is to help overcome ignorance and prejudice among health and social care professionals as learning together at undergraduate (and postgraduate) level would lead to health care professionals working together more effectively and therefore improving quality of care for patients and clients.⁴

At one extreme the whole course content of IPE is explicitly interprofessional, “people are brought together to learn with, from and about each other and about interprofessional collaboration as a means of improving care.”⁵ At the other end of the interprofessional spectrum other learning outcomes become more important, ‘the dominant focus being on, for example, developing technical knowledge or practical skills to address particular conditions such as diabetes’ within an IPL group.⁶

LITERATURE REVIEW

According to the World Health Organization (WHO), IPE is “the process by which a group of students or workers from the health-related occupations with different backgrounds learn together during certain periods of their education, with interaction as the important goal, to collaborate in providing promotive, preventive, curative, rehabilitative, and other health-related services.”⁷

Inter Professional Education and Inter Professional Learning

Much of the original literature referred to Inter Professional Education (IPE), and certainly Centre for the Advancement of Interprofessional Education (CAIPE) which was highly influential in highlighting, researching into and taking forward the IPE agenda, prefers the term IPE. In this article we will use the Inter Professional Education (IPE) and the Inter Professional Learning (IPL) interchangeably according to the definitions below. We use both terms here to emphasis the informal as well as formal nature of much IPL activity, particularly in the clinical context.
The Center for the Advancement of Interprofessional Education (CAIPE) defines IPE as, “two or more professions learn with, from and about each other to improve collaboration and the quality of care.”

In the United Kingdom, IPE is being used as a vehicle to drive health care-related policy goals. For example, there is a plan within National Health Service (NHS) in the Department of Health (DOH) that is requesting the creation of a single program for all health care professionals.

Other international organizations including Organization for Economic Co-operation and Development (OECD) and the World Federation of Medical Education (WFME) have embraced strategies that foster experiences in IPE.

According to Health Canada, “changing the way we educate health providers is key to achieving system change and to ensuring that health providers have the necessary knowledge and training to work effectively on interprofessional teams within the evolving health care system.”

The Canadian government has furthered the concept of IPE to include the patient in their outline of collaboration in the health care sector. Appropriately termed ‘Interprofessional Education for Collaborative Patient-Centered Practice (IECPCP),’ is described as a method of learning together to promote collaboration. IECPCP initiatives will facilitate the implementation of Inter Professional Education (IPE) for collaborative patient-centered practice. Overall, the goals of IECPCP are to improve patient and provider satisfaction and improve patient outcomes.

According to the Interprofessional Education Consortium (IPEC), a funded group of educators, administrators, and evaluators from the United States, IPE is a holistic concept and is defined as “a learning process that prepares professionals through interdisciplinary education and diverse fieldwork experiences to work collaboratively with communities to meet the multifaceted needs of children, youth, and families. It provides the knowledge, skills, and values individuals need to collaborate effectively with others as they serve communities and families.”

Another definition of IPE that appeared in the Journal of Interprofessional care is, “Students from various professions learn together as a team. Their collaborative interaction is characterized by the integration and modification of different professions’ contributions in light of input from other professions.”

During an extensive review of the literature related to IPE, it became clear that there were several closely related terms that organizations, such as education institutions, specific health care sectors, researchers and professionals use in order to define or expand on the concept of IPE. It is necessary to explore some of the terms. They include:

- **Collaborative patient-centered practice** is “designed to promote the active participation of each discipline in patient care. It enhances patient and family-centered goals and values, provides mechanisms for continuous communication among caregivers, and optimizes staff participation in clinical decision making within and across disciplines fostering respect for disciplinary contributions of all professionals.”

- **Collaboration in Health Care Team** is “an interprofessional process of communication and decision making that enables the separate and shared knowledge and skills of health care providers to synergistically influence the client/patient care provided.”

- **Educational Continuum** is the movement through the continuum that allows for increased complex knowledge and appreciation of other professions.

As Freeth notes, IPE is primarily concerned with students or professionals actively learning together. The learning is based on an exchange of knowledge, understanding, attitudes or skills with an explicit aim of improving collaboration and health care outcomes.

IPL links closely to the concept and practices of the Inter Professional delivery of health and social care where there is an interaction among professionals. Interdisciplinary health and social care where professionals work collaboratively to improve health outcomes. This helps to support the delivery of effective integrated care across primary, secondary and tertiary services involving a range of client groups, implying shared assessments, clinical records, care and client goal setting with patient/client, community and family at the center.

Team working can be defined as considered action carried out by two or more individuals jointly, concurrently or sequentially. It implies common agreed goals, clear awareness of and respect for others, roles
There is overwhelming evidence that a failure of health and social care professionals to work together and communicate with each other can have tragic consequences for individuals. Despite the lack of robust evidence that IPE contributes to more effective collaborative practices and improved patient and client outcomes, there are clearly policy drives from government to encourage collaborative practice and partnership working.

General Medical Council (GMC) consultation on the strategic options for medical undergraduate education felt that inter professionalism was an important area in medical education, but it was more likely to be embedded to medical practice through experience.

**Principles of Inter Professional Learning**

In 2001 CAIPE identified seven principles to guide the provision of commissioning of Inter Professional Education (IPE) and to assist in its development and evaluation:

- Improves the quality of care
- Focuses on the needs of service users and careers
- Involves service users and careers
- Encourages professions to learn with, from and about each other
- Respects the integrity and contribution of each profession
- Enhances practice within professions
- Increases professional satisfaction

The principles draw on the IPE literature, evidence base and the experience of CAIPE members, underpinned by values common to all health care professionals including a commitment to equal opportunities and positive regard for difference, diversity and individuality.

**Benefits of Inter- Professional Education (IPE)**

This particular paper focuses on the benefits of inter-professional education for the first three members of the group. Rance, in his assessment of the extent and the value of the inter-professional education in the built environment, claims that IPE provides added value- it offers a “broader perspective to complement specialist professional expertise, and will ultimately make students more capable of securing employment.” Employers thus recruit a higher standard of graduate, which in turn, reflects positively on the institution and its staff.

In order to present a more simplified overview of potential benefits for all, we have attempted to present each of the stakeholders separately, and to briefly examine the likely benefits.

**For Employers**

Freeth, Meyer et al list the following as further benefits of IPE for employers within healthcare:

- A reduction in the occurrence of communications breakdowns
- An increase in morale and efficiency
- An avoidance of unhelpful protectionism

IPE enhances personal and professional confidence, promotes mutual understanding between professions, facilitates intra and inter professional communication and encourages reflective practice.

**For Universities**

- Costeffectiveness
- Development of the necessary skills to operate effectively in multi-disciplinary teams.
- To bring students together from different professional degrees.

The evaluation of the University of California’s inter-professional initiatives indicates that there are clear benefits for individual staff members:

- An exposure to new ideas
- An opportunity to work with different people
- An increased cultural sensitivity
- An enhanced flexibility in working with students
- A better sense of co-operation and networking between departments
- An impetus to discover more community resources.

**For Students**

- Leads the student to recognition of overlapping professional functions, or those activities which fall between professional areas.
Inter-professional teaching contributes to this by giving students the opportunity to observe good role models for collaboration, with different faculty members interacting as peers.18

Interprofessional education helps students develop the following collaborative competencies.19,20

According to Barr, they include: 21

- Describe one’s roles and responsibilities clearly to other professions.
- Recognize and observe the constraints of one’s role, responsibilities and competence, yet perceive needs in a wider framework.
- Recognize and respect the roles, responsibilities and competence of other professions in relation to one’s own.
- Work with other professions to effect change and resolve conflict in the provision of care and treatment.
- Work with others to assess, plan, provide and review care for individual patients.
- Tolerate differences, misunderstandings and shortcomings in other professions.
- Facilitate interprofessional case conferences, team meetings.
- Enter into interdependent relations with other professions.

Theorizing Inter-Professionalism:Linking Theory and Practice in IPE

IPE is understood as an aspect of the social world and as such subject to processes of discussion, negotiation and continuous construction.23

‘Inter Professional Education (IPE)’ is: “occasions when two or more professions learn with, from and about each other to improve collaboration and the quality of service’”24

‘Inter Professional learning’ is: “the process through which two or more professions learn with, from and about each other to improve collaboration and the quality of service.”

Inter Professionality is: “an education and practice orientation, an approach to care and education where educators and practitioners collaborate synergistically.”

The perspective adopted here towards theorising IPE focuses upon the relationships between learning processes, collaborative practice and improved care; and between individuals, environments and the processes that give rise to their self-creation within the health and social care system. 25

IPE reframed by social practice theory

Figure 1 illustrates a model for this new epistemology for inter professional education (adapted from Wenger’s social theory of learning). The proposed learning framework recognises that independent attributes of inter professional knowledge, skills and attitudes are integrated with, and embedded within, practice. The surrounding components are the interconnected elements that are required to enable individuals to gain both an inter professional identity as a health care professional and a professional identity as, for example, a doctor, nurse therapist.

Figure 1: Model for Inter Professional Education (adapted from Wenger 1998)

Meaning: a way of talking about students’ (changing) abilities, individually and collectively, to experience meaningful learning, in this example, in the field of rehabilitation. Through work/learning activities, discussions and using each other’s language the inter professional as well as the profession-specific experiences become meaningful.

Practice: a way of talking in both the practice and academic contexts about inter professional practices and the mutual engagement of the students and other team members demanded by their roles, responsibilities and tasks.

Community: a way of talking about the social configurations of the team and, through legitimate peripheral participation, gaining competence as an individual member of the inter professional team.
Identity: a way of talking about professional identities and becoming inter professionally socialised as well as acquiring ‘professional personhood’. The emphasis of the model is on learning that takes place in practice thus the workplace of the practice context is deliberately positioned first although the model acknowledges that the academic context is also essential for the continuum and integration of learning. The learning that occurs through students living in the social world of both the workplace and the university is also acknowledged as a key element of the theory and of the health care students’ inter professional learning experiences. It is this primacy that is essential to inter professional practice and should give confidence to practitioners to work in teams and to work across traditional occupational boundaries.

CONCLUSION

IPE was constructed in order to meet the challenges of creating a common platform on which health care professionals can work as a team. In the literature there is evidence that mounting barriers exist with the successful implementation of IPE programs. The challenge is to overcome the barriers and develop effective education strategies.

RECOMMENDATIONS

The following three recommendations make up a recipe for successful IPE understanding and implementation.

1. A global definition of IPE should exist that encompasses every health care discipline. This definition should be detailed enough so that it leaves no room for interpretation

2. IPE should be comprised of a common set of goals that every disciple can adhere to.

3. One set of core competencies should exist, regardless of discipline and geographic location. Creating a common platform for educators, learners, and professionals is the start to moving toward a unified health care system.

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Acceptability of a Problem-Based Learning Approach in a Baccalaureate Nursing Programme- A Pilot Study

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ABSTRACT

Introduction: Problem-based learning (PBL) is a form of contextual learning, which has been developed to promote independent learning and critical thinking skills. To determine how far this form of learning would be beneficial and acceptable to the nursing profession, the PBL method was introduced in the Obstetrical and Gynecological Nursing course for baccalaureate students in India and an opinionnaire was used for this purpose.

Material and Method: The opinionnaire was administered to 45 selected baccalaureate nursing students who had undergone a month-long PBL on antenatal care using convenience sampling. The opinionnaire developed by the author had a reliability coefficient of 0.83.

Results: The response from the students was encouraging. Overall, a majority of the students expressed the opinion that the PBL was acceptable to them to ‘a great extent’ and to ‘some extent’. It was also found that a majority of the students (73.33%) expressed the view that PBL, to a great extent, motivated them to do self-study and that they were capable of self-directed learning. They also found tutorial sessions interesting and student-centered.

Conclusion: PBL is found to be an acceptable approach to learning for baccalaureate nursing students.

Keywords: Problem-Based Learning, Acceptability, Nursing, Opinionnaire.

INTRODUCTION

Problem-based Learning (PBL) is a method of learning often characterized by the use of patient problems as context for students to acquire knowledge and learn problem-solving skills. It is a form of contextual learning which has been introduced in various forms in health professions either as a curriculum or integrated into the traditional curriculum to promote independent learning, critical thinking and problem-solving in real-life situations. PBL bridges the gap between theory and practice.

Even in the field of nursing, PBL has been used in programmes as it promotes higher thinking skills and combines theory with practice. Townsend believes that learning by PBL enables students to refine their clinical reasoning, make judgments and enhances their interpersonal and procedural skills in planning and implementing care. Little and Ryan found a role change in students as they became active self-directed learners with critical thinking and problem-solving skills. Hwang & Kim found that PBL group had a higher level of knowledge and motivation than the lecture groups, although the two groups had similar attitudes towards learning.

PBL approach to learning has several advantages. One important advantage is that it significantly enhances the deep approach to learning among the undergraduate nursing students. Nevertheless, before this method is introduced; it is necessary and expedient to determine the perception of the students to this type of approach.

Thus, as part of a larger study, a pilot study was conducted with the objective of determining the acceptability of the PBL Package on antenatal care by...
developing an opinionnaire suitable for baccalaureate nursing students.

MATERIAL AND METHOD

A nursing college in Karnataka, India, was selected for this study. To start with, since the PBL was a new experience for the students of the college, mock sessions and practice sessions were conducted both for students as well as the facilitators. After the initial preparation for undergoing PBL, a month long PBL Package (PBLP) developed on antenatal care was implemented for the fourth year baccalaureate students using convenience sampling. Forty-five students (n=45) were selected using convenience sampling and were divided into four groups, with 10-12 students in each group. The PBLP consisted of five problems/situations on antenatal care which were used as triggers and presented sequentially in five small group brainstorming sessions and tutorials of two hours each. During the tutorials, students were encouraged to analyze, in small groups, the contextual information and set hypotheses by bringing in existing or new knowledge into the context and share and elaborate on their learning, and derive their own learning objectives.

After the completion of the PBL, the opinionnaire on acceptability of the PBL developed by the author was administered. The scales developed by Chapagain et al. and Roach were adopted for this opinionnaire but a few items were modified to suit the requirement. The opinionnaire consisted of nineteen statements on a three point scale, which was content validated by experts in the field. The reliability computed using Cronbach alpha was 0.83. The respondents were required to give their opinion on each statement “to a great extent”, “to some extent” or “not at all”, which had a score of 3, 2 and 1 respectively. The scores were interpreted in terms of frequency and percentage acceptability, for each of the statements.

FINDINGS

Descriptive analysis was done using frequency and percentage.

### Frequency and Percentage Agreement on Responses of the Acceptability of the PBL Package

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Statement</th>
<th>Responses</th>
<th>To a great extent f %</th>
<th>To some extent f %</th>
<th>Not at all f %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The PBLP has enabled me to learn the content area related to antenatal care.</td>
<td></td>
<td>24</td>
<td>53.33</td>
<td>21</td>
</tr>
<tr>
<td>2</td>
<td>I learnt a great deal from the PBL sessions.</td>
<td></td>
<td>20</td>
<td>44.44</td>
<td>25</td>
</tr>
<tr>
<td>3</td>
<td>PBL has made me capable of self-directed learning.</td>
<td></td>
<td>33</td>
<td>73.33</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>PBL has provided me with opportunities to consolidate my previous knowledge and skills.</td>
<td></td>
<td>27</td>
<td>60</td>
<td>18</td>
</tr>
<tr>
<td>5</td>
<td>PBL has helped me to integrate the knowledge that I had from different disciplines into the antenatal context.</td>
<td></td>
<td>25</td>
<td>55.56</td>
<td>19</td>
</tr>
<tr>
<td>6</td>
<td>PBL has helped me to develop problem-solving and clinical reasoning skills.</td>
<td></td>
<td>22</td>
<td>48.89</td>
<td>23</td>
</tr>
<tr>
<td>7</td>
<td>PBL has enabled me to have a deeper approach to learning.</td>
<td></td>
<td>27</td>
<td>60</td>
<td>17</td>
</tr>
<tr>
<td>8</td>
<td>PBL has motivated me to do self-study.</td>
<td></td>
<td>33</td>
<td>73.33</td>
<td>12</td>
</tr>
<tr>
<td>9</td>
<td>The PBLP will help me to apply problem solving and clinical reasoning to new situations in the clinical area.</td>
<td></td>
<td>23</td>
<td>51.11</td>
<td>21</td>
</tr>
<tr>
<td>10</td>
<td>The tutorial sessions were very interesting and student-centered.</td>
<td></td>
<td>33</td>
<td>73.33</td>
<td>12</td>
</tr>
<tr>
<td>11</td>
<td>I learnt a lot from the group discussions.</td>
<td></td>
<td>22</td>
<td>48.89</td>
<td>23</td>
</tr>
<tr>
<td>12</td>
<td>The clinical situations used in the tutorial sessions were relevant to the objectives of the course.</td>
<td></td>
<td>24</td>
<td>53.33</td>
<td>21</td>
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<tr>
<td>13</td>
<td>The clinical situations were stimulating for discussions.</td>
<td></td>
<td>28</td>
<td>62.22</td>
<td>17</td>
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<tr>
<td>14</td>
<td>The clinical situations were appropriate for hypotheses generation.</td>
<td></td>
<td>26</td>
<td>57.78</td>
<td>19</td>
</tr>
<tr>
<td>15</td>
<td>The student component of the PBLP is very informative.</td>
<td></td>
<td>33</td>
<td>73.33</td>
<td>12</td>
</tr>
<tr>
<td>16</td>
<td>The learning objectives of the course were achievable in the given time.</td>
<td></td>
<td>21</td>
<td>46.67</td>
<td>23</td>
</tr>
<tr>
<td>17</td>
<td>Accessing information from the resource list enables me to effectively and efficiently use problem solving and clinical reasoning skills.</td>
<td></td>
<td>31</td>
<td>68.89</td>
<td>14</td>
</tr>
<tr>
<td>18</td>
<td>The listed resources were easily available.</td>
<td></td>
<td>26</td>
<td>57.78</td>
<td>19</td>
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<tr>
<td>19</td>
<td>PBL has enabled me to develop new clinical knowledge and skills.</td>
<td></td>
<td>28</td>
<td>62.22</td>
<td>17</td>
</tr>
</tbody>
</table>
RESULTS

Overall, the students were of the opinion that the PBLP was acceptable to ‘a great extent’ and ‘to some extent’, but 6 students out of 45 were of the opinion that at least, on some items, it was not acceptable at all. However, a majority of the students (73.33%) indicated that the PBLP helped them to a great extent to believe that they were capable of self-directed learning, motivated them to do self-study, found the student component of the PBLP very informative and the tutorial sessions quite interesting and student centered. A majority (68.89%) of them also indicated accessing information from the resource list enabled them to effectively and efficiently use problem-solving and clinical reasoning skills. Further, PBL enabled them to develop new clinical knowledge and skills (62.22%). Majority (57.78%) of the students gave the opinion that to a large extent clinical situations were appropriate for hypothesis generation and (53.3%) indicated that they were relevant to the objectives of the course. Also, it was found that clinical situations (problems) were stimulating for discussions (62.22%), gave them a deeper approach to learning (60%) and provided them opportunities to consolidate their previous knowledge and skills (60%). However, a majority of the students opined that the PBL was acceptable only to some extent on some of the criteria. On other criteria, (55.55%) of the students indicated that they have learnt a great deal from the PBL sessions, (51.11%) felt it has helped them to develop problem-solving and clinical reasoning skills and (51.11%) stated that they have learnt a lot from group discussions. However, a majority of the students (51.11%) felt that the learning objectives of the course were achievable in the given time only to some extent.

The responses also revealed that of the 45 students, two (4.44%) were of the opinion that working through the PBLP did not help them to believe that they were capable of self-directed learning. One student (2.22%) opined that PBLP did not help her to integrate the knowledge that she had acquired from different disciplines into the antenatal context, while an equal percentage of students felt that PBLP will not help them to apply problem solving and clinical reasoning to new situations in the clinical area.

In response to the open-ended questions, many students identified some features that they liked about PBL. For example, PBL motivated them to go through more references, gave them an opportunity for group discussion and motivated them to do self-study.

CONCLUSION

PBL is a major curriculum innovation which is being adopted, with some variations, in a number of professional training programmes in medicine 17-19, dentistry 20-22, physiotherapy 14 and nursing 15. Evaluative studies have shown its superiority over the traditional curriculum 16-17. Some institutions have adopted an integrated curriculum by incorporating PBL with the traditional curriculum 18.

In the nursing college where the present study was conducted PBL was a new concept altogether and the faculty had no or limited experience in PBL. Hence, before introducing the PBL the students had to be trained with mock and practice sessions. The faculty had also to be prepared through practice sessions.

As stated earlier, the main objective of the study was to assess the opinion of students regarding the acceptability of the PBL in ante-natal care. The result was encouraging as the overall response was favourable. A majority of the students expressed the opinion that it was acceptable. This was quite in contrast to the findings of a few other studies, where students perceived PBL as a stressful method of teaching in the field of medicine 19-20.

Interestingly, the findings of the study are consistent with the findings of a similar study where majority of the students found the PBL to be an acceptable approach to learning 11. Some other studies conducted where PBL was introduced in nursing education have also reported overall satisfaction of students with PBL 21. One interesting feature the present study has brought out is that students have felt a sense of achievement in using resources. One student noted: “PBL motivated me to do a lot of reference work which I never did in the past”. However, the main problem in PBL method is that the students have to spend a lot of time doing research relating to the assigned problem. This is true, as even medical students have found that the main disadvantage of PBL is that it was time-consuming 22.

The success in the implementation of PBL programme will depend on integration of PBL in a particular subject area or to the whole curriculum. For successful implementation, the integration of PBL with the traditional curriculum would be the most ideal. Therefore, the findings of this study should interest those who intend to introduce PBL into the existing curriculum.
The fact that PBL was strongly favoured by the students as the acceptable method for self-direction is in line with the findings of other studies. Although the PBL approach was considered acceptable to a great extent in this study, it has to be taken into account that this group was following the traditional curriculum and PBL was introduced only in a specific area (antenatal care). Barrows states that where the students are following a traditional curriculum they always have too much to learn in the time available, as they have to cover more course content in a short period as compared to the PBL learning. Therefore, when both methods are used simultaneously sufficient time is not available for self-directed study which is essential for PBL. It would therefore be ideal to integrate the PBL approach in all subjects simultaneously both in the classroom and clinical settings to determine the acceptability of PBL.

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Conflict of interest: nil

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Health Care Reforms and Nurses as Essential and Integral Part

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ABSTRACT

A health care reform in our country is very essential as the need is greatly felt by its consumers. Along with other health care providers nurses who are an integral part are facing tremendous pressure at the grass root level to district/ state level, due to various reasons, like shortage of nurses and midwives, limited competency of nurses and midwives due to too many categories of nurses and midwives with overlapping roles, ineffective clinical preparation and supervision during training, inadequate continuing education system, non-creation of posts for clinical nurse specialists etc. These challenges can be faced when effective solutions i.e., to empower nurse leaders, create posts for professional nurses at the community level and strengthen the competency of the auxiliary nurse-midwife, enforce implementation of recommended norms on nurse to patient ratio etc, are executed with good support from the INC and government.

Keywords: Health Care Reform, Challenges, Solutions, Advanced Practice Nurse, Nurse Patient Ratio, Collective Bargaining

INTRODUCTION

What is Health care Reform?

Health care reform must involve more than how to provide everyone with access to our current dysfunctional health care system, but, we must reform what and how care is delivered. Access must be affordable, accessible, and acceptable. Nursing, as the pivotal health care profession, is well positioned to advocate on behalf of and in concert with individuals, families and communities who are in desperate need of a well financed, functional and coordinated health care system that provides safe, quality care

According to the National Health Policy (NHP) of India 2002, the major health problems were infectious diseases. These diseases could be prevented by mid-level health personnel such as nurses. However, the quality of nursing and midwifery services, education, research, management and regulation is inadequate and the workforce insufficient

“Never underestimate the power of a small group of dedicated people to change the world. Indeed it is the only thing that ever has.” Margaret Mead

Challenges Faced By Nurses

1. Insufficient contribution of nurses and midwives to health care development due to

- few positions for nurses and midwives at the State and National levels
- inadequate nursing leadership and strategic management

Nurses and midwives are not well accepted or recognized as leaders or administrators. Inadequate number of nurse and midwife leaders at the national and State levels for nursing practice, research, education, management, and planning and policy development also add burden to the existing workforce.

Although the nurse is a member of the health team, she/he is never asked to represent the profession in planning and policy formulation for nursing services, education, etc. The nursing chief only looks after the nursing personnel and has no authority to make decisions on pay scales, number of posts, staff development or new interventions. In response to the demand of the Delhi Nurses’ Union, the Government of India has sanctioned 5 nursing posts at the national level.
2. Poor quality of nursing and midwifery care due to

(a) Shortage of nurses and midwives due to

• (i) Inadequate number of nursing positions as per the recommended staffing norms. In India, the nurse to doctor ratio is almost 1.5:1 while it is 3:1 in developed countries.

There is a shortage of nursing personnel owing to non-implementation of recommended nursing staffing norms. Promotions are limited to 2-3 times throughout the career and few supervision posts are offered.

At the community level, there are no positions for nurses. Health care is provided by auxiliary nurse-midwives (ANMs), lady health visitors (LHVs) and female health workers. There are 5,025,030 registered ANMs, and 40,536 registered health visitors and female health workers. Due to the heavy workload, nursing care or home health care cannot be properly provided.

• (ii) migration- nurses look for better prospects that give them better professional opportunities and personal life style.

• (iii) Insufficient number of nurses with Bachelors’ and Master’s degrees in clinical specialties.

(b) limited competency of nurses and midwives due to too many categories of nurses and midwives with overlapping roles.

• The contribution of nurses and midwives to the quality and efficiency of health services is insufficient.

(c) unclear roles and responsibilities of nurses and midwives

The roles and responsibilities of nurses are not clearly defined. As a result, they spend most of their time in non-nursing tasks

(d) ineffective clinical preparation and supervision during training

(e) inadequate continuing education system

Nurses and midwives do not have much opportunity for continuing their education as no such system exists in most hospitals. And there is no mandatory CNE required for any re registration and re registration act has to be strengthened.

(f) limited utilization of evidence and research

• The use of evidence and research to improve practice is inadequate.

• Data and evidence for research are not managed systematically and are inaccurate and out-of-date.

(g) non-creation of posts for clinical nurse specialists.

• inadequate standards and guidelines for nursing practice

• ineffective regulation of nursing and midwifery practice

The INC was constituted by the Indian Nursing Council Act, 1947and the act was amended in 1950 and 1957 to set a uniform standard of regulation and practice for nurses, midwives and health visitors by specifying the minimum requirements for courses in nursing education, institution inspection and accreditation for quality of education, and maintaining registration by compiling data from the State Nursing Councils.

• inadequate infrastructure for nursing and midwifery practice

• inadequate motivation to provide effective care

3. Poor quality of nursing education to produce qualified graduates for service due to

• an inadequate national nursing and midwifery education plan and development

• limited involvement of nurses and midwives at the policy level

• shortage of qualified nurse educators in certain areas

• inadequate infrastructure for nursing education.

• too many categories of nursing and midwifery personnel

• limited production of academic work and research.

• even though syllabi are revised (2007) it lacks uniform application.

4. Limited role and authority of the INC in nursing development due to

• limited roles prescribed in the Indian Nursing Council Act, 1947
inconsistency in the Indian Nursing Council and State Nursing Council Acts

insufficient information systems in nursing and midwifery services

shortage of staff at the INC and State Nursing Councils.

Other challenges

- Gaps between policy and action.

- Nursing shortage increases the potential of nursing units not being adequately staffed.

- Maintaining the nurse client ratio in skilled nursing facilitates and prohibiting acute care settings from assigning unlicensed personnel to perform nursing functions in lieu of registered nurse.

- Enhancing the job satisfaction of nurses is vital with regard to

  - physician behaviour towards nurses,
  - shift duty, flat salary,
  - mandatory overtime,
  - increasing workload.

Conduct of research

For many years, nursing, along with other medical professions, had been told in their academic programs that “this is how you do it . . . because it’s been always done that way.”

We need to be able to continue to research more—to have better science that can actually dictate our practice that is based upon knowledge and information,

ACCOUNTABILITY

The lack of accountability stems from the fact that there is no formal feedback mechanism and incentive to treat citizens as clients. Patients often complain of rude and abrupt health workers that discriminate against women and minorities from scheduled castes or tribes, poor who can’t afford paid services. The lack of accountability leads to absentee doctors; non-performing nurses (actual care), unresponsive ANMs in rural areas, inconvenient opening times and little or no community participation.

The cost effectiveness of PHC compared to other health programmes has been reinforced by World Bank findings; selected primary healthcare activities such as infant and child health, nutrition programmes and immunisation appeared as ‘good buys’ compared to hospital care and such interventions could avert a large population of deaths. The Bamako Initiative in Benin and Guinea demonstrate that even in resource-poor settings, it is possible to implement and sustain basic PHC services.

CHOOSE OF SERVICES

Nursing personnel must be prepared to guide clients in choosing between the different complementary and traditional approaches to health care. Education should therefore enable nurses to understand these different approaches, their compatibility with other forms of treatment and their acceptability within the traditions of a given culture.

NUMBER OF NURSES

It is estimated that by 2020-2025 there will be a shortage of between 500,000 and 1 million nurses. Additionally, both the Institute of Medicine and the World Health Organization have called for the redesign of nurse training and the development of critical nurse competencies to support better chronic care, self-care and lifestyle change.

Under NRHM at the sub center level additional contractual ANMs and in PHC 3 staff nurses are recruited.

Not only will a better health care system require an adequate supply of nurses, it will require nurses with the right skill sets to support better outcomes and new value for patients and purchasers.

The government has proposed to open number of nursing colleges in each state to sponsor for graduate nursing output under schemes.

SOLUTIONS

1. Providing with good working package

- Better working conditions and better salaries will boost up the spirit of nurses and the productivity and output will definitely be overturned.
• Development of strategies to attract youngsters to take up nursing as the profession will go in the long way in producing nurses for our system.

2. Advocacy : INC to expedite the needed change in policies, programme design and implementation.
• Improve management and accountability of health services.
• Training of nurses in high level for suitable health care.
• Ensure quality improvement through standards and accreditation.
• Quality improvement efforts should be given thrust at all levels.
• Nursing colleges attached with medical colleges should include new areas of clinical practices and respond to the rapidly changing health scenario in the country.
• Facilitate updating the technical knowledge of the existing nursing professionals through continuing nursing education.

3. Use of critical care pathway
• CCP means directing of care and reporting any deviation from what has been planned
• Introduction of critical care pathways- initiated emergency care, asked more questions
• Helped to use resources more efficiently
• Audit has become simpler and CCP can include questions that audit wish to answer.

4. INC proposal
INC has been in discussion with the Department of Health and Family Welfare, Government of India, WHO and INC’s own national constituents, regarding establishing a strategy for achieving excellence in Indian nursing education which would enable it to prepare Indian nursing to take on new and emerging roles in healthcare Collaboration with Indian and International Organizations.

Indian Nursing Council has already prescribed standards for nursing education, service and practice standards, which needs to be fully implemented by the schools and colleges of nurses and health care institutions.
• Need for training nurses in advancing the clinical and public health technologies in India
• Nurses in the Developed countries are now being educated and trained to take on the new emerging roles in healthcare. Indian nurses will need similar training to enhance their existing clinical, managerial and public health skills and competencies.
• As there are enormous gaps that exist in nursing education and practices in the hospitals and communities, the practice areas need to be regulated like educational institutions.

5. Collective Bargaining:
This is a area that is not very much with us. Any need of ours can be bargained by the involvement of all the concerned in effective manner. Our demand has to be presented and argued with good support.

Solutions –at a glance
1. Strengthen involvement of nurses in health and nursing policy formulation and planning Nurses need to study policy formulation and planning at all levels of education.

The INC can take the lead and actively participate in health policy formulation, especially policies that will affect and impact the nursing profession. More positions for nurses are needed at the policy-decision level.

2. Empower nurse leaders
There should be a nursing division led by a nursing director in hospitals. The nurse director has to develop leadership and management skills to enhance the quality of the nursing workforce and nursing care to improve the health of the people and achieve the United Nations’ Millennium Development Goals.

3. Establish a quality assurance system for the nursing service
The objective of this system is to ensure quality care and nursing outcomes as expected by clients (less suffering, shorter duration of hospital stay, and reduction of health care costs, infection,
complications and mortality), and according to professional standards. It also indicates the commitment of the care provider towards providing the best care to consumers. Hospital QA system should have nursing as an integral part and involves nurses in a surveyor team.

4. Ensure nursing workforce management as an integral part of human resource planning and health system development.

A well-managed nursing workforce requires an effective and efficient nursing workforce policy and planning. As a follow up to the Resolutions WHA 45.5 (1992) and WHA 49.1 (1996), Member States were urged to formulate and implement national strategic plans for development of nursing and midwifery services. Bangladesh [1994], Thailand [1994], Indonesia and Maldives [1997], Myanmar [1999], Sri Lanka and Nepal [2001] have developed national strategic plans for achieving this goal.

5. Enhance nursing autonomy in practice

In India, there are a number of care activities that nurses can undertake because of their educational background but cannot carry out because doctors do not delegate responsibility to them. Having nurses take on some of the care that they are trained for independently will be cost-effective. Nurses with a Master’s degree in advanced nursing practice can deal with complex health problems, have a better clinical judgment and can select the proper option for the patient by using evidence-based practice.

6. Enforce implementation of recommended norms on nurse to patient ratio

INC must propose to the government the need for more posts and develop mechanisms to enforce the recommended norms for quality of care.

7. Create posts for professional nurses at the community level and strengthen the competency of the auxiliary nurse-midwife

In India, there is a doctor and nurse at the community health centre but at the primary health centre and sub centre, only the female health worker, ANM and LHV are there.

To ensure quality of service at all community level, a public health nurse (PHN) should work with an ANM. The ANM should be qualified to provide effective maternal and child care to reduce maternal and infant mortality rates, and be able to replace the TBA.

The capacity of PHNs and ANMs should be strengthened so that they can provide health information and education, which are important means to improve the health behaviour of individuals, family and the community.

8. Produce advanced practice nurses

Advanced practice nurses (APNs) are prepared at the Master’s level. An APN can be categorized into a clinical nurse specialist (CNS), nurse practitioner (NP), nurse anaesthetist and midwife. To expand the role of nurses in India, APN programmes should be established and should be included in manpower planning, The scope of practice should be clearly identified by the INC.

9. Ensure appropriate facilities and adequate medical equipment and supplies

Facilities, medical equipment and supply form the infrastructure required for providing health service.

10. Promote evidence-based practice and nursing research

Establishment of policies on the use of evidence in practice is required. Nurses with a Master’s degree should be encouraged to provide evidence, read nursing research and use evidence to improve or change nursing practices.

11. Establish a continuing nursing education system

The existing continuing nursing education programmes should be strengthened or new units established. The appointment of responsible persons for continuing education activity is needed. Continuing education programmes should get approval from the INC and state councils.

12. Strengthen payment scales, incentive systems and working conditions

Emigration of nurses can be prevented by good payment and incentive systems, and promoting better working conditions. Payments should reflect education, type of work, roles and responsibilities, and workload.

An incentive system for nurses could include allowances, uniform, housing, reimbursement for health care services, extra payment for working in
the evening and night shifts or overtime, or working at remote or unsafe areas, and opportunities for continuing education and recognition should be given to good workers at the institutional, local and national levels.

13. **Ensure quality of nursing education by strengthening nursing programmes, increasing qualified nurse educators and allocating appropriate resources to maximize efficiency and effectiveness.**

14. **Expand the role and authority of the Indian Nursing Council on Nursing development by revision of the Act, Restructuring and Networking**

**INC Recommendations**  
Rapid Changes Occurring in Healthcare require new Policy Initiatives 
Faced with the rapid changes occurring in the Healthcare sector of India, the National Health Policy of 2002 lays emphasis on:

- Increasing the number of nurses relative to beds and doctors.
- Improving the skill level of nurses.
- Increasing the ratio of degree-holding nurses vis-à-vee diploma nurses.
- The need for establishing training courses for super-specialty nurses.

**CONCLUSIONS**

If all the challenges of nurses are acknowledged and the solutions are offered at every level to the satisfaction of the nurses then the nursing workforce will definitely will be able to serve the consumers with much more vigor. No health care reform is possible ignoring the largest workforce of the health care industry.

**REFERENCES**

A Study to Evaluate the effectiveness of Planned Teaching Programme on Growth Monitoring of Children Using Innovative Paediatric Growth Chart among the Third Year General Nursing and Midwifery Students in a Selected Institute at Mangalore

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ABSTRACT

Various teaching and reinforcement programmes have been very successful in developing the skills and knowledge which required to the health care providers for the effective growth monitoring. The purpose of this study was to assess the effectiveness of planned teaching programme using the power point presentation in improving the knowledge of third year GNM students regarding the Innovative Pediatric Growth Chart. Pre experimental one group pre-test post-test design with evaluative approach was adopted to accomplish the objectives of the study. A sample of 30 III year GNM students was selected using purposive sampling technique. Statistical analysis of the data revealed that the planned teaching programme regarding the Innovative Pediatric Growth Chart was effective in improving the knowledge of the III year GNM students. (t29 = 15.1, p 0.05).

Keywords: Planned Teaching Programme, Innovative Paediatric Growth Chart, Growth Monitoring, III year GNM Students, Structured Knowledge Questionnaire, and Knowledge Score.

INTRODUCTION

Growth refers to an increase in the physical size of the whole or any of its parts. It results because of cell division and the synthesis of proteins. It causes a quantitative change in the child’s body. Development refers to a progressive increase in skills and capacity to function. It causes a qualitative change in child’s functioning. Growth assessment is the single most useful tool for defining health and nutritional status in children at both the individual and population levels. Growth monitoring of children using innovative growth chart strives to improve nutrition, reduce the risk of inadequate nutrition, educate caregivers, and produce early detection and referral for conditions manifested by growth disorders. Growth monitoring and promotion is an important aspect in childcare. Growth monitoring is best initiated from birth rather than when the child is already 2 to 3 years.

The new Child Growth Standards provide the necessary measurement and evaluation tool for parents, caregivers, health practitioners, policymakers and advocates with which to monitor healthy growth, ensure timely screening and treatment, recommend and follow positive nutritional practices.

It is also important to keep in mind that the nurses and mothers should be familiar with important milestones of development. It helps the nurses and mothers in growth monitoring, to identify growth falter, delayed milestones, malnutrition and mothers can be educated about the care of their own child as well. Growth monitoring is an opportunity for health providers to increase awareness and provide anticipatory guidance on the importance of healthy feeding and eating practices. Therefore, the investigator felt the need to conduct the present study to promote knowledge of III year GNM students regarding growth monitoring of children using innovative growth chart.

OBJECTIVES

The objectives of the study were:

1. To assess pre-test knowledge score among the third year GNM students on growth monitoring of
children using innovative paediatric growth chart as measured by structured knowledge questionnaire.

2. To assess post test knowledge score among the third year GNM students on growth monitoring of children using innovative paediatric growth chart as measured by the same structured knowledge questionnaire.

3. To compare the pre-test and post test knowledge score of third year GNM students on growth monitoring of children using innovative paediatric growth chart.

4. To find out association between pre-test knowledge score of third year GNM students with selected demographic variables.

Conceptual framework

The conceptual framework for the study was developed on the basis of Kings Goal Attainment Model (1989). This model focuses on interpersonal relationship between the client and the nurse in order to attain a mutual goal.

HYPOTHESIS

H₁: The mean post test knowledge score of third year GNM students on growth monitoring of children using innovative paediatric growth charts will be significantly higher than that of their mean pre-test knowledge score at 0.05 level of significance.

H₂: There will be significant association between pre test knowledge score with selected demographic variable at 0.05 level of significance.

METHODOLOGY

Pre experimental one group pre-test post-test design with evaluative approach was adopted to accomplish the objectives of the study. A sample of 30 III year GNM students was selected using purposive sampling technique. A planned teaching programme was prepared by the investigator focusing on the growth monitoring of children using innovative paediatric growth chart.

Description of the tool

Part I: Consisted of three items related to demographic data of the subjects such as age, gender, previous information regarding innovative growth monitoring chart.

Part II: Structured questionnaire consisted of 30 items on knowledge regarding innovative growth monitoring chart. All items were given score of one for each correct answer. The items were based on various areas of innovative growth monitoring chart, which included: knowledge regarding innovative growth monitoring chart- fourteen items (46.7%) and knowledge regarding methods of growth monitoring using innovative growth monitoring chart- sixteen items (53.3%).

Description of Planned Teaching Programme

The planned teaching programme was titled “Growth Monitoring of Children using Innovative Growth Monitoring chart”. The planned teaching programme included introduction, general and specific objectives and references. The planned teaching programme consisted of the following content areas: Introduction, definition of the growth monitoring and the growth monitoring chart, aims and purposes of growth monitoring, characteristics of innovative growth monitoring chart, types of innovative growth monitoring chart, methods of innovative growth monitoring, frequency of growth monitoring and conclusion. Lecture-cum-discussion method was selected as appropriate methods of teaching III year GNM students. Power Point slides were considered appropriate to increase the impact of teaching.

Process of data collection

Prior permission was obtained from the concerned authority of the selected school of nursing at Mangalore to conduct the study. The ethical clearance was obtained from the ethical committee of Shee Devi College of Nursing, Mangalore. Keeping in mind the ethical aspect of research, data was collected after getting informed consent from the sample. The respondents were assured of the anonymity and confidentiality of the information provided by them. The researcher has collected data from samples. Pre-test was conducted on the first day with a structured knowledge questionnaire. They were instructed to go through the instructions before proceeding to answer the questionnaire. The planned teaching programme was administered on the same day for all III year GNM students in the selected school of nursing. Power Point slides and chalkboard were used as the visual aid to facilitate easy understanding. Planned teaching programme was administered for one hour. Post test was conducted after seven days with the same structured knowledge questionnaire.
Results: The gathered data were then organised, tabulated, analysed and interpreted using descriptive and inferential statistics.

Description of demographic characteristics of the sample

Description of the III year GNM students according to their age shows that the majority (46.7%) of them were in the age group of 20 years and 30% of them were in the age group of 21 years. However, 13.3% of them were in above 21 years and 10% of them were in 19 years age group. It is observed that majority of the students under study were under the age group of 20 years. Distribution of III year GNM students according to their gender shows that all the students under study were females (100%). Distribution of students according to their previous information about innovative paediatric growth chart reveals that majority of the students (66.7%) had no previous information regarding innovative paediatric growth chart and only (33.3%) had previous information regarding innovative paediatric growth chart.

Evaluation of the effectiveness of the PTP on growth monitoring using innovative paediatric growth chart

Comparison of pre-test and post-test knowledge score

The mean percentage of knowledge in the pre-test was 28.8% with mean and SD was (8.7 ± 2.1) and the mean percentage knowledge in the post-test was 61.2% with mean and SD was (18.4 ± 2.6). Comparison of the pre-test knowledge and post-test knowledge score reveals that the highest mean score (18.4 ± 2.6) which is 61.2% was found in the post-test and the lowest score (8.7 ± 2.1) which is 28.8% was found in the pre-test. Analysis also revealed the effectiveness of PTP by a mean score (9.7 ± 3.5) which is 32.4%.

Testing of Hypothesis

The effectiveness was tested by using paired ‘t’ test. The significant difference between the pre-test and post-test knowledge scores was found highly significant (t_{29} = 15.1, p<0.05). Thus the data revealed that the PTP was effective and improved the knowledge of students regarding the growth monitoring of children using the innovative paediatric growth monitoring chart.

The table value at 0.05 level of significance t (29) = 1.68. The paired ‘t’ test reveal that, the calculated ‘t’ value (t=15.1, p<0.05) was greater than the table value at 0.05 level in all sections.

Acknowledgements

My sincere gratitude and thanks to Mrs. Sheeba, for her guidance and support. Ms. Priya Vadhana, Associate Professor, Pediatrics, Shree Devi College of Nursing Mangalore, for her support and timely help during the entire study. I also acknowledge the cooperation and support rendered by Mrs. Sudharani, Lecturer Shree Devi College of Nursing Mangalore.

References

A Study to Assess the Level of Foot Care Practice among Patients with Diabetes Mellitus

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¹Vice-Principal, College of Nursing, JIPMER, Puducherry, India, ²Prof., & Head, Dept. of Paediatric Nursing, Rani Meyyamai College of Nursing, Annamalai University, Chidambaram, Tamil Nadu, India

ABSTRACT

Diabetes Mellitus is a disease of complications which decreases the life span of diabetic patients. The diabetic foot is one of the common complications of diabetes, often requiring prolonged hospitalization. Foot problems are the most common cause of admission to hospital for people with diabetes.¹ The objectives of the study were to assess the various foot care practices and also the level of foot care practices among patients with diabetes mellitus. Cross sectional descriptive research design was used for the study. The study was conducted in diabetic clinic outpatient department and wards of Sri Venkateshvaraa Medical College Hospital and Research Centre at Puducherry. Hundred samples were selected by convenience sampling technique. The study results showed that among 100 patients, 57% of them had very poor foot care practices, 42% of them had poor practices and only one had fair foot care practices. None of them had good or excellent foot care practice.

Keywords: Diabetes Mellitus, Foot Care Practice, Diabetic Foot Ulcer, Microcellular Rubber (MCR).

INTRODUCTION

Diabetes mellitus is a disease of complications which decreases the life span of diabetic patients. Diabetes is the fourth leading cause of death by disease globally. Diabetes foot is one of the common complications of diabetes, often requiring prolonged hospitalization.¹ International Diabetes Federation reported that up to 70% of all leg amputations happen to people with diabetes mellitus. Every 30 seconds a leg is lost to diabetes somewhere in the world. People with diabetes are 15 to 40 times more likely to require a lower limb amputation.² Based on the statistical evidences, there is an urgent need to focus attention on patients with diabetes mellitus to prevent foot ulcer and amputation. Many studies reported that foot care management remains poor among diabetic patients and non-healing ulcer lead to lower extremity amputation.

OBJECTIVES

¹ To assess the various foot care practices among patients with diabetes mellitus.
² To assess the level of foot care practices among patients with diabetes mellitus.

MATERIAL AND METHOD

Cross sectional descriptive research design was adopted to assess the foot care practices among patients with Diabetes Mellitus. The study was conducted in Diabetic outpatients department and wards of Sri Venkateshvaraa Medical College Hospital and Research Centre, Puducherry. Population for the study was all patients with diabetes mellitus, who had attended Diabetic outpatient department and also who were admitted in wards. Inclusion Criteria for the study were patients who were diagnosed to have diabetes mellitus, above 18 years of age, able to understand Tamil or English and willing to participate in the study. Exclusion criteria for the study was patients who were critically ill. Hundred samples were selected based on inclusion criteria by convenient sampling technique. Data were collected using three point Likert’s scale to assess the foot care practices among diabetic patients. The maximum score was 30 and minimum score was 0. Level of practices were indicated by scores, such as 1 to 7 indicated very poor practices; 8 to 15 stated poor practice; 16 to 22 denoted fair practices, 23 to 29 mentioned good practices; 30 declared as excellent practice. Prior permission was obtained from the higher authorities of the Institute.
The investigator explained the purpose of the study and gained the confidence from the respondents. Oral consent was obtained from the study respondents. Data were collected from 100 samples by interview method for a period of 30 minutes each. The data were tabulated in a master data sheet in Microsoft Excel, organized and analyzed in terms of objective of the study. Descriptive and inferential statistics were used to analyze the data.

FINDINGS AND DISCUSSION

Table 1. Percentage Distribution of Foot Care Practice among Patients with Diabetes Mellitus

<table>
<thead>
<tr>
<th>Activities</th>
<th>Regular</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you check your height and weight?</td>
<td>9%</td>
<td>45%</td>
<td>46%</td>
</tr>
<tr>
<td>Do you check your blood sugar value?</td>
<td>42%</td>
<td>47%</td>
<td>11%</td>
</tr>
<tr>
<td>Do you walk with foot wear?</td>
<td>5%</td>
<td>82%</td>
<td>13%</td>
</tr>
<tr>
<td>Do you wear prescribed foot wear?</td>
<td>3%</td>
<td>9%</td>
<td>88%</td>
</tr>
<tr>
<td>Do you inspect your foot daily?</td>
<td>-</td>
<td>10%</td>
<td>90%</td>
</tr>
<tr>
<td>Do you check your foot by mirror?</td>
<td>-</td>
<td>2%</td>
<td>98%</td>
</tr>
<tr>
<td>Do you cut your toe nails?</td>
<td>6%</td>
<td>62%</td>
<td>32%</td>
</tr>
<tr>
<td>Do you inspect your foot wear?</td>
<td>1%</td>
<td>5%</td>
<td>94%</td>
</tr>
<tr>
<td>Do you wash your foot before go to bed?</td>
<td>-</td>
<td>15%</td>
<td>85%</td>
</tr>
<tr>
<td>Do you apply moisturizers to smoothen the foot</td>
<td>1%</td>
<td>10%</td>
<td>89%</td>
</tr>
<tr>
<td>Do you take drug by order?</td>
<td>54%</td>
<td>41%</td>
<td>5%</td>
</tr>
<tr>
<td>Do you follow diet control?</td>
<td>49%</td>
<td>46%</td>
<td>5%</td>
</tr>
<tr>
<td>Do you follow DM identity card?</td>
<td>-</td>
<td>-</td>
<td>100%</td>
</tr>
<tr>
<td>Do you practice the leg exercise?</td>
<td>-</td>
<td>3%</td>
<td>97%</td>
</tr>
<tr>
<td>Do you soak the leg in warm water?</td>
<td>1%</td>
<td>1%</td>
<td>98%</td>
</tr>
</tbody>
</table>

The data presented in Table 1. shows that percentage distribution of foot care practice among patients with diabetes mellitus.

- Out of 100 patients, 42% had regular practice of checking their blood glucose level, 54% had anti-diabetic agents regularly as per doctors’ advice, and 49% were following the diet restriction regularly.

- Further, 46% of them replied that they never checked their height and weight. Majority of the patients (88%) said that they never used MCR chappels, 90% of them never inspected their foot, and almost 98% agreed that they never examined their foot using mirror. Most of them (94%) reported that they never checked their foot wear before wearing, 85% expressed that they never washed their foot before going to bed, 89% accepted that they were not using moisturizers to smoothen the foot, none of them (100%) used diabetic ID card, 97% answered that they were not practicing leg exercise and 98% of them never soaked their leg in warm water.

- Khamseh ME, Vatankhah N, Baradaran HR. (2007) conducted study on Knowledge and practice of foot care in Iranian people with type 2 diabetes in Iran which supports the present study. Lack of adequate knowledge included the following: 60% failed to inspect their feet and 42% did not know to trim their toe nails. High risk practices related to foot care were use of irritants to water (66.5%) and walking barefoot (62%). Further the results of the study highlighted the patients’ inadequate knowledge of self-care about their foot and lack of optimal podiatry service in Iran. The present study findings showed that diabetic patients had very poor foot care practice, which needs constant motivation by health care provider.
Table 2: Level of Foot Care Practice among Patient with Diabetes Mellitus

<table>
<thead>
<tr>
<th>Level of foot care practice</th>
<th>Percentage</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Poor practice (1-7)</td>
<td>57%</td>
<td>7.2</td>
<td>2.65</td>
</tr>
<tr>
<td>Poor practice (8-15)</td>
<td>42%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair practice (16-22)</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Good practice (23 – 29)</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent practice (30)</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Maximum score -30; Minimum score - 0

Table 2 shows that among 100 diabetic patients, 57% had very poor foot care practices, 42% had poor practices, and only one had fair practices. None of them had good or excellent foot care practice. Mean value of foot care practice among patient with diabetes mellitus was 7.2 with the standard deviation of 2.65. The study finding showed an average score of 7.2 which indicated that almost all diabetic patients involved in the study were practicing only 3 to 4 foot care activities out of 15 expected.

Present study finding supported by Hasnain S, Sheikh NH (2009) study on knowledge and practices regarding foot care among diabetic patients visiting diabetic clinic in Jinnah Hospital, Lahore. The study finding reported that only 14% respondents had good practice for foot care, 54% had satisfactory practice and 32% had poor practice.4

RECOMMENDATIONS

- The finding of the study suggested that health care provider should actively involve creating awareness programme among patients with diabetes mellitus through mass media about diabetic foot, its complications and preventive measures.
- Government of Puducherry is issuing free foot wears for school going children, which can be extended to the risky diabetic patients to prevent foot ulcer based on qualified medical officer recommendation.
- Continuing education programme is necessary to all categories of nurses and public health workers about early detection and prevention of foot complications.

CONCLUSION

The study concluded that diabetic patients were not having adequate knowledge on foot care practice such as selection of foot wear, foot inspection, and leg exercise. Health care provider should educate the patients about healthy practices of foot care and preventive measures of foot injuries. The health care professionals should start health education regarding foot care at the time of diagnosis itself. After completion of the data collection as per the interview schedule, the investigators have given health education on foot care which included anatomy and physiology of foot, causes of foot problems, causes of foot injury, foot inspection, foot wear selection, foot wear inspection, way of cutting toe nails, importance of diabetic ID card, leg exercises, regular medications, diet control and preventive measures of foot injuries. Diabetic foot is gaining importance due to increased morbidity and mortality rate among diabetic patients. There is a need for early detection and prevention of foot problems.

ACKNOWLEDGEMENT

We express our thanks to patients who participated in the study and authorities who provided permission to conduct the study.

Conflict of interest: Nil.

References

Effectiveness of IEC Programme on the Nursing Students with Regard to Management of Children with ARI (Pneumonia) and Diarrhea Based on IMNCI Guidelines

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ABSTRACT
A quantitative (experimental) research approach with "One group pre-test post-test design" (pre-experimental) was used to assess and evaluate the effectiveness of IEC programme in terms of knowledge and practice of B.Sc. (Nursing) students with regard to management of children with Acute Respiratory Infection (ARI) and Diarrhea based on IMNCI guidelines in a selected nursing college of Delhi with the objectives: 1. To develop IEC programme. 2. To assess the knowledge and practice before and after administration of IEC programme.3. To seek relationship between knowledge and practice after the administration of IEC programme. Sample consisted of thirty one (31) 3rd year B.Sc student nurses of Rufaida College of Nursing, New Delhi. The study was conducted at Rufaida College of Nursing and Health Centre and Maternity Home, IPP-VIII, Badarpur, New Delhi. Total enumeration sampling technique was used to select the subjects and data was collected using a predesigned, tested, valid and reliable structured knowledge questionnaire and structured observation checklist. The findings of study revealed that the mean post-test knowledge score (33.29) was significantly higher than the mean pre-test knowledge score (22.03) and the computed ‘Z’ value (15.21) for knowledge was greater than the standard ‘Z’ value of (1.96). The mean post-test practice score (33.58) was significantly higher than the mean pre-test practice score (22.26) and the computed ‘Z’ value (10.88) for practice was greater than the standard ‘Z’ value of (1.96). The calculated value of coefficient of correlation (r) 0.399 is greater than the table value (0.355) at df (29) which indicates that there is significant positive relationship between post-test knowledge and post-test practice scores. The study concluded that IEC based on IMNCI guidelines was useful in enhancing the knowledge and practice of student nurses. Study recommended that research needs to be done on other aspects of IMNCI

And more focus needs to be given to assess the skills, knowledge and practice of grass root level health care workers who are actually the implementers of care.

Keywords: Children, Information Education Communication (IEC), Effectiveness, Management

INTRODUCTION
Children under the age of five constitute for 15 to 20 % of population in developing countries. In India pre-school children represent about 12% of the general population. Children are the most super sensitive, delicate and the vulnerable group of the population which can easily be waned if not taken care of. Children receive proportionately large doses of environmental toxicants than adults, and the fact that their organs and tissues are rapidly developing makes them particularly susceptible to chemical insult. More than 2 million children die every year due to common childhood illness like ARI, pneumonia, diarrhea, malnutrition and many more (fig-1.1). One of the important resources of the community is its children. “Child health is national health”. If the health of the child is affected, it affects the national economy.
The Times of India (UNICEF—Report, 20 Nov 2009) reported that 5,000 children under the age of five, die in India every day. Diarrhea and pneumonia remain a significant health problem in India with significant morbidity and mortality. About 2.1 million children die every year, of which 1.9 million (90%) deaths can be prevented if proper and immediate action are taken and parents are correctly informed and counselled.

According to David Oot (2004) globally diarrhea is the second largest killer. Around 4 billion cases of diarrheal diseases are recorded annually, leading to more than 2 million deaths, mostly affecting children under the age of five. This has been equably compared to one child dying every 15 seconds.

UNICEF/WHO (2006) in the article ‘Pneumonia—The Forgotten Killer of Children’, reported that pneumonia kills more children than any other illness worldwide—more than AIDS, malaria and measles combined. India has the largest number of deaths due to pneumonia. About 69% of children with suspected pneumonia are taken to a health facility and 13% are treated with antibiotics.

Jehu et al. (2005) in a quasi-case control study on ‘Child Survival: Short-Term Effects of IMNCI’ stated that skill-based training needs should be provided to front-line health workers (Anganwadi workers) based on the premise that most neonatal deaths can be prevented by community-based interventions.

According to operational guidelines of IMNCI (2003) IMNCI is a skill-based training based on a participatory approach combining classroom sessions with hands-on clinical sessions in both facility and community settings. Trainings under IMNCI include in-service training for the existing staff and pre-service training.

Expert group meeting (2005) at AIIMS, on ‘IMNCI in pre-service education of physician’ highlighted that academic and professional leadership in child health have the responsibility not only to promote IMNCI in pre-service education of physicians but also that of the nurses, ANMs and other health professionals and workers.

As per the researcher’s knowledge based on literature reviews no such kind of study has been conducted on student nurses on management of ARI and Diarrhea based on IMNCI guidelines in Delhi/India. Student nurses are the potential workforce of health care team. Effective guidance during the student period will play an imperative role in bringing out skilled nursing personnel who will be able to bestow comprehensive nursing care. Tutoring the student nurses regarding early detection of signs and symptoms, classifying disease according to severity and appropriate and prompt management at the domiciliary and primary health centre level will help to achieve case control of ARI (Pneumonia) and Diarrhea thus bringing down the occurrence, prevalence, morbidity & mortality among children. IMNCI has been recently introduced into B.Sc nursing curriculum. Effective imparting of knowledge and skills based on the IMNCI guidelines will enable the nurses to better manage a sick neonate/child thus contributing to the overall objective of bringing down the infant and child mortality rates.

A study of this kind would convey the nature of involvement of required by the health workers in disseminating appropriate low cost technologies in the management of Pneumonia and Diarrhea as per IMNCI guidelines.

MATERIAL AND METHOD

The objectives of the study were 1. To develop Information education communication programme on management of diarrhea and pneumonia based on IMNCI guidelines. 2. To assess the knowledge and practice of B.Sc. (Nursing) students before and after administration of IEC programme. 3. To seek relationship between knowledge and practice after the administration of IEC programme.

Research approach

Quantitative approach was adopted to accomplish the objectives.
Research design

Pre-experimental—‘One group pre-test post-test design

Population

B.Sc. (Nursing) students

Sample and Sampling Technique

The sample consisted of 3rd year B.Sc (Nursing) students of a selected college of Nursing in Delhi who were available and willing to participate in the study. Total enumeration technique was used to select the subjects.

Sample size: 31

Setting

Rufaida College of Nursing and IPP-VIII, Health Centre and Maternity Home, Badarpur, New Delhi.

Data collection tools and techniques: In order to meet the objectives a structured knowledge questionnaire and structured observation checklist was prepared. The tool consisted of 2 sections:

Section A: demographic characteristics of sample such as age, aggregate marks of previous year (%), and exposure to paediatric ward.

Section B: consisted of two parts:

Part – I Structured knowledge questionnaire consisting of 50 items to assess the knowledge.

Part – II Structured observation checklist consisting of 45 steps to assess the practice with 2 response columns ‘Yes’ and ‘No’.

Content validity of the tool was done by giving the questionnaire and checklist to 15 experts from the field of nursing and medicine. Appropriate modifications were made according to the suggestions given by the experts. The reliability coefficient for knowledge questionnaire was calculated using Kuder-Richardson-20 formula and found to be 0.85. For observation checklist, inter-rater reliability was calculated using percentage of agreement and found to be 0.95 (95%). Tools were thus established as reliable for study. A pilot study was conducted at Dr.RML hospital, on 10 subjects to ascertain the feasibility of the current study. The pilot study findings indicated that the study was feasible.

Procedure for data collection

After getting formal administrative approval from concerned authorities, informed consent was taken from selected subjects and was appraised about the purpose of study and the confidentiality of their responses was assured. The following steps were followed for data collection:

Day one-pre-test for knowledge for all the (31) students using structured knowledge questionnaire and practice of 15 students was observed by using observation checklist.

Day two-Observed practice of 16 students

Day three-intervention (lecture cum demonstration)

Day 10 & 11 post-test for knowledge and practice identical to pre-test was administered in order to evaluate the effectiveness of IEC programme.

Data analysis

The data were tabulated in a master data sheet in Microsoft excel, organized and analyzed in terms of objectives of the study. Inferential and descriptive statistics were used to describe the data.

MAJOR FINDINGS

Section I: Demographic characteristics

- 29 (93.55%) subjects were in the age group of 19—21 years and 2 (6.45%) were in age group of 22—24 years.
- 22 (70.97%) subjects secured 61–70%, 7 (22.58%) secured 50—60% and 2 (6.45%) secured 71—80% as aggregate % marks in 2nd year.
- 19 (68.29%) subjects had exposure to paediatric ward.

Section II: Findings related to post-test knowledge score of student nurses
As shown in fig 1.2 the mean post-test knowledge score (33.29) was significantly higher than the mean pre-test knowledge score (22.03) of the student nurses.

Table 1 Mean, Mean difference, Standard deviation and ‘Z’ value of pre-test and post-test knowledge scores of student nurses on management of children with ARI (pneumonia) and Diarrhea

<table>
<thead>
<tr>
<th>Knowledge test</th>
<th>Mean</th>
<th>Mean difference</th>
<th>Standard Deviation</th>
<th>‘Z’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>22.03</td>
<td>11.26</td>
<td>3.34</td>
<td>15.21*</td>
</tr>
<tr>
<td>Post-test</td>
<td>33.29</td>
<td></td>
<td>2.61</td>
<td></td>
</tr>
</tbody>
</table>

‘Z’ = (1.96), p < 0.05  *Significant at 0.05 level

The data presented in the Table -1 indicates that the computed ‘Z’ value (15.21) is greater than the standard ‘Z’ value of (1.96). This indicates that the IEC programme developed was effective in increasing the knowledge of student nurses.

Section III: Findings related to post-test practice score of student nurses

As shown in fig 1.3 the mean post-test practice score (33.58) was significantly higher than the mean pre-test practice score (22.26) of the student nurses.

Table 2. Mean, Standard deviation and ‘Z’ value of pre-test and post-test practice scores of student nurses on management of children with ARI (pneumonia) and Diarrhea

<table>
<thead>
<tr>
<th>Knowledge test</th>
<th>Mean</th>
<th>Mean difference</th>
<th>Standard Deviation</th>
<th>‘Z’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>22.26</td>
<td>4.80</td>
<td>10.88*</td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>33.58</td>
<td></td>
<td>3.31</td>
<td></td>
</tr>
</tbody>
</table>

‘Z’ = (1.96), p < 0.05  *Significant at 0.05 level

From the data presented in the Table -2, it is evident that, the computed ‘Z’ value (10.88) is greater than the standard ‘Z’ value of (1.96). This indicates that the IEC programme developed was effective in increasing the practice of student nurses.

Section IV: Findings related to area-wise gain in modified mean percentage on comparison of the pre-test and post-test knowledge and practice scores.

As evident in Figure-1.4 Area-wise highest post-test modified mean percentage of knowledge scores obtained by student nurses was in the area of IMNCI followed by pneumonia.
As evident in Figure-1.5 Area-wise highest post-test modified mean percentage of practice score was in the area of pneumonia steps followed by diarrhea and general steps.

Section V: Findings related to correlation between post-test knowledge and post-test practice scores.

TABLE 3. Coefficient of correlation between post-test knowledge scores and post-test practice scores on management of children with ARI (Pneumonia) and Diarrhea

<table>
<thead>
<tr>
<th>Test</th>
<th>Knowledge scores</th>
<th>Practice scores</th>
<th>'r'</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D</td>
<td>Mean</td>
</tr>
<tr>
<td>Post test</td>
<td>33.29</td>
<td>2.61</td>
<td>33.58</td>
</tr>
</tbody>
</table>

'r' (29)=0.355, p ≤ 0.05 level * Significant at 0.05 level of significance.

It is evident from the Table-3 the calculated value of coefficient of correlation (r) is 0.399 is greater than the table value (0.355) at df (29). This indicates that there is significant positive relationship between post-test knowledge and post-test practice scores at 0.05 level of significance.

CONCLUSION

In India, mortality and morbidity in under-five children due to the preventable diseases are very high. If appropriate measures are taken, it would be possible to prevent these diseases. To combat the challenge of high under-five mortality, WHO developed IMNCI strategy aiming at holistic and integrated approach towards child health and development. The studies on IMNCI have concluded that there is a sound scientific basis for adopting IMNCI approach. IMNCI algorithm is diagnostically and therapeutically superior to vertical disease specific algorithm. IMNCI guidelines cover 81-84% of diagnosis among young infants and 92% of the recorded illnesses among the children. To propagate this novel strategy, there is a need for the training of health professionals and workers. Some initiatives have been already taken but pre-service education and training on IMNCI strategy will be a sustainable mean for introducing public health interventions in national health programmes. Pre-service training is considered to be cost-effective, sustainable and the most appropriate mean that allows students to devote their full attention to programme implementation. This will help in standardization of the practice and protocol-based management of the most common medical conditions that afflict under-five children. The present study was carried out to assess and evaluate the effectiveness of IEC programme in terms of knowledge and practice of B.Sc (nursing) students regarding management of children with ARI (Pneumonia) and Diarrhea, based on IMNCI guidelines. The IEC programme included classroom teaching using lecture cum discussion with demonstration of assessment and management of children with ARI(Pneumonia) and Diarrhea based on IMNCI guidelines. The study concluded that after administration of IEC programme, knowledge and practice of the student nurses were enhanced significantly as they were able to identify, assess and classify the condition. They were also able to advise the mothers of under five children about management of diarrhea with ORS solution and home available fluids, how to give medicines at home for pneumonia and follow up. On the basis of the present study it may be concluded that IEC based on IMNCI guidelines is useful for managing childhood illness in the community. Study recommends that community sensitization programme on management of neonatal and childhood illnesses should be created through health education. Traditional health workers should be trained on IMNCI guidelines and encouraged to practice it. The administrator must provide adequate support to develop material and see that every nurse posted in the casualty, OPD, paediatric, PHC and CHC must be competent in managing sick children based on IMNCI guidelines. There should be provision for in-service education of the nurses on IMNCI.

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I would like to thank Mrs. Sujana Chakravarty, Principal, Rufaida College of Nursing, Jamia Hamdard, Dr Jugal Kishore, Professor, Maulana Azad Medical College, New Delhi, Dr. B.K Rao and Dr. Byotra (Board of management) Sir Ganga Ram Hospital, New Delhi, Dr. Ikka, CMO, IPP-VIII for continuous guidance and support. I also thank the parents of the subjects for giving their consent to be a part of this study.

Conflict of interest: None
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1. The Times of India (UNICEF—Report, 20 Nov 2009)
Health Problems Faced by the Women during Pregnancy in Sunsari District of Nepal

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ABSTRACT

Background: Pregnancy is a very happy moment for any married woman. But along with this happiness come some of the health problems which are common in pregnant woman as her body undergoes certain changes due to the hormonal functioning.

Objective: The objective of this study was to assess health problems of the pregnant women in Sunsari district, Nepal.

Methods: A cross-sectional study was conducted among 239 pregnant women in Sunsari district of Nepal. Face- to-face interview method was used to gather information for this study.

Results: Of the 239 of pregnant women, 110 (46%) of them complained of nausea and vomiting, 92 (38.5%) had pain abdomen, 98 (41%) felt tiredness, 92 (38.5%) had headache, 12 (5.1%) had swelling of lower limbs, 5 (2.1%) had pregnancy induced hypertension (PIH), 12 (5%) had faced convulsion and unconsciousness and 16 (6.7%) had fever.

Conclusion: It is a tragic fact that majority of the pregnancy has some kind of health problems, which may be disappeared after delivery.

And more focus needs to be given to assess the skills, knowledge and practice of grass root level health care workers who are actually the implementers of care.

Keywords: Health problems, Women, Pregnancy

INTRODUCTION

Health refers to the absence of obvious evidence of disease and normal functioning of that person, adequate functioning of several organs of the body in themselves and in relation to one another which implies a kind of equilibrium or homeostasis-a condition relatively stable but which may vary as human being adapt to internal and external stimuli. Health is multidimensional. The WHO definition envisages three specific dimensions-the physical, mental and social.

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Antenatal period is the most important and crucial time for the health of the mother and fetus. Most of the women do not know what to do and how to take care of their own health during antenatal period. It is a tragic fact of life that in the every acts of giving birth, of achieving motherhood, more than half a million women die every year in the world. Many more who escape this tragedy, survive with serious ill health, because of pregnancy and childbirth related complications.

MATERIALS AND METHOD

A cross-sectional study was conducted among the pregnant women in Sunsari district of Nepal. Sunsari district has five primary health care centers (PHC), of which two PHCs of Chatar and Itahari were randomly selected by lottery method. Pregnant women who attended Chatar and Itahari PHC were enrolled as
Sample population in this study. Any subject refusing to participate was excluded from the study. Total sample size was 239. Purposive sampling technique was used to collect the data. Interview method was used for the purpose with prior permission of the PHC Incharge and the subjects. Computer software programme was used to analyze the collected data. Descriptive and inferential statistical methods were applied.

RESULTS

Data collected among 239 pregnant women revealed that majority of the respondents (65.7%) were literate followed by near about one third (27.2%) respondents were completed primary level of education, and very few (0.4%) of them had completed graduate level. Majority of the respondents (90%) were engaged as housewives, few (3.3%) were service holder, and few (5.9%) of them were laborers. Majority of the respondents (82.4%) belonged to upper lower socio-economic class according to Kuppuswamy’s modified socio-economic status scale for the urban population.

Nearly half of the respondents (46.4%) were primigravida, 43.1% were multi-gravida and 10.5% grandmultigravida. Majority of the respondents (94.6%) had no history of abortion while 4.6% had one, 0.4% had two and 0.4% had history of five episodes of abortion. Some respondents (10.9%) were in first trimester, half of them (50.6%) were in second trimester and 38.5% were in third trimester. Majority of the respondents (63.5%) visited antenatal clinic regularly in their present pregnancy.

Table: 1 Age Group of the Respondents

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>58</td>
<td>24.3</td>
</tr>
<tr>
<td>20-24</td>
<td>98</td>
<td>41.0</td>
</tr>
<tr>
<td>25-29</td>
<td>59</td>
<td>24.8</td>
</tr>
<tr>
<td>30-34</td>
<td>18</td>
<td>7.5</td>
</tr>
<tr>
<td>35-41</td>
<td>6</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td>239</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 1 depicts nearly one fourth (24.3%) were 15 to 19 years and very few (2.4%) were 35 to 41 years of age. Mean age of the respondents was 23.02 with standard deviation 4.71 years and age ranged from 15 to 41 years.

Table 2 Distribution of the Respondents as per Health Problems during their Previous Pregnancy & Labour

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Symptoms</th>
<th>Present</th>
<th>Absent</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1.</td>
<td>P/V bleeding</td>
<td>6</td>
<td>2.5</td>
<td>233</td>
</tr>
<tr>
<td>2.</td>
<td>Edema</td>
<td>14</td>
<td>5.9</td>
<td>225</td>
</tr>
<tr>
<td>3.</td>
<td>Convulsion and unconsciousness</td>
<td>13</td>
<td>5.5</td>
<td>226</td>
</tr>
<tr>
<td>4.</td>
<td>Diabetes</td>
<td>1</td>
<td>0.4</td>
<td>238</td>
</tr>
<tr>
<td>5.</td>
<td>Hypertension</td>
<td>9</td>
<td>3.8</td>
<td>230</td>
</tr>
<tr>
<td>6.</td>
<td>Hyper emesis</td>
<td>17</td>
<td>7.1</td>
<td>222</td>
</tr>
<tr>
<td>7.</td>
<td>Obstructed labor</td>
<td>3</td>
<td>1.3</td>
<td>236</td>
</tr>
<tr>
<td>8.</td>
<td>Pre-term labor</td>
<td>13</td>
<td>5.4</td>
<td>226</td>
</tr>
</tbody>
</table>

Table 2 depicts the previous history of health problems during their pregnancy and delivery. Very few respondents (2.5%) had history of per vaginal (P/V) bleeding, 5.9% had history of edema, 5.5% had gestational diabetes, 3.8% had pregnancy induced hypertension (PIH), 7.1% had hyper-emesis gravidarum, 5.4% had preterm labour and 1.3% had obstructed.

Figure 1 depicts the respondents suffering from some health problems during their present pregnancy. Few respondents (4.2%) were suffering from some chronic illness and were under treatment.
Table 3. Health Problems Faced by the Respondents during Present Pregnancy

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Symptoms</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1.</td>
<td>Nausea/Vomiting</td>
<td>110</td>
<td>46.0</td>
</tr>
<tr>
<td>2.</td>
<td>Pain abdomen</td>
<td>92</td>
<td>38.5</td>
</tr>
<tr>
<td>3.</td>
<td>Tiredness</td>
<td>98</td>
<td>41.0</td>
</tr>
<tr>
<td>4.</td>
<td>Headache</td>
<td>92</td>
<td>38.5</td>
</tr>
<tr>
<td>5.</td>
<td>Edema</td>
<td>12</td>
<td>5.1</td>
</tr>
<tr>
<td>6.</td>
<td>PIH</td>
<td>5</td>
<td>2.1</td>
</tr>
<tr>
<td>7.</td>
<td>Convulsion and Unconsciousness</td>
<td>12</td>
<td>5.0</td>
</tr>
<tr>
<td>8.</td>
<td>Fever</td>
<td>16</td>
<td>6.7</td>
</tr>
</tbody>
</table>

n= 239

Table 3 shows the health problems faced by respondents during the present pregnancy. Nearly half of the respondents (46%) complained of nausea and vomiting, 38.5% had pain abdomen, 41% felt tiredness, 38.5% had headache, 5.1% had swelling of lower limbs, 2.1% had pregnancy induced hypertension (PIH), 5% had faced convulsion and unconsciousness and 6.7% had fever.

DISCUSSION

The problems affecting the health of mother and child are multifactorial. Despite current efforts, the health of mother and child still constitutes one of the most serious problems affecting the community, particularly in the developing countries. The major health problems during pregnancy are malnutrition and infection.

In developed countries it is estimated that approximately 2% of pregnant women are anemic; in developing world this figure may be as high as 50% and this contributes to the high rate of maternal mortality. In Nepal, 57% of pregnant women have been suffering anemia. Present study revealed that 41% (98) felt tiredness, which may be due to anemia.

Pregnancy induced hypertension (PIH) is a condition in which vasospasm occurs due to pregnancy. Signs of hypertension, proteinuria, and develop edema. It is unique to pregnancy and occurs in 5% to 10% of pregnancies in the United States. Fourteen percent of pregnant women are suffering from pre-eclampsia and eclampsia in Nepal. This study revealed that 38.5% (92) had headache, 5% (12) had swelling of lower limbs, 2.1% (5) had pregnancy induced hypertension (PIH), and 5% (12) cases had convulsion and unconsciousness in their current pregnancy. Previous obstetric history of same respondents revealed that the 5.9% (14) had edema, 3.8% (9) had hypertension and 5.5% (13) had convulsion and unconsciousness. Nepalese women have little lower risk to develop PIH during pregnancy as compare to developed country.

Literatures shows that 70% of women complained of nausea and vomiting during first trimester of pregnancy. Present study also found nausea and vomiting among 46% respondents in between 4 to 16 weeks of gestation.

CONCLUSION

Pregnant women are at high risk to develop health problems at any stage of pregnancy which they should be aware of and measures should be taken at any cost to prevent further complications.

REFERENCES

Role of a Nurse in Non-invasive Positive Pressure Ventilation: A Conceptual Model for Clinical Practice

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ABSTRACT

Non-invasive ventilation (NIV) has proven to be effective in acute respiratory illness of various etiologies in Intensive Care Units (ICU) and general ward/Unit settings. It is viewed as complementary to invasive ventilation and primarily a means of preventing some patients from deteriorating to the point at which intubation is needed. Benefits include the avoidance of endotracheal-tube-associated infections, reduction of morbidity and mortality, improvement in patient outcomes and a gross reduction in health care costs. Nurse staffing levels will continue to vary in ICUs, high dependency units or general wards but the intensity of nursing input will be much lower in the general wards than on the ICU, particularly at night. In developing countries with scarce technology and less ICU beds, NIV will be an asset in general wards for nurses who have adequate experience in caring for acutely ill patients. The most important ingredient for an acute NIV nurse led service is a well-trained enthusiastic ward team. This article highlights the factors that should be considered in providing an acute NIV nurse led service in general or acute care settings. Utilizing the Roper, Logan and Tierney nursing model, which focuses on patients as individuals, recommendations are made for best nursing practices based on 12 activities of living, promoting independence with quality of life and essential functions of living.

Keywords: Non-invasive Ventilation, Non-invasive Positive Pressure Ventilation, Holistic Nursing Practice, Nurse’s Role, Roper, Logan and Tierney Model, Evidence Based Practice.

INTRODUCTION

The concept of applying ventilatory support non-invasively has always been attractive, and because of their relative simplicity, the development of these techniques preceded that of airway intubation and intermittent positive pressure ventilation. The increasing use of non-invasive respiratory support (i.e. the provision of mechanical ventilatory assistance without the need of an invasive airway) is one of the remarkable developments in the field of mechanical ventilation over the past dozen years. Non-invasive ventilation (NIV) is a form of mechanical ventilation that uses a ventilator connected to a well fitting face mask rather than an endotracheal tube. This ventilatory mode allows patients to breathe spontaneously and each breath triggers the ventilator to produce an inspiratory positive airway pressure (IPAP), resulting in increased tidal volume and improved ventilation. As bi-level mode NIV also leaves a second set pressure in the airway on expiration, that is, expiratory positive airway pressure (EPAP), which splint opens the smaller airways. If the respiratory rates fall below a set level ventilators can be set to give back-up breaths.

NIV is used on wards as well as critical care units as a standard first line treatment for patients with acute type 2 hypercapnic respiratory failure and acute hypoxicemic respiratory failure. A strong evidence base exists for using NIV to treat chronic obstructive pulmonary disease; chronic hypercapnic respiratory failure caused by chest wall deformity, neuromuscular disease, or impaired central respiratory drive and weaning from mechanical ventilation. NIV should not be used as a substitute for tracheal intubation and invasive ventilation when the latter is clearly more appropriate. This fact highlights the need for consistent close observation and frequent medical reviews in all patients receiving NIV.

Non-invasive ventilators employed in NIV range from ICU ventilators with full monitoring and alarm systems normally employed in the intubated patient,
to light weight, free standing devices with limited alarm systems specifically designed for non-invasive respiratory support even at homes. In NIV single tubing is usually employed, and exhalation is either active (the ventilator opens an exhalation valve—for example, NIPPY1 or Breas PV 401) or passive (exhaled air is encouraged to exit through an exhaust valve or port by continuous bias flow (EPAP) from the ventilator). Continuous Positive Airway Pressure (CPAP) is the non invasive application of positive-airway pressure via a face mark, without ventilator support. Nursing management of patients using NIV is a complex and challenging task and hence nurses require specialized professional training. Qualified nursing staffs play a key role in providing NIV to patients who require ventilator support.

Conceptual Model for Evidence Based Nursing Practice

The Roper, Logan and Tierney model7 focuses on the patient as an individual and is based on 12 activities of living, promoting independence with quality of life and essential functions of living. The 12 activities of living are: a). maintaining a safe environment, b). communication, c). breathing, d). eating and drinking, e). elimination, f). washing and dressing, g). controlling temperature, h). mobilization, i). working and playing, j). Expressing sexuality, k). sleeping, l). Death and dying. In delivering nursing care, these 12 activities of living should be considered across the biological, psychological, socio cultural, environmental and politico-economic spectrum7. Debate occurs within the literature concerning the complex versus simplistic nature of the Roper, Logan and Tierney model6; however it is the accessibility of the model coupled with its realism10 that makes it usable in complex neurological care settings for patients receiving mechanical ventilation or NIV. The model incorporates the nursing process: assessment, diagnoses, planning, implementation and evaluation.

Assessment and Diagnoses

Clinical evaluation of the patient should include assessment of patient comfort, consciousness level, chest wall motion, accessory muscle recruitment, co-ordination of respiratory effort with the ventilator, respiratory rate and heart rate. Patients receiving NIV should be reviewed regularly to assess their response to treatment and to optimize the ventilator settings (Figure 1). The need for arterial blood gas analysis will be governed by the patient’s clinical progress but should be measured in most patients after 1-2 hours (H) of NIV and after 4-6H if the earlier sample showed little improvement. If there has been no improvement in PaCO2 and pH after this period, despite optimal ventilator settings, NIV should be discontinued and invasive ventilation be considered. Oxygen saturation should be monitored continuously for at least 24H after commencing NIV and supplementary oxygen administered to maintain saturations between 85% and 90%. Breaks from NIV should be made for drugs, physiotherapy, meals etc. Patients who show benefit from NIV in the first few hours should be ventilated for as much as possible during the first 24 hours or until improvement. The decision to start NIV should be made after careful assessment by a specialist, taking into account: patients’ pre-morbid state; the severity of any psychological disturbance; the potential to reverse acute illness; any contraindications to NIV; patients’ wishes4.

Contraindications for the use of NIV: Though NIV is widely used, intubation and conventional ventilation always remains as the gold standard in the management of patients with acute respiratory failure. There are no absolute contraindicates but NIV should not be used in the following conditions: coma/confusion, inability to protect the airway, severe acidosis, significant co morbidity, vomiting, hemodynamic instability, oro-facial abnormalities, copious respiratory secretions, facial trauma/burns and recent facial, upper airway or upper GI tract surgery.

![Figure 1: Flow Chart for Non-Invasive Ventilation (NIV)](image_url)
Possible Nursing Diagnoses

1. Alteration in breathing pattern related to use of external device for breathing.
2. Impaired gas exchange related to loss of functioning of lung tissue, air trapping in alveoli and inadequate ventilation: perfusion ratio.
3. Impaired tissue perfusion related to low oxygen saturation.
4. Alteration in nutrition less than body requirements related to use of NIV/disease condition.
5. Anxiety and fatigue related to the oxygen deprivation and use of face mask.
6. Fear (claustrophobia) related to air hunger and mechanical ventilation.
7. Impaired verbal communication related to the use of face mask.
8. Impaired skin integrity (skin ulcers) around the nose related to the use of rigid masks.
10. Activity intolerance related to respiratory failure and use of the ventilator.
11. Risk of infection related to microbial invasion.
12. Potential for complications related to long term use of NIV or co-morbid conditions of critically ill patients.

PLANNING

a. Preparation of Staff and Patients: Nursing and technical staff should be adequately prepared and the necessary equipment must be available before NIV is first tried.
   - Patient ventilator interfaces: Selection of the mask and setting the ventilator appropriately: There are two kinds of mask used: full face mask and a nasal mask. Full face mask should be used initially to prevent air leak through the mouth. Many patients are mouth breathers and later may be changed to a nasal mask. More sophisticated “off the shelf” masks are available with cushioned gel surrounding the nasal interface. Full face mask may be useful in the co-operative patient, but nasal masks are generally preferable because they are less claustrophobic and allow eating, drinking and speech. Air swallowing is also more problematic with a full face mask and sometimes produces severe abdominal distension. In patients who have nasal obstruction, nasal stents can be inserted to restore the patency of upper airway. Ventilator pressures can be started with an IPAP of 12 and an EPAP of 5.
   - Relief of anxiety: This method of treatment is anxiety provoking and many patients experience fear of being in a closed environment. Nurses need to provide adequate explanation and allow the patient to handle the mask.
   - Range of mask sizes, both nasal and full face, and head gear: A minimum of two of each should always be available. If the mask does not have an integral exhalation port one must be inserted into the ventilator circuit.

b. Ventilator Preparation
   - Set inspiratory positive airway pressure level (IPAP) (10-15 up to 30 cms of H₂O)
   - Set expiratory positive airway pressure level (EPAP) (3-5 cm H₂O up to 15cms of H₂O)
   - Select an appropriate size mask (interface)

Implementation and Evaluation

a. Maintaining a safe environment: Conduction of risk assessments for equipment and electrical failure/procedures, tissue viability and secretion management at periodical intervals is an important strategy to maintain a safe environment.

b. Communication: Tips to improve nurse-patient rapport and communication:
   - Face patients; keep voice at a normal volume and rate, use appropriate methods: spoken and written words, pictures, objects
   - Keep messages simple: reduce the length of questions and information; give non-verbal cues, smile and nod
   - Include relatives/families/support systems, respect individual likes/dislikes

c. Breathing: Important aspects of care include respiratory care/airway management, including humidification, tracheostomy management,
Secretion mobilization strategies: suctioning guidelines, chest vibration, postural drainage therapy, external manipulation of the thorax.

i. Oxygen (O₂): NIV ventilators entrain room air and on most machines, oxygen enrichment requires oxygen to be fed proximally into the circuit or directly into the mask. A FiO₂ (Fraction of inspired oxygen) of about 35% can be achieved, but the flow rate of O₂ required will vary depending on the flow rate of air from the ventilator as it attempts to reach the set pressure, and the magnitude of any leaks in the circuit. Oxygen saturation should be constantly monitored by pulse oximetry. Arterial blood gas tensions should be checked after 30–120 min and ventilator settings adjusted as necessary; gas tensions should then be rechecked. Oxygen entrainment into the ventilator circuit is often needed to maintain adequate levels of arterial oxygen saturation, typically judged to be above 90% but importantly high levels are not needed as these patients are acclimatized to hypoxia. The addition of oxygen even during NIV may still occasionally cause worsening hypercapnia, probably by increasing the ratio of dead space to tidal volume, and arterial blood gas tensions should be checked approximately 1H after any change in oxygen flow rate. A ventilator with an oxygen blender should be used for patients with severe hypoxemia to deliver a high FiO₂.

ii. Humidification: NIV can cause an excess loss of water vapor, leading to thickened and tenacious secretions as well as the discomfort associated with a dry nose or mouth. In addition, increased nasal resistance has been described with CPAP leading to increased mouth leak, particularly when pressure-cycled systems with high inspiratory flow rates are used. Therefore adequate fluid intake and humidification is vital. Although eating and drinking help to keep the mouth moist, when this is not possible regular mouth care is an important comfort for the patient. Saliva stimulants such as pineapple juice or ice chunks are useful, as are artificial saliva sprays and water-based lubricating gels to keep the mouth moist. The lips can be protected with a soft petroleum gel such as Vaseline. Humidification of the inspired gas must be considered for some mask-ventilated patients, and is mandatory for those patients with a tracheostomy. It can be achieved using a heat and moisture exchange filter, a water bath humidifier or regular nebulized saline.

iii. Inhaled drugs: Inhaled drugs can be administered during NIV by adding a nebulizer to the circuit. This can be done by using a T-piece positioned as close as possible to the patient, ideally between the exhale valve and the patient to prevent fall out and loss of the drug, although this does increase the dead space. In addition, aerosols can be administered into the ventilator circuit using metered dose inhalers and spacer devices.

iv. Physiotherapy: Chest physiotherapy can be performed during NIV; indeed, it is sometimes more effective because the patient is less breathless and better able to cooperate. However nurses require specific training.

d. Eating and Drinking/Nutrition: Breathless patients may find it difficult to eat, and this is further compromised if they are unable to remove the mask for sufficient time to masticate food. Liquid supplements are an alternative but nasogastric feeding may be more appropriate, particularly during the acute period, and oral medication can be given easily. The patient should not lie flat when being tube fed to reduce the risk of aspiration.

e. Elimination: Dignity and respect are needed in attending to continence care.

f. Washing and dressing: Participation in self-care is encouraged, e.g. holding a wash cloth, selecting appropriate clothing. If patients suffer cognitive impairment, selected choices are to be given rather than overwhelming them.

g. Controlling temperature: Often patients are not able to maintain homeostasis of core temperature. Regular observations are required to prevent complication, e.g. hypothermia. Nurses need to encourage and monitor fluid intake. Environmental monitoring and regulating is required for comfort, i.e. is it too hot, too cold?

h. Mobilization: Safe manual handling techniques and guidelines should be followed, with regular education and training. Focus on what patients can do rather than on lost skills e.g. if a patient has movement of a finger or a limb then interdisciplinary team should plan and encourage activities around this ability.

i. Working and playing: Relatives/families and friends may like to be involved (something to do with patients rather than for them). Too many
activities in one day may over stimulate patients and they may struggle to settle in the evening.

j. Expressing sexuality: Sexual expression is not just about sex but can be facilitated in clothing and dressing choices, hair styles, makeup use, and self-expression.

k. Sleeping: Patients’ circadian rhythms can be impaired. Nurses need to reduce stimulus to give clues that it is time to go to sleep; late in the evening turn lights down, avoid excessive talking, and minimize noise with nursing duties.

l. Death and Dying/ Coping with anxiety: Patients require careful monitoring, awareness of resuscitation status and regular review of status. Allowing patients’ to express his/her wishes on the topic and involving relatives where appropriate is an important aspect of nursing care. Dependence on ventilator support may be accompanied by loss of mobility and independence as well as social isolation.

Implications for nursing practice

Registered nurses on acute or general wards have an important role for setting up a nurse led service. With good support structures, local established protocols, audit and training helps ensure the safe delivery of effective NIV. More staff needs to develop their knowledge, skills and attitudes to meet both the increasing demand for ventilation services and the holistic needs of patients in need of mechanical ventilation, thus preventing the need for admission to an ICU. Nurses caring for these patients need to be clinically competent as these patients require assessment, close observation and evaluation of treatment outcomes while on NIV.

REFERENCES

Psychiatric Follow Up Services in Rural Community: An Exploratory Approach

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ABSTRACT
Follow up services are regarded as one of the basic elements of the community based mental health services which helps the patient, caregiver and the family to know about the disorder and to take part in the recovery of the patient with minimal impairment as early diagnosis and prompt treatment reveal in primary prevention. Hence it is important to note that those institutions which are providing community based mental health follow up should provide the services according to the need of the caregiver including all the areas which covers the patient's illness pattern.

The aim of the present study is to assess the awareness of the caregiver on follow up services, to associate follow up services with the selected demographic variables and to prepare a community mental health nursing home visit proforma. Data were collected by descriptive exploratory research design was for the sample consisted of 30 caregivers of the psychiatric patients who are coming first time for the follow up after diagnosis. The findings of this study showed that follow up services provided by the rural psychiatric centre were poor. Investigator found the areas of the follow up services and prepared a community mental health nursing home visit proforma which will help the health care to provide follow up services during home visit.

Keywords: Psychiatric Follow up Services, Community Psychiatric Services, Community Based Mental Health Services, Caregiver of the Psychiatric Patient, Community Mental Health Nursing Home Visit Proforma.

INTRODUCTION
Mental disorders figure among the leading diseases and disabilities the world over. Mental analysis studies indicated high prevalence rate of mental disorders in the community (58.2/1000). Therefore the problem of the mentally challenged is a global problem1.

Community mental health care includes specialised community-based residential and non-residential psychiatric services that provide specialised treatment, rehabilitation or care for people affected by a mental illness or a psychiatric disability2.

Finally, it is necessary to refine and broaden nursing process skills in treatment planning to include the impact of mental illness on families and the community3.

Mental disorders cause an enormous burden to affected individuals, their families and society, although this suffering may not be visible to others4.

Combating stigma and widening the social network of patients were regarded as core elements of a successful rehabilitation programme. During the last 50 years mental health activities have moved from care of the mentally ill to include prevention and promotion of mental health.

Keeping with the reforms in community psychiatry, the first psychiatric mental health camp in India was organized in 1972, at Bagalkot, a taluka of Mysore.

The efforts continued in the 1960s at NIMHANS as there was widespread international acceptance of such approaches, which are known under the rubric of 'family interventions'5.

Psychiatric home service is a critical element in delivery of comprehensive mental health care; home visits are part of psychiatric care tradition. The goal was to develop an inter-professional approach that introduces students in various disciplines to a home visit experience. Through a series of background
discussions, planning, teaching and practice of home visits, developed goals for student learning, criteria for case selection and the structure for a typical psychiatric home visit.

The Need for the Study

Follow up is an act of renewing contact with sources of information and reviewing data is needed to reinforce or evaluate a previous action or report, such as re-examination of an earlier diagnosis or prognosis.

After psychiatric assessment and discharge from the emergency room, patients advised to see their psychiatrist or family physicians are more likely to seek follow-up care than those advised to attend outpatient services or seek help at addiction services.

A Conclusion of study evaluated the effectiveness of the psychiatric consultation process in the general hospital reveals that follow-up studies on outcome of psychiatric consultations are few and it warrants a strong recommendation for further analysis.

A study examined the frequency of missed appointments initial outpatient and follow-up appointments and recommended future studies should consider initial and follow-up appointments as distinct.

A study evaluated a routine psychiatric outpatient unit that admitted a variety of diagnoses and was staffed with a multi-professional team. Newly admitted patients were diagnosed according to the ICD-10 and completed questionnaires at the beginning and end of their treatment regarding symptoms (Brief Symptom Inventory) and interpersonal problems (Inventory of Interpersonal Problems); The study indicates that the effectiveness of a routine psychiatric outpatient practice seems to be similar to results obtained from specialty research clinics and randomized controlled trial studies. However, the results also show that there is a considerable amount of patients still in the dysfunctional group after the treatment, a fact that implies that further improvements of the treatment could be made.

The investigator, during his service in the mental health clinical setup, came across a number of patients who are getting admitted several times with relapse. Hence the investigator formulated statement: A study to assess follow up services of psychiatric patient as expressed by the caregivers with a view to prepare a community mental health nursing home visit proforma in a rural psychiatric center, Nitte, Karnataka.

OBJECTIVES OF THE STUDY

1. To assess the awareness of the caregiver on existing follow up services by structured interview schedule.
2. To find out the association between follow up services & selected demographic variables.
3. To validate the community mental health nursing home visit proforma

MATERIALS AND METHOD

The research approach used for the study is given below

Follow up services are considered as the key variable in this study. This study was conducted in the Rural community center, Nitte, Karnataka. Accessible population consisted of 30 caregivers of psychiatric patients who are coming first time for the follow up after the diagnosis and treatment using convenience sampling.

The baseline proforma and structured interview schedule were prepared in English, translated to Kannada and back to English and the validity was assured.

Pre-testing of the tool was carried out and internal consistency of the tool was tested by using Cronbach Alpha formula (0.93). The reliability of the structured interview schedule was tested by inter-rater reliability with Karl Pearson’s Correlation Co-efficient. And was found to be 0.90 which indicated that the instruments are reliable.

The pilot study was conducted and main study was conducted. Formal written permission was obtained from the concerned authority prior to the data collection. Investigator visited the rural psychiatric centre everyday to collect the data from the participants. The tool was administered to the participants with explanation. After data collection, the investigator thanked the respondents for their participation in the study.

Problems Faced in Data Collection

- Non availability of the sample.
- Language barrier between investigator and sample (Tulu is the regional language)
RESULTS

I. Frequency and percentage distribution of sample characteristics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age in years</td>
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</tr>
<tr>
<td>a. 18-29</td>
<td>7</td>
<td>23.34</td>
</tr>
<tr>
<td>b. 30-39</td>
<td>11</td>
<td>36.66</td>
</tr>
<tr>
<td>c. 40-49</td>
<td>8</td>
<td>26.66</td>
</tr>
<tr>
<td>d. 50 &amp; above</td>
<td>4</td>
<td>13.34</td>
</tr>
<tr>
<td>2. Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Male</td>
<td>28</td>
<td>93.33</td>
</tr>
<tr>
<td>b. Female</td>
<td>2</td>
<td>6.67</td>
</tr>
<tr>
<td>3. Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Primary – Pre-university education</td>
<td>28</td>
<td>93.33</td>
</tr>
<tr>
<td>b. Diploma</td>
<td>2</td>
<td>6.67</td>
</tr>
<tr>
<td>4. Job Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Employed</td>
<td>30</td>
<td>100</td>
</tr>
<tr>
<td>5. Family income (In Rs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 2,500-5000</td>
<td>10</td>
<td>33.33</td>
</tr>
<tr>
<td>b. 5,001-7500</td>
<td>20</td>
<td>66.67</td>
</tr>
<tr>
<td>6. Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Hindu</td>
<td>26</td>
<td>86.66</td>
</tr>
<tr>
<td>b. Christian</td>
<td>4</td>
<td>13.34</td>
</tr>
<tr>
<td>7. Distance of your home from rural psychiatric centre (In Kms)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 5 or &lt;5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. 6-157</td>
<td>23.34</td>
<td></td>
</tr>
<tr>
<td>c. 16-30</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>26.66</td>
</tr>
<tr>
<td>8. Use of any media for follow up.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. No</td>
<td>30</td>
<td>100</td>
</tr>
<tr>
<td>9. Consulting the same doctor during the follow up.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. No</td>
<td>30</td>
<td>100</td>
</tr>
<tr>
<td>10. Time of consultation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. 30 or &lt;30 mins</td>
<td>30</td>
<td>100</td>
</tr>
</tbody>
</table>

II. Determining the existing follow up services based on the awareness of caregivers of psychiatric patient

1. Range, percentage, and category of follow up services provided by the rural psychiatric centre

<table>
<thead>
<tr>
<th>Range of score</th>
<th>Range of percentage</th>
<th>Category</th>
<th>After Follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;34</td>
<td>0-25%</td>
<td>Very Poor</td>
<td>-</td>
</tr>
<tr>
<td>35-68</td>
<td>26-50%</td>
<td>Poor</td>
<td>30 100</td>
</tr>
<tr>
<td>69-102</td>
<td>51-75%</td>
<td>Good</td>
<td>-</td>
</tr>
<tr>
<td>103-136</td>
<td>76-100%</td>
<td>Excellent</td>
<td>-</td>
</tr>
</tbody>
</table>

Maximum Score = 136
Table 3 shows that 100% of the subjects had received poor follow up services from the rural psychiatric centre.

2. Area-wise Mean, SD, and Mean percentage of existing follow up services

<table>
<thead>
<tr>
<th>No</th>
<th>Area</th>
<th>Statements</th>
<th>Range</th>
<th>Max Possible Score</th>
<th>Mean</th>
<th>S.D</th>
<th>% Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Drugs</td>
<td>21</td>
<td>22 to 28</td>
<td>42</td>
<td>25.5</td>
<td>1.99</td>
<td>60.7143</td>
</tr>
<tr>
<td>II</td>
<td>Early warning signs of relapse</td>
<td>20</td>
<td>4 to 18</td>
<td>40</td>
<td>8.9</td>
<td>4.66</td>
<td>22.25</td>
</tr>
<tr>
<td>III</td>
<td>Psycho-education</td>
<td>15</td>
<td>6 to 14</td>
<td>30</td>
<td>9.6</td>
<td>4.9</td>
<td>24.44</td>
</tr>
<tr>
<td>IV</td>
<td>Importance of revisits</td>
<td>3</td>
<td>4 to 6</td>
<td>6</td>
<td>4.9</td>
<td>0.997</td>
<td>81.6667</td>
</tr>
<tr>
<td>V</td>
<td>Patient's occupation &amp; family adjustment</td>
<td>9</td>
<td>0 to 10</td>
<td>18</td>
<td>6</td>
<td>3.34</td>
<td>33.3333</td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>68</td>
<td>40 to 64</td>
<td>136</td>
<td>53.06</td>
<td>6.64</td>
<td>39.0147</td>
</tr>
</tbody>
</table>

Maximum score=136

3. Association between follow up services and selected demographic variable

$H_0$: There will be no significant association between existing follow up services and demographic variables

<table>
<thead>
<tr>
<th>No.</th>
<th>Variables</th>
<th>&lt;Median</th>
<th>≥Median</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Age in years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>1</td>
<td>4</td>
<td>0.044*</td>
<td></td>
</tr>
<tr>
<td>30-39</td>
<td>2</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-49</td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 &amp; above</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 or &lt;30 mins</td>
<td>8</td>
<td>22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Significant P= 0.05

Hence it was concluded that follow up services provided by the rural psychiatric centre are poor and are dependent on age of the caregiver, distance of rural psychiatric centre from home and independent of other demographic variables. Hence the null hypothesis was rejected for the variables age of the caregiver and distance of the home from rural psychiatric centre & research hypothesis was accepted.

**DISCUSSION**

Nelson EA, Maruish ME, Axler JL conducted a study which revealed patients who did not have an outpatient appointment after discharge were two times more likely to be rehospitalized in the same year than patients who kept at least one outpatient appointment which indicates the importance of follow up in patients recovery.

Adeponle AB, Baduku AS, Adelekan ML, Suleiman GT, Adeyemi SO conducted a study which gives similar results as medication non-compliant patients were more likely to reside more than 20 km away from hospital.

Callaly T, Hyland M, Trauer T, Dodd S, Berk M did a study to identify the risk of readmission within 28 days of discharge was associated with having been admitted in the previous year, receiving the Disability Support Pension, not having a discharge plan sent to the patient’s GP on discharge from the index admission, receiving follow-up by the mental health team within 7 days of discharge and being unemployed.

Preville M, Boyer R, Vasilias HM, Grenier S also suggest that the use of mental health services is associated with severity of the mental illness.

Muhlbauer S conducted a study which showed that follow-up which offers moderate support and is distinct from the hospital, i.e., community-based, fosters the most independence and adjustment in the participants.

Ryan-Nicholls KD, Racher FE, Robinson JR conducted a study which underscored the need to provide community psychiatric services to improve patients’ access to services and medication compliance.

Ryan-Nicholls KD, Racher FE, Robinson JR did a study which recommends urgent need to provide community psychiatric services to improve patients’
access to services and medication compliance.

Schoenbaum SC, Cookson D, Stelovich S suggests that readmission was less likely for patients who made a follow-up visit.

CONCLUSION

The present study is an attempt to assess the follow up services of psychiatric patients as expressed by the caregivers with a view to prepare a community mental health nursing home visit proforma in the rural psychiatric centre, Nitte, Karnataka. The scope for detailed exploration in this field is immense. Extensive research into the importance of preparation of staff nurses before sending them to the community mental health nursing home visit for the follow up, comparison between perception and delivery of follow up services, effectiveness of home care follow up, etc., may also be researched.

On the whole, the present study was an enriching and novel experience for the investigator in the field of research.

ACKNOWLEDGEMENT

This paper owes a special debt of gratitude to many persons. This study would not have been possible without the inspiring guidance of Mrs. Chanu Bhattacharya, I am indebted to the Management, PG teachers of Father Muller College of Nursing, Patients, Doctors, OPD in-charges, and the staff of the psychiatric ward of Father Muller Medical College Hospital and Nitte rural psychiatric centre, Nitte for their sincere interest in and serious co-operation to this project especially to all the for their timely support and guidance.

REFERENCES

A Study on Assessment of Obsessive Compulsive Symptoms among Schizophrenic Patients

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ABSTRACT

Objectives:
1. To assess the obsessive compulsive symptoms among schizophrenic patients.
2. To find out the association between obsessive compulsive symptoms among schizophrenic patients with selected demographic variables.

Materials and Methods: The study was conducted In KS.Hegde Hospital, Nitte University. Data were collected by 60 schizophrenia in patients with the help of demographic Proforma, Y-BOCS checklist and Y-BOCS rating scale to assess obsessive compulsive symptoms.

Results: The result shows that more than half of the 32 (53.3%) samples were screened to have obsessive compulsive symptoms with majority of them 20(33.3%) were having checking compulsion.

Conclusion: Findings of this study can be used in the psychiatric nursing field which will help the psychiatric nurses to understand the co-existence of other disorders along with schizophrenia.

Keywords: Obsession, Compulsion and Schizophrenic Patients

INTRODUCTION

The concept of mental health and mental illness are culturally defined. Some cultures are quite liberal in the range of behaviors that are considered acceptable, whereas others have very little tolerance for behaviors that deviate from the cultural norms. A universal concept of mental illness is difficult, owing to the cultural factors that influence such a definition. However, certain elements are associated with individual’s perceptions of mental illness, regardless of cultural origin like incomprehensibility and cultural relativity. As lifestyle changes day by day, the prevalence of mental disorders also changes with various types of mental disorder. Among those disorders, schizophrenia is a common one.

Schizophrenia is a mental disorder with multiple paradigms; perhaps more than any other mental illness mainly illness of thought, cognition and affect. Schizophrenia has a debilitating effect on the lives of the people who suffer from it. Once people develop schizophrenia, they usually suffer from the illness for the rest of their life and along with them the whole family suffer from the disease condition.

Based on large scale epidemiological studies and more sophisticated statistical analyses, we can understand that co morbidity is not merely an artifact produced by chance, specific help seeking patterns, population or sampling characteristics. One of the major goals of the investigation of co morbidity is to elucidate the mechanisms for non-random association between diseases. An article written by Buckley et al. on psychiatric co morbidities and schizophrenia in 2008 says that Psychiatric co morbidities are common among patients with schizophrenia. He says substance abuse, anxiety, depression, panic disorder, post-traumatic stress disorder, and obsessive compulsive disorder. About 7 per thousand of the adult population, mostly in the age group 15-35 years are affecting with the mental illness-schizophrenia. Though the incidence is low, the prevalence is high due to chronicity.

Recent studies show that psychiatric co morbidities are common among patients with schizophrenia. It was not until 1994, DSMIV, that diagnostic guidelines first permitted additional diagnoses on Axis I, such as anxiety disorder, in the presence of schizophrenia. Yet
remnants of the old hierarchical diagnostic system remain, diverting attention from the pressing issue of managing what appear to be common—and treatable—disabling conditions, such as panic disorder and obsessive-compulsive disorder, that often occur with schizophrenia. Although researchers suggest that the presence of obsessive compulsive symptoms in schizophrenia is associated with graver levels of psychosocial dysfunction, it is unclear whether it is also related to clinical features of illness.

Studying and knowing psychiatric co morbidities in schizophrenia is essential and got a clinical relevance. Presence of persistent obsessive compulsive symptoms represents an indicator of poor prognosis. These patients have been reported to be more socially isolated, less likely to work, and need longer hospitalization than non obsessive compulsive schizophrenic patients. By finding out the frequency of obsessive compulsive symptoms in schizophrenic patients gives more inspiration to the investigators to think about the proverb “Prevention is better than cure”. Thus it focuses the early detection and proper treatment of schizophrenic patients to avoid the obsessive compulsive symptoms as a co-morbid disorder.

MATERIALS AND METHOD

A typical descriptive research design was selected to examine the characteristics of OC symptoms in schizophrenic patients. In this design, OC symptoms is the phenomenon of interest and the variables identified are age, gender, marital status, religion, educational status, occupational status, family history, age of onset, type of schizophrenia, course of illness, duration of illness and treatment. OC symptoms among schizophrenic patients were screened out by using Y-BOCS checklist and severities of obsessive compulsive symptoms were measured using Y-BOCS rating scale. Data were collected from sixty schizophrenic patients in K.S Hegde Medical college Hospital at Mangalore Taluk, India. The criteria for the selection of the sample were those who were willing to participate in study, who can understand the languages Hindi, English, Malayalam and Kannada, who are present at the time of data collection and those who are able to follow instructions. Before doing the main study, pilot study was conducted in order to check the reliability, validity, feasibility and practicability. The investigator obtained written permission from the concerned authority prior to the study. The topic was explained to the patient and confidentiality was assured. After conducting the pilot study, it was found that the study was feasible, patient were co-operative, the data collection instruments were reliable and the time and cost for the study was within the scope of the present study. To conduct the main research study, formal written permission was obtained from the authorities after explaining the nature and objectives of the study. The topic was explained to them and confidentiality was assured. An informed consent was taken from all the patient individually after that research tools (demographic proforma, Y-BOCS checklist and Y-BOCS rating scale) were administered by semi-structured interview method and data were collected. The data will be analyzed in terms of descriptive and inferential statistics.

RESULTS

Description of the demographic characteristics of 60 samples results shows that among the age of 60 samples 18 (30 %) were in the age group of 31-40yrs of age, 16 (28.3 %) were between 21-30yrs of age, 12 (20%) were between 41-50yrs of age, 10 (16.7 %) were above 51years and 4 (6.7 %) were below 20 years of age. Among them, about 31 (51.7 %) samples were females and 29 (48.3 %) were males. In the case of marital status of the samples, highest number of the samples 32 (53.3%) were Married and rest 21 (35 %) were Unmarried, 3 (5 %) were divorced and 5 (6.25 %) were widow/widower. Among the samples, 40(66.7%) samples are from Hindu religion and 10(16.7%) samples were from Muslim and Christian Religion each. According to the educational status of the samples, 28(46.7%) samples did High School education, 22(36.7%) had Pre-University Education, 8(13.3%) had Primary School education and only 2(3.3%) did their education Degree and above. Occupational status of the samples shows that more than half of the samples 32 (53.3 %) were employed previously and currently not working, 27 (45 %) were unemployed/home maker and only 1(1.7%) sample is working still. Considering family history of mental illness among the samples, 31(51.6%) were not having family history of mental illness, 19(31.7%) samples had a family history of mental illness in their second degree relatives and 10(16.7%) samples had family history of mental illness in their first degree relatives. The age of onset of schizophrenia were highest 29 (48.3%) among the age group between 21-30yrs. For 15(25%) of samples, the onset of schizophrenia were between the age group of 31-40yrs and below20 each. Majority of the 44(73.3%) samples were diagnosed cases of Paranoid Schizophrenia, 7(11.7%) samples were diagnosed cases of Residual Schizophrenia, 6(10%) samples were with Simple Schizophrenia and only 3(5%) samples were diagnosed cases of Undifferentiated Schizophrenia. Distribution of samples according to their mental illness revealed that 55(91.7%) of samples were having episodic course of illness and only 5(8.3%) were suffering from...
continuous course of Schizophrenia. Majority of the samples 45(75%) were diagnosed to have schizophrenia less than 6months, 10(16.7%) were diagnosed to have schizophrenia between 6months-1year and 5(8.3%) of them were diagnosed to have Schizophrenia above 1year. More than half of the samples 33(55%) were on irregular treatment and at the same time 27(45%) were on regular treatment. In all the irregular treatment samples 33(100%) had occurred relapse.

Table I: Assessment of Obsessive compulsive symptoms by using Y-BOCS Checklist

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggression obsession</td>
<td>17</td>
<td>28.3</td>
</tr>
<tr>
<td>Contamination obsession</td>
<td>16</td>
<td>26.7</td>
</tr>
<tr>
<td>Sexual obsession</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Hoarding obsession</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Religious obsession</td>
<td>8</td>
<td>13.3</td>
</tr>
<tr>
<td>Obsession with symmetry</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Miscellaneous obsession</td>
<td>10</td>
<td>16.7</td>
</tr>
</tbody>
</table>

Distribution of patient according to the type of OC symptoms revealed that out of 60 patient 32 (53.3%) patient were screened to have obsessive compulsive symptoms and majority of 20(33.3%) patient were having checking compulsion.

At the same time 17(28.3%) patient had aggression obsession, 16(26.7%) patient had contamination obsession, 1(1.7%) subject had sexual obsession, 1(1.7%) subject had hoarding obsession, 8(13.3%) subject had religious obsession, 10(16.7%) subject had miscellaneous obsession,

Table I: Assessment of Obsessive compulsive symptoms by using Y-BOCS Checklist

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somatic obsession</td>
<td>16</td>
<td>26.7</td>
</tr>
<tr>
<td>Cleaning/ washing compulsion</td>
<td>16</td>
<td>26.7</td>
</tr>
<tr>
<td>Checking compulsion</td>
<td>20</td>
<td>33.3</td>
</tr>
<tr>
<td>Repeating compulsion</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Counting compulsion</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ordering compulsion</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hoarding compulsion</td>
<td>2</td>
<td>3.3</td>
</tr>
<tr>
<td>Miscellaneous compulsion</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Out of 60 subjects16 (26.7%) subject had somatic obsession, 16(26.7%) subject had cleaning compulsion, 3(5%) subject had repeating compulsion, and 2(3.3%) subject had hoarding compulsion.

Table II: The level of obsessive compulsive symptoms were analyzed by descriptive statistics based on Y-BOCS rating scale.

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subclinical</td>
<td>41</td>
<td>68.3%</td>
</tr>
<tr>
<td>Mild</td>
<td>4</td>
<td>6.7%</td>
</tr>
<tr>
<td>Moderate</td>
<td>8</td>
<td>13.3%</td>
</tr>
<tr>
<td>Severe</td>
<td>6</td>
<td>10.0%</td>
</tr>
<tr>
<td>Extreme</td>
<td>1</td>
<td>1.7%</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Distribution of samples according to the level of obsessive compulsive symptoms revealed that 4 (6.7%) samples were found to have mild level of obsessive compulsive symptoms, 8 (13.3%) samples were found to have moderate level of obsessive compulsive symptoms, 6(10%) samples were found to have severe level of obsessive compulsive symptoms and only 1(1.7%) were found to have extreme level of obsessive compulsive symptoms. Whereas 41(68.3%) samples were found as subclinical.

Table III: Association between obsessive compulsive symptoms with selected demographic variables

<table>
<thead>
<tr>
<th>AGE</th>
<th>Obsessive compulsive symptom</th>
<th>Chi square(c²)</th>
<th>df</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;7</td>
<td>&gt;7</td>
<td>0.819</td>
<td>3</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Absent</td>
<td>Present</td>
<td>0.925</td>
<td>3</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>1. Below 21yrs-30yrs</td>
<td>14</td>
<td>6</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>2. 31yrs-40yrs</td>
<td>13</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. 41yrs-50yrs</td>
<td>7</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Above 51yrs</td>
<td>6</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table finding shows that there is no association between OC symptoms with age.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Obsessive compulsive symptom</th>
<th>Chi square(c²)</th>
<th>df</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;7</td>
<td>&gt;7</td>
<td>0.033</td>
<td>1</td>
<td>0.855</td>
</tr>
<tr>
<td>Absent</td>
<td>Absent</td>
<td></td>
<td></td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>1. Male</td>
<td>19</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Female</td>
<td>21</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table finding shows that there is no association between OC symptoms with gender.
Family History of Mental Illness

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obsessive compulsive symptom</th>
<th>Chi square($c^2$)</th>
<th>df</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family History of Mental Illness</td>
<td>Absent</td>
<td>7</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>1. Present in first degree relatives</td>
<td>7</td>
<td>3</td>
<td>0.141</td>
<td>2</td>
</tr>
<tr>
<td>2. Present in second degree relatives</td>
<td>13</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Absent</td>
<td>20</td>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table finding shows that there is no association between OC symptoms with family history of mental illness.

Onset of Schizophrenia

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obsessive compulsive symptom</th>
<th>Chi square($c^2$)</th>
<th>df</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset of Schizophrenia</td>
<td>Absent</td>
<td>11</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>1. Below 20</td>
<td>11</td>
<td>4</td>
<td>1.150</td>
<td>2</td>
</tr>
<tr>
<td>2. 21yrs-30yrs</td>
<td>20</td>
<td>9</td>
<td>p&gt;0.05 NS</td>
<td></td>
</tr>
<tr>
<td>3. 31yrs-40yrs above</td>
<td>9</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table finding shows that there is no association between OC symptoms with onset of schizophrenia.

Type of Schizophrenia

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obsessive compulsive symptom</th>
<th>Chi square($c^2$)</th>
<th>df</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Schizophrenia</td>
<td>Absent</td>
<td>28</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>1. Paranoid</td>
<td>28</td>
<td>16</td>
<td>0.682</td>
<td>1</td>
</tr>
<tr>
<td>2. Simple/Residual/Undifferentiated</td>
<td>12</td>
<td>4</td>
<td>p&gt;0.05 NS</td>
<td></td>
</tr>
</tbody>
</table>

The above table finding shows that there is no association between OC symptoms with types of schizophrenia.

Course of Schizophrenia

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obsessive compulsive symptom</th>
<th>Chi square($c^2$)</th>
<th>df</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course of Schizophrenia</td>
<td>Absent</td>
<td>4</td>
<td></td>
<td>10.027</td>
</tr>
<tr>
<td>1. Continuous</td>
<td>4</td>
<td>10.027</td>
<td>1</td>
<td>0.869</td>
</tr>
<tr>
<td>2. Episodic</td>
<td>36</td>
<td>19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table finding shows that there is no association between OC symptoms with course of schizophrenia.

Duration of Schizophrenia

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obsessive compulsive symptom</th>
<th>Chi square($c^2$)</th>
<th>df</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course of Schizophrenia</td>
<td>Absent</td>
<td>29</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>1. Less than 6months</td>
<td>29</td>
<td>16</td>
<td>0.400</td>
<td>1</td>
</tr>
<tr>
<td>2. Episodic</td>
<td>11</td>
<td>4</td>
<td>p&gt;0.05 NS</td>
<td></td>
</tr>
</tbody>
</table>

The above table finding shows that there is no association between OC symptoms with duration of schizophrenia.

Treatment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obsessive compulsive symptom</th>
<th>Chi square($c^2$)</th>
<th>df</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>Absent</td>
<td>17</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>1. Regular</td>
<td>17</td>
<td>10</td>
<td>0.303</td>
<td>1</td>
</tr>
<tr>
<td>2. Irregular</td>
<td>23</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table finding shows that there is no association between OC symptoms with selected treatment.

DISCUSSION

Section I: Description of sample characteristics.

The above findings were supported by a study conducted by Dr. Paul H Lysaker and et al. in the year 2000 on obsessive compulsive symptoms in schizophrenia, which revealed that majority of the patients were between 39 + 10 and the most common type of schizophrenia was paranoid schizophrenia. The gender result shows that 82% of the patient were male which is contradictory to this study result6. Another study also supported the above findings conducted by Dr. Giovanni B Cassano and et al. in the year 1998 on occurrence and clinical correlates of psychiatric comorbidity in patients with psychotic disorder revealed that majority of the patients were between the age group of 33 + 10, 35.4% of patients are unemployed and 91% of patients had medium educational level12 but it revealed that 63.5% of the patient were unmarried which is contradictory to the above findings3.
Section II: Estimation of obsessive compulsive symptoms among schizophrenic patients.

The study findings were supported by a study conducted by Dr. Jaydeokar S and et al. on Obsessive-compulsive symptoms in chronic schizophrenia: a new idea or an old belief in the year 1997 which revealed that 26.7% of the chronic schizophrenic patients had significant OC symptoms with a high prevalence in the age group below 35 years. OC symptoms were more severe in patients with duration of illness more than 5 years. The OC symptoms were more prevalent among paranoid schizophrenics with the frequent obsessions being that of contamination, sexual and aggressive thoughts and frequent compulsion was need to ask or confess.

Section III: Distribution of patient according to the level of obsessive compulsive symptoms.

The level of obsessive compulsive symptoms was analyzed by descriptive statistics (frequency, percentage) based on Y-BOCS rating scale and the study result on the level of obsessive compulsive symptoms revealed that 4 (6.7%) of the patient were found to have mild level of obsessive compulsive symptoms, 8 (13.3%) of the patient were found to have moderate level of obsessive compulsive symptoms, 6(10%) of the patient were found to have severe level of obsessive compulsive symptoms and only 1(1.7%) were found to have extreme level of obsessive compulsive symptoms. Whereas 41(68.3%) of the patient were found as subclinical.

Section IV: Association between Obsessive Compulsive symptoms and selected demographic variables

The association of obsessive compulsive symptoms with selected demographic variables was analyzed by Chi-square test and the hypothesis was tested at 0.05 level of significance. The result shows that there was no significant association between obsessive compulsive symptoms among schizophrenic patients with selected demographic variables.

The above study results were supported by a study conducted by Dr. Allon Nechmad and et al. on obsessive compulsive disorder in adolescent schizophrenia patient which explains that there was no significant association between obsessive compulsive symptoms with demographic variables such as age of the subject, gender, age at schizophrenia onset and duration of schizophrenia.

ACKNOWLEDGMENTS

The authors are thankful to Nitte Usha Institute of Nursing Sciences, Nitte University and K.S Hegde Medical college Hospital at Mangalore, for giving the permission to carry over the study.

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A Qualitative Study on Expressed Views of Parents Regarding the Use of Mobile Phones and its Impact on Mental Health among their Children in Selected Urban Areas in Mangalore Taluk

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ABSTRACT

Background: Developments in mobile technology have been rapid in recent year and youth have always been keen to grasp the opportunities offered by new technologies, especially the mobile phones. In this context the researcher is interested to study regarding the parents' opinion about their child's mobile phone use and how it affects the child's mental health. Aims & Objectives:

1. To assess the parents view about the use of mobile phone by their children.
2. To assess the impact of mobile phones on children's mental health.

Materials & Method: Qualitative enquiry by grounded theory design using In-depth interview, field notes and observation. Analysis and interpretation is done by open coding, axial coding and selective coding followed by theory development.

Results: From the analysis of the data, concepts were derived from the parent's opinion about children using mobile phones and its impact on their mental health. The major concepts are Decreased parent child relationship, maladaptive behaviour, deviated social relationships, and decreased scholastic performance and Stress. From these concepts the following theory was formulated The excessive non - overseen use of mobile phones may lead to decreased parent child relationship, maladaptive behaviour, deviated social relationship and decreased scholastic performance, which will alter the stress level of the child there by leading to altered mental health.

Conclusion: The results of the study suggest that the increased use of mobile phones can lead to altered mental health in children. The study concludes that the excessive non- overseen use of mobile phones may lead to decreased parent child relationship, maladaptive behaviour, deviated social relationship and decreased scholastic performance, which will alter the stress level of the child there by leading to altered mental health.

Keywords: Expressed View, Mobile Phone, Parents, Impact, Mental Health, And Children.

INTRODUCTION

It might have happened to you that sometimes you go out but forgot your mobile phone at home and because of that you are not feeling complete. There is a feeling somewhere inside that you are missing something and there will be a sense of insecurity. Developments in mobile technology have been rapid in recent years1. Mobile phones are a faster and more effective way to transfer information. It is a resource that gives great advantages to its users2. In the earlier times mobile phones used to be craze, symbol of money and success but nowadays even kids find it a necessity of life3.

Children and young people have always been keen to grasp the opportunities offered by new technologies, and mobile phones are certainly no exception. Most teenagers are willing to fork out extra money to ensure that their phone has latest features. With so much
technology crammed into one single phone, teenagers have become less reliant on other devices. Because of this reliance, most teens feel the need to have their phones with them at all times. While useful, many of the features of mobile phone can also be used to engage in inappropriate behaviour. Most school administrations regard cell phone use as disruptive and distracting, and have implemented policies that prohibit using them in school. For many teachers, one of the biggest concerns about including cell phones in schools is that they will be used inappropriately.

A mobile phone is an electronic device used to make calls across a wide geographic area, served by many public cells, allowing the user to be mobile. Mobile phones have brought many advantages and the most important advantage of mobile phone is that they can be used almost everywhere without cables or electricity. However, although mobile phones have brought many benefits into our lives, they also have disadvantages. For example, mobile phones spread electromagnetic waves and these electromagnetic waves cause health problems like cancer. A study led by Dr. Agarwal summarizes some of the researched health consequences of the microwave radiation we are exposed to though mobile phone use found that Electromagnetic waves alter and cause disturbance in sleep; cause difficulty in concentration, fatigue, and headache; and increase reaction time in a time-dependent manner, they increase the resting blood pressure and reduce the production of melatonin.

Studies have already proven that children of urban areas are addicted to the internet. Mercedes Sanchez-Martinez, M.D., Angel Otero, M.D., Ph.D. conducted a study on factors associated with Cell Mobile Phone Use in Adolescents in the Community of Madrid (Spain). The purpose of this research was to measure cell mobile phone use among high school adolescents and the factors associated with intensive mobile phone use (depressive symptoms, social isolation, drug and alcohol use, school failure, and mobile phone dependence). The estimated prevalence of mobile phone dependence was 20% (26.1% in females, 13% in males). Intensive mobile phone use was associated with female sex, rural school location, good family economy, smoking tobacco, excessive alcohol consumption, depression, mobile phone dependence, and school failure.

STATEMENT OF PROBLEM

A Qualitative study on expressed views of parents regarding the use of mobile phones and its impact on mental health among their children in selected urban areas in Mangalore Taluk.

OBJECTIVES

1. To assess the parents view about the use of mobile phone by their children.
2. To assess the impact of mobile phones on children’s mental health.

MATERIALS AND METHOD

Setting: The setting was selected urban areas of Mangalore. The data were collected by interview method.

Population: In this study the population was the parents whose children uses mobile phone and residing in the Mangalore city.

Sample / sampling technique: In this study purposive sampling technique is used for the selection of sample and in-depth interview was conducted for 12 participants.

RESEARCH DESIGN
interview schedule of a few open ended question to explore the expressed views of parents regarding the use of mobile phones and its impact on mental health among their children.

Before the data collection, the researcher consciously put aside his views and thoughts about the situation, so that he could view the situation in a naive way. The lead questions were pretested to check the clarity of the items, their feasibility and practicability. After obtaining the formal approval, the questions were administered to a participant. The subject chosen was similar in character to those of the population under study. On the basis of their responses minor changes were made in the arrangement of items. Before conducting the interview the researcher built a rapport with the parents. After that he obtained permission for conducting an interview with parents. It was found that it took 15 to 20 minutes to complete an interview and that the items were clear and unambiguous.

DATA ANALYSIS

Demographic Performa shows that 8 participants belonged to the age group of 45 – 55 yrs and 4 belonged to the age group above 55 years. 4 of the participants were having an educational qualification of graduation and 8 participants were having post-graduation and above educational qualification. All the 12 participants were having a monthly family income of > Rs. 30,000. Out of the 12 participants, 6 participants’ children were using the mobile phone for more than 3 hours.

The data analysis of this study was based on Strauss and Corbin’s coding system.

- All transcripts was read & then reread to obtain a feeling for them.
- The Significant statements relating directly to the situation under study were extracted. Researcher derived the meaning of each significant statement separately.
- Significant statements of the participants were coded.
- The derived categories were discussed with the research participants in order to check the validity of the identified categories and their meaning.
- By selective coding the core categories were developed and from that the theory was developed.

AGE LIMIT

Most of the parent’s opinion strongly suggests that there should be an age limit for using the mobile phone by the children. Even though there are advantages with the mobile phone the disadvantages are more. The usage of mobile phone should be limited to its exact purpose. The chances of misusing the mobile phone are more when compared to the uses.

COMMUNICATION

The main purpose for which children use the mobile phone is for communication. This includes the various methods of communication such as making calls, sending SMS and contacts via internet etc. The mobile phone has various facilities like games, internet facilities and social networking which are also used by the children. They use this facility even in the class hours which distracts the concentration of themselves and other students.

DECREASED PARENT CHILD RELATIONSHIP

There are changes in parent child relationship in most of the families after the child started using the mobile phone. Children are having more contacts with the friends and because of that the relationship with the family members is getting decreased.

MALADAPTIVE BEHAVIOUR

After the initiation of mobile phone use there are some changes in the behaviour of the children. Children spend more hours during the night time with the mobile phones which disturbs their sleep. Children are always lost in thought of mobile phone and they have lackadaisical attitude to other activities. If the parents advise them regarding the mobile phone use or if the parents count against the mobile phone use they will get irritated and angry.

DECREASED SCHOLASTIC PERFORMANCE

Majority of the parents opine that their child’s scholastic performance is affected by the mobile phone usage by the child. There are always chances for a reduction in the academic performance of the child if he / she is fully engaged with the mobile phone. There are chances for the child to spend more time with the mobile phone there by reducing the time spend for reading. Moreover mobile phones can distract their concentration if it rings during the study hours. It can cause distractions in the class rooms also.
DEVIATED SOCIAL RELATIONSHIPS

Majority of the parents opine that there are changes in the child’s social relationship after they started using the mobile phone. The social relationship of the child has increased. Child spends more time chatting with their friends in mobile phones and sending SMS’s. Because of this the child’s friends circle has widened. There are chances for negative exploitation of the child’s relationship which can create undue stress in the child. There are chances for children to get into unwanted relationships which can spoil even their family relationships.

INCREASE IN THE STRESS LEVEL OF THE CHILD

Mobile phone use can lead to changes in the stress levels of the child. Children will have increased contacts with friends and they will keep away from parents. They also try to hide things from parents and try to keep privacy. This can lead to an increase in the stress levels which can further lead to mental health problems.

FINANCIAL RESTRICTION

Parents always keep financial restrictions on the child’s mobile phone usage to restrict the number of calls made by the child and to reduce the unnecessary use. Most of the parents have also told that they will not provide extra money for their child if the currency gets over before the specified time. This can create alterations in the parent child relationships and can become a cause to increase the stress level of the child.

DISCUSSION

There were changes in parent child relationship in most of the families after the child started using the mobile phone. Children are having more contacts with the friends and because of that the relationship with the family members is getting decreased. Even if the parents are talking to the children they will be engaged in their own mobile phone and they will not give proper attention to the parents. A study was conducted by Robert S. Weisskirch, on Cell Phone Communication in Parent-Adolescent Relationships. The results showed that parents reported greater communication and closeness when adolescents initiated calls seeking social support. Adolescents reported greater conflict when parents called for monitoring activity, for tracking schoolwork, and when upset.

After the initiation of mobile phone use there are some changes in the behaviour of the children. Children spend more hours during the night with the mobile phones which disturbs their sleep. Children are always lost in thought of mobile phone and they have lackadaisical attitude to other activities. A study conducted by Gaby showed that when compared to subjects with restricted use of cell phones, young people with excessive use of cell phones (both talking and text messaging) have increased restlessness with more careless lifestyles, more consumption of stimulating beverages, difficulty in falling asleep and disrupted sleep, and more susceptibility to stress and fatigue. Getting quality sleep each night has a profound impact on a child’s health and development. Failing to get enough sleep can cause a variety of health and behavioral problems.

Majority of the parents opine that there are changes in the child’s social relationship after they started using the mobile phone. The social relationship of the child has increased when compared to the previous times i.e. after the child started using a mobile phone. At the same time the child’s relationship with the family members has reduced also. A study conducted by Sheereen N. Zulkefly and Rozumah Baharudin on Mobile Phone use Amongst Students in a University...
in Malaysia showed that students with lower self-esteem and who spent more time on the phone were more likely to be problem phone users. Adolescents who spend more time on their mobile phone were also more vulnerable to psychological disturbances. On the contrary a study conducted by Ran Wei and Ven-Hwei Lo shows that the cell phone supplements the fixed telephone as a means of strengthening users' family bonds, expanding their psychological neighborhoods, and facilitating symbolic proximity to the people they call. Thus, the cell phone has evolved from a luxury for business people into an important facilitator of many users' social relationships.

Majority of the parents opine that their child’s scholastic performance is affected by the mobile phone usage by the child. A study conducted by Tamyra A. Pierce and Roberto Vaca on Academic Performance Differences between Teen Users and Non-Users of MySpace and Other Communication Technology shows that those who had a MySpace account, cell phone and IM had significantly lower grades than those who did not. Results also showed that 28% text messaged during class from always to frequently, and 5% reported text messaging during an exam from always to frequently. On the contrary study was conducted by Muhammad Javid M.Phil., Muhammad Ashraf Malik etal on Mobile Phone Culture and its Psychological Impacts on Students’ Learning at the University Level showed that the student’s academic performance has increased due to this technology. The mobile phone has helped to improve the level of the quality of education. The students utilize Mobile Phone to share important and useful information with classmates. Students use dictionary, thesaurus and calculator available in the mobile phone.

CONCLUSIONS

From this study the researcher has found that the alterations in any one of the concepts can lead to stress and there by an altered mental health in children who are excessive users of mobile phone. The sample size, typical of qualitative research, was small and the results were not generalizable to wider populations in a statistical sense. The results of the study suggest that the increased use of mobile phones can lead to altered mental health in children. Other studies have also proven that excessive mobile phones use can lead to dependency sleep problems, anxiety and depression. In conclusion, nothing can be overused without side effects.

ACKNOWLEDGEMENT

The authors gratefully acknowledge the help rendered by Prof. (Mrs.) Fatima D’Silva, Principal, Nitte Usha Institute of Nursing Sciences, Mangalore, Dr. Christopher Sudhakar (Dean, Manipal College of Nursing, Mangalore) and experts who have contributed with their valuable suggestions in validating the tool.

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The Perceived Communication Barriers and Attitude on Communication among Staff Nurses in Caring for Patients from Culturally and Linguistically Diverse Background

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ABSTRACT
The objectives of the study are to assess communication barriers, assess staff nurses’ attitude towards the importance of communication, to find out relationship between communication barriers and attitude of staff nurses, association between communication barriers perceived and selected demographic variables, association between attitude regarding importance of communication and selected demographic variables. The descriptive survey approach was used. Study was conducted among 100 staff nurses of various departments of Kasturba Hospital, Manipal. Convenient sampling technique was used to select samples. 3 tools were used for data collection and they are demographic Performa, tool to assess the communication barriers, and attitude about the importance of communication among staff nurses in caring patients from culturally and linguistically diverse background. Content validity and reliability of tools were established.

This study findings showed that majority of samples (71%) belonged to the age group of 20-30, (88%) are females, (58%) were diploma holders and about (49%) work in general wards. Majority with (71%) were from Karnataka and most of the samples (48%) included in the study have years of experience between 1-5 years. The verbal and nonverbal communication barriers were assessed and found that 79% of nurses experience moderate level of difficulty in communicating with patients. Most of them (93%) had a favorable attitude towards the importance of communication. There was no significant association between communication barriers and selected demographic variables, but found a significant association between gender and communication barriers (\(x^2=15.203, p<0.01\)). There is no significant association between attitude about importance of communication and selected demographic variables, no relationship between communication barriers and attitude about importance of communication (\(r= -0.037, p=0.715\)).

It was concluded that nurses experiences both verbal and non verbal communication difficulties in caring patients from culturally and linguistically diverse background and they have a favorable attitude towards the importance of communication for the same.

Keywords: Culture, Communication, Attitude, Transcultural

INTRODUCTION

Communication is a non-stop process and is a vital ingredient for success both within and outside the workplace. It is a part of ‘soft skills’ as opposed to domain or technical skills which is a part of ‘hard skills’. These days even an average business executive spends a good part of his time on the job communicating in one form or other. Therefore a formal study of business communication is important.

The relationship between communication and culture is a very complex and close one. Cultures are created through communication; that is, communication is the means of human interaction through which cultural characteristics— whether customs, roles, rules, rituals, laws, or other patterns— are created and shared. It is not so much that individuals set out to create a culture when they interact in relationships, groups, organizations, or societies, but rather cultures are a natural by-product of social interaction. In a sense, cultures are the “residue” of social communication. Without communication and communication media, it would be impossible to preserve and pass along cultural
characteristics from one place and time to another. One can say, therefore, that culture is created, shaped, transmitted, and learned through communication. The reverse is also the case; that is, communication practices are largely created, shaped, and transmitted by culture.

An ethnographic study was conducted Gerrish K (2001) to examine the nature and effects of communication difficulties between the nurses and South Asian patients and their caregivers. Over half of South Asian patients had little or no understanding of spoken English with women and older people the least likely to speak English. The limited use of professional interpreters and the concomitant heavy reliance on family members to translate highlighted how ethnic minority patients and who caregivers were not fluent in English were disadvantaged. The observed language barriers suggested that the content of advice on matters such as compliance with treatment regimes might not be fully understood. Psychological support of patients and caregivers was severely restricted. The findings raise concerns regarding the quality of care provided to patients and caregivers who are nonusers of English and provide evidence of inequalities in service provision. However, not speaking English should not be a barrier to appropriate and effective nursing care. The study reported that district nurses need to appreciate their responsibility to provide equitable services irrespective of a patient’s linguistic background and seek to overcome the disadvantage experienced by ethnic minority patients.1

An experimental study was conducted by William CA, Gossett MT(2001) among 86 registered nurses in the University of South Carolina in nursing communication. The purpose of the study was to identify nurse’s approach towards determining what the patient understood about the reason for hospitalization and nursing intervention related to that understanding. Here registered nurses' interaction with a simulated patient regarding what physician had told was examined using taped interviews which were later analyzed to classify nurses approach towards assessment and intervention. The findings suggested that nurses must mediate and clarify communications between the patient and physician. Hence the communication of nurse plays an integral role in health care delivery2

NEED FOR THE STUDY

Communication frequently present barriers between nurses and clients, especially when nurses and clients are from different cultural backgrounds. If the nurse and the client do not speak the same language or if communication styles and patterns differ, both nurse and client can feel alienated and helpless. When communication is impaired, the healing process may be impaired. Nurses may feel angry and helpless if their communication is not understood or if they cannot understand the client. Without the ability to communicate, care will be inadequate. So nurses need to have not only a working knowledge of communication with clients of same culture but also thorough awareness of social,cultural,racial factors that may affect communication with persons from other culture.

An experimental study was conducted among nursing students to assess the effectiveness of communication skills training and patients’ satisfaction using ratings of students’ videotaped history taking interviews with patients and patient satisfaction ratings’. Trained students showed significantly improved consultation skills and techniques compared with a group of control students who displayed few changes in behavior over the course of study. Satisfaction rating given by patients of experimental group students improved significantly after training, whereas rating given by patients of control group students decreased over the same period. Hence there is a need for nurses to develop their communication skills3

STATEMENT OF THE PROBLEM

The perceived communication barriers and attitude on communication among staff nurses in caring for patients from culturally and linguistically diverse background.

PURPOSE OF THE STUDY

The purpose of the study is to find out difficulties that staff nurses experience in communicating with patients from culturally and linguistically different background and the staff nurses’ attitude towards the importance of communication in caring for those patients. This will help to tackle out barriers in communication and staff nurses’ attitude which in turn will help the nurses and authorities to plan in-service education for nursing staff on this area.
OBJECTIVES OF THE STUDY

The objectives of the study are to:

- Assess communication barriers as measured by tool to assess the communication barriers.
- Assess staff nurses’ attitude towards the importance of communication as measured by an attitude scale.
- Find out relationship between communication barriers and attitude of staff nurses.
- Find out association between communication barriers perceived and selected demographic variables.
- Find out association between attitude regarding importance of communication and selected demographic variables.

ASSUMPTIONS OF THE STUDY

- Staff nurses will be experiencing various types of communication barriers.
- Demographic variables will be having an influence in the perception of communication barriers.
- Demographic variables will be having an influence in the attitude of staff nurses regarding communication.
- Attitude will be having an impact in the perception of communication barriers by staff nurses.

VARIABLES UNDER THE STUDY

- Attitude of staff nurses on communication
- Communication barriers
- Extraneous variables
  - Age,
  - Sex
  - Education
  - Years of experience
  - Area of work
  - Place of birth

MATERIAL AND METHOD

Research Approach

To achieve the objectives of the study, a survey approach was considered appropriate as the study aimed to determine communication barriers and attitude about importance of communication.

RESEARCH DESIGN

An descriptive survey design was selected for the study hence it was found to be appropriate for the present study, to determine communication barriers and attitude about importance of communication.

VARIABLES

- Attitude of staff nurses on communication
- Communication barriers
- Extraneous variables
  - Age,
  - Sex
  - Education
  - Years of experience
  - Area of work
  - Place of birth

SETTINGS OF THE STUDY

The present study was conducted in Kasturba hospital Manipal. Karnataka.

POPULATION

The population compresses of staff nurses of Kasturba Hospital, Manipal.

SAMPLE AND SAMPLING TECHNIQUES

Sample is a representative part of the population.

In the study, sample consists of 100 staff nurses of Kasturba Hospital.

Sampling is the technique of selecting a representative group from a population. In the study, convenient sampling techniques were used to select the sample.

SAMPLING CRITERIA

1. Inclusion criteria
   i. Staff nurses of Kasturba Hospital.
2. Exclusion criteria.
   i. Staffs other than nurses
DATA COLLECTION TOOLS AND TECHNIQUE

As the study aimed at assessing the level of stress and stress management techniques used by adolescents the following data collection instruments were developed in order to obtain the data.

a) Tool 1: Demographic Performa.
b) Tool 2: Tool to assess perceived communication difficulties
c) Tool 3: Questionnaire to assess attitude about importance of communication.

CONTENT VALIDITY

Content validity refers to the adequacy of the domain being studied. To ensure content validity of the tools, tools will be submitted to three experts along with blue print and criteria checklist. The experts were selected from the field of community health nursing, department of clinical psychology, Medical surgical nursing etc. These experts were requested to give their opinions and suggestions in terms of appropriateness, relevance and accuracy of the terms.

PRETESTING

With administrative permissions the tool was pretested on 10 staffs of City hospital Udupi.

RELIABILITY

Reliability done by administering the tool to 20 samples of staff nurses of Kasturba Hospital. Manipal

PILOT STUDY

Pilot study done to assess the feasibility of the main study. Data was selected from 20 subjects.

DATA COLLECTION PROCEDURE

Data collection is the process of assessing subjects and collecting information needed for the study.

In order to conduct the study the following steps will be taken:

1. Administrative permission will be taken from Nursing superintendent, Kasturba Hospital. Manipal.
2. Informed consents from participants will be obtained.

FINDINGS OF THE STUDY

This study was conducted to determine communication difficulties among staff nurses of Kasturba Hospital, Manipal.

Major findings of the study

The following are the major findings of the study.

- Majority (71%) of them belongs to age group 30-40yrs, 20-30 with (17%) and 40 above (12%).
- Majority were females with 88% and 12% males.
- Most of them were diploma holders (58%) and bachelorette (28%) and certificate (14%).
- Most of them works in general wards (49%), intensive units (40%), and other units (11%).
- Majority were from Karnataka (71%), Kerala (28%), and other states (1%).
- Majority of them have experience between 1-5 years (38%), 5 and above (31%), and below 1 years (21%).
- The verbal and nonverbal communication barriers were assessed and found that 19% experience mild, 79% of nurses experience moderate and 2% have severe level of difficulty in communicating with patients from different culturally and linguistically diverse background
- 93% had a favorable attitude and 7% had unfavorable attitude towards the importance of communication.
- A major communication barrier that majority encounter difficulties in using language of clients from linguistically diverse background
- There is a significant association between gender and communication difficulties and found that male staff nurses experience more difficulties in multi-cultural context.
- A staff nurse from intensive unit commented that they have difficulty to comprehend meaning of non verbal communication showed by intubated patients.

CONCLUSION

The following conclusions were drawn based on the following study:

The verbal and nonverbal communication barriers were assessed and found that 19% experience mild,
79% of nurses experience moderate and 2% have severe level of difficulty in communicating with patients from different culturally and linguistically diverse background. 93% had a favorable attitude and 7% had unfavorable attitude towards the importance of communication. A major communication barrier that majority encounter difficulties in using language of clients from linguistically diverse background. There is a significant association between gender and communication difficulties and found that male staff nurses experience more difficulties in multi-cultural context. A staff nurse from intensive unit commented that they have difficulty to comprehend meaning of non verbal communication showed by intubated patients.

**IMPLICATION**

The findings of the study have implications in various areas of nursing education, nursing practice, nursing administration, and nursing research.

**Nursing education**

The nursing curriculum must include content relating to transcultural concepts especially communication in multi cultural context. Students should be taught about different dimensions of transcultural communication.

Educational preparation and relevant clinical experience help nursing students to perform effective and efficient transcultural nursing in today’s multicultural health care system. Therefore educators need to focus on providing students with relevant theoretical information and ensure sufficient clinical exposure to support student learning transcultural communication aspects.

**Nursing practice**

Clinically, all health professionals, particularly nurses should be aware about differences in verbal as well as non-verbal communication in different cultural context.

**Nursing research**

There is a great scope for nurses to conduct more research in the field of transcultural nursing to tackle out the issues that are caused by the variation in the cultural aspects. The health managers should encourage and support staff nurses to research in different aspects that comes under transcultural context.

**Nursing administration**

The nurse as an administrator must plan and organize continuing nursing education programme for the nursing personnel about changing trends transcultural care.

The administrator can organize programmes related to transcultural communication issues in work place that facilitate in minimizing the communication problems and increasing job satisfaction.

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Ultraviolet Light Therapy and Psoriasis - Nursing Perspectives

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ABSTRACT

Patients with psoriasis have a disease that may be readily apparent to others because of its visibility. This disease can cause functional impairment, disfigurement of the skin and emotional distress. Phototherapy is considered to be the most effective and least risky treatment for moderate to severe psoriasis although many other treatments are also available. Hence, it is essential for a nurse to have better knowledge regarding effective and safe use of these therapies.

Keywords: Psoriasis, Phototherapy, Photochemotherapy.

INTRODUCTION

Psoriasis is a chronic skin disease which affects 1% to 2% of the general population, affecting all the age groups. Basically, it is a chronic papulosquamous skin disorder that is classically characterized by thickened, well defined red areas of skin covered with silvery white scales. The extent of skin involvement ranges from discrete, localized lesions to generalized body involvement. The joints, nails, scalp and mucous membranes may also be affected with the disease.

It may be symptomatic throughout life and may be progressive with age or wax and wane in its severity. Majority of the patients with psoriasis however can go in remission with the presently available treatments such as topical therapies (emollients, keratolytics, retinoids, vitamin D analogues, corticosteroids etc), phototherapy and photochemotherapy, systemic therapies, and adjunctive therapies such as occlusive and wet dressings, specialized baths and antihistamines.

Of these modalities of treatment, ultraviolet (UV) light therapy alone or in combination with various topical or oral medications can help to control proliferation of epidermal cells, heal plaques, and prevent new lesions from reappearing.

It is a well known fact that sunlight decreases the severity of psoriasis. In late 19th century, artificial sources of light were introduced as part of therapy. In 20th century, UV light became mainstay of therapy as part of Goeckerman and Ingram regimen. In 1945, modern day flourescent UVB lamps came into market.

Phototherapy means exposure of the affected area with lesions to non-ionizing radiation for therapeutic benefit. It may involve exposure to UVB, UVA or various combinations of UVB and UVA radiation. On the other hand, photochemotherapy is the therapeutic use of radiation in combination with a photosensitizing chemical administered topically or systemically. It currently involves the use of psoralens, a photosensitizing chemical and UVA radiation (PUVA –Psoralens ultra violet A). Treatment with these modalities may involve partial or whole body exposure.

ULTRAVIOLET LIGHT

Ultraviolet light (UVL), the part of the electromagnetic spectrum that extends from 200nm to 400nm, may be used in the therapy of psoriasis. It causes many profound biologic changes in the skin, including temporary suppression of epidermal basal cell division, followed by a latter increase in cell turnover, and UVL-induced immuno-modulation. UVB has shorter wavelength, so acts on superficial epidermal cells i.e., Langerhans cells and keratinocytes. In contrast, UVA has longer wavelength penetrates deep into dermis and acts on dermal fibroblasts, T lymphocytes, and mast cells. The UVL spectrum is...
subdivided into three bands; ultraviolet C (UVC – 200 to 290 nm), UVB (290 to 320 nm), and UVA (320 to 400 nm). Of the three bands, UVB and UVA are used in the treatment of psoriasis with narrow band UVB (NBUVB - 311-312nm) being the standard modality of treatment.4 (Figure: 1)

Fig. 1. Spectrum of ultraviolet light

In controlled amounts, UV light – either from artificial sources or from natural sunlight – suppresses skin cell replication and controls psoriatic lesions. However, excessive UV light can exacerbate the disease, probably because normal skin cells reproduce more quickly to repair the damage. Procedures that combine UV light with drug therapies, such as coal tar preparations or psoralen, increase the effectiveness of the treatment.

**UVB LIGHT THERAPY**

UVB therapy is considered to be the most effective and at the same time, least risky treatment for moderate to severe plaque type of psoriasis. UVB radiation is responsible for most of the therapeutic effects of sunlight and conventional artificial UVL therapy. It is administered mostly in hospital settings using UVB fluorescent bulb lined phototherapy units.

**Sources of UVB**

- Fluorescent sunlamp bulbs (with low-pressure, low-temperature mercury as source) emit a continuous spectrum with a peak at 313 nm.4 The radiation is filtered through calcium, zinc and thallium phosphate in the glass envelope. These lamps are easily obtainable, relatively inexpensive, and are good sources of sunburn radiation (290 to 320 nm). Narrowband UVB (311 to 312 nm) therapy using a Philips bulb model TL-01 has greater selectivity for the treatment of psoriasis.

- Hot quartz lamps (high-pressure, high-temperature mercury are sources) emit discontinuous UVL spectrum with bands at 254, 265, 297, 303, 313 and 365 nm but with particular effectiveness in the erythema producing midrange. These large lamps are expensive and have been used for hospital patient care.4

UVB is used mainly in the treatment of stable plaque psoriasis, cases having history of rapid clearance with exposure to sunlight, and for psoriatic plaques resistant to topical therapy. The initial dose depends on skin type such as color or melanin content as well as genetic capacity to tan, usually starting at 50% of minimal erythema dose per sitting, 3 to 4 times per week.2,5 Dose is then gradually increased by 10 - 20%, at every visit depending upon the response and once 75% of the lesions are cleared, the dose and the frequency of visits is slowly tapered.

If the patient’s skin turns severely red or burns, however, treatment may be stopped temporarily for 1 to 2 days and again restarted at a lower dose. Smaller light devices may be used to treat hands, feet or other sites of localized plaques. After the treatment course, maintenance UVB light therapy may prolong remission.2,5

**Therapies of historical importance**

**Goeckerman therapy**

Goeckerman therapy combines topical crude coal tar treatment with UVA or UVB light therapy, further increasing the effectiveness of each component. Used mostly during flare-ups,2,6 Goeckerman therapy also may be effective for extended periods to treat chronic, resistant plaques of psoriasis.

**Modified Goeckerman therapy**

Using UVB light therapy after applying topical drugs, such as coal tar preparations (such as Estar Gel), or keratolytic agents, rather than crude coal tar ointment constitutes modified Goeckerman therapy.2,6 Although this treatment may relieve psoriasis faster than standard Goeckerman therapy, remission may be of shorter duration.

**Ingram therapy**

This procedure uses anthralin rather than a tar preparation combined with UVB light treatment.2,6 Patient has to be instructed to apply anthralin to his plaques and to leave it on as directed (usually between 8 and 12 hours). Next, he should remove the anthralin with mineral oil. Then, after bathing, he will receive UVB light treatment. With Ingram therapy, the normal
skin surrounding the plaques is protected by a layer of zinc oxide or petrolatum. Improvement is seen within four weeks of treatment.

**Contraindications of UVB/NBUVB**
- Xeroderma pigmentosa
- Basal cell nevus syndrome
- Photosensitive disorders
- Photoaggravated skin diseases
- Past history of skin cancer
- Intake of photosensitizing medication

**Side effects of UVB/NBUVB**
- Acute – erythema (appears 4 to 6 hours after radiation and peaks at 12-24 hours)
- Blistering
- Tanning
- Keratitis – if proper eyewear not used
- Photoaging
- Photocarcinogenesis – recent studies show minimal risk

**Photochemotherapy or Puva Therapy**

UVA radiation from sunlight or fluorescent tubes by itself will not cause erythema or pigmentation except with extremely large doses. However, in the presence of a circulating photosensitizer such as psoralen, UVA becomes an excellent therapeutic tool. This combination of light and drug is termed as photochemotherapy or PUVA therapy.

**Sources of UVA**

a. Fluorescent blacklight lamps (low-pressure, low-temperature mercury arcs) emit a spectrum of 320 to 450 nm filtered through the barium disilicate phosphorous in their glass envelopes.

b. High-intensity UVA fluorescent bulbs are best used in PUVA light boxes.

c. Sunlight-produced UVA. This technique is potentially dangerous because, it may cause severe burns.

Photochemotherapy (PUVA) combines UVA light treatment with psoralen – either given orally or applied topically. Psoriasis vulgaris, which responds poorly to topical therapies, nail psoriasis, and palmo plantar psoriasis may respond to PUVA therapy. Patients may need about 30 treatments before symptoms clear totally.

**Types of psoralens**

Three types of psoralens are in routine clinical use. These include 8 methoxypsoralen (8 MOP), 5 methoxypsoralen (5 MOP), and trimethyl psoralen (TMP). They are active only when combined with UVA irradiation. These psoralens can be given orally – oral PUVA or topically - topical PUVA (soak, bath, or paint PUVA).

**Mode of action**

1. DNA directed effect: psoralens intercalate with DNA bases, which on exposure to UVA forming cross links between DNA strands and interferes with DNA synthesis and blocks epidermal cell proliferation.

2. Immunomodulatory effects and immune-suppression.

**Dosage of psoralens**

Oral 8 MOP is given in a dose of 0.6 to 0.8 mg/kg body weight/day twice or thrice in week. Two hours later, the patient is exposed to ultraviolet radiation A (UVA) at a dose of 1 joule/square cm to begin with, which is gradually increased to minimal erythema dose depending on the skin type. Therapy is usually given two or three times per week. The number of exposures required for achieving control are usually between 15 and 25. Maintenance therapy involves less frequent treatments often as little as once every two to four weeks, with eventual discontinuation of treatment.

PUVA therapy can also be combined with other systemic drugs like retinoids (re-PUVA), or methotrexate. Combination with cyclosporine is not recommended because of the increased risk of skin cancers.

**Contraindications of UVA**

Pregnancy, photosensitivity, skin cancer, cataract, renal, hepatic or cardiovascular diseases, and children under the age of 18 years (UVB is generally safe in these conditions)

Side effects of UVA

1. Nausea, and vomiting
2. Cutaneous – acute sunburn and erythema, irreversible hyperpigmentation of the skin, actinic keratoses, premature ageing of the skin.
3. Ocular – Cataract
4. Carcinogenesis

Factors Influencing the use of Phototherapy

- Severity of the psoriasis disease
- Site of the disease – scalp, palms and soles are relatively resistant to treatment
- Type of psoriasis
- Skin type
- General health of the patient
- Past response to treatment – A good response to previous phototherapy may be an indication for phototherapy

Safety Features of UVA/UVB Treatment Unit

- Proper electrical grounding
- An accurate timing or dosimetry device
- Protective shielding of lamps
- Handrails, handholds, or other support
- Viewing window or mirror
- Doors that can be opened by the patient
- Non-skid floor
- Adequate cooling of the chamber

The safe and effective use of phototherapy requires the following:

Physician with adequate knowledge regarding phototherapy, a trained nursing and technical staff to administer the treatment, informed and reliable patients and equipment that is safe, correctly maintained, and adequately monitored.

Nurses Role In Educating And Counselling The Clients Undergoing Phototherapy

- Stress should be laid on the compliance of patient.
- Thin layer of mineral oil should be applied to the psoriatic plaques by the nurse before exposure to UVB (oil decreases the dryness and increases the effectiveness of UVB)
- Special dark glasses or goggles are provided to be worn to protect their eyes during the light treatment.
- Genitalia should be completely covered by clothing.
- After receiving the light therapy, no further eye protection is needed in case of NBUVB.
- Examine client’s skin for color, redness, pain and blistering before and after the treatment.
- In case of PUVA therapy, patient should be instructed to take psoralen tablets 2 hours before or to apply topical psoralen ½ hour before UVA light exposure.
- Advise the patient to take the oral psoralen with milk or food to minimize nausea and to avoid spicy food.
- Psoralen medication should be stored away from sunlight and heat.
- Possible side effects of PUVA treatment, including short-term nausea, itching, and skin redness should be informed well before hand to the patient as skin redness may peak from 48 to 72 hours after the treatment, due to which the patient may discontinue the treatment.
- In case of PUVA therapy, patient should be instructed to wear goggles for at least 24 hours afterwards to protect his eyes from sunlight (as psoralen remains active for at least 24 hours).
- Also, ophthalmological examination should be done before starting PUVA therapy and repeated every 6 months.
- Usage of broad spectrum sunscreens after phototherapy, with both UVB and PUVA is of utmost importance and should be advised properly.

Brief procedure of phototherapy

The entire treatment course may last 1 to 3 months (depending on results). Patient should stand inside a body-sized UV light chamber, or he will use a small light chamber for hands or feet or other body parts. For the body-sized chamber, he will remove any...
clothing that covers the plaques and expose affected skin to the light of fluorescent lamps surrounding him. A special coating on these lights guarantees that the appropriate UV wavelength reaches the affected skin. This exposure will be electronically timed to ensure proper safety.

The first session usually lasts between 15 and 30 seconds and it may last only a few seconds to minutes, depending on how much melanin his skin contains, his usual response to sunlight, and his sunburn history. As mild sunburn produces the best response, exposure time gradually increased until the light turns the patient’s skin pink. 2,4,6

CONCLUSION

Photochemotherapy and phototherapy, either alone or in combination with other topical and systemic drugs are being used increasingly in the treatment of patients with psoriasis, especially the recalcitrant cases. And the response to phototherapy in psoriasis is also improving recently due to the modern, standardized equipment. However, as for any other procedure, phototherapy also has certain side effects which have to be carefully monitored. Hence, education regarding these therapies enhances the patients’ adherence to the treatment regimen and thus improves the quality of life of the patients with psoriasis.

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Application of Nursing Informatics: Need to Transform into Reality

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ABSTRACT

The current health care system is facing several challenges and one of which is informatics in nursing. It also explores the potential impact of integration in nursing education and practice. The article focuses on seven themes emerged by Canadian Nurses Association to build the philosophy of nursing informatics and they are: antithesis, artifact, agency, utility, technique, network and power. The article furthers with the necessity to transform the nursing informatics into reality by identifying barriers to success of nursing informatics and extended with recommendations drawn from the Technology Informatics Guiding Education Reform Initiative.

Keywords: Nursing Informatics, Antithesis, Artifact, Agency, Utility, Technique, Network, Power

INTRODUCTION

The term ‘Informatics’ was first coined in 1957 by German computer scientist, Karl Steinbach as ‘Informatik’ followed by Phillippe Dreyfus in 1962 as ‘Informatique’ and further translated into ‘Informatics’ by Walter F Bauer. The term informatics combines the terms ‘information’ and ‘automation’ to name automatic information processing. As new information and communication technologies emerged over the past three decades, the term Nursing Informatics (NI) has evolved to encompass all usage of technologies within the scope of nursing practice, education, research and administration 1.

In 1994, the American Nursing Association refined a NI definition to encompass this new role stating ‘NI is the speciality that integrates nursing science, computer science and information science in identifying, collecting, processing and managing data and information to support nursing practice, administration, education, research and the expansion of nursing knowledge’. The NI model 3 is shown in figure 1. NI facilitates the integration of data, information and knowledge to support patients, nurses and other providers in their decision making in all roles and settings. This support is accomplished through the use of information structures, information processes and information technology 1.

Currently, NI is an emerging field of study. National nursing organizations support the need for nurses to become computer literate and versed in the dynamics of NI. Over the past few decades, the field of informatics has become focus of a large body of research, theory development and scrutiny across most disciplines.

In order to address both the visible and hidden aspects and nuances of informatics in nursing, seven themes were emerged from extensive review of literature by Canadian Nurses Association. These themes have been fashioned into a conceptual framework that focuses on seven perspectives of informatics: antithesis, artifact, utility, technique, network,
agency, networks and power. The conceptual model shaped by philosophies is shown in figure 2.

Fig: 2: Conceptual model shaped by philosophies

**Antithesis:** To begin an analysis of NI related theory, it is logical to examine the concept of antithesis. Since this dystopic idea seems to be the primary causes of resistance to information technology within nursing, it highlights the gender issues inherent in this process and emphasizes the need for nurses to be critically involved in how technology is allowed and assumed within nursing practice.

**Artifact:** Cultural artifacts or artifacts within nursing are human made objects that reflect both professional and workplace characteristics such as values, norms, myths, sagas, symbols, rituals, ceremonies, this includes the use and placement of objects within nursing practice. Artifact refers to the notion that technology of all kinds, including the contemporary inclusion of information technologies in nursing is as inherent, almost seamless cultural phenomenon, one that is long standing and can be taken for granted as part of nursing evolution. Technologies from simple to complex, have served as long standing artifacts within nursing culture, along with other tools, documentations, physical and organizational structures and more recently information systems. Technology in the form of computers and software’s has been shaped to improve and enhance human cognition, facilitate collaboration and communication and support task performance.

Artifacts are thus considered to be the crucial element that binds user cognition, information processing, workload management and task accomplishment. The subject (nurse) interacts cognitively and behavior (activity) with the mediating artifact (technology) motivated by the achievement of the objective or object, which means the provision of nursing care to clients. This activity is coupled with conscious psychological tools which support the application and evolution of nursing practice.

**Utility:** Another common conception of technology, including information technology is founded in modernism. The notion that computers and machines used in nursing practice are simply tools that nurse’s control within their practice. This reflection is very common in the nursing literature, usually embedded within an organizational culture, to support the use of technologies in a utilitarian manner. Nurses in all specialties are required to care for patients and develop the technical knowledge not only to manipulate machinery but interpret the world around them. Nursing and hospital information systems are promoted as benign, efficient software that can save time, repetitive charting and make nurses documentation easily available to physicians, other nurses and the entire interdisciplinary team at the click of a button.

**Technique:** One of the strongest and most far-reaching current trends in health care is the application of evidence-based practice through development of research and information technology. This trend is visible across all sectors of nursing and the rationale behind this trend is to improve client care by selecting best practice options grounded in viable research and to expand the theoretical foundations of all health professions. The ultimate goal is to shift health care decisions, choices and actions to a higher, more scientific, research and theoretically-based level.

**Agency:** Human – computer interactions occur within sociocultural and sociostructural contexts, a notion that has sparked research and theory that strives to account for the social role of technology within the workplace and other arena of society. Informatics is contextual by nature, entangled with the work done to gather it. There is a co-evolution of the environment and the system, the technology, work and clinician are interwoven agents of change. Human agency is often motivated by personal and collective efficiency. An agent is a computer system capable of flexible
autonomous action in a dynamic, unpredictable and open environment. Agent technology is considered the foundation for next generation technology.

**Networks:** Nurses and technologies interact to form actor networks within the workplace arena. New technologies are also used to facilitate networks between nurses and other health care professionals. These networks manifest as virtual nursing and interdisciplinary work teams, interest groups, communities of practice and other collaborative configurations. In essence, all organizations consist of networks: system of people configures into work teams, occupations, specialties and hierarchical layers linked by relationships and all generally focused on a central goal. In case of health care, the central goal is the provision of health care to a network of clients. Often, nursing virtual social network are created for the purpose of exchanging ideas on practice issues and best practices, to become more knowledgeable about new trends, research and innovations in health care.

**Power:** A final glance at the lens of power is important for nursing to examine the dynamics or disciplinary and individual power in the context of utilizing information technology within nursing. Much of the contemporary nursing literature supports a noticeably strong modernist philosophy of nursing power, especially in relation to the integration of technologies into nursing practice. Nursing is a field that has striven to establish itself as a legitimate discipline in the eyes of other health profession groups. With the emergence of information technology, the inclusion of computers and eventually information and communication technologies in nursing has become a way to boost prestige and influence within health care system.

**Impact of informatics on nursing**

NI is a small but growing specialty area in nursing. NI is a relatively new, but rapidly growing discipline that has tremendous potential to improve the quality, effectiveness and efficiency of nursing practice, administration, education and research. Nurses providing direct care must be prepared to use information systems, access information sources and communicate their information systems needs to those responsible for developing new systems.

All nurses can utilize management concepts to help identify, collect and record data pertinent to nursing care. Regardless of the practice setting: clinical practice, administration, research or education—technology can be used to support nursing in direct and indirect care practice. The beginning nurse needs to have basic competencies such as computer literacy and protecting confidentiality of health care information while using the information system. The experienced clinician builds on the competencies of the beginning nurse and also facilitates to identify data elements necessary for practice and documentation activities. The informatics specialist needs to possess knowledge of the system life cycle, which are initiation, development, implementation and operation of the information system.

Educators in nursing can utilize technology-driven instruction for both nurses and clients. More and more online classes are being conducted using the internet. Nurses can obtain bachelors, master’s and even doctoral degrees using technology. Computers can help to manage the data surrounding courses such as registration, maintenance of student grades and course certificates. The educator may teach the technical components of how to use a particular software application. An informatics educator also teaches nursing staff and students about the clinical, legal and ethical standards behind the documentation and methodology.

**Integration into nursing curricula**

This new and expanding field addresses the efficient and effective use of information for nurses. Preparing nurses for computerization is essential to confront an explosion of sophisticated computerized technology in the workplace. It is critical in a competitive health care market for preparing nurses to use the most cost-effective methods. A model is presented that identifies six essential factors for preparing nurses for computerization. Strong leadership, effective communication, organized training sessions, established time frames, planned change, and tailored software are the essential factors to consider for development of a successful educational program.

NI content is being integrated into nursing educational courses as another strategy to promote computer literacy. Technology content is being integrated into courses in response to faculty and student demand. The full integration of NI into educational programs regardless of the method of integration selected requires an educational strategy. This implementation of the education strategy generally requires a) framework/model b) strategic
Advantages of online education in nursing

- Online education in nursing increases accessibility for students in rural areas.
- Online educational settings offer nursing students the ability to collaborate with colleagues on other geographic areas through participation in online group activities, thus increasing opportunities for social professionalism.
- Using online databases to stay up to date on current research and can make decisions based on that research, thereby increasing the possibility of improved health care.
- Participation in online instructional activities and learning exposes nurses to the very technology that is becoming so central to nursing practice.

Transforming Nursing Informatics into reality- a new challenge:

Computer and telecommunication systems have proven to be effective management tools for health care data and communication of this information to other healthcare professionals and their use will become the way of the future. To cite the classic change model, we have moved through phases of substitution and replacement and we are now entering into transformation of health. Major challenges remain and we must complete vital tasks to make this transformation a reality. The new paradigm for knowledge transfer involves both content and the methods of learning and using the content.

The use of computers in education has become commonplace. In a study among 162 nurse teachers, it is found that teachers are not familiar with the software that is available for nursing education purposes. Teachers also lack confidence in their own abilities to cope with computer-assisted education. The information systems used in practical nursing are often inaccessible to nurse teachers. The teachers themselves say they would regularly need further training in their own computer skills.

The science of nursing informatics has evolved to aid in the management of nursing data. A study suggests that disciplines such as nursing, which are information intensive, require the careful investigation into the use of computers to process nursing information and nurses need to feel comfortable working with computerized data. Nursing leaders, such as the American Nurses Association (ANA) support skilled information management and in 1992, officially established the role of the informatics nurse specialist, offering the first credentialing exam in 1995.

The full integration of NI into nursing education is essential to the health of the nursing profession as it faces the 21st century. NI, which encompasses new technologies, supports the nursing profession’s goal of achieving computer literacy. To accomplish this goal, educators must integrate informatics into their basic, advanced and continuing nursing programs. The major obstacle to the success of NI has been reluctance on part of nursing faculty to integrate it into nursing curricula. The four factors accounting to it are given below:

- Since the majority of nursing educators were generally not computer literate, they have had difficulty embracing technology.
- There have been a limited number of informatics experts and qualified faculty available to teach and upgrade their colleagues’ skills.
- Only a few educational programs are available that can educate faculty to this new speciality.
- Educational institutions have not allocated sufficient funds for technology resources.

The Technology Informatics Guiding Education Reform (TIGER) Initiative responded to the lack of nursing involvement in meeting federal initiatives by convening more than 40 nursing professional organizations to create a vision and a three-year action plan. The TIGER Initiative “aims to enable practicing nurses and nursing students to fully engage in the unfolding digital era of health care”. To reach its goals, TIGER established the following recommendations for schools/ institutions of nursing:

- Adopt informatics competencies for all levels of nursing education (undergraduate/graduate) and practice (generalist/specialist).
- Encourage faculty to participate in development programs in informatics.
- Develop a task force or committee at each school/ institution to examine the integration of informatics throughout the curriculum.
- Encourage the Health Services Resources Administration’s Division of Nursing to continue
and expand its support for informatics specialty programs and faculty development.

- Measure changes from baseline in informatics knowledge among nursing educators and students and among the full range of clinicians seeking continuing education.
- Collaborate with industry and service partners to support faculty creativity in the design, acceptance, and adoption of informatics technology.
- Develop strategies to recruit, retain, and educate current and future nurses in the areas of informatics education, practice, and research.

CONCLUSION

All health care professions now rely on advances in biomedicine and technology that influence the use of informatics in health care and nursing. The nation is at the tipping point in applying enabling technologies to health care. The time has come for health care to leave the manual tools of the past in the past and turn to the enablers in the new millennium. The nursing profession is being transformed to meet the needs of the new world and will be a major player in the revolution. The nurse of the future will play a key role as an information mediator and facilitate the use of technology by consumers of health care. Technology will drive health care and nursing and in turn nursing has the opportunity to channel the technology to render higher quality, evidence based health care.

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Effectiveness of Individual Education Intervention (IEI) Regarding Therapeutic Regimen on Attitude and Compliance among Patients with End Stage Renal Disease

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ABSTRACT

Successful treatment of patients with end-stage renal failure requires, in addition to dialysis, strict control of dietary, fluid and medication intake. Patient education provides a vehicle for increasing the self-management of chronic illness and promoting modifications of life styles. The purpose of the study was to find the effectiveness of Individual Education Intervention on attitude level and compliance level regarding therapeutic regimen. An evaluatory approach with one group pre-test post-test design is adopted for the study. Statistical analysis of data revealed that Individual Education Intervention regarding therapeutic regimen was effective in improving the attitude (t=11.47, P <0.05) and compliance (t=5.67, P <0.05)

Keywords: Effectiveness, Compliance, Attitude, Therapeutic Regimen, Haemodialysis.

INTRODUCTION

End-Stage Renal Disease (ESRD) is the result of a progressive deterioration in kidney function over a prolonged period of time.¹ ESRD affects every aspect of a patient’s life, including perception of health and quality of life.² In order to reduce ESRD mortality rate, patients undergoing haemodialysis are required to have favourable attitude and effective compliance with various prescriptions.¹

Patients’ attitudes towards illness are important because they influence adherence and adjustment, to treatment. Many patients regard haemodialysis and dietary control as externally imposed challenges that dominate life. The Patient’s health belief and attitude is an important factor which determines compliance level.³ For many chronic conditions, poor patient compliance with prescribed medications and other aspects of medical treatment can adversely affect the treatment outcome.⁴ Patient education and/or individualized attention, supervision, encouragement, and support are widely advocated strategies to improve patient compliance. Positive attitude and increased compliance to therapeutic regimen decrease hospitalization. While patients’ must decide their own level of compliance, nurses must strive to help the patients to achieve better outcomes. This can be done by providing the patients’ with knowledge and encouragement so that they can make better choices.⁵

Education is used to empower the patient and is an important aspect of quality improvement; it has been associated with improved health outcomes.⁶ Patient education by health care professionals is an important factor in promoting compliance and reducing occurrence or exacerbation of co-morbid conditions.

OBJECTIVES

1. To determine the attitude level of patients with ESRD towards therapeutic regimen.
2. To determine compliance to the therapeutic regimen.
3. To evaluate the effectiveness of Individual Education Intervention.
4. To find the relationship between attitude level and compliance level.
5. To determine the association between attitude level, compliance level, and selected demographic variables.

METHODOLOGY

An evaluatory approach with one group pre-test post-test design is adopted for the study. Data were collected from 50 patients with ESRD undergoing
haemodialysis. Attitude was assessed by using attitude scale and compliance was assessed by using compliance scale. Time taken for pre-test was 15 minutes. Immediately after the pre-test, the teaching on therapeutic regimen administered and the pamphlet was given. Post-test was conducted on 7th day using same tools.

RESULTS

Baseline Characteristics

Of 50 patients 34% of the samples were of the age group 50-64 years, 14% of them were in the age group of 20-34 years. Majority 37 (74%) of the samples were male. More than half 28 (56%) of the subjects belongs to illness group of more than three years.

Attitude of Patients with ESRD towards the Therapeutic Regimen

The attitude of 50 patients with ESRD towards the therapeutic regimen was assessed before and after the intervention using the structured interview schedule.

Table 1: Distribution of Subjects According to the Grading of Pre-test and Post-test Attitude scores towards Therapeutic Regimen.

<table>
<thead>
<tr>
<th>Attitude Category</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-125</td>
<td>04</td>
<td>16</td>
</tr>
<tr>
<td>86-105</td>
<td>33</td>
<td>29</td>
</tr>
<tr>
<td>66-85</td>
<td>11</td>
<td>05</td>
</tr>
<tr>
<td>46-65</td>
<td>02</td>
<td>-</td>
</tr>
<tr>
<td>≤ 45</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Maximum score = 125

The data in the Table 1 shows that 4 (8%) of the sample had highly favourable pre-test attitude and in post test 16 (32%) of the sample had highly favourable attitude.

Table 2: Range, Mean, Median and Standard Deviation of Pre-test and Post-test

<table>
<thead>
<tr>
<th>Attitude score of Patients with ESRD</th>
<th>N=50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>Mean</td>
</tr>
<tr>
<td>Pre-test</td>
<td>56-116</td>
</tr>
<tr>
<td>Post-test</td>
<td>69-119</td>
</tr>
</tbody>
</table>

Maximum score = 125

Data in Table 2 shows that post-test attitude score ranged from 69-119 and pre-test attitude score ranged from 56-116. Mean pre-test attitude score (x₁) = 92.3 ±12.39 and Mean post-test attitude score (x₂) = 99.6 ±10.12

Table 3: Area wise Mean Percentage and Mean Gain of Pre-test and Post-test Attitude score of the Subjects towards Therapeutic Regimen

<table>
<thead>
<tr>
<th>Area of attitude score</th>
<th>Mean %</th>
<th>Mean % Actual gain(A)</th>
<th>Mean % Possible gain(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dietary regimen (DR)</td>
<td>71.8</td>
<td>6.7</td>
<td>28.2</td>
</tr>
<tr>
<td>Fluid regimen (FR)</td>
<td>73.1</td>
<td>6.2</td>
<td>26.9</td>
</tr>
<tr>
<td>Medication regimen(MR)</td>
<td>76.7</td>
<td>4.9</td>
<td>18.4</td>
</tr>
<tr>
<td>Dialysis Attendance (DA)</td>
<td>74.5</td>
<td>5.3</td>
<td>25.5</td>
</tr>
</tbody>
</table>

Data in table 3 shows that mean percentage of pre test score is highest (76.7%) in “Medication Regimen” area and lowest (71.8%) in “Dietary Regimen” area. Mean percentage post test score is highest (81.6%) in “Medication Regimen” area and lowest (78.5%) in “Dietary Regimen” area. Mean percentage of actual gain is more in “Dietary Regimen” area and lowest in “Medication Regimen” area

Compliance Score of Patients with ESRD to Therapeutic Regimen

Table 4: Distribution of Subjects According to the Grading of Pre-test and Post-test Compliance Scores

<table>
<thead>
<tr>
<th>Range of Compliance score</th>
<th>Category</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-40</td>
<td>Noncompliance</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>41-60</td>
<td>Partially compliance</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>61-80</td>
<td>Compliance</td>
<td>48</td>
<td>50</td>
</tr>
</tbody>
</table>

Maximum score = 80

The data in table 4 shows that during pre-test 96% of the samples were compliant and during the post 100% of the samples were compliant to the therapeutic regimen.

Effectiveness of Individual Education Intervention

Table 5: Mean, Standard Deviation of Difference and ‘t’ value of Pre and Post-test Attitude Score

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Mean difference</th>
<th>SD difference</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude Score</td>
<td>92.3</td>
<td>7.3</td>
<td>4.52</td>
<td>11.47*</td>
</tr>
</tbody>
</table>

Data in the table 5 Show that the IEI is effective in improving the attitude score of patients with ESRD.
Table 6: Mean, Standard deviation Difference and ‘t’ value on Pre and Post test Compliance Score

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean Pre-test</th>
<th>Mean Post-test</th>
<th>Mean SD</th>
<th>Difference Mean SD</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance score</td>
<td>70.1</td>
<td>73.2</td>
<td>3.1</td>
<td>3.76</td>
<td>5.67*</td>
</tr>
</tbody>
</table>

The data in the Table 6 shows that IEI was effective in improving the compliance level of patients with ESRD.

Relationship between the Attitude Scores and Compliance Score

Figure 1: Scatter Diagram showing the Correlation between Pre-test Attitude Score and Compliance score of Patients with ESRD

The findings of the current study showed a significant increase in post test attitude score. The computed ‘t’ value $t_{49} = 11.47$ is more than the tabled value ($t_{49} = 2.02, p<0.05$). These findings are congruent with the findings of a study where attitude scores significantly improved following education regarding upper respiratory infections.9 All these findings prove and support that IEI is effective in improving attitude of patients towards therapeutic regimen.

The findings of the current study showed a significant increase in post test compliance score. The computed ‘t’ value $t_{49} = 5.57$ is greater than the tabled value ($t_{49} = 2.02, p<0.05$). These findings are supported by a study on medication apprehension and compliance among dialysis patients where compliance with prescribed medications significantly improved following the intervention, from 89 to 95.7%, (p = 0.0007).54 This finding support the present study finding that IEI is effective in improving compliance of patients towards therapeutic regimen.

The results of the present study showed that there was a significant correlation between pre-intervention attitude and compliance ($r_{48} = 0.486$) ($r_{48} = 0.273$, $p<0.05$). These findings are similar to the results of a study conducted to determine the knowledge, attitude and compliance with tuberculosis treatment where there was a positive relationship between compliance and attitude ($r_{102} = 0.59$, $p<0.001$).7 These findings indicate that as the level of attitude increases, compliance level also increases.

DISCUSSION AND CONCLUSION

Out of the 50 patients 4 (8%) had highly favourable attitude and 33 (66%) had favourable attitude towards the therapeutic regimen in pre test and 16 (32%) had highly favourable and 29 (58%) had favourable attitude during the post test. The mean attitude score is increased from $92.3 \pm 1.239$ to $99.6 \pm 1.012$ after the administration of IEI. There was also a mean percentage gain of 5.8 % in the attitude score. These findings are congruent with the study conducted in Zambia where a majority of the respondents (89.4%) had positive attitude towards TB treatment.7 Another study conducted in Udupi District reported that the mean score of post-test attitude ($x_{2} = 68$) was higher than the mean pre-test attitude score ($x_{1} = 50$).8 The current study supports that, an education program could improve the attitude of the patients towards treatment.

Compliance Score of Patients with ESRD to Therapeutic Regimen Out of the 50 patients 48 (96%) were compliant to the therapeutic regimen in pre test and 50 (100 %) were compliant during the post test. The mean compliance score increased from $70.1 \pm 5.9$ to $73.1 \pm 3.7$ after the administration of IEI. There was also a mean percentage gain of 3.75 % in the compliance score. These findings are congruent with the study conducted in Zambia where most of the respondents (80.8%) reported complying with TB treatment regimens.7
The results of the current study showed that there was no significant association between the pre-test attitude score and selected demographic variable such as age, education, family income, duration of illness, duration of dialysis, and frequency of dialysis. Similar findings were observed in a study on Effect of Intensive Education on Knowledge, Attitudes, and Practices Regarding Upper Respiratory Infections among Urban Latinos in which there was no association between attitude and demographic variables.9

Different teaching strategies can be useful to improve the attitude and compliance of patients with ESRD. The study revealed that Individual Education Intervention can be used as an effective teaching strategy.

ACKNOWLEDGEMENTS

I owe a deep sense of gratitude to Mrs Victoria D’Almeida, Professor and HOD, Medical Surgical Nursing Department, for her untiring guidance and making this study a fruitful learning experience. I am grateful to all the participants of the study for their whole hearted participation; without whose cooperation my study would have been impossible.

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8. Dsouza A, Valsaraj BP, Priyadarshini S. Effectiveness of Planned Teaching Programme on knowledge and attitude about complementary feeding among mothers of infants. Nurs J India 2009 Nov;11:246-7
A Study to Assess the Awareness of Mothers on Danger Signs of Newborn Illnesses with a View to Prepare an Information Booklet in Selected Hospitals at Mangalore

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¹Lecturer, ²Professor, Father Muller College of Nursing, Kankanady, Mangalore

ABSTRACT

Objectives: To assess the awareness among mothers on danger signs of newborn illnesses and to find the association between awareness of mothers on danger signs of newborn illnesses and selected baseline variables.

Method and Material: A descriptive survey design was used for the present study. The sample consisting of 100 postnatal mothers were selected by purposive sampling technique. Tools used were baseline proforma and structured questionnaire. The data was analyzed using descriptive and inferential statistics.

Findings:
• Majority of the mothers, i.e. about 64% had average, 26% had poor and 10% had good awareness on the danger signs of newborn illnesses.
• There was a significant association between awareness and selected baseline variables of mother, like religion, type of family, income, and gender of the present child and gestational age of the newborn.

Keywords: Awareness, Danger signs of newborn illnesses, Newborn

INTRODUCTION

Motherhood is perhaps the happiest moment in the life of a woman. All the pleasure and pains of the waiting period come to an end with the arrival of the ‘Newborn’ - a joyous occasion for celebration.¹ Good parenting involves providing the baby with his physical needs, ensuring a consistent caring relationship which avoids confusion, understanding the baby’s wants and being able to respond promptly and appropriately to them.²

The health and survival of the newborn baby depends upon the health status of the mother. Mother is the best primary health worker. A newborn baby who is small or has a potentially life threatening problem is in an emergency situation requiring immediate diagnosis and management. Delay in identification of the problem or in providing the correct management may be fatal.³ Every year, four million newborn deaths occur in the world, out of which nearly one fourth are contributed by India. Early identification of newborn danger signs by caregivers with prompt and appropriate referral serves as backbone of the programmes aiming at reduction in neonatal mortality.⁴ With this background, the present study is carried out on the mothers to assess their awareness on danger signs of newborn illnesses.

MATERIAL AND METHOD

Material

In this study the investigator used two tools. The description of the final tool is given below:
• Tool I: Baseline Proforma with 12 items.
• Tool II: Structured questionnaire with 28 items.

Tool I: Baseline Proforma

It consists of 12 items such as age, religion, educational status of the husband, mother’s education, occupation, type of family, number of children, locality, monthly income, gender of the present child, previous
knowledge, and present baby born at which month. The respondents were asked to choose the relevant option provided.

**Tool II: Structured Questionnaire to Assess Awareness on Danger Signs of Newborn Illnesses**

This section comprised of 28 items covering the following areas:

1. Signs which need immediate attention (61%)
2. Signs which do not need immediate attention (39%)

The items were of ‘yes’/ ‘no’ with ‘do not know’ option and each correct answer carrying 1 score and wrong answer/do not know answer carrying 0 score. The total maximum score would be 28. The awareness score was graded as poor (0-9), average (10-19) and good (20-28).

**METHODOLOGY**

The data was collected from 100 postnatal mothers from 23rd of August to 18th of September 2010. The prior permission from the concerned authority to conduct the study was obtained. The subjects were selected from the postnatal ward, based on the inclusion and exclusion criteria. Purposive sampling technique was used to select the samples. The investigator introduced herself to the subjects; purpose of study was explained to them. Confidentiality was assured and written consent was obtained from the study participant. The investigator administered baseline proforma and structured questionnaire to the participants. Participants completed the questionnaire by 20 minutes.

**FINDINGS**

- Majority of the mothers (64%) had average level of awareness, 26% had poor level of awareness and 10% had good awareness.

- There was a significant association between awareness and selected baseline variables of mother like religion (0.030), type of family (0.009), income (0.015) and gender of the present child (0.004) and gestational age of the newborn (0.038).

**Interpretation and Conclusion**

The findings of the study have shown that the awareness level of mothers was not adequate. Considering the lack of awareness of mothers regarding the danger signs of newborn illnesses, there is need for raising awareness building, which required for early recognition and prompt treatment that prevents associated serious sequelae.

**ACKNOWLEDGEMENTS**

- It gives me immense pleasure to thank my guide Rev. Sr Winnifred D’Souza, Professor, Department Pediatric Nursing, and Pro.Prof. Prema D’Souza HOD department of pediatric nursing, Father Muller College of Nursing for their inspiring guidance, suggestions, timely help, constant encouragement and co-operation for the completion of this study and I am proud to acknowledge the support and prayers of my parents Mr. George Fernandes & Mrs. Philomena Fernandes, who were an immense source of motivation and encouragement for me to achieve this goal.

**REFERENCES**

Conceptualization of a Research Study: An Exemplar

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ABSTRACT

Conceptualization of a research study is the most critical phase, which includes several meticulous steps. The first step in the process is to identify the common research problems that prevail in a particular context, either through clinical observations or through literature review; each of these sources may be used to validate the problem identified through the other. The next step involves an in-depth literature search to identify the work previously done in the field, determining the gap in the existing body of literature and establishing the need for the proposed study. The final step of the conceptualization phase is concerned with establishing the significance of the proposed study. This paper reports the conceptualization of a research study conducted in Karachi, to identify the gender differences among Acute Coronary Syndrome (ACS) patients, in terms of their prehospital delay times and in the associated factors of delay.

Keywords: Conceptualization, Research Study, Gender Differences, Acute Coronary Syndrome, Prehospital Delay Time

INTRODUCTION

Planning and conducting a research study is an exhaustive, but fulfilling activity. Each step in this process is important; however, the conceptualization phase is the most significant one whereby the intent of the study is finalized based on the gaps in the existing body of literature and the significance of the problem. The purpose of this paper is to describe the stages in conceptualization of a research study titled ‘Gender differences in factors associated with prehospital delay among acute coronary syndrome (ACS) patients in Karachi, Pakistan’, conducted as part of the primary investigator’s graduate thesis. The process of conceptualization described in the paper may be helpful for the novice researchers, so as to use it as a guide.

Identification of the Research Area

The very first step in conceptualization of any given study is the identification of a research area which is the most relevant to the researcher’s context, and which is the most in need of further exploration. In the instance of the said study, it was identified through literature review that the epidemiological transition¹ is anticipated to result in the emergence of cardiovascular diseases as the major cause of mortality in developing countries, within the next few years.²,³ Moreover, approximately 17.5 million deaths are attributed to acute coronary events each year worldwide; 80 percent of these deaths occur in developing countries.⁴ In Pakistan, cardiovascular mortality accounts for 12% of all deaths.⁵ This grave situation in Pakistan and other developing countries, with respect to the cardiovascular morbidity and mortality, led the investigators to choose...
‘cardiovascular diseases’ as their area of interest for this study.

Clinical and Theoretical Significance of the Research Topic

The next step in the process of finalizing the thesis topic was aided by the primary investigator’s clinical experience. During the researcher’s clinical experience at one of the renowned tertiary care hospitals of Karachi, it was quite alarming to see that many patients arrived hours and even days after the onset of acute coronary syndrome (ACS) symptoms and ended up with complications, poor prognosis and even death. The review of literature further confirmed the significance of prehospital delay in ACS. Literature showed that although reducing the prehospital delay time is important for any given set of symptoms, its significance increases in ACS due to its devastating consequences. Prehospital delay in ACS is a barrier to early reperfusion, and hence, it is an important predictor of the complications associated with ACS, such as loss of cardiac muscle with subsequent reduction in ejection fraction, increased incidence of arrhythmias and higher mortality. The impact of prolonged prehospital delay time on the clinical outcomes of ACS patients is evident by the fact that every 30 minute delay in reperfusion after an acute coronary event increases the risk of 1 year mortality by 7.5 times. Besides worsening the clinical outcomes and the chances of survival, prehospital delay in ACS also has financial implications for the patients, as it increases the cost associated with the treatment due to the complications. It was surprising to see that despite the widely acknowledged significance of prehospital delay in ACS, quite prolonged delay times have been reported among ACS patients in various developed and developing countries.

Another aspect of the researcher’s clinical experience further helped in determining the final thesis topic. In researcher’s clinical experience, it was quite distressing to see that women delayed longer than men in reaching the hospital after the onset of ACS symptoms. The observation of gender disparity in prehospital delay times of ACS patients led the researcher to look for international trends through a comprehensive literature review. The literature review affirmed the trend of gender differences in prehospital delay times of ACS patients. Literature further showed that the factors associated with prehospital delay may vary between men and women, as gender has been found to be one of the important factors contributing to the treatment seeking behavior. Differences between the genders in factors related to prehospital delay can be explained on the basis of biological and social theories. One of the most important explanations for gender differences in treatment seeking for ACS is the varying presentation of ACS symptoms among men and women. Studies around the world have established that women with ACS present with more atypical symptoms like jaw pain, back pain, indigestion, shortness of breath, and nausea or vomiting, as compared to the men who mostly present with typical symptoms like crushing chest pain. Atypical presentation of symptoms often leads to an incorrect assessment of the source of the symptoms, which results in the subsequent delay in treatment-seeking. Additionally, gender plays quite an important role in determining treatment seeking behavior among South Asian residents. The social explanation for gender differences in health-seeking derives from the deprived conditions that women in South Asia are subject to, and from the male dominance in decision making related to health and other issues. Women in this part of the world are more prone to delay in seeking care for ACS symptoms because they can neither make nor exercise their choices in accessing health care. In contrast, South Asian men are susceptible to delay due to their need to portray the traditional masculine characteristics of courage and physical strength.

Determining Gap in the Existing Body of Literature

Thus, after a thorough literature review, this study was planned considering the fact that studies done in the West have demonstrated gender differences in treatment seeking for the ACS symptoms; however, to the best of the researchers’ knowledge, before this study, no study had been conducted in Pakistan to evaluate gender differences in factors associated with prehospital delay in ACS.

Establishing the Significance of the Proposed Study

Another important step of the conceptualization phase is establishing the significance of the proposed study. This study was deemed to be significant because the subject of prehospital delay among ACS patients was a novel area that was to be explored in the Pakistani context for the very first time. This study was an attempt to identify gender-specific factors that contribute to delay among men and women diagnosed...
with ACS in Karachi, Pakistan. It was hypothesized that the factors associated with delay among Pakistani men and women may be different as compared to the factors that have been identified in Western studies, due to cultural differences and difference in the social status of the two genders in Pakistan. It was expected that the study findings will help in targeting the gender specific factors of delay, subsequently preventing the complications and mortality associated with delayed treatment in ACS.

CONCLUSION

In conclusion, this research study was conceptualized based on: the rising trend of cardiovascular morbidity and mortality in Pakistan; strong evidence from the literature suggesting the importance of prehospital delay in ACS and the presence of gender disparity in treatment seeking for the ACS symptoms, worldwide; and a substantiation of the fact through the researchers’ clinical experience within the local context. Based on this evidence, an analytical, comparative, cross-sectional study was planned which intended to explore gender differences in the prehospital delay time and its associated factors, among ACS patients in Karachi, Pakistan.

Conflict of Interest: nil

REFERENCES


A Study to Determine the effectiveness of Planned Teaching Program on Adolescence Girl's Knowledge, Attitude and Practices Towards Menstrual Hygiene in Selected Schools of Hemja, Kaski, Nepal

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ABSTRACT

Objectives: To assess the knowledge, attitude and practice of adolescence girls on menstrual hygiene. To find the association between knowledge score, attitude score, practice score and selected variables. In addition, to evaluate the effectiveness of planned teaching program on adolescence’s knowledge, attitudes and practices.

Materials and method: An intervention study done among 60 adolescence girls by using instrument demographic performa, knowledge questionnaire, attitude questionnaire and practice questionnaire.

Results: Majority of sample 51.7% are in age group 15year, majority 78.5% are Hindu, 41.7% girls got the information about menstruation from their mother and 50% of their menarche was in 13 years. In the pre test 18.33% girls had good knowledge about menstrual hygiene, 60.0% had fair knowledge and 21.67% of them had poor knowledge on menstrual hygiene. After the health education on menstrual hygiene 43.33% had good knowledge on menstrual hygiene, 48.33% had fair knowledge and 8.34% of them had poor knowledge on the topic. In pre test majority 96.67% of the total girls had favorable attitude towards the menstrual hygiene and 3.33% had negative attitude about menstrual hygiene and in the post test after the health education 100% of them had favorable attitude on menstrual hygiene. Among the sample size majority 86.7% of them dry their used clothes in the sun during their menstruation but in the post test of the same sample majority 96.66% of them dry their used cloths in the sun during their menstruation, all of them use soap and water to wash their used clothes during their menstruation.

Conclusion: In the pre test 18.33% girls had good knowledge about menstrual hygiene, 60.0% had fair knowledge and 21.67% of them had poor knowledge on menstrual hygiene but in post test 43.33% had good knowledge on menstrual hygiene, 48.33% had fair knowledge and 8.34% of them had poor knowledge on the topic.

Keywords: Adolescent, Menstruation, Attitude, Practices

INTRODUCTION

Menstruation, though a natural process, has often been dealt with secrecy in many parts of Nepal. Hence, knowledge and information about reproductive functioning and reproductive health problems amongst the adolescent is poor. Several tradition norms and beliefs socio-economic condition and physical infrastructure can and do influence the practices related to menstruation. For example, a Hindu Nepali women abstains from worship, cooking and stay away from her family as her touch is considered impure during this time. ¹

A study was conducted to examine the knowledge and practices of adolescent school girls in Kano, Nigeria about menstruation and menstrual hygiene. Majority had fair knowledge of menstruation, although deficient in specific knowledge areas. Most of them used sanitary pads as absorbent during their
last menses; changed menstrual dressings about 1-5 times per day; and three-quarter increased the frequency of bathing. 2

A community based study was conducted on menstrual hygiene and the prevalence of female reproductive infections among Egyptian women and adolescent girls, Egyptian Fertility Care Society Dakahlia Governorate Dakahlia governorete (Arabic: ÇalPáâlîf) is an Egyptian governorate lying northeast of Cairo. Its area is about 6,000 km² and it has a population of about 5 million, which was published in 1999. It found that among ever-married older women, 15.3% used disposable sanitary pads, and 42.1% and 39.4% used re-usable cotton toweling after washing or boiling it, respectively. In contrast, 25.2% of unmarried younger women used disposable sanitary pads, 50.5% and 21% used re-usable cotton toweling which they washed or boiled after use. Only 3.2% of both groups of women used pieces of cloth that they threw away after one use.3

A cross-sectional study was conducted on 350 students recruited from educational institutions offering higher secondary education, pre-university and under graduate courses in the urban areas from a major city in South India. It is evident that the mean age of the subjects studied was 18.6±1.7 years, while the age range was 15 -22 years. Among these 42.6 % girls were in the age group of 15-19 years, and others were aged 19-22 years (57.4%). Age at menarche in the selected group ranged from 10-17 years, with a mean of 13.4±1.2 years. Majority of the participants (90.9%) belonged to families practicing Hinduism, 85.4% girls were from nuclear family. 4

With the above background, the study was conducted with the following objectives:

1. to assess the knowledge, attitude and practice of adolescence girls on menstrual hygiene.
2. to find the association between knowledge score, attitude score, practice score and selected variables.
3. to evaluate the effectiveness of planned teaching program on adolescence’s knowledge, attitudes and practices.

MATERIALS AND METHOD

The evaluative approach was undertaken among 60 adolescents’ girls in Snow view secondary school and Vishnu paduka secondary school of Hemja village development community; ward no 2, Kaski, Nepal by using instrument demographic performa, knowledge questionnaire, attitude questionnaire and practice questionnaire. Data was analyzed using SPSS-Package (version 12.0)

RESULTS

Table 1: Distribution of sample according to the demographic proforma in terms of frequency and percentage

<table>
<thead>
<tr>
<th>S.N</th>
<th>Sample characteristics</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>22</td>
<td>36.7</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>31</td>
<td>51.7</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>7</td>
<td>11.7</td>
</tr>
<tr>
<td>2.</td>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hindu</td>
<td>53</td>
<td>88.5</td>
</tr>
<tr>
<td></td>
<td>Buddhist</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>3.</td>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Newar</td>
<td>4</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>Gurung</td>
<td>5</td>
<td>8.3</td>
</tr>
<tr>
<td></td>
<td>Brahmin</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>39</td>
<td>65</td>
</tr>
<tr>
<td>4.</td>
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<td>health workers</td>
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</table>
Thus from table 1 we came to know that among the sample size majority 51.7% in age group 15, majority 78.5% are Hindu, and majority 65% of people are from the ethnicity other than Newar, Gurung and Brahmin, majority are in class 9, 55.0% live in a nuclear family, 38.3 of their mothers education is primary level, among the sample size majority of their mother’s occupation is agriculture, 50% of their menarche was in 13 years and majority 41.7% got knowledge from their mother.

Data presented in fig 1 revealed that 21.67% had poor knowledge in the pre test and 48.33% of the samples had fair knowledge about menstrual hygiene.

Table No 2: Distribution about practices of adolescence girls regarding menstrual hygiene Frequency and percentage.

<table>
<thead>
<tr>
<th>S.N</th>
<th>Practices of adolescents girls</th>
<th>Pre test</th>
<th>Post test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>f</td>
<td>%</td>
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<tr>
<td>1.</td>
<td>Hide in dark room</td>
<td>Yes</td>
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<tr>
<td></td>
<td></td>
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<td>35</td>
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<td>Allowed to enter kitchen</td>
<td>Yes</td>
<td>16</td>
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<td></td>
<td></td>
<td>No</td>
<td>44</td>
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<td>Cook food in the kitchen during menstruation</td>
<td>Yes</td>
<td>9</td>
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<tr>
<td></td>
<td></td>
<td>No</td>
<td>51</td>
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<td>4.</td>
<td>Are you allowed to sit with the male members?</td>
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<td>21</td>
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<td></td>
<td></td>
<td>No</td>
<td>39</td>
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<tr>
<td>5.</td>
<td>What did you use in your first menstruation?</td>
<td>Sanitary pad</td>
<td>24</td>
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<tr>
<td></td>
<td></td>
<td>New clothes</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Both</td>
<td>24</td>
</tr>
<tr>
<td>6.</td>
<td>Do you dry your used clothes in the sun during your menstruation?</td>
<td>Yes</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>8</td>
</tr>
<tr>
<td>7.</td>
<td>Do you use soap water to wash your clothes in your menstruation?</td>
<td>Yes</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
<td>2</td>
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</table>
Among the sample size majority 86.7% of them dried their used clothes in the sun during the menstruation, almost 96.7% used to wash their clothes with soap water in the pre test but in the post test almost everyone 96.66% of the sample dried their used clothes in the sun during their menstruation and all of them 100% used soap water to wash their clothes during their menstruation. In the pre test 38.3% changed their pad according to the flow, 100% cleaned their perineal area each time they go to toilet and 33.3% ate outside the kitchen during menstruation. In the post test majority 56.66% changed their pad according to flow, 100% cleaned their perineal area and 43.33% ate outside the kitchen during their menstruation.

Table No 2: Distribution about practices of adolescence girls regarding menstrual hygiene Frequency and percentage. (Cont.)

<table>
<thead>
<tr>
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<th>Practices of adolescents girls</th>
<th>Pre test</th>
<th>Post test</th>
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<tr>
<td></td>
<td></td>
<td>f</td>
<td>%</td>
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<tr>
<td>8.</td>
<td>How many times do you change your pad during your menstruation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
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<td>1.7</td>
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<td>2</td>
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<tr>
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<td>According to the flow</td>
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<tr>
<td></td>
<td></td>
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<td>38.3</td>
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<tr>
<td>9.</td>
<td>Do you clean your perineal areas each time you go to toilet?</td>
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<tr>
<td>Yes</td>
<td></td>
<td>60</td>
<td>100</td>
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<tr>
<td>10.</td>
<td>Where do you eat during your menstruation?</td>
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<tr>
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<td>13</td>
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<tr>
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<td>11.</td>
<td>When do you bath during your menstruation?</td>
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<tr>
<td>3rd day</td>
<td></td>
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<td>4th day</td>
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<td>Daily</td>
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<td>Do you eat supplementary food during your menstruation?</td>
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<td>Yes</td>
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<td>Which type of food should be taken during menstruation?</td>
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<td>Packed foods</td>
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<td>Fish and meat products</td>
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<td>Where do you sleep during your menstruation?</td>
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In the pre test 40% of the girls took bath regularly, majority 96.7% took supplementary food. In the posttest majority 51.67% took bath in the third day of the menstruation, 100% of them took supplementary food. In the pre test majority 60% of the girls buried the pad after the menstruation. In the post test majority 71.66% of the girls disposed the pad by burying after the menstruation.

Table no 3: Association between knowledge score and selected variables

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<th>df</th>
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S = Significant  NS = Non-significant
The data in table 3 revealed that there was no significant association between knowledge and selected variables such as age, religion, caste, school, level of education, types of family, mother’s education, mother’s occupation and source of information.

Table no 4: Association between attitude score and selected variables

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<th>Sample characteristics</th>
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<th>P-value</th>
<th>Significance</th>
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<td>38</td>
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<td>Private</td>
<td>1</td>
<td>12</td>
<td>0.253</td>
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<td>Public</td>
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<td>32</td>
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<td>Joint</td>
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<td>25</td>
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<td>Mothers education</td>
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<td>Illiterate</td>
<td>0</td>
<td>14</td>
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<td>3</td>
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<tr>
<td>Middle</td>
<td>0</td>
<td>13</td>
<td>5.08</td>
<td>4</td>
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<td>Secondary</td>
<td>0</td>
<td>4</td>
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<td>Mothers occupation</td>
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<td>Housewife</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
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<td>Agriculture</td>
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<td>13</td>
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<tr>
<td>Business</td>
<td>1</td>
<td>35</td>
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<td>3</td>
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<td></td>
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<tr>
<td></td>
<td>0</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Source of information</td>
<td></td>
<td></td>
<td></td>
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<td>Friends</td>
<td>0</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Media</td>
<td>1</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>1</td>
<td>24</td>
<td>2.797</td>
<td>4</td>
<td>0.592</td>
</tr>
<tr>
<td>Grandmother</td>
<td>0</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health worker</td>
<td>1</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

S = Significant NS = Non-significant
The data in table 4 revealed that there was no significant association between attitude and selected variables such as age, religion, caste, school, level of education, types of family, mother’s education, mother’s occupation and source of information.

Table 5: Quartiles, Median, Z values of Wilcoxon signed Rank test of knowledge scores.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Quartiles</th>
<th>Median</th>
<th>Z value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>5</td>
<td>7</td>
<td>-4.62</td>
<td>.000*</td>
</tr>
<tr>
<td>Q2</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

The data presented in Table 5 revealed the significant difference between the pre-test knowledge and post–test knowledge which was using Wilcoxon Signed Rank Test. the Z score is -4.62 and the P value is .000 which was significant at 0.005 level of significance. this shows a significant increase in the post-test knowledge scores.

The researcher rejects the null hypothesis and research hypothesis was accepted. Hence the teaching program was found to be effective in improving the knowledge level of adolescence girls.

Table 6: Mean, Mean difference, Standard deviation difference and t value of mean pre-test and post-test attitude scores.

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Mean</th>
<th>Mean difference</th>
<th>Standard deviation difference</th>
<th>t' value</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre test</td>
<td>20.17</td>
<td>7.55</td>
<td>3.24</td>
<td>-0.860</td>
<td>0.937</td>
</tr>
<tr>
<td>Post test</td>
<td>20.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data presented in Table 6 revealed that the mean difference between the mean pre-test and post-test attitude scores were not significant. Hence the null hypothesis was accepted and it was inferred that in the present study there was no significant change in adolescent’s attitude towards menstrual hygiene after the teaching program also.

DISCUSSION

Study findings have been discussed in terms of objectives and with the findings of the other studies.

A descriptive cross-sectional study was conducted in Dhading, Morang, Lalitpur and Kathmandu districts. Data was collected from 204 adolescent school girls from four government secondary schools using self administered structured close-ended questionnaires, focus group discussions (FGD), and semi-structured in-depth interviews. It was found respondents (92%) had known about menstruation before their menarche, particularly from mothers (51%) or sisters (41%). menstruation. But in this study also mother was the first to inform about menstruation that is 25(41.7%) and 60(100%) of them used soap and water. Regarding the practice 24(40%) of them used sanitary pad in their menstruation.

In India, a study was conducted with 65 females 14-15 years old attending a rural high school in Guntur District in Andhra Pradesh to learn their knowledge and practices about menstruation. All the students attained menarche at 12-13 years. 48 received information about menstruation from their mothers. Among the sample one used old cloth during menstruation, 25 reused the cloth, 16 disposed of the used cloth through Dhobi, 13 put it into a canal, 52 took special baths during menstruation, 27 students cleaned the external genitalia with only water. Only three students used water and soap. More than 50% were restricted from household work, taking part in religious activities, attending marriages, and playing during menstruation. 13 were restricted from attending school during menstruation. But in this study also mother was the first to inform about menstruation that is 25(41.7%) and 60(100%) of them used soap and water. Regarding the practice 24(40%) of them used sanitary pad in their menstruation.

CONCLUSION

In the pre test 18.33% girls had good knowledge about menstrual hygiene, 60.0% had fair knowledge and 21.67% of them had poor knowledge on menstrual hygiene but in post test 43.33% had good knowledge on menstrual hygiene, 48.33% had fair knowledge and 8.34% of them had poor knowledge on the topic.

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6) Andhra Pradesh Agricultural University, Home Science College, Bapatla.
Client Satisfaction with Family Welfare Services among Women in Selected Primary Health Centre: Descriptive Explorative Approach

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ABSTRACT

Primary care is the healthcare provided at the primary level of care, which is the first level of contact of the community with the health system. Primary health care is the first level contact of individuals, the family and community with the national health system, where “Basic Health Care” is provided. The aim of the present study was to assess the client satisfaction with the family welfare services, to find out the comparison of satisfaction among women of antenatal, intranatal, postnatal and family planning groups and to associate client satisfaction with the selected baseline variables. A descriptive explorative approach was used with the sample of 100 women of Antenatal, Intranatal, Postnatal and Family Planning groups using convenient sampling technique. Results show that women in antenatal and family planning group were moderately satisfied and women in intranatal and postnatal group were satisfied with the services rendered at Primary Health Centre. There was no significant difference found in satisfaction level among all groups.

Keywords: Family Welfare Services, Client Satisfaction, Primary Health Centre, ANM Female Health Worker.

INTRODUCTION

The primary health care has a significant role in the process of a reproduction of the population and plays an important role in the improvement of women’s health, as well as in the implementation of measures in the population planning policy. The National Health Policy accords high priority to maternal and child health program. The health interventions are significant not only in preserving the health of the mother and children, but also socio-cultural factors. In India women in reproductive age (15-49 years) constitute 60% of the total population. Women constitute a vulnerable section of the population, more so in a rural environment. Naturally they need better health care and attention. The maternal mortality rate was 301/1,00,000 live births during the year 2005-2006 (NFHS-3).

Health of the mother and children is very important in matter of public health concern because of several reasons. Family Welfare programme is being implemented purely on Central Assistance as 100% Centrally Sponsored Scheme (CSS) without any share from the State Government. The programme has started since 1952 as a National programme throughout the country. Main components of the programme are maternal health, child health and population stabilization.

Patient satisfaction is an important health care area and is one of the most frequently reported outcome measures for quality of care and provision of health care services. Patient satisfaction is used by health care providers, administrators and policy makers to assess the quality of care, make decisions about the organization and provision of health care services, avoid malpractice litigation and maintain a competitive edge in the health care area.

Need for the study

In our national health programme family welfare service has been the prime focus of delivery. It comprises advice and service given to pregnant women and mothers at regular and periodic intervals. To control and stabilize the growth of population, the national family planning programme (NFPP) was launched in 1952 by the government of India. The programme is now being implemented as a family welfare programme with mother-and-child health as its integral part.
Patient satisfaction has become an important indicator of quality of primary care and health care performance. Patient satisfaction with health care is important for several reasons. Firstly, satisfied patients are more likely to maintain consistent relationships with their care provider. Secondly, by identifying source of dissatisfaction, the primary care administration can address system weakness, thus improving their services. Thirdly, satisfied patients are more likely to develop a deeper and longer lasting relationship with their medical provider leading to improved compliance, continuity of care and ultimately better health outcomes.

Client satisfaction in general is important both as a quality assurance measure and a marketing tool that can give health care providers a competitive edge when rendering health care services in a managed care environment.

A cross-sectional study was conducted to assess the patient’s satisfaction with the Primary Health Care services in 21 Primary Health Centre’s in Qatar in August and September 2008. The subjects were selected through systematic random sampling by taking every tenth patient according to their order of attendance at the reception desk. The data were collected through interviews. The questions measuring six different aspects of health services using a 5-points rating scale from strongly agree to strongly disagree. 282 patients have participated in the study. The overall satisfaction was 75.2%. The highest score of satisfaction for the aspect of services was for accessibility to the health services (98%) and the lowest was for comprehensiveness of care (92.6%).

Thus evaluation of client satisfaction will help the researcher to understand the client’s expectations of the care rendered by the health personnel, the actual care rendered to the clients and will also aid in making recommendations for provision of better care.

Hence investigator as a researcher formulated statement:

A study to assess the satisfaction with family welfare services rendered at selected Primary Health Centre.

OBJECTIVES OF THE STUDY

1. To find out the level of satisfaction with family welfare services among women of antenatal, intranatal, postnatal and family planning groups received at selected Primary Health Centre.

2. To find out the comparison of satisfaction level among women of antenatal, intranatal, postnatal and family planning groups with family welfare services.

3. To find out the association between client satisfaction and selected baseline variables.

MATERIALS AND METHOD

Research approach used for the study is given below:

The study was conducted in Surathkal Primary Health Centre in Dakshina Kannada district with the population of 52,465 and there are 12 Sub centre’s under this PHC. The present study was conducted in the antenatal clinic, postnatal ward, immunization clinic and outpatient department of Primary Health Centre.

Descriptive exploratory approach was used for the present study since the purpose of the study was to find out satisfaction with family welfare services among women of antenatal, intranatal, postnatal and family planning groups and to find out comparison of satisfaction level among women of those groups. Keeping feasibility in mind it was decided to include 50 antenatal mothers, 10 intranatal mothers, 20 postnatal mothers and 20 women who adopted family planning methods.

DATA COLLECTION PROCESS

Formal written permission was obtained from the concerned authorities to conduct the research study in the selected Primary Health Centre. The purpose of the study, method of data collection and time required were explained to the subjects. They were also assured of the confidentiality of the information. Informed consent was obtained from the respondents indicating
their willingness to participate in the study. Subjects who fulfilled the sampling criteria were selected from the antenatal clinic, postnatal ward, immunization clinic and outpatient department of Primary Health Centre. On every Wednesdays the data collected from antenatal mothers regarding their baseline information and satisfaction with the antenatal services. Intrapartum information was collected from mothers within 24 hours after the delivery in the PHC regarding their baseline information and satisfaction with the intrapartum services. Postnatal information was collected from mothers bringing their children for immunization on Thursdays on an average within 42 days after delivery in the Primary Health Centre regarding their baseline information and satisfaction with the postnatal services. Information about family planning service utilization was collected from women attending to laparoscopic sterilization camp once in month. And those utilizing temporary family planning methods during data collected in out-patient department of PHC regarding their baseline information and satisfaction with the family planning services. After data collection, the investigator thanked the respondents for their participation in the study.

RESULTS

Table 1: Sample Characteristics of Women who have Utilized Family Welfare Services

<table>
<thead>
<tr>
<th>SN</th>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
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<tbody>
<tr>
<td></td>
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<td>Intrapartum</td>
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<tr>
<td>1.</td>
<td>Age in years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>15-20</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>b)</td>
<td>21-25</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>c)</td>
<td>26-30</td>
<td>19</td>
<td>7</td>
</tr>
<tr>
<td>d)</td>
<td>31-35</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>e)</td>
<td>36-45</td>
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<tr>
<td>2.</td>
<td>Number of children</td>
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<tr>
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<td>None</td>
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</tr>
<tr>
<td>b)</td>
<td>One</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>c)</td>
<td>Two</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>d)</td>
<td>Three and above</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>Religion</td>
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<tr>
<td>a)</td>
<td>Hinduism</td>
<td>34</td>
<td>5</td>
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<tr>
<td>b)</td>
<td>Islam</td>
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<td>5</td>
</tr>
<tr>
<td>c)</td>
<td>Christianity</td>
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<td>4.</td>
<td>Educational status of women</td>
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</tr>
<tr>
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<td>No formal education</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>b)</td>
<td>Primary</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>c)</td>
<td>Secondary</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>d)</td>
<td>High school</td>
<td>19</td>
<td>-</td>
</tr>
<tr>
<td>e)</td>
<td>Pre-university</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>f)</td>
<td>Graduate</td>
<td>2</td>
<td>-</td>
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<tr>
<td>5.</td>
<td>Educational status of husband</td>
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</tr>
<tr>
<td>b)</td>
<td>Primary</td>
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<td>1</td>
</tr>
<tr>
<td>c)</td>
<td>Secondary</td>
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<td>4</td>
</tr>
<tr>
<td>d)</td>
<td>High school</td>
<td>19</td>
<td>3</td>
</tr>
<tr>
<td>e)</td>
<td>Pre-university</td>
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<td>2</td>
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<tr>
<td>f)</td>
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Table 1: Sample Characteristics of Women who have Utilized Family Welfare Services (Cont.)

<table>
<thead>
<tr>
<th>SN</th>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
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<td></td>
<td>Groups</td>
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<td>Occupation of the women</td>
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</tr>
<tr>
<td></td>
<td>a) Unemployed</td>
<td>38</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>b) Coolie</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>c) Beedi rolling</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>d) Self employed</td>
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<td>-</td>
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<tr>
<td>7.</td>
<td>Occupation of the husband</td>
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<tr>
<td></td>
<td>a) Unemployed</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>b) Coolie</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>c) Self employed</td>
<td>36</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>d) Professional</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>8.</td>
<td>Type of family</td>
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<td></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td>b) Joint</td>
<td>24</td>
<td>4</td>
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<td></td>
<td>c) Extended</td>
<td>7</td>
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</tr>
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<td>9.</td>
<td>Monthly income of the family</td>
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<tr>
<td></td>
<td>a) &gt; 1,500</td>
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<td>-</td>
</tr>
<tr>
<td></td>
<td>b) 1,501-3,000</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>c) 3,001-4,500</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>d) 4,501-6,000</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>e) 6,001</td>
<td>16</td>
<td>-</td>
</tr>
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<td>10.</td>
<td>Source of information about family welfare services</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>a) ANM</td>
<td>24</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>b) Govt. practitioner</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>c) Neighbors/Relatives</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>d) ASHA/AWWs</td>
<td>11</td>
<td>2</td>
</tr>
</tbody>
</table>

Section II: Satisfaction with Family Welfare Services received from PHC

A rating scale was used to assess the patient’s level of satisfaction with the family welfare services rendered at Primary Health Centre.

Table 2: Frequency and Percentage distribution of Women Level of Satisfaction with Family Welfare Services

<table>
<thead>
<tr>
<th>Grading of Satisfaction</th>
<th>Antenatal</th>
<th>Intranatal</th>
<th>Postnatal</th>
<th>Family planning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Unsatisfied</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Minimally satisfied</td>
<td>3</td>
<td>6</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Moderately satisfied</td>
<td>27</td>
<td>54</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Satisfied</td>
<td>18</td>
<td>36</td>
<td>4</td>
<td>40</td>
</tr>
<tr>
<td>Fully satisfied</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>20</td>
</tr>
</tbody>
</table>
Table 3: Area-Wise Distribution of Mean, Standard Deviation and Mean Percentage of Satisfaction Score of Women with Antenatal Care Services received from the PHC

<table>
<thead>
<tr>
<th>Area</th>
<th>Range</th>
<th>Mean</th>
<th>Std deviation</th>
<th>Mean percentage</th>
<th>Inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical environment</td>
<td>14-35</td>
<td>23.64</td>
<td>4.299</td>
<td>67.54</td>
<td>Moderately satisfied</td>
</tr>
<tr>
<td>Services provided</td>
<td>14-35</td>
<td>23.24</td>
<td>4.387</td>
<td>66.40</td>
<td>Moderately satisfied</td>
</tr>
<tr>
<td>Communication</td>
<td>14-35</td>
<td>23.06</td>
<td>4.740</td>
<td>65.89</td>
<td>Moderately satisfied</td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>42-104</td>
<td>69.94</td>
<td>12.777</td>
<td>66.61</td>
<td>Moderately satisfied</td>
</tr>
</tbody>
</table>

Maximum score-105, Minimum score-21

Table 4: Area-Wise Mean, Standard Deviation and Mean Percentage of Satisfaction Score of Women with Intrapartal Services received from the PHC

<table>
<thead>
<tr>
<th>Area</th>
<th>Range</th>
<th>Mean</th>
<th>Std deviation</th>
<th>Mean percentage</th>
<th>Inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical environment</td>
<td>15-35</td>
<td>24.80</td>
<td>5.83</td>
<td>70.9</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Services provided</td>
<td>12-30</td>
<td>20</td>
<td>5.4</td>
<td>66.7</td>
<td>Moderately satisfied</td>
</tr>
<tr>
<td>Communication</td>
<td>14-35</td>
<td>24.20</td>
<td>6.44</td>
<td>69.1</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>41-100</td>
<td>69</td>
<td>17.1</td>
<td>69</td>
<td>Satisfied</td>
</tr>
</tbody>
</table>

Maximum score-100, Minimum score-20

Table 5: Area-wise Mean, Standard Deviation and Mean Percentage of Satisfaction Score of Women with Postnatal Services received from the PHC

<table>
<thead>
<tr>
<th>Area</th>
<th>Range</th>
<th>Mean</th>
<th>Std deviation</th>
<th>Mean percentage</th>
<th>Inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical environment</td>
<td>14-35</td>
<td>25.45</td>
<td>5.18</td>
<td>72.7</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Services provided</td>
<td>12-30</td>
<td>21</td>
<td>4.17</td>
<td>60.0</td>
<td>Moderately satisfied</td>
</tr>
<tr>
<td>Communication</td>
<td>14-35</td>
<td>23.6</td>
<td>5.28</td>
<td>67.4</td>
<td>Moderately satisfied</td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>40-100</td>
<td>68.95</td>
<td>13.5</td>
<td>68.95</td>
<td>Satisfied</td>
</tr>
</tbody>
</table>

Maximum score-100, Minimum score-20

Table 6: Area-wise Mean, Standard Deviation and Mean Percentage of Satisfaction Score of Women with Family Planning Services received from the PHC

<table>
<thead>
<tr>
<th>Area</th>
<th>Range</th>
<th>Mean</th>
<th>Std deviation</th>
<th>Mean percentage</th>
<th>Inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical environment</td>
<td>21-35</td>
<td>26.6</td>
<td>3.66</td>
<td>76.0</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Services provided</td>
<td>15-35</td>
<td>21</td>
<td>4.13</td>
<td>60.0</td>
<td>Moderately satisfied</td>
</tr>
<tr>
<td>Communication</td>
<td>17-35</td>
<td>24.55</td>
<td>4.27</td>
<td>70.1</td>
<td>Satisfied</td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>43-97</td>
<td>70.15</td>
<td>11.9</td>
<td>66.8</td>
<td>Moderately satisfied</td>
</tr>
</tbody>
</table>

Max.Score-105, Min.Score-21

Section III: Comparison of Satisfaction level among Four groups with Family Welfare Services rendered at selected Primary Health Centre

This section deals with the analysis and interpretation of data collected from 100 women to find the comparison of satisfaction level among all the four groups.

In order to find out the significance of the difference among all the groups ANOVA F test was computed and data is presented in Table 7. To test the statistical difference between all the four groups the following null hypothesis was formulated.

H_0: There will be no significant difference between the satisfaction levels among all four groups of subjects at 0.05 level of significance.
Table 7: Comparison of Satisfaction level among four groups with Family Welfare Services received from the PHC

<table>
<thead>
<tr>
<th>Groups</th>
<th>Mean (%)</th>
<th>Std.deviation (%)</th>
<th>ANOVA F value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenatal</td>
<td>66.61</td>
<td>12.17</td>
<td>0.044</td>
</tr>
<tr>
<td>Intranatal</td>
<td>69</td>
<td>16.3</td>
<td></td>
</tr>
<tr>
<td>Postnatal</td>
<td>68.95</td>
<td>12.84</td>
<td></td>
</tr>
<tr>
<td>Family planning</td>
<td>66.81</td>
<td>11.32</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>66.37</td>
<td>12.41</td>
<td></td>
</tr>
</tbody>
</table>

N=100(50+10+20+20)

The data in Table 7 shows that the computed ANOVA 'F' value (F=0.044) is less than the tabled value (T100= 2.71, P<0.05). Hence null hypothesis was accepted and it is inferred that, there is no significant difference between the satisfaction levels among all the four groups.

**DISCUSSION**

The above findings are supported by the study on Client Satisfaction in Rural India for Primary Health Care – A Tool for Quality Assessment which revealed that satisfaction level was 89.5% with antenatal services, 92.08% with Intranatal services and 97.77% with family planning services in PHC.32

**CONCLUSION**

The study findings may be helpful to community health educators to organize health education programme in the community for women to motivate them for seeking early and regular Family Welfare Services. Health workers can be motivated to provide awareness programme on health practices and benefits of use. This will be helpful to increase their understanding and obtain the interest of the community and study whether this makes an improvement in awareness and satisfaction.

**ACKNOWLEDGEMENT**

The authors are thankful to mentor Mrs. Leena K.C, Principal Rev. Sr. Jacintha D’Souza, lecturer Mr. Santhosh Father Muller College of Nursing for kindly providing necessary suggestions and guidance to carry out this work.

**REFERENCES**

Effectiveness of Structured Teaching Programme on Prevention and Management of Pressure Ulcer for Caregivers of Hospitalized Immobilized Patients

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¹Associate Dean, SUM Nursing College, Bhubaneswar, ²Clinical instructor, SUM nursing college, SOA University, Bhubaneswar

ABSTRACT

Structured teaching programme is a process by which it aims to alter knowledge, attitude & behaviour of people. The objective of structured teaching programme is to influence people. The present study is an evaluative study to assess the effectiveness of structured teaching programme on knowledge and practice of significant caregivers of hospitalized immobilized patients in prevention & management of pressure ulcer at selected hospital in Bhubaneswar. The objectives of study were to determine the effectiveness of health education on prevention & management of pressure ulcer among the caregivers of hospitalized immobilized patients & to find out the correlation between post test knowledge & post test practice scores of the caregivers of hospitalized immobilized patients regarding prevention & management of pressure ulcer.

The study was conducted at SUM hospital, Bhubaneswar. The research design adopted for this study was one group pretest & posttest design & the research approach was evaluative in nature. Data was obtained from a sample size of 50. The study was confined to the significant caregivers of hospitalized immobilized patients.

There was a significant difference between caregiver’s pretest knowledge & post test knowledge & there was a significant difference between caregiver’s pretest Practice & post test Practice after giving health education on prevention & management of pressure ulcer during the hospitalization.

There was a felt need for health care providers to include pressure ulcer prevention & management in their care. The information booklet which was developed after pre test knowledge & pretest practice of caregivers of hospitalized immobilized patients would be a help to enhance knowledge & skills of caregivers not only at hospital setup but also at home even after discharge.

Keywords: Structured Teaching Programme, Significant Caregivers, Hospitalized Immobilized Patients, Prevention, Management, Pressure Ulcer.

INTRODUCTION

Pressure ulcers are often blamed on poor nursing care in long term care facilities, but the incidence is actually higher in acute care hospital. Many experts suggest that pressure ulcers are present in 6 to 14% of patients in acute care setting & up to 25% of the patients in continuous residential nursing care that represents a significant burden for patients & their family members. (Barton A, 2006)¹

Nursing staff face an immense challenge in caring for the skin of bed ridden patient by treating them holistically & educating both patients & their caregivers for worthy skin integrity. The key to successful prevention & management of pressure ulcer is the setting up proper care plan as well as hands on nursing work. (Beitz JM, 1998)²

Therefore the investigator framed the following objectives for the present study.

1. Identify knowledge of the caregivers of hospitalized immobilized patients regarding prevention & management of pressure ulcer.
2. Identify practice of the caregivers of hospitalized immobilized patients regarding prevention & management of pressure ulcer.
3. Determine the effectiveness of health education on prevention & management of pressure ulcer among the caregivers of hospitalized immobilized patients

4. Find out the correlation between post test knowledge & post test practice scores of the caregivers of hospitalized immobilized patients regarding prevention & management of pressure ulcer.

**MATERIAL & METHOD**

The research design adopted for this study was one group pretest & posttest design & the research approach was evaluative in nature. Data was obtained from a sample size of 50. The study was confined to the significant caregivers of hospitalized immobilized patients. Purposive sampling was adopted until a desired sample of 50 was obtained. Knowledge based Data from the significant caregivers was collected with the help of knowledge questionnaire on prevention & management of pressure ulcer. Practice based data from the significant caregivers was collected with the help of check list on prevention & management of pressure ulcer. Validity was ensured in consultation with guide & experts in related field. Reliability was tested separately for both the tools & was found 0.8 & 0.7 respectively for knowledge questionnaire & check list respectively. The data were analyzed & interpreted using descriptive & inferential statistics.

**RESULTS**

The statistical test carried out for analysis was frequency & percentage for quantitative variables. 't' test is computed for effectiveness of health education on prevention & management of pressure ulcer & correlation of coefficient 'r' value is calculated to find out the correlation between caregiver’s post test knowledge & post test practice score.

In the presented study majority of immobilized patients (58%) were in the age group of 49 years & above. Majority (60%) of caregivers belong to age group of 18 to 33 years. While 40% of caregiver were having higher school education & more than that.

The pretest knowledge regarding the causes of pressure ulcer was 39% & it was increased to 100% after pretest. The pretest knowledge regarding the measures taken to prevent pressure sore was 40% & after post test it was increased to 89%. Knowledge regarding importance of wound care was 61% during pre test & it was increased to 99% after post test.

The pre test practice of caregivers in changing the position of patient was 45% & it was increased to 94% after post test. The use of any absorbent for preventing further progression of pressure ulcer was 74% during pretest & it was increased to 100% after post test. The maintenance of aseptic measures during wound care was 64% during pretest & after posttest it was increased to 94%.

There was a significant difference between caregiver’s pretest knowledge & post test knowledge after giving health education on prevention & management of pressure ulcer during the hospitalization as the calculated ‘t’ value is greater than tabulated ‘t’ value

\[ t_{49} = 2.44, p<0.025 \]

There was a significant difference between caregiver’s pretest Practice & post test Practice after giving health education on prevention & management of pressure ulcer during the hospitalization as the calculated ‘t’ value is greater than tabulated ‘t’ value

\[ t_{49} = 2.44, p<0.025 \]

The results showed that there was a positive correlation between post test knowledge & post test practice on prevention & management of pressure ulcer during the hospitalization as the calculated r value was greater than tabulated r value

\[ r_{48} = 0.44, p<0.001 \]

**DISCUSSION**

A pressure ulcer program was implemented at a large teaching hospital in early 2000. An additional certified nurse was hired for consultation & assessment, education of staff nurses, on prevention measures & monitoring prevalence after two years decrease in pressure ulcer prevalence of 55% was reported by (Young & Colleague in 2006). The success of intervention depends on degree to which the organizations, Management & staff members who will provide care have made pressure ulcer prevention a priority. In this study the pre test practice of caregivers in changing the position of patient was 45% & it was increased to 94% after post test. The use of any absorbent for preventing further progression of pressure ulcer was 74% during pretest & it was increased to 100% after post test. The maintenance of aseptic measures during wound care was 64% during pretest & after posttest it was increased to 94%. There was a significant difference between caregiver’s pretest...
knowledge & post test knowledge after giving health education on prevention & management of pressure ulcer during the hospitalization as the calculated 't' value is greater than tabulated 't' value ($t_{49} = 2.44$, $p<0.025$).

Regardless of what medical condition or injury a patient is being treated for, the success of the recovery process will be greatly affected by how well educated the patient is about what they are suffering from. Patient's caregivers teaching is more important than ever & is now considered to be imperative for any patient's recovery. In present study there is a significant difference between caregiver's pretest Practice & post test Practice after giving health education on prevention & management of pressure ulcer during the hospitalization as the calculated 't' value is greater than tabulated 't' value ($t_{49} = 2.44$, $p<0.025$).

Globally maintaining skin integrity & preventing pressure ulcers have traditionally been the responsibility of nurses. The presence of pressure ulcer in the hospitalized patients has been identified as a quality indicator in health care. Still it is the responsibility of caregivers where insufficient staff & patient ratio is present & caregivers should be trained with some basic nursing care to prevent this disaster.

**Interpretation & conclusion**

The study was an attempt at ascertaining the effectiveness of health education among the caregivers of hospitalized immobilized patients regarding prevention & management of pressure ulcer. It was observed that complete knowledge & the practices of caregivers of hospitalized immobilized patients regarding prevention & management of pressure ulcer was lacking. There was a felt need for health care providers to include pressure ulcer prevention & management in their care. The information booklet which was developed after pretest knowledge & pretest practice of care givers of hospitalized immobilized patients would be a help to enhance knowledge & skills of caregivers not only at hospital setup but also at home even after discharge.

**RECOMMENDATION**

Keeping in view the finding of the present study the following recommendations were made. Since the study was carried out on a small sample, the result can be used only as a guide for future studies.

1. A longitudinal study can be carried out taking a larger sample.
2. A similar study could be done among the caregivers of immobilized patients in rural areas.
3. An evaluative study may be conducted to assess the level of patient’s satisfaction in care givers nursing care on prevention & management of pressure ulcer.
4. A comparative study may be conducted to compare the level of patient’s satisfaction in care givers nursing care & staff nurses nursing care on prevention & management of pressure ulcer.

**ACKNOWLEDGEMENT**

The authors are thankful to the faculties of SUM Nursing College & caregivers of hospitalized patients of SUM Hospital to carry out this work.

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Strategies in the Promotion of Nursing as a Career among Second Level Students: An Irish Perspective

Sean Kelleher¹, Caroline Dalton O’Connor²
¹MSc. BSc. PDCIC, PDTL, ²MSc. BNs, PDTL, School of Nursing and Midwifery, Brookfield Health Sciences Complex, University College Cork, Ireland

ABSTRACT

The world is currently experiencing one of the worst nursing shortages in the last 50 years. The reasons are multi-faceted, however one factor is a lack of structured collaborative, promotional initiatives among career guidance counsellors (CGCs), universities and established health professionals. In order to enhance recruitment emphasis must be placed on developing innovative promotional initiatives, materials and events which accurately portray the role and function of the nurse in the 21st century. The aim of this study is to identify second level CGCs preferred strategies for the facilitation of accurate and current information on nursing as a career option. The results suggest that CGCs very frequently engage with students and their parents regarding nursing as a career and emphasise the need for increased collaboration between health care professionals and CGCs in the promotion of nursing as a career.

Keywords: Guidance Counsellor, Nursing, Recruitment, Careers

INTRODUCTION

There is a global shortage of health care professionals which has the potential to worsen over the coming years as demands for health service personnel increase. ¹, ², ³ While the international shortage in health care professionals includes various professions and occupations, the deficit within nursing is of particular concern given that the demand for nurses is on the rise and outpacing production and retention rates. ⁴, ⁵, ⁶, ³ A recent report on nurse shortages in OECD countries suggests that the crisis is likely to persist or even increase in the future unless action is taken to increase flows into and reduce flows out of the workforce or to raise the productivity of nurses.³ This reflects one of the worst nursing shortages in the last 50 years¹⁰ with the potential to be exacerbated by a steady decline in the number of potential nursing candidates and accessible undergraduate training places.

INTERNATIONAL NURSING SHORTAGES

The UK’s Royal College of Nursing⁵ labour market review cautions that urgent action is needed to avoid a return to the chronic nursing shortages experienced in the early 1990’s. A comparable situation is facing the US with approximately 126,000 unfilled nursing positions across the country.⁴ Indeed this national shortage is projected to increase to more than 1 million ‘Full Time Equivalent’ RNs by 2020 if current trends continue, meeting only 64% of projected demand.⁹ The sustainability of the Irish nursing workforce is similarly under threat¹¹ and is manifest by a falling number of domestically trained nurses registering with the Irish Nursing Board and a dramatic drop in the number of internationally trained nurses working in Ireland.¹² Despite the ominous outlook for the future of nursing, such shortages are a recurrent phenomenon in most countries, primarily due to an increasing demand for nurses outpacing a languishing supply.⁸ Historically, numerous factors have contributed to nursing shortfalls such as growing populations, work dissatisfaction and burnout¹³ which are still pertinent today, however additional factors suggest a new dimension to the current problem. The registered nurse (RN) workforce is ageing, for example in Canada 50% of nurses employed today will retire within the next 15 years, and in Australia 90,000 nurses are expected to retire between now and 2020.¹⁰ These are very disturbing statistics for countries who have become increasingly reliant on the recruitment of overseas nurses to meet the domestic nursing shortfall. The sustainability of such recruitment drives must be
questioned given the current and projected international nurse shortages. Additionally, many nurse graduates never register to practice. In the UK one third of newly qualified nurses do not register and in Australia 66% of new graduates reported that they seriously contemplated leaving nursing during their 1st year of practice.

The work environment for nurses is also changing whereby the greater life expectancy of individuals with acute and chronic conditions will require more nurses and more complex nursing care. By 2050 there will be a greater number of older people in the world and in the EU alone half the population will be older than fifty years of age. Additionally underinvestment in nursing education in developed countries, poor work environments including excessive workloads, inadequate support staff, violence, stress, burnout, wage disparities and little autonomy contribute to the current shortfall.

PROMOTING NURSING

To achieve an adequate and sustainable workforce, developed countries must stabilize their domestic nursing supply and promote efforts to meet projected international demands. However the nursing shortfall is not easily rectified as labour market forces are complex and the nursing workforce is sensitive to changes in work patterns, education and training arrangements, demographic trends and wider economic factors. In order to address the current crisis and restore the diminishing workforce emphasis must be placed on the effective recruitment of school leavers considering health related programmes such as nursing. The recruitment of suitable candidates is central to the sustenance of the nursing and health care workforce not only in Ireland but worldwide.

An Irish survey explored key factors in the career decision making process of undergraduate nursing students and found that the majority (90%) became aware of nursing as a career during their second level education. CGCs were identified by 23% of respondents as the primary source of information, a factor well established in the literature. School CGCs are in ideal positions to offer students sufficient direction and accurate information about careers in health care to allow them make informed career decisions. International studies point to the effectiveness of collaboration between CGCs, universities and clinical staff in the development of effective promotional resources to support students in their decision to pursue a career in nursing. However from an Irish perspective little research has been conducted to identify the extent to which CGCs promote nursing as a career and the initiatives and promotional resources used.

STUDY AIM

1. To establish how frequently CGCs in Ireland discuss nursing as a career with senior cycle second level students and/or their parents
2. To determine secondary school CGCs preferred mechanisms in providing accurate information on nursing as a career for senior cycle second level students.

METHOD

Data were collected using an adaptation of a previously validated questionnaire survey, originally developed to establish high school CGCs perceptions of nursing as a career. Modifications were made to include questions addressing CGCs perceptions of nursing within an Irish context. Part 1 of the questionnaire focused on demographic details of CGCs. Part 2 sought to identify the frequency of requests from parents and students relating to nursing and CGCs preferred mechanisms for promoting nursing as a career. The survey generator ‘survey monkey’ was utilised to adapt Bolan and Grainger’s work for use online. By means of convenience sampling participants were accessed through ‘Qualifax’, a website providing comprehensive information on further and higher education and training courses in Ireland. The website also offers support, advice and a discussion forum for CGCs.

Descriptive data were analysed using the Statistical Package incorporated in ‘Survey Monkey’ and inferential statistics were analysed using the Statistical Package for the Social Sciences (SPSS). The sample population were all CGCs working in second level schools in Ireland (N=700). Ethical approval to conduct the study was granted by the relevant institutional ethics review board.

FINDINGS

A total of 121 CGCs completed the questionnaire representing a response rate of 17.2%. Of those 24.2% (n=29) were male and 75.8% (n=91) were female, with the majority of respondents over 50 years of age. The majority of respondents had more than 10 years
experience as CGCs, (38.3%, n=46), 30.8% (n=37) had between 6-10 years experience and 30.8% (n=37) had less than five years experience (see Figure 1). The majority of respondents were Irish (95%, n=117) with the remaining 1.7% (n=2) identified as EU nationals.

The majority of respondents (47.0%, n=54) stated that information was requested occasionally by parents with 10.4%, (n=12) stating that parents requested information relating to careers in nursing very frequently, (see Table 1). In relation to requests from students the majority of CGCs (44.4% n=52) stated they were frequently asked for information relating to careers in nursing (see Table1).

Table 1: Parents/ students requests for information relating to nursing

<table>
<thead>
<tr>
<th>Requests for info on nursing</th>
<th>Very frequently</th>
<th>Frequent</th>
<th>Occasional</th>
<th>Never</th>
<th>Rating</th>
<th>Response count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td>10.4% (12)</td>
<td>15.7% (18)</td>
<td>47.0% (54)</td>
<td>27% (31)</td>
<td>2.90</td>
<td>115</td>
</tr>
<tr>
<td>Students</td>
<td>42.7% (50)</td>
<td>44.4% (52)</td>
<td>12.8% (15)</td>
<td>0% (0)</td>
<td>1.7</td>
<td>117</td>
</tr>
</tbody>
</table>

CGCs (29.1%, n=34) very frequently recommended a career in nursing, with 56.4% (n=66) frequently recommending nursing, 12 % (n=14) occasionally recommended nursing and 2.6% (n=3) never recommended nursing as a career. A total of 91.5% (n=107) of respondents believe that increased collaboration is required between health care professionals and CGCs to provide students with accurate and current information. Of the remainder, 3.4% (n=4) did not believe increased collaboration was required, and 5.1% (n=6) were unsure. When asked how best to facilitate the provision of accurate information to students, CGCs identified a range of options, with school visits by professionals being the most popular at 69.8%(n=74) followed by the use of promotional booklets and DVD’s (56.9% n=58). Structured university based programmes identifying

the roles of health professionals were considered useful by 50% (n=49) while school visits by faculty were considered useful by 46% (n= 46) of respondents (See figure 1).

Respondent’s qualitative feedback supports the above findings and include ‘work experience programmes’ in hospital settings as a underutilised and valuable resource. Respondents also suggested that school visits by recent graduates and final year nursing students would be beneficial.

Fig. 1. Years of experience

The majority of respondents (47.0%, n=54) stated that information was requested occasionally by parents with 10.4%, (n=12) stating that parents requested information relating to careers in nursing very frequently, (see Table 1). In relation to requests from students the majority of CGCs (44.4% n=52) stated they were frequently asked for information relating to careers in nursing (see Table1).

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the roles of health professionals were considered useful by 50% (n=49) while school visits by faculty were considered useful by 46% (n= 46) of respondents (See figure 1).

Respondent’s qualitative feedback supports the above findings and include ‘work experience programmes’ in hospital settings as a underutilised and valuable resource. Respondents also suggested that school visits by recent graduates and final year nursing students would be beneficial.

Fig. 2. Provision of information

DISCUSSION

Respondents to this study have accumulated a wealth of professional experience, with the majority having in excess of 10 years’ practice of working as a CGC. Findings suggest that the majority of CGCs are at pace with developments within nursing and recognise the professional standing of the nurse, placing them in an ideal position to confidently support students. According to respondents there is a very high level of interest in nursing as a career with the majority indicating they are very frequently asked for information relating to nursing (85%). A point of concern however is that 2.6 % of CGCs never recommend nursing to students. The reasons for this are unclear however a qualitative comment suggests that respondents working in all boy schools tend not to recommend nursing as a career choice. This trend is reflected in other studies suggesting that nursing is still perceived as women’s work due to preconceived social stereotypes and misconceptions. Such stereotypes need to be challenged through the promotion of nursing as a non-gender specific career offering good income, status and upward mobility.

39. Sean kehellar--184-188.pmd 3/21/2013, 2:31 AM
The future promotion of nursing must include strategies to encourage the recruitment of groupings that are traditionally underrepresented such as males and minority ethnic groups. In keeping with the findings of international studies, the majority of respondents (91%) believe that increased collaboration is required between health care professionals and CGCs in order to provide students with accurate and current information. Such collaboration could be facilitated through school visits by clinical professionals and faculty, structured university based programmes and the use of promotional materials. A study by Campbell–Heider et al concluded that faculty collaboration with CGCs is an excellent mechanism to uncover and address barriers to nurse recruitment at a local level. The development of faculty led university based programs for potential nursing students was also considered important by 50% of respondents in this study. University led programs typically take the form of ‘nursing camps’ run over a number of days where participants engage in a variety of activities including field trips, site visits, job shadowing as well as attending lectures and demonstrations. In Australia and the US such initiatives have been associated with positive outcomes, particularly in relation to social perception of nursing as a career While the concept of ‘nursing camps’ has not yet gained any significant momentum in Ireland and Europe generally, the results of US and Australian studies that have explored the benefits of such initiatives suggest positives outcomes, particularly in relation to social perception of nursing as a career. This is encouraging and reinforces the idea that the provision of accurate information to young people regarding nursing can untangle the reality of careers in nursing from media influenced perceptions and result in substantial dividends. Their ultimate success however is dependent upon the ability and willingness of CGCs, universities and established health professionals to fully engage in the initiative.

CONCLUSION

An acute shortage of nurses has currently been identified internationally with medium and long term projected shortages reflecting one of the worst nursing shortages in the last 50 years. Given the magnitude of the current crisis a comprehensive international approach is required to address the situation including the development of appropriate nurse recruitment strategies. Strategies identified in this study concur with international findings such as the use of promotional tools including DVD’s and educational packs for schools; clinician led seminar sessions, and structured tours of hospitals and schools of nursing. In particular emphasis is placed on enhanced cooperation between CGCs and faculty staff in developing innovative and timely promotional materials and activities to attract second level students into nursing.

Going forward, it is evident that collaboration between vested parties is the foundation for the sustained recruitment of nursing students who have realistic expectations of their future careers. Commitment between all parties may positively impact on the provision of a sustainable nursing workforce capable of meeting the healthcare needs of the 21st century.

REFERENCE LIST


Quality Assurance in Nursing: Standards

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ABSTRACT

Today’s practicing nurse must be aware of nursing standards, legal issues in nursing, legal limits of nursing and legal liabilities. Otherwise, he or she could be the first person to be penalized from a legal standpoint. Legal responsibilities in nursing practice are growing in importance day by day. Legal accountability is an essential concept of professional nursing practice that can pose a threat to a nurse’s career if he or she is uninformed of the law. Legal issues confronting practicing nurses today are legion. The nurse need not view the law not with apprehension but as a helpful adjunct to the practice of nursing.

Keywords: Standards, Legal, Accountability, issues.

INTRODUCTION

Standard is an acknowledged measure of comparison for quantitative or qualitative value, criterion, or norm. A standard is a practice that enjoys general recognition and conformity among professionals or an authoritative statement by which the quality of practice, service or education can be judged. It is also defined as a performance model that results from integrating criteria with norms and is used to judge quality of nursing objectives, orders and methods.

A standard is a means of determining what something should be. In the case of nursing practice standards are the established criteria for the practice of nursing. Standards are statements that are widely recognized as describing nursing practice and are seem as having permanent value.

A nursing care standard is a descriptive statement of desired quality against which to evaluate nursing care. It is guideline. A guideline is a recommended path to safe conduct, an aid to professional performance. A nursing standard can be a target or a gauge. When used as a target, a standard is a planning tool. When used as a gauge against which to evaluate performance a standard is a control device.

Characteristics of Standard

• Standards statement must be broad enough to apply to a wide variety of settings.
• Standards must be realistic, acceptable, and attainable.
• Standards of nursing care must be developed by members of the nursing profession; preferable
• Nurses practicing at the direct care level with consultation of experts in the domain.
• Standards should be phrased in positive terms and indicate acceptable performance good, excellence etc.
• Standards of nursing care must express what desirable optional level is.
• Standards must be understandable and stated in unambiguous terms.
• Standards must be based on current knowledge and scientific practice.
• Standards must be reviewed and revised periodically.
• Standards may be directed towards an ideal, ie, optional standards or may only specify the minimal care that must be attained, i.e., minimum standard.

And one must remember that standards that work are objective, acceptable, achievable and flexible

Purposes of Standards

• Setting standard is the first step in structuring
evaluation system. The following are some of the purposes of standards.

- Standards give direction and provide guidelines for performance of nursing staff.
- Standards provide a baseline for evaluating quality of nursing care.
- Standards help improve quality of nursing care, increase effectiveness of care and improve efficiency.
- Standards may help to improve documentation of nursing care provided.
- Standards may help to determine the degree to which standards of nursing care maintained and take necessary corrective action in time.
- Standards help supervisors to guide nursing staff to improve performance.
- Standards may help to improve basis for decision-making and devise alternative system for delivering nursing care.
- Standards may help justify demands for resources association.
- Standards may help clarify nurses area of accountability.
- Standards may help nursing to define clearly different levels of care.
- Institutions/health care agencies, e.g. University Hospitals, Health Centres.
- Department of institutions, e.g. Department of Nursing.
- Patient care units, e.g. specific patients’ unit.
- Government units at National, State and Local Government units.
- Individual e.g. personal standards

Classification of Standards

There are different types of standards used to direct and control nursing actions.

Normative and Empirical Standards

Standards can be normative or empirical. Normative standards describe practices considered ‘good’ or ‘ideal’ by some authoritative group. Empirical standards describe practices actually observed in a large number of patient care settings. Here the normative standards describe a higher quality of performance than empirical standards. Generally professional organisations (ANA/TNAI) promulgate normative standards whereas low enforcement and regulatory bodies (INC/MCI) promulgate empirical standards.

Ends and Means Standards

Nursing care standards can be divided into ends and means standards. The ends standards are patient-oriented; they describe the change as desired in a patient’s physical status or behaviour. The means standards are nursing oriented, they describe the activities and behaviour designed to achieve the ends standards. Ends (or patient outcome) standards require information about the patients. A means standard calls for information about the nurses performance.

Structure, Process and Outcome Standards

Standards can be classified and formulated according to frames of references (used for setting and evaluating nursing care services) relating to nursing structure, process and outcome, because standard is a descriptive statement of desired level of performance against which to evaluate the quality of service structure, process or outcomes.
Structure Standard

A structural standard involves the ‘set-up’ of the institution. The philosophy, goals and objectives, structure of the organization, facilities and equipment, and qualifications of employees are some of the components of the structure of the organization, e.g. recommended relationship between the nursing department and other departments in a health agency are structural standards, because they refer to the organizational structure in which nursing is implemented. It includes people money, equipment, staff and the evaluation of structure is designed to find out the effectiveness, degree to which goals are achieved and efficiency in terms of the amount of effort needed to achieve the goal.

The structure is related to the framework, that is care providing system and resources that support for actual provision of care. Evaluation of care concerns nursing staff, setting and the care environment. The use of standards based on structure implies that if the structure is adequate, reliable and desirable, standard will be met or quality care will be given.

Process Standard

Process standards describe the behaviors of the nurse at the desired level of performance the criteria that specify desired method for specific nursing intervention are process standards. A process standard involves the activities concerned with delivering patient care. These standards measure nursing actions or lack of actions involving patient care. The standards are stated in action-verbs, that is in observable and measurable terms. eg: the nurse assesses”, “the patient demonstrates”. The focus is on what was planned, what was done and what was communicated or recorded. Therefore, the process standards assist in measuring the degree of skill, with which technique or procedure was carried out, the degree of client participation or the nature of interaction between nurse and client. In process standard there is an element of professional judgment determining the quality or the degree of skill. It includes nursing care techniques, procedures, regimens and processes.

Outcome Standards

Descriptive statements of desired patient care results are outcome standards because patient’s results are outcomes of nursing interventions. Here outcome as a frame of reference for setting of standards refers to description of the results of nursing activity in terms of the change that occurs in the patient. An outcome standard measures change in the patient health status. This change may be due to nursing care, medical care or as a result of variety of services offered to the patient. Outcome standards reflect the effectiveness and results rather than the process of giving care.

LEGAL SIGNIFICANCE OF STANDARDS

Standards of care are guidelines by which nurses should practice. If nurses do not perform duties within accepted standards of care, they may place themselves in jeopardy of legal action. Malpractice suit against nurses are based on the charge that the patient was injured as a consequence of the nurses failure to meet the appropriate standards of care.

To recover losses from a charge of malpractice, a patient must prove that:

• a patient-nurse relationship existed such that the nurse owed to the patient a duty of due care,

• the nurse deviated from the appropriate standard of care,

• the patient suffered damages,

• the patient’s damages resulted from the nurses deviations from the standard of care.

CONCLUSION

Quality assurance is to provide a higher quality of care. It is necessary that nurses develop standards of patient care and appropriate evaluation tools, so that professional aspects of nursing involving intellectual and interpersonal activities. Quality will be ensured and attention will be given to the individual needs and responses to patients. The formulation of standards is the first step towards evaluating the nursing care delivery. The standards serve as a base by which the quality of care can be judged. This judgement may be according to a rating or other data that reflect the conformity of existing practice with the established standards. The standards must be written, regularly reviewed and well-known by the nursing staff.
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Vertical Bullying in Nursing Education: Coping Behaviors of Turkish Students

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ABSTRACT

Objective: This study aims to analyze the extent of vertical bullying and the type of behaviors used by students to cope with vertical bullying and harassment, and to find out whether any their Nursing School has special programs to overcome this problem.

Materials and Method: To estimate bullying at nursing school a short version of the Negative Acts Questionnaire is used and data were collected by means of anonymous self-reported questionnaires.

Result: A large percentage (60%) of the nursing students reported that they had experienced at least one of the thirteen bullying behaviors at daily and weekly frequencies during the last six months. The students most often identified both their clinic nurses and lecturers were the most frequently source of bullying behaviors.

Conclusion: In contrast to previous studies on bullying in nursing education, this study shows that students preferred active responses to cope with bullying instead of using unhealthy and passive coping behaviors which were found in previous studies [1-3].

Keywords: Vertical Bullying, Harassment, Coping strategies, Turkey

INTRODUCTION

Violence, bullying and verbal abuse at work have been widely studied by researchers in the field of occupational health and safety particularly among researchers in the nursing professions from different parts of the world [4-6]. According to these studies, in health sector, people have higher risk of exposure to bullying at workplace because jobs are less stable and include high pressure. The previous studies on bullying against Turkish nurses report wide prevalence rates ranging from 33 % to 86.5 % [7-8] similarly as is found in international studies [9].

Hodgkinson et al. [10] propose that nursing students have the highest risk of experiencing negative behaviors because of being younger nurses, less experience, less education, frequent ward changes and the challenge of meeting new environments and being vulnerable to patient aggression. Cooper et al. [11] cite that Magnussen and Amundson [12] in their U.S study identify some nursing instructors actually impede their educational experiences, undervalue nursing students, or treat students in uncaring ways. In Turkey, Celik and Bayraktar [13] investigated all types of abuse in the nursing school and found that students experienced high rates of verbal abuse as well as academic, physical, and sexual abuse. Nearly all participants identified their classmats as a source of verbal abuse. Moreover Celebioglu et al. [14] indicated that similar to nurses, nursing students also experienced violence in areas of practice. Consequently, a systematic review of studies on bullying and harassment in nursing school demonstrate that in spite of different culture, countries, and research designs, and settings, high level of workplace bullying and harassment is a problem for nurses [12,13,14].

Nursing students are exposed to horizontal (negative behavior directed from colleagues on the same level) and vertical (negative behavior directed from superiors towards subordinates) bullying and harassment in nursing school and workplace. Randle [15] states that bullying was found to be commonplace in the transition to becoming a nurse; students were bullied and also witnessed patients being bullied by qualified nurses. The internalization of nursing norms meant that students then bullied others.
Recent studies revealed that nurse-to-nurse violence is widespread and negative behavior among coworkers has been reported to be more frequent and disturbing than behavior of physicians, patients or family members [16, 17]. Stevens [5] underlines that nurse-to-nurse violence or in other words horizontal bullying seems to be tolerated to a much higher level in nursing education compared with other professions.

As is pointed out by Thomas and Burk [17] the term horizontal bullying are appropriate to describe the abusive behavior performed between nurses at the same level in a hierarchical system, and the term vertical is used to identify bullying behaviors experienced by nursing students from a co-worker in a superior position towards a subordinate. Therefore in this research the term vertical bullying is preferred since the receivers are students.

Little attention has given the incidences of vertical bullying experienced by Turkish nursing students, and a scan of the literature for relevant studies revealed only two studies [1,2]. The study of Celik and Bayraktar [1] investigated all types of abuse in the nursing school and found that students experienced high rates of verbal abuse as well as academic, physical, and sexual abuse. However, much more information is required to allow nursing schools to understand the bullying and to develop preventive programs.

This research focuses on the extent of vertical bullying experienced by Turkish nursing students in both their educational and clinical settings and aimed to determine the type of behaviors used by students to cope with vertical bullying and harassment, and to find out whether any their Nursing School has special programs to overcome this problem.

METHOD

Participants and Settings

This descriptive study on bullying and harassment against nursing students was conducted in four different Nursing Schools in the wide area of the southern Marmara and Aegean region of Turkey. The sampling included only nursing students who were taking courses in 2nd, 3rd, and 4th grades. First year students were not included in the scope of the study because they have not started to gain clinical experience yet. In total, 400 questionnaires were delivered and 374 returned. The initial examination of the returned questionnaires showed that four were incomplete; these were therefore excluded from the data analysis process. The number of usable questionnaires was 370 (92%).

Ethical Considerations

Ethics approval was obtained from the university ethics committee. Also before the research was initiated, legal permission was obtained from the administrations of each Nursing Schools. Issues of confidentiality and participation choice were explained verbally to the students in a classroom session.

Instruments

In literature, there are 27 different inventories to assess bullying or phenomena similar to workplace bullying. Some of these have been used in only one study, whereas others, such as the Leymann Inventory of Psychological Terror [18], and the Negative Acts Questionnaire (NAQ) have been employed in a range of study. Yet, except the NAQ, they have not been thoroughly tested and validated in separate validation studies. It was shown in a study on the psychometric properties of the NAQ that the inventory has high internal stability and excellent criterion and constructs validity. Therefore, to estimate bullying at nursing school I used a short version of the Negative Acts Questionnaire that adapted according to the earlier studies on bullying against nursing students particularly those conducted by Cooper et al. [11], Ferns and Meerabeau [13], and Celik and Bayraktar [1]. The scale showed a satisfactory internal consistency, measured by Cronbach’s alpha (0.80). The questionnaire was discussed and reviewed with three colleagues of Nursing Schools and their opinions were sought with regard to face validity. In addition, the questionnaire was tested for structure and clarity in a pilot study, and no revisions to the questionnaire were indicated. Data from the pilot study were not included in this study. All items are given in behavioral terms with no reference to the phrase “bullying”, thus measuring perceived exposure to bullying behaviors without foreign the respondents to label this situations as bullying. For each item, the respondents are asked how often they have been exposed to the specific behavior during the last 6 months. The response categories are “never”, “now and then”, “about monthly”, “about weekly”, and “about daily”. 
Data Analysis

The collected data were analyzed by using the Statistical Package Program for the Social Sciences (SPSS version 11.5) for frequency distribution.

FINDINGS

A large percentage (60%) of the nursing students reported that they had experienced at least one of the thirteen bullying behaviors at daily and weekly frequencies during the last six months. Twenty four percent had witnessed other students experiencing the bullying and harassment. It is found that the most common bullying behaviors were “negative and disparaging remarks about nursing’s profession” (11.85 %), “unmanageable workloads or unrealistic deadlines” (8.37%), and “given a bad grade as a punishment” (5.67 %). On the other hand, “threats of violence or physical abuse” (1.08 %), “intimidating behavior such as finger-pointing and shoving” (1.35 %), “cursing and swearing” (2.70 %), were the least frequent reported forms of negative behaviors in present study.

The students most often identified both their clinic nurses and lecturers were the most frequently source of bullying behaviors (70.8 % and 29.5 % respectively). The faculty (29.2%), doctors (21.1%), and patients (20.8%) were the following most frequent reported perpetrators. On the other hand, hospital staffs, patients’ relative, and visitors seem to be minor source of bullying and harassment according to the students’ perception. Further, most of the students reported that the perpetrators were older than them (86.17%) and they were predominantly female (92.4 %).

Nursing students in the study group were asked that what behaviors they would do when they encountered bullying behaviors. Fourteen possible responses were listed according to the students’ choices which were shown in Table 1. The most common responses to cope with bullying were “rectify by talking face to face”, “report to superiors”, and “tell to friends”. In addition, it was seen that 67.13% of the respondents preferred to “work harder and more organized to avoid criticism”.

DISCUSSION

In consistent with the present study that nurse-on-nurse bullying is a significant workplace problem that depends on the flow of power within workplace. Bullying within nursing is primarily intra-professional (i.e. between nurse and nurse) and vertical violence is common in nursing and the victims are especially the younger and student nurses [5, 19,20]. It is proposed that external pressures are often held responsible, such as health care workers’ need to find a scapegoat for errors as a reason for the existence of bullying behavior towards nursing students [5]. Recent change in health sector in Turkey which involves adaptation requirements for the issue of accreditation and patient rights and the financing of hospitals on output-based formula which leads to greater levels of alertness in the hospital patient population increased workloads for nurses. Therefore, increased stress and pressure on clinical nurses might cause increased tendency of bullying student nurses in the clinical settings.

As is well explained in the study of Curtis et al. [20] nursing as a profession is considered to be oppressed; in this context, a hierarchical system has arisen in which nurses, in order to succeed, must accept that their roles is defined by those with power and authority. Such a system supports the occurrence of vertical violence, and in many case, perpetrators are usually themselves past or current victims and most are convinced that their experiences have strengthen them for their nursing role. It is suggested that the cycle of vertical violence actually begins during nursing education. The findings of this study support this suggestion as lecturer and the faculty was reported being responsible for bullying followed by clinical nurses.

<table>
<thead>
<tr>
<th>Action</th>
<th>N</th>
<th>%</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rectify by talking face to face</td>
<td>259</td>
<td>71.74</td>
<td>1</td>
</tr>
<tr>
<td>Report to superiors</td>
<td>259</td>
<td>70.75</td>
<td>2</td>
</tr>
<tr>
<td>Tell to friends</td>
<td>244</td>
<td>67.77</td>
<td>3</td>
</tr>
<tr>
<td>Work harder and more organized</td>
<td>241</td>
<td>67.13</td>
<td>4</td>
</tr>
<tr>
<td>Share with family members</td>
<td>163</td>
<td>45.15</td>
<td>5</td>
</tr>
<tr>
<td>Seek legal charges</td>
<td>153</td>
<td>42.5</td>
<td>6</td>
</tr>
<tr>
<td>Shout or snap at the bully</td>
<td>129</td>
<td>34.86</td>
<td>7</td>
</tr>
<tr>
<td>Try to put up with</td>
<td>117</td>
<td>32.23</td>
<td>8</td>
</tr>
<tr>
<td>Pretend not to see</td>
<td>97</td>
<td>26.94</td>
<td>9</td>
</tr>
<tr>
<td>Request counseling</td>
<td>72</td>
<td>20.05</td>
<td>10</td>
</tr>
<tr>
<td>Demonstrate similar behavior</td>
<td>68</td>
<td>18.68</td>
<td>11</td>
</tr>
<tr>
<td>Do nothing</td>
<td>64</td>
<td>17.29</td>
<td>12</td>
</tr>
</tbody>
</table>
In contrast to previous studies on bullying in nursing education, this study shows that students preferred active responses to cope with bullying instead of using unhealthy and passive coping behaviors which were found in other studies[1-3]. When coping responses of nursing students considered in four categories; the most frequently reported responses to bullying were active responses, such as rectify by talking face to face, report to superiors, tell to friends, seek legal charges, and share with family members. Additionally, passive responses were used by some of students such as work harder and more organized to avoid criticism, pretend not to see it, do not take it seriously, and did nothing. Some of the respondent preferred aggressive responses; shout or snap at the bully, and demonstrated similar behaviors. However, unhealthy responses were reported rarely such as use of unhealthy coping behavior such as drinking or taking medications. The respondents reported discussing the bullying incidents more frequently with friends and family members rather than with their nursing instructors or counselors. This result shows that instructors or lecturers at nursing school need to create open atmosphere in which students are willing to share their stories and seek guidance in dealing with the situation as suggested by Longo [21].

The result indicates that latest studies and some court case have a good effect on people comprehension of bullying as a work life problem. The respondents in this study seem to be aware of bullying, but as is mentioned in previous section, the nursing schools have no policy or procedure about the bullying phenomenon therefore; nursing students try to cope with bullying and harassment paddling their own canoe. This study suggests that nursing schools should provide anti-bullying policies and procedures to allow students to cope with bullying properly.

Study limitations

The limitation of the study is that the number of people participated into the study located in one certain part of the country and although they were representative of the total population of health care employees in this area, obtained results could not be generalized. Therefore the generalisability of research findings was limited to the sampled area of Turkey. Future research could focus on larger samples from different nursing schools in all over the country.

Another limitation of present study was the use of self-report questionnaires which suggest problems with both common method variance and issues of validity in the classification of victims as is presented by Einarsen [22]. This type of research enables measuring only perceptions, not the actual behaviors and this study is subject to single-rater bias as only the students’ responses have been considered. The present study does not include any information from the nursing school’s staff and the hospital’s staff or independent observers confirming the victimization reported. Therefore, it would be beneficial if multiple data collection methods and multiple raters are used in the future study.

CONCLUSION

This study supports previous reports of bullying against Turkish student nurses[1, 2] and adds to the scant body of literature showing that nursing students often experience bullying and harassment from clinical nurses (Vertical bullying), and importantly, this may influence their future employment choices. Moreover, although educators need to be sensitive to its occurrence and assist students to deal with it, but our findings show that the school and lecturer also considerable source of the bullying behaviors. Nursing students were exposed to bullying and harassment in both the practice settings and the educational settings, as suggested by Randle [18] there is concern that students may begin to assimilate this conduct into their practice, perpetuating the behavior. For this reason, the aspect of bullying in nursing education need to be crucially taken into consideration in order to stop this vicious cycle of bullying in nursing profession.

REFERENCES

Study to Assess the Level of Satisfaction of the Patients Regarding New Milieu Therapy Provided by the Health Team in a Selected Psychiatric Hospital at Mangalore

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ABSTRACT

Milieu, therapeutic environment consists of a scientific structuring of the environment in order to effect behavioural changes and to improve the individual’s psychological health and functioning⁴. If people are to return to a positive level of functioning they must be immersed in as much lifestyle as practicably possible.

So it is very important to provide a therapeutic milieu for the clients with mental illness. And the health team members should know how much the clients are satisfied with the milieu. In this perspective, the present study has been conducted to assess the level of satisfaction of the patients regarding new milieu therapy provided by the health team in a selected psychiatric hospital at Mangalore. The main objective of this study is to evaluate the patient’s level of satisfaction after the introduction of a structured new milieu therapy and compare the patient’s level of satisfaction with the existing and new milieu. And also to determine the association between the baseline data of the patients and the satisfaction score. A one group pre test post test design using an evaluative approach was used to collect data using purposive sampling.

The results indicates that the client’s with mental illness were more satisfied with new milieu than the existing milieu. It was observed that the clients were motivated and interested to participate in the sessions. It has given the investigator a new venue to understand the value of milieu and also widen her knowledge and experience on milieu therapy.

Keywords: New Milieu Therapy Techniques, Clients With Mental Illness, Patient’s Level Of Satisfaction

INTRODUCTION

Florence Nightingale (1820–1910) is considered the founder of educated and scientific nursing and is widely known as "The Lady with the Lamp". When all the medical officers have retired for the night and silence and darkness have settled down upon those miles of prostrate sick, she may be observed alone, with a little lamp in her hand, making her solitary rounds¹.

In addition to her nursing work she tried to provide reading and recreation rooms for the men and their families. The practice of environment configuration according to patient’s health or disease condition is still applied today².

In psychiatry, the therapy involving the milieu or the environment is called milieu therapy or therapeutic environment. The goal of milieu therapy is to manipulate the environment so that all aspects of the client’s hospital experience are considered therapeutic. Within this therapeutic community setting the client is expected to learn adaptive coping, interaction and relationship skills that can be generalized to other aspects of his or her life.

Milieu is the French word for “middle” – in English translation; the word milieu means “surroundings, or environment.” Also called therapeutic environment, this type of therapy consists of a scientific structuring of the environment in order to effect behavioral changes and improve the individual’s psychological health and functioning³.

The milieu is very broad and powerful yet poorly understood in the current social climate. The basic principles provided by the milieu are essential in the acute inpatient environment but rarely practiced⁴.
Key concepts of milieu therapy
- Containment
- Validation
- Structured interaction
- Open communication

Need for the Study
The milieu, or “life space,” provides a safe environment that is rich with social opportunities and immediate feedback from caring staff. The therapy is planned in such a way that it is constantly supporting, guiding and reinforcing the client’s ability to learn life tools, such as problem solving and coping skills, while at the same time offering a safe place for these skills to be practiced.4

A study was conducted by University of Tennessee, Knoxville, USA in 2002 on What’s therapeutic about the therapeutic milieu. They expressed longing for a deeper connection with staff and more intensive insight-oriented therapies.5

Milieu therapy training for the staff is essential to ensure staff competency. The staff also gets an opportunity to review their knowledge of therapeutic milieu techniques which is more effective in promoting a positive therapeutic outcome.6

Milieu therapy was more important in the years past when hospital stays were longer and medication options were non-existent, but it is still a benefit of hospitalization. Though expensive, this type of therapy can be exceptionally valuable and can mean the difference between re-current active phase psychosis and a normal life.7

Statement of the Problem
Study to assess the level of satisfaction of the patients regarding new milieu therapy provided by the health team.

OBJECTIVES
1. To evaluate the patient’s level of satisfaction with the existing milieu.
2. To evaluate the patient’s level of satisfaction after the introduction of a structured new milieu therapy.
3. To compare the patient’s level of satisfaction with the existing and new milieu therapy.
4. To determine the association between the baseline data of the patients and the satisfaction score.

MATERIALS AND METHOD

Research approach
An evaluative research approach was adopted.

Reaserch design
The research design used in the study is one group pre test-post test design.

Table 1: Schematic representation of study design

<table>
<thead>
<tr>
<th>Group</th>
<th>Day 1-2</th>
<th>Day 3</th>
<th>4-28 days</th>
<th>Day 29</th>
<th>Day 30 onward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample of 30 Psychiatric patients</td>
<td>Taking consent</td>
<td>Orientation to the health team regarding new milieu therapy techniques.</td>
<td>Post test</td>
<td>Analysis of data using descriptive and inferential statistics</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Screening with mental status examination</td>
<td>Assigning the health team members for various activities</td>
<td>Various activities</td>
<td>Various activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collecting baseline data</td>
<td>Discussion on various communication techniques</td>
<td>Orientation programme for the patients</td>
<td>Various activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Administering patient satisfaction scales (pre test)</td>
<td>Discussion on management of aggression</td>
<td>Social skills development programmes</td>
<td>Various activities</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stopping various posters into the wall</td>
<td>Recreational activities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Research setting

The study was conducted in Father Muller Medical College Hospital, Mangalore. In this study independent variable is new milieu therapy. In the study dependent variable refers to the satisfaction of clients with mental illness. In this study the population consists of clients with mental illness who are admitted in the acute psychiatric care unit in a selected hospital during the period of data collection. The sample consists of 45 clients with mental illness who fulfilled the sampling criteria were selected. In that 15 clients were discharged before 25 days of intervention. Purposive sampling technique was used to select the sample from the selected hospital. Samples are screened using mini mental status examination.

Data collection instrument

In this study the data collection instruments are:

- Baseline proforma
- Self rating patient satisfaction scale

Content validation was assured. After seeking the formal permission from the administration the tools were pre-tested on 05.06.10. The test was conducted on 06-06-10. The reliability of the instrument was measured using Corn bach’s Alpha (r = 0.933), which indicates that the instrument is reliable.

Pilot study was conducted in family psychiatric ward. The results show that the clients are more satisfied with the new milieu than existing milieu. The study was found to be feasible and practicable. The formal written permission was obtained from the concerned authorities before the data collection. The data collection period extended from 23.08.2010 to 21.09.2010.

FINDINGS

Table 2: Frequency and percentage distribution of sample characteristics

<table>
<thead>
<tr>
<th>S I No</th>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age (in years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11-20</td>
<td>6</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>21-30</td>
<td>15</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>31-40</td>
<td>4</td>
<td>13.33</td>
<td></td>
</tr>
<tr>
<td>41-50</td>
<td>3</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>&gt;50</td>
<td>2</td>
<td>6.66</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Comparison of Grading of pre-test and post-test patient satisfaction score

<table>
<thead>
<tr>
<th>Grading of satisfaction</th>
<th>Score range</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly (82-100%)</td>
<td>115 - 140</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Moderately (64-81%)</td>
<td>89 - 114</td>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td>Minimally (45-63%)</td>
<td>63 - 88</td>
<td>20</td>
<td>66.67</td>
</tr>
</tbody>
</table>

Comparison of the patient’s level of satisfaction with the existing and New milieu therapy.

$H_{0}$: There will be no significant difference between pre and post intervention level of satisfaction of clients with mental illness.
Data in Table 7, Figure 10 shows that 6.67% of the subjects in the pre test and 66.67% subjects in post test scored between 115-140. 26.67% of the subjects in the pre test and 33.33% of the subjects in the post test scored between 89-114. 66.67% of the subjects in the pre test and none of the subjects in the post test scored between 63-88.

Table 4: Mean, mean difference, standard deviation and 't' value between pre-test and post-test satisfaction score of patients with milieu

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean satisfaction score</th>
<th>SD</th>
<th>Mean difference</th>
<th>'t' value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>84.63</td>
<td>12.716</td>
<td>36.57</td>
<td>15.01*</td>
</tr>
<tr>
<td>Post-test</td>
<td>121.2</td>
<td>7.522</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

'\(t\)'\(_{29}\) = 2.04, \(p < 0.05\) * Significant

Data in Table 8 shows that the mean post-test satisfaction score (84.63) is lower than the mean pre-test satisfaction score (121.2). The computed 't' value '\(t\)'\(_{29}\)=15.01, \(P<0.05\) shows that there was a significant difference between the pre-test and post-test mean satisfaction score. Hence the null hypothesis \(H_01\) is rejected and research hypothesis is accepted at 0.05 level of statistical significance. This indicates that the client’s with mental illness are more satisfied with new milieu therapy.

Table 5: Area-wise comparison of pre-test and post-test patient satisfaction score

<table>
<thead>
<tr>
<th>Area</th>
<th>Pre-test Mean</th>
<th>SD</th>
<th>Post-test Mean</th>
<th>SD</th>
<th>Mean difference</th>
<th>'t' value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical environment</td>
<td>23.67</td>
<td>2.631</td>
<td>29.33</td>
<td>2.69</td>
<td>5.67</td>
<td>9.08</td>
</tr>
<tr>
<td>Ward programmes</td>
<td>38.53</td>
<td>7.1</td>
<td>60.87</td>
<td>4.08</td>
<td>22.03</td>
<td>16.83*</td>
</tr>
<tr>
<td>communication</td>
<td>22.43</td>
<td>5.04</td>
<td>51.0</td>
<td>2.38</td>
<td>7.57</td>
<td>8.37</td>
</tr>
</tbody>
</table>

'T'(29) = 2.04, \(p<0.05\) * Significant at 0.05 level

Area-wise pre-test and post-test satisfaction score was computed and it was found that there was an increase in score in all the areas. The maximum increase was in the area of ward programmes (Table 9 and Figure 11).

Association between the baselines data of the patients and the satisfaction score.

To test the association between pre-test patient satisfaction score and selected variables the following null hypothesis was formulated.

\(H_{02}\): There is no significant association between the pre-test satisfaction score and selected variables (age, gender, religion, education, monthly income, occupation, marital status, duration of stay, previous admission and diagnosis)

Chi-square was computed with Yates correction where needed. The data is presented in Table 9.

Table 6: Chi-square value between pre-test satisfaction score and selected variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pre-test Satisfaction score</th>
<th>Variable</th>
<th>Pre-test Satisfaction score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>&lt; Mean &gt; Mean</td>
<td>df</td>
<td>(\chi^2)</td>
</tr>
<tr>
<td>&lt;30</td>
<td>15 6</td>
<td>1</td>
<td>0.319</td>
</tr>
<tr>
<td>&gt;30</td>
<td>8 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Male Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10th std.&lt;10th std.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10th std.&lt;10th std.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 10th std.&lt;10th std.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income ((\text{\text{\textpounds}}))</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; (\text{\textpounds} 6,000)</td>
<td>17 2</td>
<td>1</td>
<td>4.651</td>
</tr>
<tr>
<td>&gt; (\text{\textpounds} 6,000)</td>
<td>6 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td>Employed Unemployed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>11 4</td>
<td>1</td>
<td>0.00</td>
</tr>
<tr>
<td>Married status</td>
<td>Unmarried Married</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmarried</td>
<td>15 4</td>
<td>1</td>
<td>0.00</td>
</tr>
<tr>
<td>Married</td>
<td>8 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration of stay</td>
<td>&lt;35days &gt;35days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;35days</td>
<td>12 6</td>
<td>1</td>
<td>1.312</td>
</tr>
<tr>
<td>&gt;35days</td>
<td>11 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admission</td>
<td>Previous stay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>3 1</td>
<td>1</td>
<td>0.00</td>
</tr>
<tr>
<td>No</td>
<td>20 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnosis</td>
<td>BPAD Others</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>16 5</td>
<td>1</td>
<td>0.00</td>
</tr>
</tbody>
</table>

NS= Not significant  S= Significant
The data in Table 10 shows that Chi-square value computed between pre-test satisfaction and baseline variables (age, gender, religion, education, occupation, marital status, duration of stay, previous admission and diagnosis) were not significant at 0.05 level. But monthly income is significant at 0.05 level. It is interpreted that patient satisfaction is dependent on their monthly income. Hence the null hypothesis (H02) is rejected. In relation to other variables null hypothesis was accepted.

DISCUSSION

The findings of the study were supported by a study which showed that there is an increase in patient's level of satisfaction and ward atmosphere is also improved in a desirable direction9.

The findings of the study were supported by a study which showed that patients looked relaxed and happy, behaved more appropriately and some preferred to sit with visitors in the room10.

The findings of the study were supported by a study where results showed that the inpatient milieu is not an incidental backdrop to patients' hospitalization experience but a powerful and integral aspect of the experience of illness and recovery. The milieu experiences of patients are situated in relationship but are not always therapeutic in nature. Patients reveal that psychiatric inpatient unit environment creates as much potential for destruction as for healing11.

The findings of the study were supported by a study which results showed that the physical environment of long-stay rehabilitation wards may influence aggressive behaviour and arousal in chronically ill patients8.

The findings of the study were supported by a study where patients who engaged in more than five role plays demonstrated greater improvements in social skill performance than those who engaged in fewer role plays. Males improved their performance more than females12.

The findings of the study were supported by the result showed that patients do not limit their experience of milieu to that which is tangibly external; rather, patients experience their relationships as key aspects of the inpatient milieu. It suggests that it is person-to-person interaction on the inpatient unit that creates meaning for the patient11.

CONCLUSION

The researcher felt a deep sense of satisfaction and fulfilment for having undertaken the study. The study provided the investigator with deeper insight and empathy to the needs of clients with mental illness. The expert opinions and direction from the guide, and help from the health team members made the study fruitful and interesting.

ACKNOWLEDGEMENT

I express my deep sense of gratitude to my Guide, Prof. (Mrs.) Chanu Bhattacharya. An extensive sense of gratitude is due to Rev. Sr. Jacintha D’Souza, Principal, Father Muller College of Nursing. My sincere gratitude to all the Management, PG faculty members, Library staff of Fr. Muller College of Nursing and the clients with mental illness for their timely assistance and encouragement throughout the study.

Source of Funding- Nil

REFERENCES

A Study to Assess the Side effects and Coping Strategies Adopted by Cancer Patients Receiving Chemotherapy Treatment

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ABSTRACT

Background: Cancer affects everyone and represents a tremendous burden on patients, families and societies. The principal means for treating cancer (surgery, Chemotherapy and radiation therapy) are very effective; however, all such therapies come with the risk of substantial side effects.

Aims and Objectives: The present descriptive study was conducted to assess for side effects experienced and the coping strategies adopted by cancer patients receiving chemotherapy treatment.

Methods: Study carried out on 30 cancer patients receiving chemotherapy treatment at Pravara Rural Hospital. The data were collected by using the self prepared; and validated rating scales. The results were analyzed and interpreted using descriptive and inferential statistics.

Results: Result revealed that patients receiving chemotherapy had variety of side effects with wide range; and patients followed many things to make the side effects more acceptable and easier to adopt with. There was significant association found with the side effects, coping strategies with age of the patient (P>0.05). People with cancer often concerned with what side effects are going to occur during their treatment.

Conclusion: It is essential to raise awareness on cancer treatment and its impact on health; and develop health seeking behaviors among the patients and caregivers to provide better cancer care and improve the quality of life.

Keywords: Words: Assess, Side Effects, Coping Strategies.

INTRODUCTION

Cancer is a leading cause of death worldwide, at any given point of time; nearly 2.5 million cancer cases are estimated to be present in India. Over 8,00,000 new cases are diagnosed and 5, 50,000 deaths occur annually due to cancer. The dramatic increase in morbidity and mortality due to cancer is a matter of concern for the society.1

More than half of these people receive systemic chemotherapy as a form of treatment. Chemotherapy works by destroying or slowing the growth of cancer cells. It mainly affects fast growing (malignant) cells and the aim of chemotherapy may be to cure cancer, to relieve symptoms, to help other treatments work better or to improve survival.2

Chemotherapy works by killing cancerous cells. However the chemotherapy drugs come with the risk of substantial side effects. Some are short term and time limited; others are long term and persistent. The systematic review shows that the common symptoms experienced by patients receiving chemotherapy include pain, fatigue, anxiety, depression and infection. Dealing with the side effects of chemotherapy has always been a major concern. Chemotherapy side effects can be debilitating and can make life very unpleasant.3

The side effects may well managed or coped with simple and the basic nursing measures. Control/management of these symptoms has been a nursing research priority. The many of side effects can be managed if proper education or awareness is provided which are useful for reducing the severity of side effects. The health care professionals must be able to identify side effects and provide effective information on management of any chemotherapy side effects.4
Thus the study was carried out with purpose of assess the severity of side effects and coping strategies adopted by cancer patients receiving chemotherapy treatment according to different demographic characteristics.

**MATERIAL AND METHOD**

This descriptive explorative study was conducted among 30 cancer patients receiving chemotherapy treatment at Pravara Rural Hospital, Loni (Bk). Before commencement of the study, ethical approval was obtained from the Institutional Ethical Committee, and official permission was received from the authority. Patients who were above 18 years of age, receiving chemotherapy treatment, able to read Marathi and willing to participate in the study were included in the study by using the non – probability; purposive sampling method.

The patients who are below 18 years of age and not willing to participate in the study were excluded from the study. The purpose of the study was informed and explained to the participants; and those who voluntarily agreed to participate in the study and gave an informed consent for the same were asked to fill the rating scale according to the response format provided in the questionnaire. Material used is self prepared; and content validated rating scale as questionnaire to collect the data. For data analysis, each response like ‘very often’, ‘often’, ‘sometimes’, ‘rarely’ and ‘never’ were given a score 5,4,3,2 and 1 respectively. Individual scores were summed up to yield a total score. The collected data was tabulated and analyzed using appropriate statistical methods like descriptive statistics (mean, SD and mean percentage) and inferential statistics (chi – square test).

**RESULTS**

Findings related to socio demographic variables: Highest percentage (27%) of patients were < 35 years and 36 – 45 years of age respectively. Majority (63%) were females, 44% of patients had primary school education, (57%) of the patients were house wives, 73% were belongs to joint family, 57% had per capita income of Rs.501 – 1000, almost all (94%) were married and most (84%) were Hindus.

Findings related to clinical characteristics: The common cancers of samples were Lymphoma (80%), Head and Neck cancer (11%) and Lymphomas (07%). Around 90% of patients received chemotherapy related information through Health care professionals and 53% had habit of pan/betel nut chewing and only 7% of patients had family history of cancer.

Severity of side effects experienced: Results showed 73% of patients had moderate level of physical side effects and 20% had severe side effects (mean score of 31.3 ± 8.3); whereas patient receiving repeated cycle of chemotherapy treatment, 67% had mild and 13% had moderate level side effects. The common physical side effects experienced were fatigue (70%), loss of appetite (67%), pain (53%) and hair loss (44%). (Figure1). In relation to psychological side effects, 63% had moderate level psychological side effects and 27% had severe side effects (mean score of 11.4 ± 3.8), however (40%) of patients had emotional distress, (27%) had depression and (20%) and anxiety.

Coping strategies adopted: Findings revealed (60%) of patients had completely adoptive coping strategies and 40% had partially adoptive coping strategies for the chemotherapy side effects. However the patients had better coping strategies for psychological side effects than the physical side effects. (Table 1 and Table 2). The side effects and coping strategies adopted were compared with demographic characteristics, a significant association was seen with age (p>0.05)

<table>
<thead>
<tr>
<th>Coping strategies</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Anxiety</td>
<td></td>
</tr>
<tr>
<td>Concentrate the efforts on doing something</td>
<td>80</td>
</tr>
<tr>
<td>Performs slow, steady deep breathing exercise</td>
<td>56.6</td>
</tr>
<tr>
<td>b. Depression</td>
<td></td>
</tr>
<tr>
<td>Talk to someone (family members)</td>
<td>86.6</td>
</tr>
<tr>
<td>Join the support group</td>
<td>60</td>
</tr>
<tr>
<td>c. Fear</td>
<td></td>
</tr>
<tr>
<td>Discuss with others who have the same condition</td>
<td>70</td>
</tr>
<tr>
<td>Ask for professional help</td>
<td>63.3</td>
</tr>
<tr>
<td>d. Emotional distress</td>
<td></td>
</tr>
<tr>
<td>Use humor- find something to laugh about every day</td>
<td>83</td>
</tr>
<tr>
<td>Discuss with others having the same disease</td>
<td>66.6</td>
</tr>
</tbody>
</table>
DISCUSSION

The cancer patients receiving chemotherapy treatment had variety of side effects because of the drug effect. Mathis.E.et.al (2004) studied the side effects experienced by cancer patients receiving chemotherapy treatment; he recognized that the side effects commonly experienced by patients receiving chemotherapy include pain, fatigue, nausea and vomiting, hair loss, anxiety and depression. In the study the common physical side effects experienced by the cancer patients were fatigue, loss of appetite, pain and hair loss. Various studies shown that fatigue affects up to 76% of people with cancer and 90% of patients experience pain because of cancer and cancer related treatment, which affects quality of life in many ways and limits a patient’s ability to perform everyday activities and leisure activities (Sr.Mempra. H, 2008).

The common psychological side effects experienced by patients were emotional distress, depression and anxiety. Stark.D.et.al, (2002) also found that 44% of patients with cancer and cancer treatment reported some anxiety and 23% reported significant anxiety and prevalence of depression in cancer patients to be 20% to 25%, increasing with higher levels of physical disability, advanced illness and pain.

In the present study, the cancer patients receiving chemotherapy showed significant coping strategies in reduction of the severity of side effects. Anderson BL,ugle (2005) studies showed that patients were followed the problem solving actions (interventions) for reducing severity of problems, enhancing coping and improving adjustment with cancer treatment.

CONCLUSION

Cancer is among the most difficult and commonest chronic disorder of people because its causes are multi factorial. The results revealed that the cancer patients receiving chemotherapy had various side effects. Awareness education and motivation of people to adopt healthy behaviour would play a most important role in order to minimize the severity of side effects. In order to prevent treatment related complications and to promote health status, health professionals should give priority to health assessment and patient/family oriented health care based on primary health care concept. Consideration may be given to side effects and distress of patients as the vital aspects and to be checked routinely along with vital signs. It is imperative for health personnel working in cancer care areas to provide supportive, educative and counseling services.

Table 1 Common coping strategies adopted by cancer patients for physical side effects

<table>
<thead>
<tr>
<th>Coping strategies</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Nausea</td>
<td>56.6</td>
</tr>
<tr>
<td>Avoid greasy, fatty and spicy foods</td>
<td>56.6</td>
</tr>
<tr>
<td>Eat small and frequent meals</td>
<td>43.3</td>
</tr>
<tr>
<td>b. Vomiting</td>
<td>60</td>
</tr>
<tr>
<td>Rest by sitting up with head elevated, after meals</td>
<td>60</td>
</tr>
<tr>
<td>Drink fluids throughout the day</td>
<td>56.6</td>
</tr>
<tr>
<td>c. Loss of appetite</td>
<td>73</td>
</tr>
<tr>
<td>Eating whenever feel angry</td>
<td>73</td>
</tr>
<tr>
<td>Eat small and frequent meals instead of 3 large meals</td>
<td>60</td>
</tr>
<tr>
<td>d. Taste changes</td>
<td>73.3</td>
</tr>
<tr>
<td>Maintain good oral hygiene before and after meal</td>
<td>73.3</td>
</tr>
<tr>
<td>Eat in pleasant surroundings</td>
<td>66.6</td>
</tr>
<tr>
<td>e. Oral Mucositis</td>
<td>70</td>
</tr>
<tr>
<td>Eat soft, liquid foods rich in proteins</td>
<td>70</td>
</tr>
<tr>
<td>f. Fatigue</td>
<td>70</td>
</tr>
<tr>
<td>Takes short and frequent rest</td>
<td>70</td>
</tr>
<tr>
<td>Ask for help when required</td>
<td>53.3</td>
</tr>
<tr>
<td>g. Pain</td>
<td>86.6</td>
</tr>
<tr>
<td>Takes rest if required</td>
<td>86.6</td>
</tr>
<tr>
<td>Distracts himself by listening to music/ TV</td>
<td>50</td>
</tr>
<tr>
<td>h. Infection</td>
<td>86.6</td>
</tr>
<tr>
<td>Maintains personal hygiene</td>
<td>86.6</td>
</tr>
<tr>
<td>Wear shoes/slippers; and avoid injuries</td>
<td>80</td>
</tr>
<tr>
<td>i. Hair loss</td>
<td>70</td>
</tr>
<tr>
<td>Wear scarves, turban and caps</td>
<td>70</td>
</tr>
<tr>
<td>Use soft bristle hair brush</td>
<td>56.6</td>
</tr>
<tr>
<td>j. Diarrhea</td>
<td>66.6</td>
</tr>
<tr>
<td>Drinks more water and clear liquid foods</td>
<td>66.6</td>
</tr>
<tr>
<td>Avoids milk and milk products, creamy foods</td>
<td>53.3</td>
</tr>
<tr>
<td>k. Extravasation</td>
<td>86.6</td>
</tr>
<tr>
<td>Ask to change the veni – puncture site</td>
<td>86.6</td>
</tr>
<tr>
<td>Elevate the affected area</td>
<td>40</td>
</tr>
</tbody>
</table>

REFERENCE

Determinants of Burnout among Nursing Personnel in Public and Private Tertiary Level Health Care Hospital Setting in Odisha

Sonali Kar1, Suman Roy2, BC Das3
1Assistant Professor, Department of Community Medicine, 2Professor, Department of Community Medicine, 3Professor, Department of Community Medicine, Kalinga Institute of Medical Sciences, KIIT University, Bhubaneswar

ABSTRACT

Burnout is not a symptom of work stress; it is the end result of unmanaged work stress. It is primarily found in helping professions where individuals are required to work closely with others in an emotionally charged environment. Advances in technology and practice and increasing demands for health care delivery services and accountability have resulted in nurses engaging in further specialized training and in the provision of more complex and diverse care. This has definitely made their job profile extremely stressful and challenging.

Objective: The present study aims to explore the main determinants of burnout among nurses working in tertiary care hospitals and intends to investigate the impact on work because of stress and burnout.

Study design: A cross-sectional, survey design

Setting: Data was collected from Pradumna Bal Memorial Hospital & Capital Hospital, two tertiary health care facilities, government and private respectively in the city of Bhubaneswar.

Subjects: A convenience sample of 200 nursing staff, 100 each from the two facilities participated in the study.

Study Tools: Following approval from the hospital and university ethics committees, participants completed a self reported questionnaire containing the following scales, as well as demographic questions (age, gender, employment status, hospital ward, nursing experience). Wolfgang’s (1988) Health Professions Stress Inventory was used to measure nurses’ perceptions of job specific stressors. The 30 item inventory provides a measure of the amount and sources of stress experienced specifically by nursing professionals. Respondents answer how often they find each situation to be stressful in their work setting using a five point Likert scale, ranging from 0 (never/rarely) to 4 (very often).

Study period: 2 months

Results: 57% of the nurses were over 45 years of age; 86% were married and 48% of them said that they entertained with their family. When compared between married and unmarried, the latter i.e 55% said that they spent their money on themselves and 100% reported all the cooperation from their family. Medical symptoms were more among nurses working for public hospitals. Musculoskeletal and gastrointestinal problems were reported by all (irrespective of the place of work) in the 45 above age group followed by insomnia-nearly 91% in the government hospitals as compared to the private which was statistically significant. Depersonalization, personal accomplishment, professional recognition and professional uncertainty emerged as the main statistically significant job stressors.

Keywords: Nursing Personnel, Stress, Burnout, Public and Private Hospital

INTRODUCTION

Stress has been regarded as an occupational hazard since the mid-1950s.1 In fact; occupational stress has been cited as a significant health problem.2,3 Work stress in nursing was first assessed in 1960 when Menzies 4 identified four sources of anxiety among nurses: patient care, decision-making, taking responsibility, and change. The nurse’s role has long been regarded as stress-filled based upon the physical labor, human suffering, work hours, staffing, and interpersonal relationships that are central to the work nurses do. Since the mid-1980s, however, nurses’ work stress may be escalating due to the increasing use of technology,
continuing rises in health care costs, and turbulence within the work environment.

In 1974, Freudenberger coined the term “burnout” to describe workers’ reactions to the chronic stress common in occupations involving numerous direct interactions with people. Burnout is typically conceptualized as a syndrome characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment.

Few studies have been conducted in India that have looked into the stress that the nursing personnel who are primarily women are facing in the country. The current study also aims at looking into the various determinants that affect the working of nursing personnel in two major scenarios: the public and private tertiary care set ups in the city of Bhubaneswar, Odisha.

**METHODOLOGY**

This study was conducted with the objective of assessing the workplace environment and stress of the nursing personnel and its possible physical and psychological impact on health. The study was conducted in one private and public tertiary care hospital each, of the city of Bhubaneswar, Odisha over a period of two months by repeatedly interviewing and observing the lifestyles of the nursing staff. 100 nursing personnel were chosen at random from each of the facility out of their employment register. Selected nursing personnel were interviewed with pretested and predesigned questionnaire and group discussions were carried out in each institution for in-depth analysis and study of their views and opinions regarding the environment at their workplace and its impact on physical and mental health. The symptoms related to the stress like depression, chronic headache, insomnia, rude behavior etc. were considered as recommended by the Ministry of Health, Government of India. Each nursing staff was interviewed personally and privately to learn about her personal views and problems, convincing her in writing that no particular personal information would be published. Wolfgang’s (1988) Health Professions Stress Inventory was used to measure nurses’ perceptions of job specific stressors. The 30 item inventory provides a measure of the amount and sources of stress experienced specifically by health care professionals. Respondents answer how often they find each situation to be stressful in their work setting using a five point Likert scale, ranging from 0 (never/rarely) to 4 (very often). In the current study for feasibility sake Modified Wolfgang’s (1988) Health Professions Stress Inventory was used with the following 12 items: Emotional exhaustion, Depersonalization, Personal accomplishment, Professional recognition, Job conflicts, Professional uncertainty, Interpersonal conflict, Role overload, Role boundary, Role ambiguity, Co worker support and Supervisor support.

The total collected data was assimilated and analyzed to bring the results.

**RESULTS**

Table 1: Demographic details of nursing personnel from private and public tertiary hospitals

<table>
<thead>
<tr>
<th>Factors</th>
<th>Private Organization (n=100) 350 beds</th>
<th>Government Organization (n=100) 750 beds</th>
<th>Statistical significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td></td>
</tr>
<tr>
<td>1. Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) &lt;30 years</td>
<td>17 17</td>
<td>8 8</td>
<td></td>
</tr>
<tr>
<td>b) 30-45 years</td>
<td>50 50</td>
<td>35 35</td>
<td></td>
</tr>
<tr>
<td>c) &gt;45 years</td>
<td>33 33</td>
<td>57 57</td>
<td></td>
</tr>
<tr>
<td>2. Marital Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Married</td>
<td>77 77</td>
<td>86 86</td>
<td></td>
</tr>
<tr>
<td>b) Unmarried</td>
<td>20 20</td>
<td>7 7</td>
<td></td>
</tr>
<tr>
<td>c) Divorced</td>
<td>2 2</td>
<td>1 1</td>
<td></td>
</tr>
<tr>
<td>d) Widowed</td>
<td>1 1</td>
<td>6 6</td>
<td></td>
</tr>
<tr>
<td>3. Family type</td>
<td></td>
<td></td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td>a) Joint</td>
<td>35 35</td>
<td>14 14</td>
<td></td>
</tr>
<tr>
<td>b) Nuclear</td>
<td>65 65</td>
<td>86 86</td>
<td></td>
</tr>
<tr>
<td>4. Scope of recreation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Individually</td>
<td>55 55</td>
<td>22 22</td>
<td></td>
</tr>
<tr>
<td>b) With family</td>
<td>15 15</td>
<td>48 48</td>
<td></td>
</tr>
<tr>
<td>c) No scope at all</td>
<td>30 30</td>
<td>30 30</td>
<td></td>
</tr>
<tr>
<td>5. Posting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) OPD</td>
<td>40 40</td>
<td>50 50</td>
<td>P&lt;0.05</td>
</tr>
<tr>
<td>b) Indoor</td>
<td>33 33</td>
<td>31 31</td>
<td></td>
</tr>
<tr>
<td>c) ICU</td>
<td>27 27</td>
<td>19 10</td>
<td></td>
</tr>
</tbody>
</table>
In private setups nurses were mostly in 30-45 age group and public facility above 45 years of age. In both facilities the nurses were mostly married and unmarried nurses were more in the private sector. Irrespective to the facility most ladies were from nuclear families which was significant and mostly enjoyed with family. In private most postings were at indoor wards and in ICU as compared to public which was statistically significant.

### Table 2. Societal factors that may be affecting nursing personnel

<table>
<thead>
<tr>
<th>Factors assessed</th>
<th>Married</th>
<th>Positive response</th>
<th>unmarried</th>
<th>Positive response</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>1. Scope of recreation</td>
<td>173</td>
<td>98</td>
<td>27</td>
<td>56.6</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td>2. Right to spend money on her own</td>
<td>173</td>
<td>8</td>
<td>27</td>
<td>4.6</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td>3. Involvement in household work</td>
<td>173</td>
<td>94</td>
<td>27</td>
<td>54.3</td>
<td></td>
</tr>
<tr>
<td>a) Self</td>
<td>4</td>
<td>2.3</td>
<td>23</td>
<td>85.2</td>
<td></td>
</tr>
<tr>
<td>b) Supervision</td>
<td>173</td>
<td>41.6</td>
<td>4</td>
<td>14.8</td>
<td></td>
</tr>
<tr>
<td>c) No responsibility</td>
<td>27</td>
<td>15</td>
<td>15</td>
<td>55.5</td>
<td></td>
</tr>
<tr>
<td>4. Kind of cooperation received from family</td>
<td>173</td>
<td>20</td>
<td>27</td>
<td>11.6</td>
<td>P&lt;0.01</td>
</tr>
<tr>
<td>a) Emotional</td>
<td>80</td>
<td>46.2</td>
<td>27</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>b) Both emotional &amp; help around home</td>
<td>28</td>
<td>16.2</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>c) Household work (No cooperation)</td>
<td>173</td>
<td>94</td>
<td>27</td>
<td>54.3</td>
<td></td>
</tr>
<tr>
<td>5. Cooperation of</td>
<td>45</td>
<td>26</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>a) Husband</td>
<td>173</td>
<td>45</td>
<td>27</td>
<td>27.6</td>
<td></td>
</tr>
<tr>
<td>b) Other family members</td>
<td>8</td>
<td>80</td>
<td>27</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>6. Cooperation of children</td>
<td>171</td>
<td>27</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

As seen in the above table, the scope of recreation and right to spend their own money was much better reported by nursing personnel who were unmarried as compared to the married, the difference being statistically significant. The married nurses reported more self involvement in household work while the unmarried mostly held no responsibility. Cooperation from husbands and from family was reported respectively by married and unmarried women. Nearly 16% of married women reported cooperation from their children.

### Table 3. Prevalence of health complaints in the 2 study groups

<table>
<thead>
<tr>
<th>Health Problems</th>
<th>Private Organization</th>
<th>No. of Participants</th>
<th>Private Organization</th>
<th>No. of Participants</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. BMI</td>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Overweight</td>
<td></td>
<td>Underweight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 years</td>
<td>17</td>
<td>6</td>
<td>35.3</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>30-45 years</td>
<td>50</td>
<td>1</td>
<td>2</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td>&gt;45 years</td>
<td>33</td>
<td>-</td>
<td>-</td>
<td>57</td>
<td>-</td>
</tr>
<tr>
<td>Overweight</td>
<td></td>
<td>Overweight</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 years</td>
<td>17</td>
<td>1</td>
<td>5.9</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>30-45 years</td>
<td>50</td>
<td>15</td>
<td>30</td>
<td>35</td>
<td>10</td>
</tr>
<tr>
<td>&gt;45 years</td>
<td>33</td>
<td>18</td>
<td>54</td>
<td>57</td>
<td>23</td>
</tr>
<tr>
<td>2. Musculoskeletal Problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 years</td>
<td>17</td>
<td>4</td>
<td>23.5</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>30-45 years</td>
<td>50</td>
<td>45</td>
<td>90</td>
<td>35</td>
<td>25</td>
</tr>
<tr>
<td>&gt;45 years</td>
<td>33</td>
<td>33</td>
<td>100</td>
<td>57</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 3. Prevalence of health complaints in the 2 study groups (cont.)

<table>
<thead>
<tr>
<th>Health Problems</th>
<th>Private Organization</th>
<th>Private Organization</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>3. Gastrointestinal Problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 years</td>
<td>17</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>30-45 years</td>
<td>50</td>
<td>41</td>
<td>35</td>
</tr>
<tr>
<td>&gt;45 years</td>
<td>33</td>
<td>33</td>
<td>100</td>
</tr>
<tr>
<td>4. Insomnia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 years</td>
<td>17</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>30-45 years</td>
<td>50</td>
<td>20</td>
<td>35</td>
</tr>
<tr>
<td>&gt;45 years</td>
<td>33</td>
<td>30</td>
<td>57</td>
</tr>
<tr>
<td>5. Chronic Headache</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 years</td>
<td>17</td>
<td>-</td>
<td>8</td>
</tr>
<tr>
<td>30-45 years</td>
<td>50</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td>&gt;45 years</td>
<td>33</td>
<td>18</td>
<td>57</td>
</tr>
<tr>
<td>6. Hypertension</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 years</td>
<td>17</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>30-45 years</td>
<td>50</td>
<td>11</td>
<td>35</td>
</tr>
<tr>
<td>&gt;45 years</td>
<td>33</td>
<td>18</td>
<td>57</td>
</tr>
</tbody>
</table>

As inferred from the above table, nurses above 30 years of age from both facilities were overweight. Above 45 years of age nurses mostly complained of musculoskeletal problems, followed by gastrointestinal problems. Insomnia was complained by nurses from public health facility above 45 years of age. Hypertension was diagnosed in nearly 77% of nurses in public facility and 57% of them in private facility.

Table 4. Job stressors government vs private

<table>
<thead>
<tr>
<th>Job stressors</th>
<th>Government (pooled scoring from the 11 inventory items)</th>
<th>Private (same as the previous column)</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional exhaustion</td>
<td>384</td>
<td>451</td>
<td>0.3</td>
</tr>
<tr>
<td>Depersonalization</td>
<td>253</td>
<td>567</td>
<td>0.000</td>
</tr>
<tr>
<td>Personal accomplishment</td>
<td>670</td>
<td>214</td>
<td>0.000</td>
</tr>
<tr>
<td>Professional recognition</td>
<td>670</td>
<td>214</td>
<td>0.000</td>
</tr>
<tr>
<td>Job conflicts</td>
<td>515</td>
<td>416</td>
<td>0.45</td>
</tr>
<tr>
<td>Professional uncertainty</td>
<td>213</td>
<td>614</td>
<td>0.000</td>
</tr>
<tr>
<td>Interpersonal conflict</td>
<td>614</td>
<td>413</td>
<td>0.05</td>
</tr>
<tr>
<td>Role overload</td>
<td>715</td>
<td>316</td>
<td>0.001</td>
</tr>
<tr>
<td>Role boundary</td>
<td>312</td>
<td>354</td>
<td>0.1</td>
</tr>
<tr>
<td>Role ambiguity</td>
<td>213</td>
<td>567</td>
<td>0.05</td>
</tr>
<tr>
<td>Co worker support</td>
<td>123</td>
<td>253</td>
<td>0.05</td>
</tr>
<tr>
<td>Supervisor support</td>
<td>514</td>
<td>312</td>
<td>0.01</td>
</tr>
</tbody>
</table>

In the current study depersonalization, personal accomplishment and professional recognition was much better in nurses working in government set up as compared to private set up that was statistically significant. Professional uncertainty too was significantly higher in nurses working with the private set up.

CONCLUSION AND DISCUSSION

Indian women constitute an important segment of the total labor force that contributes to the national development. Nevertheless, pursuing a career successfully without family support remains a distant reality for them. Whether married or single, a woman depends on her family not always financially but emotionally most of the time. The present study reveals that most nurses working in government-run organizations were from nuclear families or extended joint families compared to those working in private organizations, who are paid less and hence are compelled to adjust much more with family members. Divorced and widowed nurses are even more dependent on their families.

Recreation like listening to music or practicing yoga can minimize stress; however, a handsome number of nursing personnel lack the scope of such outlets from stress. Not only that, they find little time to spend with family, especially children (Table 2). The unmarried ones, however, find time for recreation as they do not have to take care of the household nor spend time for childcare. They even receive mental support and cooperation in household work. This scenario changes in the case of a married woman.
Impact on Health

The study brings out that workplace stress can cause sleep disturbances, an upset stomach, headache, musculoskeletal problems, etc. This study shows a positive correlation between nursing staff and these health problems as stress-related physical conditions like irritable bowel syndrome, chronic headaches and heart attacks result from long-term over-stimulation of a part of the physical system. It has been established from different studies that stress is related to weight gain and obesity. Our study revealed that 29% of overweight nursing personnel were in the age group of 30-45 years, the latter age group even accounting for 81% having gastrointestinal problems, 27.8% with chronic headache while 23.8% suffered from hypertension.

The tensions of unresolved stress frequently cause insomnia, generally keeping the person awake till late at night or till early morning. Our study showed that 34% of nursing personnel between 30 and 45 years of age were insomniacs.

According to nursing professionals, prolonged stress resistance makes them mentally fatigued, taking a toll on the quality of work. As this profession deals with life and death making it necessary for nurses to remain mentally very stable, 50% of the total interviewed expressed their desire to quit their job or be transferred to a less stressful job. In the government sector, the nursing personnel over 45 years of age expressed their physical inability in performing emergency duty (10%) due to lack of staff strength.

Burnout as assessed by the Inventory method reflects on the professional insecurities that add to the stress. The Australian study too reported moderate levels of burnout in terms of emotional exhaustion, depersonalization and reduced personal accomplishment.

Thus this study strongly suggests the government as well as the employing organizations to devise strategies and policies to deal with the problems of nurses empathetically who are indispensable for the health care delivery.

Conflict of Interest: None

REFERENCES

An Exploratory Study on Knowledge and Attitude of Fathers Towards Breastfeeding in Selected Hospitals at Mangalore

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¹Lecture, Department of Child Health Nursing, Nitte Usha Institute of Nursing Sciences, Mangalore, ²Professor and HOD Child Health Nursing, Nitte Usha Institute of Nursing Sciences, Mangalore

ABSTRACT

In India every year, almost two million Indian children die before their fifth birthday and the causes of which can be prevented by breastfeeding. "Unquestionable global evidence demonstrates that breastfeeding counselling and support is the most important child-survival intervention," Dr. Victor Aguayo.¹

In this study knowledge and attitude of fathers towards breastfeeding was assessed by breastfeeding knowledge questionnaire and breastfeeding attitude scale. The study was done in 200 fathers who visited selected 2 hospitals in Mangalore. The hospitals and the fathers were selected by purposive sampling. The study findings revealed that 150 (75 %) fathers had average knowledge. Regarding the attitude of fathers towards breastfeeding it was found that 142 (71%) had favourable attitude. There was a weak positive correlation between knowledge and attitude of fathers regarding breastfeeding. There was significant association between knowledge and attitude of fathers towards breastfeeding and demographic variables like education of father, education of spouse, occupation of father, monthly family income, total number of children and number of children below 3 years .The demographic variables age, religion, and occupation of spouse had association only with knowledge regarding breastfeeding while nativity had association only with attitude towards breastfeeding.

Keywords: Breastfeeding, Fathers, Knowledge, Attitude

INTRODUCTION

Breast milk is the natural food for babies. Good nutrition forms the basis for good health of a child. Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants. An adequate supply of human breast milk provides all the nutrients the infant needs for the first 6 months of life. Early initiation of breastfeeding in the first hour after birth and exclusive breastfeeding for the first six months after birth can prevent most neonatal and infant deaths in India. A woman’s decision to breastfeed is influenced by a number of factors: demographic, psychological, cultural and social, and it is often difficult to isolate which factors are most influential. Above all it is the attitude of the partner that makes the mothers to decide upon the infant feeding method.

NEED FOR THE STUDY

Helping the mother in breast feeding

Breastfeeding was regarded as an important and integral part of the cultural norm in India. Modernization has resulted in social, cultural and economic changes that have caused erosion in breastfeeding practices.

The way a mother decides to nourish her baby can be one of the most emotive decisions she will ever make. A woman’s decision to breastfeed is influenced by a number of factors: demographic, psychological, cultural and social, and it is often difficult to isolate which factors are most influential. Above all it is the attitude of the partner that makes the mothers to decide upon the infant feeding method.
In the present society pattern we see more of nuclear family and young mothers do not know where to go for advice, encouragement, and support for breastfeeding. Nearly all mothers initiate breastfeeding but it is the knowledge, support they receive that influence the success and duration of breastfeeding. The present family system has aroused the need for prospective fathers to offer psycho-social and physical support to the mothers.

Therefore, it is important to identify the knowledge and attitude of fathers towards breastfeeding especially in a society where the people regard breastfeeding as the sole responsibility of mothers. Moreover there is lack of Indian studies regarding the father’s knowledge and attitude related to breastfeeding.

The purpose of the study is to describe the father’s breastfeeding knowledge and attitude. So, it is possible to identify the gaps and strengths in the knowledge and attitude towards breastfeeding. This information will enable us to develop the breastfeeding booklet which can be given to fathers during breastfeeding counseling sessions.

**OBJECTIVES**

The objectives of the study were

- To assess the knowledge of fathers towards breastfeeding.
- To assess the attitude of fathers towards breastfeeding.
- To find the correlation between knowledge and attitude of fathers towards breastfeeding.
- To find the association between knowledge and attitude about breastfeeding with selected demographic variables.
- To develop a self instruction module on breastfeeding for fathers

**HYPOTHESIS**

H₁: There will be a significant correlation between knowledge and attitude of fathers regarding breastfeeding.

H₂: There will be a significant association between knowledge of fathers towards breastfeeding and selected demographic variables.

**CONCEPTUAL FRAMEWORK**

In this study the investigator has adopted Nola J Pender’s revised Health Promotion Model (2002) to serve as a guide for exploration of the complex bio psychosocial processes that motivate fathers to engage in health behaviours directed toward the promotion of breastfeeding.

**Components of the Health Promotion Model**

The Health Promotion Model classifies health behaviour determinants into three specific propositional groupings:

- Individual characteristics and experiences,
- Behaviour specific cognitions and affects, and
- Behavioural outcome

**Fig. 1. Conceptual framework based on Noja.J.Pender’s revised Health Promotion Model (2002)**
MATERIALS AND METHOD

A descriptive survey approach was used to conduct the study. The purposive sampling technique was used in selecting the hospitals and fathers. The study was done in 200 fathers who had at least one child less than 3 years of age and who met the sampling criteria visiting the paediatric unit and OPD of 3 hospitals in Mangalore.

Demographic proforma, breastfeeding Knowledge questionnaire and breastfeeding attitude scale in English and Kannada were the tools used to collect data.

The reliability of the tool was established by administering to 30 fathers. Reliability for knowledge questionnaire was established by split half and for attitude scales by Crohn Bach’s alpha. Reliability coefficient was 0.798 and 0.7 respectively, indicating that the tool was reliable.

An informed consent was taken from the participants while administering the tools. The fathers were explained how to fill the tools.

The pilot study was conducted in a hospital selected by purposive sampling in Mangalore among 30 fathers who had the same sample characteristics as that of the fathers for final study and the study was found to be feasible.

The main study was conducted in two other hospitals and among 200 fathers. The fathers took 20-25 minutes to fill the tools.

ANALYSIS

The data obtained were analyzed in terms of objectives and hypothesis of the study using both descriptive and inferential statistics.

- Demographic characteristics were presented in frequency and percentage.
- The Level of knowledge and attitude regarding breastfeeding of fathers were summarised using Frequency, percentage, mean and standard deviation.
- The association between knowledge and attitude of fathers regarding breastfeeding was presented in Karl-Pearson’s Correlation coefficient
- The association between knowledge and attitude of fathers regarding breastfeeding and selected demographic variables were summarised by Chi-square test

RESULTS

Most of the fathers 85 (42.5%) were in the age group between 31 to 35 years. Majority of the fathers 103 (51.5%) were Hindus. 94 (47%) fathers belonged to nuclear family, 74 (37%) were graduates. Most of the spouses 71 (35.5%) completed high school. 98 (49%) of fathers were non-professionals. 97 (48.5%) of the spouses were homemakers. Majority 127 (63.5%) of fathers had monthly family income between Rs. 2501 – Rs 10,000. Majority 141 (70.5%) of fathers were native of Karnataka. 114 (57%) of fathers were having two children and only 2 (1%) had four and more children. Majority 161 (80.5%) of fathers had only one child with age less than 3 years. Majority 123 (61.5%) of fathers had previous knowledge whereas 77 (38.5%) of them had no prior knowledge. Most 55 of 123 (45%) of the fathers had the prior source of information regarding breastfeeding from family and friends and 31 (25%) of fathers received information from the media and magazines.

150 (75%) of fathers had average breastfeeding knowledge, 39 (19.5%) had good knowledge and 11 (5.5%) had poor knowledge.

| Table 1: Knowledge of fathers regarding breastfeeding – Areawise distribution |
|---------------------------------|------------|----------|----------|----------|
| Area                           | Max. possible score | Mean     | S.D      | Percentage |
| Anatomy and physiology         | 4          | 2.44     | 1.08     | 61        |
| Exclusive breastfeeding         | 4          | 1.95     | 0.99     | 48.75     |
| Advantages                      | 2          | 1.56     | 0.56     | 78        |
| Colostrum                      | 3          | 1.81     | 0.97     | 60.33     |
| Breastfeeding practices        | 7          | 3.48     | 1.64     | 70.2      |
| Breastfeeding problems         | 3          | 1.68     | 0.81     | 49.71     |
| Expressed breastmilk           | 2          | 0.78     | 0.64     | 39        |
| Overall knowledge              | 25         | 13.71    | 3.47     | 54.8      |

71% (142) had favourable attitude towards breastfeeding, 23% (46) had unfavourable attitude and 6% (12) had highly favourable attitude and none had highly unfavourable attitude.
Table 2: Attitude of fathers regarding breastfeeding - Area wise distribution [n=200]

<table>
<thead>
<tr>
<th>Area</th>
<th>Max. possible score</th>
<th>Mean</th>
<th>S.D</th>
<th>Percentage mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant Feeding method</td>
<td>15</td>
<td>9.11</td>
<td>1.87</td>
<td>60.73</td>
</tr>
<tr>
<td>Parental - child bonding</td>
<td>15</td>
<td>11.73</td>
<td>2.13</td>
<td>78.20</td>
</tr>
<tr>
<td>Breastfeeding practices</td>
<td>10</td>
<td>5.59</td>
<td>2.04</td>
<td>55.90</td>
</tr>
<tr>
<td>Breastfeeding assistance</td>
<td>10</td>
<td>7.19</td>
<td>1.70</td>
<td>71.90</td>
</tr>
<tr>
<td>Overall attitude</td>
<td>50</td>
<td>33.62</td>
<td>3.57</td>
<td>67.24</td>
</tr>
</tbody>
</table>

There was a weak positive correlation (r-value 0.3; p value < 0.05) between the knowledge and attitude of fathers.

There was significant association between knowledge and attitude of fathers towards breastfeeding and demographic variables like education of father, education of spouse, occupation of father, monthly family income, total number of children and number of children below 3 years. The demographic variables age, religion, and occupation of spouse had association only with knowledge regarding breastfeeding while nativity had association only with attitude towards breastfeeding.

DISCUSSION

In the study conducted by A.K Manjula majority of the fathers were Hindus, belonged to nuclear family and had monthly family income between Rs 6001-9000 and these findings were similar to the present study while the data majority in the age 26-30 years, pre-university education and electronic media as the major source of information contradicted the present study findings.

In the present study 75% of the fathers were found to have average knowledge and 71% of fathers had favourable attitude. In a study conducted by Rivera Alvarado et al. on breastfeeding knowledge, attitudes in 100 future Puerto Rican fathers 88.8% of the participants presented a low level of knowledge which contradicts the present study. The study finding that 81.6% had a positive attitude towards breastfeeding was similar to the present study where 71% of fathers had favourable attitude.

The findings of the present study showed that for the maximum score of 25, the mean knowledge score of fathers was 13.71 with mean percentage 54.8 and standard deviation 3.47. In the comparative study conducted by A.K Manjula the findings of the study showed that the mean knowledge score of urban participants was 30.4 with mean percentage 76.05 and standard deviation 2.450 and of rural participants was 26.16 with mean percentage 65.40 and standard deviation 2.937 which contradicts the present study.

The present study revealed a weak positive correlation between the knowledge and attitude of fathers. In a study conducted by Sherriff, Nigel; Hall, Valerie fathers reported requiring more relevant and accessible information about the benefits of breastfeeding as well as details concerning some of the practical issues involved in supporting their partner’s breastfeeding. The researcher feels that knowledge increases the attitude and a favourable attitude raises the interest to learn. The researcher assumes the positive weak correlation owes to the small sample size of 200 and that a large sample size might have given a significant correlation result.

In the study conducted by A.K Manjula there is significant association between knowledge level and demographic variables like education of father, occupation of father, income which is similar to the present study while the significant association between knowledge regarding breastfeeding and source of information contradicts the present study.

In the present study there is association between father’s attitude towards breastfeeding with education of father, education of spouse, occupation of father, monthly family income, total number of children, nativity, and number of children below 3 years. In a study conducted by Vaaler ML et al. on Men’s attitudes toward breastfeeding in Texas, men’s ethnicity, country of origin, education level, and socioeconomic status were found to contribute to different norms and expectations about breastfeeding.

NURSING IMPLICATIONS

The findings of the study have implications on the field of nursing service, nursing education, nursing administration and nursing research. It is discussed in following headings.

Nursing practice: The public health nurses have a vital role in creating health awareness regarding breastfeeding among the people and also identifying the prevalence, attitude and practice regarding breastfeeding. She is to educate the family on improving the breastfeeding practices and should ensure that the fathers are provided the education regarding breastfeeding and breastmilk along with the mother. Fathers should be helped to understand their
role in supporting their spouse in breastfeeding and its importance.

**Nursing administration:** Nurse Administrators can formulate strategies to create awareness among public by organising programs like breastfeeding week. Information booklets or pamphlets should be developed and made available to the fathers.

**Nursing education:** Nursing education plays a vital role in promoting health of children through ensuring optimal nutrition. General information about breastfeeding is included in the curriculum. Nursing personnel working in various health care settings should be educated on the ten steps of Baby Friendly Hospital Initiative. Nursing students should be educated to provide health talks, dramas on benefits of breastfeeding, techniques, role of father and family in supporting the breastfeeding mother.

**Nursing research:** Nurses have a great role to play in a society where mothers are given the sole responsibility for breastfeeding. Nurses can add to the body of knowledge by doing Qualitative research on “expectations of mothers regarding breastfeeding support from partners and family” and formulation of a booklet based on the findings.

**CONCLUSION**

Most of the fathers were found to have average knowledge and favourable attitude. The correlation between breastfeeding knowledge and attitude towards breastfeeding of the fathers are weakly positive. Most of the demographic variables had significant association between knowledge and attitude.

“While breastfeeding may not seem the right choice for every parent, it is the best choice for every baby.”

Amy Spangler

**REFERENCES**

Comparison of Second and Third Year B.Sc. Nursing Students' Clinical Competency for Subcutaneous Insulin Administration and its Determining Factors

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¹Lecturer, Nitte Usha Institute of Nursing Sciences, Nitte University, Mangalore, ²Dean, Himalayan College of Nursing, Dehradun, ³Assoc. Professor, Manipal College of Nursing, Manipal

ABSTRACT

Background: Medication administration is a core function of nursing practice, where nurses must possess good knowledge and skill in medication administration. Training the Nursing students in medication administration helps them to become competent in their practice. How well they learn to practice their nursing skills before graduating may determine the success of their transition from being a student nurse to becoming a competent staff nurse.

Methods: A descriptive comparative design was used to compare the clinical competency of UG Nursing students. Observational checklists, knowledge questionnaire and an Opinionnaire were used.

Results: Analysis showed that,

• All UG Nursing students were found to be less competent in insulin administration.

• Area wise competency analysis showed that there was a significant difference in knowledge (Z=-3.134, p<0.05) and skill (Z=-2.004, p<0.05) scores of second and third year BSc. Nursing students, but there was no significant difference between professional behavior of second and third year students.

• Results showed that there is no significant correlation between knowledge and skill, knowledge and professional behavior of second and third year students, no significant correlation between skill and professional behavior of second year students but there is significant correlation between skill and professional behavior of third year students (r=0.372, p<0.05)

• The students' opinion showed that Procedure demonstration, Teachers' approachability, Unbiased clinical evaluation, Students interest and Confidence Were major factors facilitating their clinical competency. The factors hindering their clinical competency were: Inability to understand the discussions during nurses’ rounds, Non availability of standardized protocol in the ward, Lack of support from other health team members.

Keywords: Clinical Competency, Determining Factors, Knowledge, Skill, Professional Behavior, Facilitating Factors, Hindering Factors.

INTRODUCTION

Curricula are generally organized around diverse subjects with more emphasis on students clearing the written tests. Though this subject centric approach can be systematically administered and controlled, it still falls short of laying a strong foundation for students in their chosen profession. This system has come under severe criticism from some sections of educationists who debate that graduating students only know what to do, they cannot actually do it. This poses a challenge before the faculty to recalibrate the assessment techniques to gauge student’s preparedness for professional environment.

Purpose: The main purpose of this study is to generate a database on the level of clinical competency of Undergraduate Nursing students in insulin administration and its determining factors. The
ultimate aim is to suggest means for improving their clinical proficiency at all levels.

**Objectives of the study**

The objectives of the study were to:

1. determine two academic levels of UG students' clinical competency in Subcutaneous insulin administration

2. compare the clinical competency (knowledge skill and professional behavior) of these two levels of UG students in Subcutaneous insulin administration

3. find correlation between the knowledge and skill, knowledge and professional behavior, skill and professional behavior in Subcutaneous insulin administration.

4. identify the factors influencing both academic levels of UG students’ clinical competency in Subcutaneous insulin administration

**Hypotheses:** All the components will be measured in relation to Insulin administration and tested at 0.05 level of significance.

- **H1**: There will be a significant difference between the clinical competency (knowledge, skill, professional behavior) of second and third year B.Sc. Nursing students.

- **H2**: There will be a significant correlation between knowledge and skill of second and third year B.Sc. Nursing students.

- **H3**: There will be a significant correlation between knowledge and professional behavior of second and third year B.Sc. Nursing students.

- **H4**: There will be a significant correlation between skill and professional behavior of second and third year B.Sc. Nursing students.

**MATERIALS AND METHOD**

The researcher utilized a descriptive comparative design to compare the clinical competency of UG Nursing students of selected nursing institute of Udupi district. A total of 60 samples (30 Second year and 30 Third year students) were selected by purposive method.

An informed consent was taken from the participants, a structured observational checklists were used to evaluate students’ clinical skill and professional behavior during subcutaneous insulin administration by participation method, knowledge level was assessed by using a structured knowledge questionnaire. An Opinionnaire, was used to identify the factors those influence the students’ clinical competency in subcutaneous insulin administration.

**FINDINGS AND DISCUSSION**

**Objective 1:** To determine two academic levels of UG students’ clinical competency in subcutaneous insulin administration.

1. Area wise Distribution of knowledge, skill and professional behavior scores of second and third year B.Sc. Nursing students:

   **Table 1:** Frequency and percentage distribution of knowledge scores of second and third year B.Sc. Nursing students in subcutaneous insulin administration.

<table>
<thead>
<tr>
<th>Range scores</th>
<th>Second year students'</th>
<th>Third year students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency (f)</td>
<td>Percentage (%)</td>
</tr>
<tr>
<td>Poor (0-49 %)</td>
<td>10</td>
<td>33.33</td>
</tr>
<tr>
<td>Average (50-65%)</td>
<td>16</td>
<td>53.33</td>
</tr>
<tr>
<td>Good (66-80%)</td>
<td>04</td>
<td>13.33</td>
</tr>
<tr>
<td>Excellent (81-100%)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Maximum possible score is 36.
Table 2: Frequency and percentage distribution of Skill scores of second and third year BSc.Nursing students on insulin administration.

<table>
<thead>
<tr>
<th>Range scores</th>
<th>Second year students'</th>
<th>Third year students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Poor skill</td>
<td>06</td>
<td>20</td>
</tr>
<tr>
<td>&lt;100% in critical step, &lt;80% in other steps</td>
<td>24</td>
<td>80</td>
</tr>
<tr>
<td>Average skill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;100% in critical step, &gt;80% in other steps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent skill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100% in critical step, 100% in other steps</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Frequency and percentage distribution of Professional behavior scores of second and third year B.Sc.Nursing students on insulin administration.

<table>
<thead>
<tr>
<th>Range scores</th>
<th>Second year students'</th>
<th>Third year students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Needs correction (0-49%)</td>
<td>02</td>
<td>6.66</td>
</tr>
<tr>
<td>Good professional behavior (50-65%)</td>
<td>22</td>
<td>73.33</td>
</tr>
<tr>
<td>Very good professional behavior (66-80%)</td>
<td>06</td>
<td>20</td>
</tr>
<tr>
<td>Excellent professional behavior (81-100%)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 4: Frequency and percentage distribution of competency (knowledge, skill and professional behavior) of second and third year B.Sc.Nursing students.

<table>
<thead>
<tr>
<th>Categories</th>
<th>Second year students'</th>
<th>Third year students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Competent (e’80% in knowledge, e’80% in professional behavior and 100% in insulin administration skill).</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Less competent</td>
<td>30</td>
<td>100</td>
</tr>
</tbody>
</table>

The data presented in table 4 show that, All UG Nursing students are found to be less competent in insulin administration.

This supports the study by Mushtaq AM conducted to assess the knowledge and technique of insulin injection amongst the nursing staff. Only few staff (Out of 272 nurses only 40) knew all the steps regarding insulin injection technique such as timings, site, and angle of needle insertion.

Objective 2: Compare the competency of UG students’ of two different academic levels.

1. Comparison of clinical competency (knowledge, skill, professional behavior) of second and third year B.Sc.Nursing students showed that there is no significant difference between competency of second and third year BSc.Nursing students.

2. Comparison of knowledge scores of second and third year undergraduate nursing students in insulin administration showed that there is a significant difference in the knowledge scores of second and third year students. The median score of third year students is higher than that of the second year students.

3. Comparison of skill scores of second and third year undergraduate nursing students in insulin administration shows that there is a significant difference between skill scores of second and third year students. The median score of second year students is higher than that of the third year students.

4. Comparison of Professional behavior scores of second and third year undergraduate nursing students in insulin administration showed that there is no significant difference between
Professional behavior scores of second and third year students.

Objective 3: Find the correlation between knowledge and skill, knowledge and professional behavior, skill and professional behavior of second and third year students:

Statistical analysis showed that there is no significant correlation between knowledge and skill of second year (r=-0.059, p>0.05) and third year students (r=0.247, p>0.05) and knowledge and professional behavior of second year (r=-0.233, p>0.05) and third year students (r=0.139, p>0.05) and there is no significant correlation between skill and professional behavior of second year students (r=0.034, p>0.05), but there is significant correlation between skill and professional behavior of third year students (r=0.372, p<0.05).

OBJECTIVE

Identify the factors influencing both academic levels UG students’ clinical competency in subcutaneous insulin administration.

Majority of the students opined that, Procedure demonstration by the teacher, Teachers’ approachability and ability to understand students’ difficulties, Opportunities to present cases with Diabetes mellitus, Unbiased clinical evaluation, Students interest in giving insulin injection, Confidence while performing the clinical procedures are factors facilitating their clinical competency.

The Hindering Factors were Inability to understand the discussions during nurses rounds, Lack of opportunity to learn the procedure in the demonstration room, Non availability of standardized protocol in the ward and Lack of support from other health team members.

This study supports the findings of a study conducted by Lofmark A, Wikblad K to provide information on what the student nurses found facilitating and obstructing for their learning during clinical practice. The students emphasized responsibility and independence, opportunities to practice different tasks, and receiving feedback as facilitating factors. The obstructing factors were the nurses as supervisors not relying on the students, supervision that lacked continuity and lack of opportunities to practice. Perception of their own insufficiency and low self-reliance were drawbacks for some students.

CONCLUSION

The findings of the study reflect a small group of students during the course of their study. The findings were significant for the group and may be generalized for the similar groups. The following conclusions were drawn based on the present study:

Students Knowledge has improved with the repeated and extended exposure of students to clinical experience and academic maturity. There was no significant increase in the skill. But professional behavior is independent of the above factor. Because it depends on

1. Inherent human attributes
2. Life experiences
3. Environmental factors influencing learning contribute to the behavior of the student.

REFERENCES

Evaluation of Communication Skills Training Program for Nursing Students to Develop Supportive Ward Atmosphere During Care of Patients with Cancer

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ABSTRACT

The diagnosis of cancer means a change in the lifestyle of the person in whom the cancer is found. The degree and permanency of that change is, of course, dependent on the extent of the disease, the course of treatment undertaken, and the resultant disabilities, all of which place that individual and his family under tremendous stress.

Communication is one of the most important aspects of nursing care. The emotional load in cancer nursing makes interactions between nurses and patients difficult.

Ineffective communication leaves patients feeling anxious, frustrated and dissatisfied, which may impair their ability to comply with treatments. Insufficient training in communication during nursing education also contributes to stress and burnout in nurses. So adequate training regarding communication skills should be given to the nurses during student period to avoid difficulties while communicating with patients.

Objective: To evaluate the communication skills training program for nursing students to develop supportive ward atmosphere during care of patients with cancer.

Material and method: An evaluatory approach with one group pre-test post-test design was used. A dyad sample through systematic and purposive sampling technique was selected i.e., 2nd year and 3rd year BSc Nursing students from a selected college of nursing and patients with cancer from a selected hospital. Data was collected by administering a nursing student’s knowledge questionnaire on basic communication skills, patient perceived supportive ward atmosphere questionnaire, and nursing student’s communication skills observational checklist before and after the Communication Skills Training Program (CSTP) implementation.

Results: The result of this study showed that there is significant difference in the mean pre-test (18.90) and post-test (19.00) knowledge scores of the nursing students regarding basic communication skills, mean pre-test (9.10) and post-test (20.90) communication skills scores of nursing students, and mean pre-test (17.43) and post-test (42.30) perceived supportive ward atmosphere level scores of patients with cancer. There was no significant relationship between pre-test knowledge and communication skills of nursing students at 0.05 level (r =0.038, P<0.05). The findings showed a statistically significant association between pre-test knowledge of nursing students on basic communication skills and selected variables such as age (p=0.001, P>0.05) and order of birth (p=0.013, P>0.05). The chi-square value showed that there was no significant association between pre-test communication skills of nursing students and selected variables such as age and order of birth.

Conclusion: Training the nursing students in specific communication skills during their nursing course can help them to learn and practice the skills in order to provide the quality nursing care through their effective communication with patients. Majority of nursing students were having the good theory knowledge about the communication, but they are least in effective communication skills. Communication skills training program was effective in terms of gain in knowledge, skills among nursing students, and also it was effective to provide supportive ward atmosphere perceived by patients with cancer.

Keywords: Evaluation, Communication Skills Training Program (CSTP), Supportive Ward Atmosphere, Nursing Students: Patients with Cancer.
INTRODUCTION

Communication is a very important aspect of human life without which we cannot survive in this world. For each and every purpose, we have to communicate with one or another. It plays a very important role in human life. It is not only the essence of being human, but also a vital property of life.

As we know, we communicate within ourselves more than what we communicate with others. But personally and professionally, how much we communicate with our family members, friends, patients, colleagues, and with our society? We, the humans, have a natural tendency for relational connection which includes an ideal of care and responsiveness, in that there is a value for the power of human contact and connectedness. The attention applied in a nursing context includes the provision of comfort, support and communication through touch, guiding patients in coping with the consequences of illness for their lifestyles, and interpretation of the illness by encouraging patients to express themselves so as to understand them better. Research evidence indicates that ‘a willingness to listen and explain’ is considered by patients to be one of the essential attributes of a health professional. It is therefore vital that health professionals communicate effectively with patients.

Communication between nurses and patients is the basis of the therapeutic relationship upon which successful healthcare depends. Nurses must communicate effectively to meet the needs of their patients, seek out information, and deliver individualized nursing care. Majority of the studies tell that nurses have poor communication and less contact with the patients, and this is because of workload, stress, lack of communication skills, inadequate training during nursing education etc. Communication skills are the cornerstone of the patient-provider relationship in cancer care. Lack of these skills can diminish patient disclosure, increase patient anxiety, and decrease satisfaction with care.

Communication is one of the most important aspects of nursing care in an oncology setting. The emotional load in cancer nursing makes interactions between nurses and patients difficult. Research shows that nurses’ communication exhibits more negative or blocking features than positive facilitative ones during interactions with cancer patients. These blocking behaviors are characterized by overwhelming patients with medical information, failing to establish what patients understand about their illness and treatment, an overwhelming concern with the physical care and treatment problems, use of closed questions, not being able to assess problems and concerns, and not being able to get patients to disclose. These findings seem to disclose an imbalance in nurses’ performance of both types of communication behaviors: nurses’ affective communication is virtually entirely absent. This is mainly due to lack of adequate training in communication skills during the learning period of nursing staffs.

Communication is a concept that is integral to nursing education, theory development, and practice. If communication is not learned skillfully during the time of nursing education, the practice will be ineffective in clinical setting. So learning communication for nursing students is most important during the time of their nursing course.

Evidence is accumulating that effective interpersonal relationship helps people cope with cancer. Investigators have reported that supportive interpersonal relationships are associated with better survival rates, higher level of psychosocial adjustment, and fewer fear of recurrence. Within the supportive relationships, therapeutic communication plays a major role in helping patients cope with the effects of cancer.

Many nurses acknowledge that their nursing practice is hampered by inadequate teaching about communication skills during their nursing education. Ineffective communication has negative effects on patient care and causes stress when nurses interact with each other, with medical colleagues, with patients and their relatives. Many senior nurses teach junior staff about communication and feel uncertain about their competence to do so despite recognition of its importance.

With this perspective, the present study has been conducted to evaluate the communication skills training program for nursing student to develop supportive ward atmosphere during care of patients with cancer.

MATERIAL AND METHOD

Research approach

An evaluatory approach with one group pre-test post-test design was adopted
Setting of the study

The study was conducted in male and female general oncology wards of Father Muller Medical College Hospital, Mangalore

POPULATION

In present study, the population was Nursing Students and Patients with Cancer.

Sample and sampling technique

A dyad sample comprised of 30 Nursing Students from 2nd and 3rd year B.Sc Nursing and 30 patients with cancer.

Systematic random sampling technique used for selecting the nursing students and purposive sampling technique was used to select the patients with cancer.

Data Collection Instrument

The instruments used for this study were:

1. Baseline proforma of nursing students and patients with cancer
2. Nursing students’ knowledge questionnaire on basic communication skills.
3. Nursing students’ communication skills observation checklist (SEGUE).
4. Patient perceived supportive ward atmosphere questionnaire.
5. Development of the Communication Skills Training Programme (CSTP)

METHOD OF DATA COLLECTION

<table>
<thead>
<tr>
<th>Number of days</th>
<th>D-1</th>
<th>D-2, 3, 4</th>
<th>D-5, 6, 7</th>
<th>D-8, 9, 10, 11, 12</th>
<th>D-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activities</td>
<td>Pre-test for nursing students and for Patients with Cancer</td>
<td>Pre-clinical postings for nursing students to communicate with Patients with Cancer.</td>
<td>Administration of Communication Skills Training Programme (CSTP) for nursing students (CSTP)</td>
<td>Post-clinical postings for nursing students to communicate with Patients with Cancer.</td>
<td>Post-test for nursing students and for Patients with Cancer</td>
</tr>
</tbody>
</table>
<pre><code>                   | Assessed with Nursing students’ knowledge questionnaire on basic communication skills and Patient perceived supportive ward atmosphere questionnaire | Assessed with observation checklist (SEGUE) | | Assessed with Nursing students’ knowledge questionnaire on basic communication skills and Patient perceived supportive ward atmosphere questionnaire | |
</code></pre>

Teaching Strategy used in CSTP

The investigator conducted two days of workshop on basic communication and cancer Communication Skills by using different teaching aids. On the 3rd day, participants were asked to play the role play on specific clinical situation in cancer communication such as breaking bad news, follow-up, transition to palliative care, and end-of-life care.

The scripts of role plays were given to the participants on the first day of CSTP. The role plays were recorded by using the digital video camera, the immediate feedback was given to the actors by showing them the recorded videos along with the feedback given by other participants who were watching the role plays. Role plays were replayed to make the corrections until it was done better.
Findings

1. The mean post test knowledge score \((x_2 = 19.00 \pm 1.114)\) was higher than the mean pre-test knowledge score \((x_1 = 18.90 \pm 1.322)\).

The computed ‘t’ value \((t_{29} = 0.44)\) is less than the tabled value \((t_{29} = 1.70, P<0.05)\). Hence null hypothesis was accepted and research hypothesis was rejected and is inferred that the Communication Skills Training Program (CSTP) was not significant statistically on knowledge level.

2. The mean post test Communication Skills score \((x_2 = 20.90 \pm 2.998)\) was higher than the mean pre-test Communication Skills score \((x_1 = 9.10 \pm 2.964)\).

The computed ‘t’ value \((t_{29} = 17.39)\) is higher than the tabled value \((t_{29} = 1.70, P<0.05)\). Hence null hypothesis was rejected and research hypothesis was accepted and is inferred that the Communication Skills Training Program (CSTP) was effective.

3. The mean post test Supportive Ward Atmosphere level score \((x_2 = 42.30 \pm 5.885)\) was higher than the mean pre-test Supportive Ward Atmosphere level score \((x_1 = 17.43 \pm 6.821)\) perceived by patients with cancer.

The computed ‘t’ value \((t_{29} = 15.16)\) is greater than the tabled value \((t_{29} = 1.70, P<0.05)\). Hence null hypothesis was rejected and research hypothesis was accepted and is inferred that the Communication Skills Training Program (CSTP) was effective.

OTHER FINDINGS

There was no significant relationship between pre-test knowledge and communication skills of nursing students at 0.05 level \((r = 0.038, P<0.05)\). The findings showed a statistically significant association between pre-test knowledge of nursing students on basic communication skills and selected variables such as age \((p=0.001, P>0.05)\) and order of birth \((p=0.013, P>0.05)\). The chi-square value showed that there was no significant association between pre-test communication skills of nursing students and selected variables such as age and order of birth.

DISCUSSION

1. On Communication Skills of nursing students

A study reflected to evaluate a 3-day Communication Skills Training Programme (CSTP) to 308 cancer nurses as part of degree/diploma courses. The method used was audiotape nursing assessment with patients undertaken before and after the CSTP. The results were mean post training (16.33) communication skills score was higher than the mean pre training (10.47) communication skills scores.

In the present study, the audiotape nursing assessment with patients was not taken before and after the CSTP. Instead of audiotape, the researcher had observed the communication skills of nursing students with patients with the help of standardized communication skills observation checklist (SEGUE checklist) before and after the Communication Skills Training Programme (CSTP).
2. on patient perceived Supportive Ward Atmosphere level

A study was conducted in Canada on a communication intervention for the nursing staff in chronic care. The findings of the study indicates that the brief, focused intervention on communication skills had a statistically significant influence on all five components of the interaction i.e., introduction (24.00), care (71.22), feeling/perception (46.25), social conversation (23.16). All the areas of communication were statistically significant which shows that communication training was effective on nurses.

Another study on assessing the efficacy of communication skill training on patients’ psychological distress and coping showed that support by nurses who completed the CST programme was found to reduce psychological distress and improved coping long term among patients informed of their cancer diagnosis.

The above study mainly focused on the psychological distress and coping among patients with cancer, but the present study focused on overall support for the patient which was provided by the nursing students through their effective communication skills.

In another study conducted in the UK on “SAGE & THYME: A model for training health and social care professionals in patient-focused support” a model was developed to teach in a three-hour workshop and to assess the impact of that training on a wide range of health and social care staff for addressing the emotional concerns of patients with cancer or their caregivers. The model (SAGE & THYME) consisted of nine steps and the purpose of the model is to enable staff of all grades and roles to fulfill the most important objectives of support.

The model which had used in the above study that is SAGE and THYME (Setting, Ask, Gather, Empathy, Talk, Help, You, Me, and End) was used in the present study to teach cancer Communication Skills in other way by the name SPIKES(Setting, Perception, Invitation, Knowledge, Emotions, and Summary).

3. Teaching strategies used in CSTP

The teaching strategies used in present study are,

- Lecture cum discussion
- Video clips related to communication techniques
- Role play
- Audio-video recording
- Peer group observation and feedback

A study was conducted on setting the stage for clinical simulation: developing an introductory video. The 5-min video was filmed with participants portraying the patient and members of the healthcare team in an actual hospital setting. The roles, script, and props were carefully chosen to correspond with the objectives clinical simulation, involving comfort care and communication.

Another study conducted on using on-line video clips to enhance self-efficacy toward dealing with difficult situations among nursing students. The video clips were designed to enhance and compliment the content of the module ‘Communication and Customer Care’.

A study conducted on First-year medical students’ assessment of their own Communication Skills: A video-based, open-ended approach. In this study the researcher used SEGUE Framework to outline essential communication tasks and provides an opportunity for students to work on advanced Communication Skills such as breaking bad news and counseling for health promotion. All interactions were recorded on a digital video, and students viewed their videos each week and improved their communication skills.

In the present study, researcher had used the same SEGUE framework as observation checklist to assess the communication skills of nursing students, but the observations were not recorded and showed to the participants.

INTERPRETATION AND CONCLUSION

The findings of this study support the need for specific communication skills training program to improve the communication skills of nursing students to practice in clinical settings and to enhance supportive nursing care for the patients to whom they will care. Training the nursing students in specific communication skills during their nursing course can help them to learn and practice the skills in order to provide the quality nursing care through their effective communication with patients, family members, and other healthcare professionals. Majority of nursing students were having the good theory knowledge about the communication, but they are least in effective
communication skills. Communication skills training program was effective in terms of gain in knowledge, skills among nursing students, and also it was effective to provide supportive ward atmosphere perceived by patients with cancer.

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The effectiveness of Video Teaching over Lecture Cum Demonstration in Improving Knowledge and Skill, of Nursing Students on Antenatal Examination

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ABSTRACT

Background: Pregnancy is a creative and productive period in the life of a woman. It is one of the vital events, which needs special care from conception to postnatal period. The joyful experience of the pregnancy is not always joyful. The objective of prenatal care is to assure that every pregnancy culminates in the delivery of a healthy baby without impairing the health of the mother. It is also focused to prevent or detect at the earliest and to treat any untoward complications that may arise during pregnancy. Most women pass through the period with specific assessment, supportive measures and encouragement. Life threatening conditions place the woman and fetus at risk for significant mortality and morbidity

Objectives: To develop and validate a video teaching programme on antenatal examination and to find the effectiveness of video teaching over lecture cum demonstration on antenatal examination for the third year nursing students.

Materials and methods: From the 94 third year B.Sc. nursing students 60 students were selected randomly. They were again randomly selected in to experimental (n=30) and control (30) groups respectively.

Results and conclusions: Administration of video to the experimental group (n=30) and lecture cum demonstration to the control (n=30) revealed that there was significant difference in the pre and post test knowledge scores within experimental and control groups at 0.001 level of significance there was gain in knowledge in all areas in both the groups there was no significant difference in pre and post test knowledge scores between groups. The study has found enough evidence to conclude that video teaching is an effective method of teaching the students.

INTRODUCTION

More than 500,000 women die of childbirth every year worldwide. One woman dies and twenty others suffer from injury or disease because of child birth every minute. Of these India alone accounts 000 maternal deaths every year, with an overall maternal mortality rate of 407 per 100,000 live births. The rate varies from state to state, being highest in Uttar Pradesh (707) and Rajasthan (677) respectively, and lowest in Tamil Nadu (76) and Gujarat (29) respectively. The maternal health program, a component of the reproductive and child health program aims at reducing maternal mortality to less than 180 by the year 2010 by the provision of essential and emergency obstetric care, facilitating referral transport, safe abortion, and the detection and treatment of reproductive tract infections. ².

The wealth of the nation is its healthy population. Today’s children are tomorrow’s citizen who should be healthy. The mother’s contribution in creating a healthy population is beyond explanation. Hence the mother must be prepared physically, emotionally and socially to bring forth a healthy child. The midwifery contributes to the health care needs of the antenatal mother by maintaining the quality of services rendered. The purpose of antenatal nursing services is to provide for safe delivery and thereby prevent maternal and infant mortality. The identification of a high-risk mother, fetus, neonate and family or a combination of these, is an essential component of comprehensive prenatal assessment, in that it clears the way for proper client.
MATERIALS AND METHOD

The study was carried out in January 2008. Antenatal examination is in the syllabus of the nursing students and it is an important procedure to be learned, in the practical life to prevent the complications and save the life of the mother and the infant.

There were 94 students in the third year B.Sc. nursing class, 60 were selected for the study. The simple random method was adopted to select the sample, 30 in experimental group and 30 in control group. An evaluative research approach was adopted for this study, since the present study aimed at determining the effectiveness of video teaching programme over lecture cum demonstration in improving the knowledge and skill of nursing students on antenatal examination. In Comparative evaluation, assessment is made about the relative worth of two or more programmes or procedure. This study aimed at comparing two methods of teaching, namely the lecture cum demonstration and video teaching therefore an evaluative research approach was considered suitable for assessing the effectiveness of the programme.

To achieve the objectives of the study a randomized controlled trial design was adopted. The subjects were randomly selected for experimental and control group, using ‘hat’ technique. The pretest knowledge was assessed on day one and the same day lecture cum demonstration method of teaching on antenatal examination was delivered to the control group the video teaching was given to experimental group were also observed with an observational checklist for skill assessment as well as post test knowledge scores with in and between groups where as gain skill scores were computed only between groups.

Due to non-availability of relevant standardized research instrument, the researcher felt the need to construct a new tool based on the study objectives. The tool was developed by the investigator after reviewing related research studies and discussion with the experts in the various related fields.

The knowledge questionnaire on antenatal examination was developed to assess the knowledge of third year B.Sc. nursing students on antenatal examination. The questionnaire included 40 items among which twenty were multiple choice questions and twenty were true or false questions. A score of one is allotted to each correct response. The highest possible score was 40. The knowledge score were arbitrarily classified as poor (<35%), satisfactory (35-70%) and good (>70%) respectively.

An observational check list was developed to measure the skill of third year B.Sc. Nursing students on antenatal examination. The observation check list has 40 items which consist of preparation of patient and environment, inspection, palpation and auscultation of the abdomen and recording. A score of one is allotted to each correct procedure.

The observational checklist on antenatal examination was given to same experts. And there was 100% agreement for all the 40 items.

RELIABILITY

The reliability was done using inter rater reliability method on 20 students. And r was computed using Pearson’s product moment formula, r =1, the tool was found to be reliable.

DATA ANALYSIS

For data analysis and interpretation, the data was categorized and analyzed based on the objective of the study. The SPSS package (11.5 versions) was used for the analysis of the data. Descriptive statistics (frequency and percentage) was used to identify the sample characteristics. Chi-square test was used to test the association between pretest knowledge scores and selected background variables; post test skill scores and selected background variables. Mann-Whitney test and Wilcoxon sign rank test was used to find the effectiveness of the teaching methods both within and between groups.

RESULTS

Majority of the students were between the age group of 18-20 years; (81.67%) were females (91.67%) and Christians (90%), Very few (10%), of experimental group students had exposure to mass media compared to 33% in the control group, 43.3% of the experimental group had previous experience of taking care of a pregnant women whereas about 66.7% had the previous experience in the control Group. Distribution of sample based on their pre and post test knowledge scores revealed that the experimental group exhibited prior good knowledge compared to the control group. There was gain in knowledge in all areas in both the groups. There was significant different in the pre and post test knowledge scores within experimental and control groups at 0.001 level of significance. There was
no significant difference in pre and post test knowledge scores between groups. 100% of the sample exhibited above 70 percentage in post test skill scores. There was no significant difference in the post test skill scores of experimental and control groups.

**DISCUSSION**

The current study showed gain in knowledge related to antenatal examination in both methods of teaching namely lecture cum discussion and video teaching. There was gain in knowledge in all areas of antenatal examination in both the groups. There was significant gain in the pre and post test knowledge scores within experimental and control groups at 0.001 level of significance. There was no significant difference in the post test skill scores among experimental and control groups.

It was found that video teaching program was equally effective though it was expected of the experimental group to show a significant gain in their knowledge and skill scores compared to the control group. This can be explained with the following reasons. Though the video was made available for the experimental group for a period of one week, between the pre and post tests, none of the students utilized the facility. This might have been due to their eight hours clinical posting in various specialty areas and lack of interest for the subject since there is not university examination for this academic year.

**CONCLUSION**

Video as well as lecture cum demonstration were equally effective in improving the knowledge and skill of nursing students on antenatal examination. 100% of the sample in the experimental group, exhibited above 70 percentages in post test skill scores. Video teaching is equally effective as lecture cum demonstration method in improving the knowledge and skill of the nursing students. The pretest knowledge scores of third year nursing students were independent of their previous experience, previous knowledge and exposure to mass media on antenatal examination. The post test skill scores of third nursing students were independent of their previous experience, previous knowledge and exposure to mass media on antenatal examination.

**ACKNOWLEDGMENT**

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Effectiveness of Educational Intervention of Women's Participation in Cervical Cancer Screening by Acetic Acid Application on the Cervix Versus Pap Smear for Screening Precancerous Cervical Lesions

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ABSTRACT

Globally cancer is a major public health problem, one out of 10 deaths occur due to cancer. Worldwide cervical cancer comprises 12% of all cancers in women of the 4, 66,000 cases, estimated to have occurred in the year 2009-developing countries account for 3, 70,000 cases. Around 2, 31,000 women die of cervical cancer every year in the world and over 80% of whom live in developing countries. South East Asia contributes about 25% of the total disease burden.

Cancer of the cervix is the most common cancer among women in India. It has been estimated that 100,000 new cases of cancer of the cervix occur in India every year & 70% or more of these are stage III or higher at diagnosis. This clearly indicates the lack of awareness and facilities for cervical cancer screening in India. In countries like India where a huge section of the population live below poverty line and where awareness among women for cervical cancer control and treatment remain very limited even years after implementation of the national cancer control programme in 1975, and the recent breakthrough in the global war against cervical cancer does not seem to have much impact.

Hence, there is a necessity to bring awareness among women regarding cervical cancer screening which can improve the health seeking behavior by making them to undergo screening. Visual Inspection with Acetic Acid (VIA) is of particular interest to developing countries because it is less expensive and only requires supplies which are locally obtainable and can be competently performed by non-physicians.

Design: The study was conducted in two phases. The I phase was conducted as one group pre and post test only design.

Experimental approach of repeated measures design was used in the II phase of the study.

Setting: Setting of the study was selected villages in Puducherry covered by Villianur Health Center and Community Health Centre, Mannadipet And Thirubhuvani.

Participants: 520 women under the age group of 35-55years from the villages covered by Mannadipet Community Health Centre and Villianur Primary Health centre were selected by stratified simple random sampling with the help of the enumeration register maintained by the field staffs of the concern health centers.

Intervention: The knowledge of the women was assessed by giving pre test followed by teaching intervention (N=520). Educational intervention was given in the form of structured teaching and its impact was tested by giving post test within a week. The health seeking behaviour of the women was identified by their acceptance for screening (N = 204) They were provided with adequate privacy and consent was obtained. Pap smear was taken prior to VIA with the wooden spatula and the smear was spread on two glass slides and preserved in 80 % alcohol solution and was send to lab for analysis.

VIA was done by applying acetic acid over the cervix and the cervix was assessed after 1 minute for aceto white changes.
Measurements and tools: The structured questionnaire was utilized to assess the knowledge before and after health intervention during the I phase of the study. Collected data was analyzed by using descriptive and inferential statistics. Visual scale for color changes due to acetic acid application on the cervix was assessed with photographs was utilized during the II phase of the study.

Findings: The health seeking behavior of women of subjecting themselves for cervical cancer screening is increased by creating awareness by imparting educational intervention. Statistically there is no significant difference between VIA and Pap smear test. Hence VIA can be used as a primary screening method to detect precancerous cervical lesions.

Key Conclusion: Creating awareness by educational intervention will improve the health seeking behavior of making women by creating awareness to accept cervical cancer screening. VIA can be used as a primary cost-effective method to screen women for precancerous cervical lesion in a low resource setting.

Implications for clinical practice: Creating awareness by imparting health education will improve the health seeking behavior of women by making them to undergo cervical cancer screening. Statistical significance of VIA (visual inspection with acetic acid application) shows that it can be used as a primary method to screen precancerous cervical lesions. Further research is suggested to determine the effectiveness of VIA in screening cancer cervix.

Keywords: Educational Intervention, Visual Inspection with Acetic Acid(VIA), Pap Smear, Precancerous Cervical Lesions.

INTRODUCTION
Every 7 minutes one WOMEN IN india dies of cervical cancer

Women are the backbone of the society. Hence Government’s commitment to safe motherhood program is within the wider context of reproductive health. Over the past decade, the global health community had been giving increased attention to the importance of addressing cervical cancer prevention where the disease burden is greatest and the second cause for mortality among women.3

In most developing countries, there has been no success to develop a high quality service. Success of cervical cancer screening initiatives depends on high participation of the target population, which in turn is determined by the women’s perceptions, health orientation and socio cultural issues. Modification of health seeking behavior through education is essential for a population based cervical screening program to succeed in India due to operational difficulties by Pap smear alternative screening methods could be more effective.2

NEED FOR THE STUDY
It has been proved beyond doubt that during the course of the development of the disease, there is a sufficiently large period, in which it is absolutely curable Precancerous changes and early cancers of the cervix have symptoms and women harbor the disease which is invisible to the keenest eye and undetectable to the most sensitive touch.4

Barriers to accessing Cervical cancer prevention services includes shyness, embarrassment, and shame about pelvic examinations, fear of pain on test results and also women concern about the cost of the screening test and transportation to the screening service, inconvenient appointment schedules and lack of partner support3. In the absence of any screening program, most of these women come to the Doctor at an advanced stage when hardly any curative management can be offered. Prevention is ideal but early deduction is most important for achieving cure for cancer cervix and thus reducing the Maternal Mortality rate.5

The demand for programs to combat cervical cancer is strong. All across the developing world, women’s health care providers regularly see women with advanced, incurable cervical cancer.6

The present study was taken to create health seeking behavior among women for cervical cancer screening and to find the effectiveness of VIA in picking up precancerous cervical lesions. All VIA positive were
further evaluated with Pap smear to confirm the precancerous cervical lesions to reveal the effectiveness of VIA.

**OBJECTIVES**

1) To assess the knowledge of women on cervical cancer screening before and after educational intervention.

2) To determine the association between the selected demographic variables and knowledge of women regarding cervical cancer screening.

3) To identify the health seeking behavior of women after imparting knowledge on cervical cancer screening.

4) To identify the precancerous lesions of cervix by visual inspection with acetic acid application and Pap smear test among women.

5) To associate the positive cases in both pap smear and acetic acid with selected demographic variables.

6) To find the concordance of visual inspection with acetic acid application with Pap smear in screening precancerous cervical lesions.

**RESEARCH HYPOTHESES**

**H1:** There will be significant increase in knowledge of women regarding screening of cervical cancer after educational intervention.

**H2:** There will be significant increase in health seeking behavior of women after imparting health education.

**H3:** There will be association between the positive cases in both Pap smear and acetic acid with selected demographic variables.

**H4:** There will be significant concordance between Pap smear test and acetic acid intervention in screening the precancerous cervical lesions of cervical cancer.

**MATERIALS AND METHOD**

**Research Design**

The study was conducted in two phases

**PHASE I:** The design chosen to assess the health seeking behavior of the women was a pre experimental of pre and post test only design.

**PHASE II:** The design chosen to assess the effectiveness of visual inspection with acetic acid over Pap smear in diagnosing the precancerous cervical lesions was a repeated measures design.

**SAMPLE**

The study sample comprised women of age group (30—55 yrs) who fulfilled the inclusive criteria, residing in the areas covered by community health centre of Villianur, Mannadipet & Thirubhuvani.

**Development and Description of the Tool**

The tool was developed after extensive review of literature, internet search and experts advice which helped the investigator to select the most suitable visual scale for assessing the cervical changes after acetic acid application.

Tool constructed in this study was divided as follows:

**PHASE I**

**Part A:** Demographic Variables of the Mother.

(i) General information of the mother—4 Items.

(ii) Obstetrical data of the mother—13 Items.

(iii) Nutritional data of the mother—4 Items.

**Part B:** A structured multiple choice questionnaires to assess the level of knowledge regarding signs & symptoms, early detection, prevention & and willingness to undergo cervical cancer screening.

**PHASE II**

Visual scale for color changes due to acetic acid application with photographs was used in this phase of the study.

**Score of**

(1, 1) positive both VIA and Pap smear are positive.

(0, 0) Negative both VIA and Pap smear is Negative.

(1, 0) false positive only VIA was positive and Pap Smear is Negative.

Content validity was achieved based on the opinion of 5 medical experts and nursing experts. Reliability of the tool was also established based on the pilot study findings.
FINDINGS

Findings of the study were discussed based on the objectives.

The two objectives

1) To evaluate the effectiveness of health intervention on knowledge of women regarding early detection and prevention of cervical cancer.

2) To determine the association between the selected demographic variable and the knowledge of women on cervical cancer.

The whole sample reveals a drastic increase in knowledge after health intervention. Among the sample by occupational status there is raise in the level of knowledge with 90 percent portraying the effect of education.

On comparing the pre and post test scores with the risk factors like across the age at marriage, duration of married life, number of sex partners, contraception usage, history of abortion, and number of gravida there is significant increase in knowledge for all the groups after teaching intervention. The mean differs by more than 55 percent when comparing the pre and post test. Thus the research hypotheses (H1) that there will be significant increase in knowledge of women regarding cervical cancer screening after health intervention are proved.

The third objective was to assess the health seeking among women after imparting knowledge on cervical cancer screening.

This has been proved by Wilcoxon matched pair test with the raise in mean value significant at 1% level for all the subjects. This is an evidence to show that health seeking behavior can be increased by providing awareness through health education. Hence the research hypotheses (H2) that there will be significant increase in health seeking behavior of women after Educational intervention across the selected variables is proved.

The fourth objective is to identify the precancerous lesions of cervix by visual inspection with acetic acid application and Pap smear test.

Assessment revealed screening using VIA and Pap smear showed positive correlation at 5% level for all the groups. The majority of women 92 (92%) had negative results for precancerous lesions and 8 (8%) had positive results for precancerous lesions with Pap smear test.

The fifth objective was to associate the positive cases in both Pap smear and acetic acid with selected demographic variables.

Statistically no significant association was found with positive findings of both Pap smear and VIA with selected demographic variables, obstetrical data and nutritional status as income, gravida and weight.

Statistically high level of association was found with demographic variables like age at p<0.001 level. Statistically high level of association was found with obstetrical data and nutritional status such as duration of married life and nutritional deficiency at p<0.001 level. Statistically moderate level of association was found with obstetrical data like history of contraception at p<0.01 level.

Hence the research hypothesis H3, stated that, “there will be a significant association of positive findings of pap smear test and VIA with selected demographic variables” was retained.

This study reveals that VAI was able to correctly pick up all 8 positive cases with Pap smear and did not show any false negative result. But 2 false positive cases were present. Hence VIA can be used as a primary screening tool for detecting precancerous cervical lesions.

The sixth objective was to find the concordance of visual inspection with acetic acid application over Pap smear test in screening precancerous cervical lesions.

The sensitivity has shown that 80 percent of cases detected as positive with cervical cancer by VIA is also detected by Pap smear method. That is 80 percent of the cases are true positive screened by both VIA and Pap smear method. Specificity provides evidence that all cases predicated as negative by VIA is also predicated as negative by Pap smear method (true negative) 98.98 percent diagnosed as negative by Pap smear method is true negative.

Hence the research hypothesis, H4 stated that, “there will be concordance between Pap smear test and VIA in screening precancerous lesions of cervix” was accepted.

CONCLUSION

The present study assessed the effectiveness of educational intervention in making the women to accept screening and the effectiveness of acetic acid application on the cervix over Pap smear test as a diagnostic tool for screening precancerous cervical lesions among women in selected villages of Puducherry. The results of 1 phase of the study concluded that awareness on cervical cancer screening will influence the health seeking behaviour by making the women to accept screening. The II phase of the study is accomplished by revealing that VIA show significantly similar results as that of Pap smear hence
it can be used as a primary screening tool and cost effective method which does not require any equipment or laboratory backup. It can also be practiced paramedical workers and nurses after proper training.

The investigator had derived from the study, the following implications, which are of vital, concern in the field of nursing practice, nursing education, nursing administration and nursing research.

The midwives have a vital role and greater responsibility in early detection and prevention of diseases among women in the community as the precancerous lesions approximately takes 7-10 years to develop into invasive cancer and help in reducing the morbidity of women due to cancer cervix. This can be facilitated by motivating the nurse midwives to have an in depth knowledge to differentiate the normal cervix from abnormal cervix, learn about the use of cost effective methods like VIA to screen cancer cervix, understand the importance of early detection of precancerous lesions to curtail the invasive cancer which have high mortality rate, develop skills to perform VIA without any medical assistance and educate the mothers on importance of cancer cervix screening to prevent the disease.

Conflict of interest

The investigator had derived from the study, the following implications, which are of vital, concern in the field of nursing practice, nursing education, nursing administration and nursing research.

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“Look backward with GRATITUDE
Upward with CONFIDENCE
And forward with HOPE”

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Effectiveness of Guided Imagery on Intensity of Pain and Quality of Life among Patients with Cancer in a Selected Hospital at Mangalore

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ABSTRACT

Pain continues to be a prevalent symptom experienced by cancer patients. Guided Imagery (GI), a cognitive behavioural pain management strategy, involves the use of one’s imagination which may modulate pain by distraction and improve the sense of wellbeing. This study aimed at finding out the effectiveness of GI on intensity of pain and Quality of Life (QoL) of patients with cancer. An evaluatory approach with one group pre-test post-test pre-experimental design used for the study. Thirty cancer patients aged between 20-70 years with pain ≥2 on Visual Analogue Scale (VAS) were selected using purposive sampling technique. GI was administered after the assessment of pre-intervention intensity of pain and QoL by using VAS, and Functional Assessment of Cancer Therapy - General (Modified) Scale (FACT-G) respectively. Intensity of pain was measured before and after intervention twice a day for 5 days and post-intervention QoL was assessed on fifth day evening after the intervention using the same tool. The mean post-intervention intensity of pain score was lower than mean pre-intervention intensity of pain score over a period of 5 days (p<0.05), both in the morning and evening. The mean post-intervention QoL score was higher than the mean pre-intervention QoL score (p<0.05). GI is an effective strategy in reducing the intensity of pain and improving the QoL of cancer patients. GI may be easily integrated into bedside nursing as well as in various clinical settings. GI is a low-cost method in relieving psychological and physiological distress.

Keywords: Cancer Pain, Guided Imagery, Quality of Life

INTRODUCTION

Cancer is a disease that poses a threat to many aspects of life. Caring for patients with cancer is one of the most significant tasks facing healthcare professionals today. One of the most debilitating complications of cancer is moderate to severe pain, calling for aggressive treatment.¹

Quality of Life (QoL) has become an important focus of oncology nursing practice and research because diagnosis and treatment of cancer often causes adverse side effects affecting the QoL. Issues related to QoL have been identified as among the top three priorities for research by oncology nursing society.²

Pain relief should be seen as part of a comprehensive pattern of care which encompasses the physical, psychological, social and spiritual aspects of suffering which is known as palliative care.³

In the inpatient setting, where patients are often admitted for management of uncontrolled symptoms or to receive treatments that may cause pain, such as surgery and chemotherapy and the incidence of pain is quite high.⁴ National guidelines for the treatment of cancer pain recommend the use of non-pharmacological strategies as adjuvant to analgesic medications to maximise pain relief.⁵

The management of pain includes pharmacological and non-pharmacological approaches as alternative therapies.¹ Some of the non-pharmacological approaches are relaxation, Guided Imagery, music distraction, acupressure, massage etc. The present trend in nursing profession attempts to encompass these approaches for pain relief.¹
GI, a cognitive behavioural pain management strategy, involves the use of one’s imagination to create mental images, using as many senses as possible, to alter the pain experience. GI may modulate pain, altering pain transmission and pain perception, by distracting attention from the pain stimulus, producing relaxation, or influencing mood or emotional context and it also improves the QoL. Practicing GI regularly helped in the reduction of intensity of pain and thereby improved the QoL of patients with cancer.

The role of the nurses are early detection and management of both physical and psychological symptoms and to use strategies that will empower patients to have a greater sense of control over their illness and treatment. This study being one of the attempts has considered examining the effect of GI as a complementary therapy to minimize cancer pain and improve QoL among patients with cancer.

MATERIALS AND METHOD

The study was done from 1st August 2008 to 23rd August 2008 in the male and female medical and surgical wards of the Father Muller Medical College Hospital, Mangalore. After obtaining the ethical clearance from the Institutions Ethical Committee, patients with cancer who fulfilled the inclusion criteria were identified. The inclusion criteria of the study were cancer patients with the age group of 20-70 years, pain intensity of ≤ 2 on VAS, pain may be due to either cancer or the treatment modalities, patients who were mentally sound and patients who could read and write in English, Kannada, or Malayalam. The exclusion criteria of the study were patients who had visual and hearing impairment as well as critical illness.

Pre-experimental, one group pre-test post-test design was adopted for this study. The sample for this study comprised of 30 patients with cancer who were selected by purposive sampling technique. The tools used were VAS and FACT-G (modified) scale.

Functional Assessment of Cancer Therapy – General (Modified) Scale (FACT-G):

FACT-G modified QoL Scale was used to assess the QoL of cancer patients. The items were developed under six different areas, namely: Physical wellbeing-7 items, Social and family wellbeing-7 items, Emotional wellbeing-6 items, Functional wellbeing-7 items, Spiritual wellbeing-9 items, and Financial wellbeing-6 items.

There was 100% agreement for QoL Scale. Pre-testing of tool was carried out followed by reliability of the tool which was established by administering the tool to 10 patients with cancer. The reliability of the QoL Scale was obtained by coefficient of internal consistency by split-half method. Karl Pearson’s Correlation Coefficient was used to find the reliability of the split half. Spearman Brown Prophecy formula was used to find out the reliability of the full test, and was found to be (r=0.97), which showed that the tool was reliable.

INTERVENTION

GI uses the power of imagination to evoke positive images to stimulate healing. It involves thinking in pictures to contact a person’s inner reality. In general, three categories of GI exist: stress reduction and relaxation GI; directed-active GI and insight-oriented GI. The investigator attended a training programme on GI conducted by Nursing Spectrum Career Fitness Online and obtained a certificate.

In this study stress reduction and relaxation GI was used. The investigator coaches the patient to vicariously see, hear, smell, taste, feel, sense, and/or experience in some way simple sensory phenomena in the imagined scene. The phenomena include seeing flowers, hearing bird’s song, sensing dappled sunlight, tasting fresh fruit, feeling the breeze, or smelling ocean air.

Permission was obtained to use the standardised GI material edited by Ms. Diana L. Tusek. The GI script was translated and recorded in both Kannada and Malayalam versions. There was 100% agreement regarding the recorded content and it was used for the study. The total duration of audio recording was 15 minutes each.

DATA COLLECTION PROCESS

The purpose of the study was explained to the selected subjects. Confidentiality was assured and written consent was obtained. A brief introduction about GI was given to the subjects. The subjects were asked to give the baseline information after which intensity of pain was assessed using VAS and QoL was assessed by using FACT-G modified scale.

Immediately after the assessment, the subject was made to lie on bed and comfort was ensured. This was
followed by administration of GI on individual basis for 15 minutes with the help of a recorded audio programme using head phones. The GI was administered to each subject for 5 days both in the morning and evening (10 sessions). Intensity of pain was assessed before and after the intervention during each session. QoL was assessed on the 5th day, on completion of the intervention. The collected data was analyzed using descriptive and inferential statistics.

RESULTS

The description of baseline characteristics are given in table 1. The data in Table 2, 3 and 4 shows that the mean post-intervention intensity of pain score is lower than mean pre-intervention intensity of pain score over a period of 5 days, both in the morning and evening. There was a significant difference (p<0.05) between the pre and post-intervention pain intensity by using VAS.

Table 1: Frequency and Percentage Distribution of Subjects

<table>
<thead>
<tr>
<th>Variable</th>
<th>(f)</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-30</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>31-40</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>41-50</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>51-60</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td>61-70</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>2. Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>22</td>
<td>73</td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>27</td>
</tr>
<tr>
<td>3. Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>13</td>
<td>43</td>
</tr>
<tr>
<td>High school</td>
<td>16</td>
<td>54</td>
</tr>
<tr>
<td>PUC</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>4. Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Unskilled</td>
<td>14</td>
<td>47</td>
</tr>
<tr>
<td>Professional</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Unemployed</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>Retired</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>House wife</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>5. Monthly income of the family (in Rs.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;2000</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td>2001-5000</td>
<td>13</td>
<td>43</td>
</tr>
<tr>
<td>5001-10,000</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>6. Duration of illness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than one year</td>
<td>18</td>
<td>60</td>
</tr>
<tr>
<td>1-2 years</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td>2-4 years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4-6 years</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>More than six years</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>7. Site of cancer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Lung</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Colorectal</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Head and neck</td>
<td>8</td>
<td>26</td>
</tr>
<tr>
<td>Others</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td>8. Present line of treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemotherapy</td>
<td>7</td>
<td>23</td>
</tr>
<tr>
<td>Radiation therapy</td>
<td>16</td>
<td>53</td>
</tr>
<tr>
<td>Chemo therapy and radiation therapy</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Surgery</td>
<td>5</td>
<td>17</td>
</tr>
</tbody>
</table>
Table 2: Pre and Post–Intervention Intensity of Pain Score from Day 1-5 for two sessions

<table>
<thead>
<tr>
<th>Day</th>
<th>Time of the Day</th>
<th>Pain Intensity</th>
<th>Pre-intervention</th>
<th>Post-Intervention</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>1</td>
<td>Morning</td>
<td>6.235.33</td>
<td>0.8580.922</td>
<td>4.433.57</td>
<td>0.9351.040</td>
</tr>
<tr>
<td>2</td>
<td>Morning</td>
<td>5.574.73</td>
<td>0.7740.691</td>
<td>3.973.13</td>
<td>0.7180.730</td>
</tr>
<tr>
<td>3</td>
<td>Morning</td>
<td>5.304.60</td>
<td>0.6510.675</td>
<td>3.802.83</td>
<td>0.9610.648</td>
</tr>
<tr>
<td>4</td>
<td>Morning</td>
<td>5.174.33</td>
<td>0.6990.711</td>
<td>3.472.67</td>
<td>0.9000.711</td>
</tr>
<tr>
<td>5</td>
<td>Morning</td>
<td>4.373.90</td>
<td>0.6150.548</td>
<td>2.772.23</td>
<td>0.6790.568</td>
</tr>
</tbody>
</table>

\( t_{29} = 2.045, p<0.05 *\) significant

Table 3: Pre and Post-Intervention Pain Intensity Scores on Daily Basis

<table>
<thead>
<tr>
<th>Day</th>
<th>Time of the Day</th>
<th>Mean</th>
<th>SD</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>MPIEPI</td>
<td>6.233.57</td>
<td>0.8521.040</td>
<td>16.521*</td>
</tr>
<tr>
<td>2</td>
<td>MPIEPI</td>
<td>5.573.13</td>
<td>0.7740.730</td>
<td>19.631*</td>
</tr>
<tr>
<td>3</td>
<td>MPIEPI</td>
<td>5.302.83</td>
<td>0.6510.648</td>
<td>26.262*</td>
</tr>
<tr>
<td>4</td>
<td>MPIEPI</td>
<td>5.172.67</td>
<td>0.6990.711</td>
<td>26.926*</td>
</tr>
<tr>
<td>5</td>
<td>MPIEPI</td>
<td>4.372.23</td>
<td>0.6150.568</td>
<td>23.028*</td>
</tr>
</tbody>
</table>

\( t_{29} = 2.045, p<0.05 *\) significant, MPI: Morning pre-intervention, EPI: Evening post-intervention

Table 4: Day 1 Morning and Day 5 Evening Pre-intervention Pain Intensity Scores

<table>
<thead>
<tr>
<th>Day</th>
<th>Time of the Day</th>
<th>Mean</th>
<th>SD</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Morning</td>
<td>6.234.37</td>
<td>0.8580.615</td>
<td>15.930 *</td>
</tr>
</tbody>
</table>

\( t_{29} = 2.045, p<0.0 *\) significant

Table 5: Pre and Post-Intervention QoL Score

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>QoL</td>
<td>75.40</td>
<td>148.60</td>
<td>25.515*</td>
</tr>
</tbody>
</table>

\( t = 2.045, p<0.05 *\) significant

The data in table 5 depicts that the mean post-intervention QoL score was higher than the mean pre-intervention QoL score. There was a significant difference (p<0.05) between mean pre and post-intervention QoL score.

Table 6: Area Wise Pre and Post-Intervention QoL Score

<table>
<thead>
<tr>
<th>Domain (Wellbeing)</th>
<th>Max. score</th>
<th>Mean ± SD</th>
<th>Mean percentage</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>28</td>
<td>7.60±4.81</td>
<td>27.27±1.015</td>
<td>22.534*</td>
</tr>
<tr>
<td>Social and family</td>
<td>28</td>
<td>14.6±3.18</td>
<td>19.9±1.24</td>
<td>10.358*</td>
</tr>
<tr>
<td>Emotional</td>
<td>24</td>
<td>8.17±4.41</td>
<td>23.9±0.305</td>
<td>19.790*</td>
</tr>
<tr>
<td>Functional</td>
<td>28</td>
<td>11.9±4.05</td>
<td>25.30±2.43</td>
<td>6.659*</td>
</tr>
<tr>
<td>Spiritual</td>
<td>36</td>
<td>24.7±5.33</td>
<td>35.73±0.640</td>
<td>11.428*</td>
</tr>
<tr>
<td>Financial</td>
<td>24</td>
<td>8.33±4.13</td>
<td>16.43±2.26</td>
<td>20.238*</td>
</tr>
</tbody>
</table>

\( t = 2.045, p<0.05 *\) significant

The data in Table 6 illustrates that the area wise mean post-intervention QoL score was higher than the area wise mean pre-intervention QoL score. There was significant difference (p<0.05) between area wise mean of pre and post-intervention QoL score.
Table 7: Correlation between Mean Post-Intervention Pain Intensity and the QoL Score

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean post-pain intensity</th>
<th>Mean post-QoL</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain intensityQoL</td>
<td>2.23</td>
<td>148.60</td>
<td>-0.249*</td>
</tr>
</tbody>
</table>

* Not Significant

The data in Table 7 reveals that there was no significant correlation ($r=-0.249$, $p<0.05$) between post-intervention intensity of pain and QoL score.

Chi- square values computed between first day morning pre-intervention intensity of pain and selected demographic variables like occupation, duration of illness, site of cancer and present line of treatment was not significant. There was a significant association between pre-intervention QoL and duration of illness ($\chi^2=3.906$, $p<0.05$).

**DISCUSSION**

The aim of the study is to find out the effectiveness of GI on intensity of pain and QoL of patients with cancer. Majority of subjects (73%) were in middle and older age group that ranged between 41 and 70 years. Cancer Fact and Figures 2007 reports that most cancer cases occur in adults who are middle aged or older. This indicates that subjects within the age group of 41-70 years have shown a high prevalence of cancer. Majority of the subjects (73%) were males. This finding is supported by the findings of studies conducted in the past which indicated that cancer is more prevalent among men.

Twenty six percent of subjects had cancer of the head and neck. This finding is supported by the findings of studies which showed that most common sites of cancer are head and neck. Majority of the subjects (53%) were on radiation therapy. The findings are supported by a study which suggested that majority of the subjects were on radiation therapy.

There were many studies conducted to assess the effect of GI on intensity of pain and the QoL among patients with cancer independently, whereas the present study was conducted to assess the effect of GI on both the outcome variables at a time.

The findings of the present study showed a significant reduction in post-intervention intensity of pain on daily basis as well as during each session. These findings are consistent with the findings previous studies. Hence, it was concluded that GI has immediate and cumulative effect in reducing the intensity of pain among patients with cancer.

There was a significant improvement in post-intervention QoL scores and the finding is consistent with the finding of another study where the QoL was significantly improved ($F=4.979$, $P<0.01$) and it was concluded that GI was effective in improving QoL of cancer patients.

Though the GI is effective in reducing the intensity of pain and improving the QoL of patients with cancer, there was no significant relationship between post-intervention intensity of pain and QoL score. These findings are consistent with the findings of another study, in which pain was not correlated with QoL.

The findings of the study showed that there was no significant association between the pre-intervention intensity of pain and selected variables. The intensity of pain and modality of treatment was not associated in this study and previous studies, whereas findings are inconsistent with the previous study in which intensity of pain is associated with the occupational status and site of cancer. The findings of this study are consistent with previous study in which QoL is associated with the duration of illness and not associated with age and sex.

**CONCLUSION**

The patients with cancer experiences moderate to severe pain as well as impaired QoL irrespective of their demographic variables. This study concludes that GI a complementary alternative therapy is very effective to reduce intensity of pain and improve QoL among patients with cancer.

**ACKNOWLEDGEMENT**

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Conflict of interest: Nil

**REFERENCE**

The efficacy of two Active Methods of Teaching on Students' Competency

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2MSc, Department of Midwifery, Toyserkan branch, Islamic Azad University, Toyserkan, Iran, 3Student research committee Jahrom university of Medical Sciences, Jahrom, Iran

ABSTRACT

Objective: This study compared two methods of scenarios with a real clinical setting and peer group feedback in students' knowledge and their performance.

Materials and Method: The study is an experimental study on 45 nursing students in the field of psychiatric. Two groups trained by scenario based learning and peer feedback in two stages of program as a self control.

Result: There were significant differences between mean score of students’ evaluation in two methods (p<0.05). Mean score of students’ knowledge & performance from peer assessment was statistically significant in both pre and post test (p<0.05).

Conclusion: Considering the result we strongly suggested using active method of teaching which is useful for clinical teaching in clinical ward.

Keywords: Peer Feedback, Scenario Base Learning, Clinical Skills, Knowledge, Performance

INTRODUCTION

Students must be able to analyze, interpret, and incorporate new information with existing knowledge and apply these competencies to solve novel problems. The last decade has witnessed rapid expansion in medical knowledge. Trends in medical education have shifted away from didactic teaching towards contextual or problem-based learning (PBL) which is justified by studies showing superiority of PBL in improving reasoning and communication skills.

In many colleges, integrating the affective domain and cognitive domain of learning provides some insights into the use of active learning, experiential learning theory (ELT), and the emerging use of appreciative inquiry (AI) to enhance the learning experience.

“Scenario-based learning is involves student in a situation or context and exposes them to issues, challenges, dilemmas and skills”.

This method uses “triggers” from the problem case or case-based training to define their own learning objectives.

The knowledge explosion has been accompanied by a decrease in didactic teaching. This educational paradigm has been led by widespread embracement of active learning, which was to improve students’ ability to solve the problem and identify the knowledge, competencies and skills.

Scenario-based teaching is feasible and useful teaching for exposing students to the complexity of real-life problems. This approach beyond traditional boundaries may offer considerable advantages in training for clinical procedures.

Michael & Shreeve and also Kneebone, et al; claim that Scenario-based learning improves below skills in students:

- Teamwork
- Critical evaluation of literature
- Chairing a group
- Self directed learning and use of resources
- Listening
- Presentation skills
- Recording
- Cooperation
- Respect for colleagues’ views.
Scenario-based teaching to improve students’ performance in a clinical environment is a feasible and useful method to promote their learning perceived by participants. This approach blurs traditional boundaries between skills laboratory teaching and clinical practice and may offer considerable advantages in training for clinical procedures.

This method requires the ability to process and discuss ideas and learn independently, hence students who have significant deficiencies in communication are more likely to be unsuccessful in a PBL program.

Wood (2003) claimed that the scenario branches in multiple directions are based on the learner’s responses. The learner gets feedback and he or she learns to influence the outcome by adjusting his or her behavior.

The Peer assessment is an excellent instrument to promote collaboration and feedback between students. It allows students to view, create, and discuss projects, papers, Web pages and other assignments. Individuals or groups can create documents. Instructors may specify that how much participants can comment on specific sentences, paragraphs, or the entire document.

Shin also reported that this method is a cooperative learning technique that promotes critical thinking, problem solving, and decision-making skills.

“Peer assessment using marks, grades and tests have shown positive formative effects on student achievement and attitudes. These effects are as good as or better than the effects of teacher assessment.”

The use of peer feedback in learning environment offers a number of distinct advantages including: “increasing the timeliness of feedback, providing potential learning opportunities for learner, reflection humanizing the environment and building community have the potential to increase the quality of discourse, which over time can lead to increased learning.”

Self and peer-assessment as potential learning opportunities are often considered together. They have several advantages. Peer assessment can help self-evaluation and feedback. By judging the work of peers, students gain insight into their own competencies. “Peer and self-assessment help students to develop the ability of making judgments and a necessary skill for study and professional life.”

Some of the research identifies two distinct types of peer assessment; the peer assessment of product and the peer assessment of performance (also referred to as the peer assessment of process). Peer assessment of product is where students assess other students’ work: either a finished product, in case of summative assessment, or a work in progress in the case of formative assessment. Hence peer assessment can be used formatively within a course.

This allows their peers’ products to illustrate potential positions which learners themselves could have taken up in producing the product. In other words, peer assessment often involves self-reference, allowing learners to determine standards for their own performances.

Present study aims to investigate the efficacy of two methods of peer assessment and scenario-based leaning on the promotion of nursing students, knowledge and performance in psychiatric field.

MATERIALS AND METHOD

This study is a comparative study on 45 nursing students. All of students were randomly divided into two groups and were trained by two methods of scenario based learning and peer group assessment or peer feedback. One group used the scenario from real scenarios or constructing scenarios by teacher. All the cases were discussed by students then they were evaluated by teacher and the last feedback was provided to students.

In scenario-based learning sessions to determine content students are asked to: ask students to share experiences about the subject event, describe desirable outcomes about content presented, share best practices or known instances of consistent achievement of the desired outcomes, create strategies expected to lead to successful outcomes.

Students in the second group were trained by peer group assessment. Peer Review is an excellent instrument to promote collaboration and feedback between students.

Teacher allows students to view, create and discuss about their selected subject.

In this way, the patient was presented by one of the students and students discussed the issues raised
by peers and peers provided feedback to each other. All of cases and methods of evaluation were similar in both groups. The students’ knowledge was evaluated by short question essay in both pre and post test stages and students’ performance was evaluated by standardized performance checklist which is written by teachers in pre and post test. Student’s scores calculated from 100.

Descriptive statistics as (mean and SD) and analytic statistics as a (Paired T-test and student T-test) were used for analyzing the result in SPSS software.

**OBSERVATION & RESULTS:**

Our results showed that 62% of students were female and 38% of them were male. The average age was 22. Other results showed that both methods of teaching increased students’ competencies in two aspects of students’ knowledge and performance. Other findings from student’s t-test revealed that there was a significant difference between the student’s mean scores on knowledge and performance in both methods (p<0.05) (Table 1).

This result showed that the mean score of students in peer group assessment was higher than of other group.

The difference between the mean score of students’ competency in knowledge and performance in the pre-test and post-test peer group assessment from paired t-test was statistically significant (p<0.05) (Table 2).

**Table 1: The comparison student knowledge and performance from two method of scenario based learning and peer group assessment .**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Peer group review (n=23)</th>
<th>Scenario base learning Variable (n=22)</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>posttest</td>
<td>pretest</td>
<td>posttest</td>
<td></td>
</tr>
<tr>
<td>Student’s knowledge from diagnosis, disease and management</td>
<td>69.70± 4.36</td>
<td>88.86±5.52</td>
<td>71.32±3.55</td>
<td>75.88±4.47</td>
</tr>
<tr>
<td>Students’ Performance from diagnosis, disease, and management</td>
<td>22.01±2.31</td>
<td>55±6.32</td>
<td>16±2.31</td>
<td>18±2.31</td>
</tr>
<tr>
<td>Students’ knowledge from communication, and patient education</td>
<td>58.15 ±3.74</td>
<td>70.36±4.51</td>
<td>54.88±3.55</td>
<td>55.31±3.2</td>
</tr>
<tr>
<td>Performance from communication, and Patient education</td>
<td>42.60±4.20</td>
<td>55.87±4.90</td>
<td>37.45±2.78</td>
<td>37.75±2.85</td>
</tr>
</tbody>
</table>

**Table 2: Differences mean score of students in peer feedback pretest- post test**

<table>
<thead>
<tr>
<th>Variable</th>
<th>pre-test</th>
<th>post-test</th>
<th>T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ Knowledge from diagnosis, disease</td>
<td>69.70±4.36</td>
<td>88.86±5.52</td>
<td>-3.93*</td>
<td>0.001</td>
</tr>
<tr>
<td>Students’ Performance from diagnosis, disease, and management</td>
<td>22.51±2.32</td>
<td>55±6.32</td>
<td>2.88**</td>
<td>0.01</td>
</tr>
<tr>
<td>Students’ knowledge from communication, and patient education</td>
<td>58.15±3/74</td>
<td>70.35±4.50</td>
<td>3.27***</td>
<td>0.002</td>
</tr>
<tr>
<td>Students’ performance from communication, and patient education</td>
<td>42.60±2.40</td>
<td>55.87±4.90</td>
<td>2.66***</td>
<td>0.002</td>
</tr>
</tbody>
</table>

**DISCUSSION**

There was a significant difference between the student’s mean scores on knowledge and performance in the two methods (p<0.05). The mean score of students from peer group assessment in students’ knowledge and performance was higher than scenario-based learning. These results were approved by other studies.

A systematic review of problem-based learning (PBL) in undergraduate, pre-clinical medical education during 22 years of research consisting of 30 unique studies recently showed that PBL does not impact knowledge acquisition. Evidence for other outcomes does not provide unequivocal support for enhanced learning. 16.
Evidence for other results did not provide unequivocal support for enhanced learning.

Vernon stated that the disadvantages of PBL have been reported to be related to its increased cost and faculty time, lower levels of content-specific knowledge, decreased learning efficiency, etc.

Results showed that peer feedback is a sufficient method to develop students’ knowledge and performance in clinical ward. Many evidences approved this result and emphasized on positive aspect of this method on the students.

By involving students in the assessment, it allows teachers to gain an insight in the dynamics group and measure things that are not possible without student’s assistance. It has indeed been argued that tutor assessment of this type of work is not sufficiently valid and that students are better placed to assess their own or each other’s work.

Keith approved our result and reported that peer assessment is of adequate reliability and validity in a wide variety of applications. Peer assessment of writing and peer assessment of using marks, grades, and tests have shown positive formative effects on student’s achievement and attitude.

Another research reported that this method increased class participation and had a positive effect on student’s experience and perceived understanding of course material, as well as the social atmosphere during class discussions.

Some researchers recommended the combination method of clinical training to improve student learning such as Bryan, Krgch and et al; to understand the impact of peer interaction and collaborative learning on student’s self-efficacy beliefs and persistence in a distance education context.

The result showed significant difference between the mean score of students’ competencies in the pre and post-tests and peer group assessment was statistically significant (p<0.05).

Peer feedback significantly enhanced mastery of the original material. Furthermore, the student’s ability to solve novel problems was significantly enhanced following peer instruction, enhanced the mastery of the original material and enhanced meaningful learning and the student’s ability to solve novel problems.

Field, et al; agree with another research report that, trainers evaluated all aspects of peer assessment highly, including their post-training confidence in examination skills, self efficacy and indicates that the Peer assessment was effective.

Dannefer & Henson suggest that it is possible to introduce peer assessment for formative purposes in an undergraduate medical school program that provides multiple opportunities to interact with and observe peers.

Bruno & Martine described part of an investigation into the reliability and potential benefits of incorporating peer assessment into English language programs in his article. In contrast to other findings, it suggests that students had a less positive attitude towards assessing their peers’ language proficiency, but they did not score their peers’ language proficiency very differently from the other assessment criteria. The overall validity of peer assessment has mostly been evaluated by surveying participants and various studies find the assessment to be fair.

Obstacle suggested by Orsmond, Merry & Reilingis that peer assessment might be time-consuming for students and that they would object to this imposition. The time taken for the process is clearly dependent on the design of the system and is therefore largely in the hands of the course designer.

Lin et al also believe that, in comparison to traditional assessment methods peer assessment can be too demanding of students, too time consuming and criteria setting can be problematic.

Some of these researchers confirm our result and emphasize on positive impact of this method on students.

CONCLUSION

Considering the results obtained and the effectiveness of peer review in the student’s clinical skills, it is the strongest method of teaching as critical and cooperative learning skills. We strongly recommends that conducting this approach be practiced in clinical teaching.
ACKNOWLEDGEMENT

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REFERENCES

Effectiveness of Structured Teaching Programme on Contraceptive Methods in Terms of Knowledge of Women: a Community Based Interventional Study from Rural Haryana

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ABSTRACT

Aim: To assess and compare the knowledge regarding contraceptive methods among women before and after the Structured teaching programme (STP) in experimental and control group.

Methods: The present interventional study using pre-test post-test strategy was carried out in randomly selected two villages of district Ambala during December 2011. The sample comprised of 80 women selected through purposive sampling. Structured knowledge questionnaire was used for data collection. Knowledge was reassessed after imparting education to study subjects. Mean, standard deviations were calculated. T test was applied.

Results: The mean age of the women was 32.05 ± 3.21 years. 46% of the women were illiterate. Mean knowledge scores among women regarding contraceptive methods before and after the Structured teaching programme were 16.9 and 18.0 in the control group. Mean post test knowledge score of women was found to be significantly higher than the mean pre-test knowledge score of women in experimental group. (p<0.05)

Conclusion: The study concluded that the structured teaching programme was effective in terms of enhancing knowledge of women regarding contraceptive methods. The similar method can be adopted to enhance the knowledge as well as to improve the contraceptive practices under such communities.

Keywords: Interventional Study, Contraceptives, Women, Knowledge.

INTRODUCTION

Family planning is a matter of global concern. The world population is now at over 6 billion and growing rapidly. If current trends continue, one billion will be added to the world population every 13 or 14 years. Family planning programmes have failed worldwide miserably due to various factors low literacy, low educational attainment, low status of women, high mortality, fatalism, and religious beliefs.

Inadequate knowledge about contraceptive methods and incomplete or erroneous information about their use or where to procure them are the main reasons for not accepting family planning methods. Knowledge and practice of family planning is strongly related to higher level of education, to labour force participation, to fertility. Education is the prime influencing factor and affects the attitudinal and behavioral patterns of the individuals so it has a direct influence on fertility.

The low female literacy rate has had a dramatically negative impact on family planning and population stabilization efforts in India. Therefore the present study was planned to assess and compare the knowledge regarding contraceptive methods among women before and after the Structured teaching programme (STP) in experimental and control group.

MATERIALS AND METHOD

The present interventional study using pre-test post-test strategy was carried out in randomly selected...
two villages of district Ambala during December 2011. The study population comprised of 80 women (40 each in experimental and control group) selected through purposive sampling. Women in reproductive age group i.e. 15-45 years and those having one child were included in the study. The author of the study visited each household and conducted face-to-face interview with the eligible study subject using a structured questionnaire to conduct the survey.

The nature and purpose of the study was explained to each study subject and requested to participate in the study. Study subjects not willing to participate were excluded from the study. Written informed consent was obtained in the local language from every study subject before conducting each interview. To obtain consent, she read the contents of the consent information sheet out loud to each respondent, who was given the opportunity to ask the questions. It took an average of 20 minutes to complete one interview each time. Ethical committee approved the study.

Structured knowledge questionnaire was used for data collection. Structured Knowledge Questionnaire was prepared and the respondents were asked to respond to the questions regarding the contraceptive methods. The structured knowledge questionnaire comprise of 42 items related to knowledge regarding contraceptive methods the maximum score for structured knowledge questionnaire was 42. Every correct answer scored one whereas incorrect zero.

The broad content outline of structured teaching programme included concept of conception and contraception, need of contraception, different types of contraceptive methods including their advantages and disadvantages, special consideration while using contraceptive methods and different belief of women regarding contraceptive methods. Knowledge was reassessed after imparting education to study subjects.

The collected data was entered in Microsoft Excel. Coding of the variables was done. SPSS version 17.0 was used for analysis. Interpretation of the collected data was done by using appropriate statistical methods like mean, mean difference, standard error and t value. Pretest and Post test knowledge scores of women in experimental and control group were calculated.

RESULTS

Result of eighty study subjects was analyzed. The mean age of the women was 32.05 ± 3.21 years. Out of total, 46% of the women were illiterate, 17% were primary, 25% Matric and remaining 12% were intermediate / university.

Mean pre test knowledge score of women was 15.78 before the intervention as compared to 23.45 after the educational intervention i.e. Structured teaching programme in the experimental group. Mean knowledge scores among women regarding contraceptive methods before and after the Structured teaching programme were 16.9 and 18.0 in the control group. Mean post test knowledge score of women was found to be significantly higher than the mean pre-test knowledge score of women in experimental group. (p< 0.05) (Table 1)

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**Table 1: Pre-Test and Post –Test Knowledge Scores of study subjects in Experimental and Control Groups.**

**DISCUSSION**

In our study, the mean age of the women was 32.05 ± 3.21 years. As compared with the study of Donati et al who carried out a family planning KAP survey in Manipur state India, the mean age of the women was 33.60 years, which is comparable with our study. Regarding the educational level, most (46%) of the women were illiterate followed by 25% Matric. As compared with the study of Donati et al there were also 45.8% women illiterate, 25.86% were primary and 23.13% women were Matric / university, which is almost similar and comparable with our study.

Education has an impact on women’s reproductive desires and behaviors. Traditionally, it has been argued that women’s schooling may affect contraceptive use in a number of ways. The result demonstrated the poor knowledge and attitude regarding family planning among respondents which was in agreement with the study in the South-East Asia that showed low level of contraception methods information. Another study from Pakistan also showed that lack of knowledge about contraceptive methods can be a major obstacle in their use.

Another studies conducted in India reported that the higher fertility was attributed to universality of
marriage, lower age at marriage, lower level of literacy, poor level of living, and limited use of contraceptive and traditional ways of life.\textsuperscript{13,14}

It was observed in the present study that mean post test expressed practice score of women was significantly higher than the mean pre-test expressed practice score of women in experimental group. It is indicated that family planning education through this method had an impact on improving respondents’ knowledge.

Similar findings were reported in other experimental studies to evaluate the impact of Family Planning Health Education on the knowledge and attitude among Yasoujian Women findings showed that the mean scores of respondents’ differed significantly before and after intervention among experimental group and mean difference was 5.70, while the knowledge score of control group were not significantly different compare to the baseline.\textsuperscript{15,16}

It was observed in the present study that family planning education improved the experimental subjects’ attitude about contraception methods significantly. This may signify that any improvement in a person’s knowledge about something will ensue to a better attitude on it. However, the increase in the mean scores from 15.78 during the pretest to 23.45 during the post proves that family planning education can be a useful tool not just in improving a person’s knowledge but their attitude as well. This finding is in cohort with another study from Taiwan.\textsuperscript{17} Through the health education on family planning, negative attitude on family planning will be changed since promoting a more positive attitude on family planning is a vital step in the actual acceptance of family planning method by people.

The study concludes that the structured teaching programme was effective in terms of enhancing knowledge of women regarding contraceptive methods. Similar teaching tools can play a vital role in enhancing the knowledge and improving the contraceptive practices in such communities.

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REFERENCES


Simulation: a Teaching Strategy in Nursing Education for Safe Practice

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ABSTRACT
Nursing education has been constantly striving to keep in pace with the exponential growth in health care and greater emphasis on patient safety. Shortage of clinical placements, increased acuity of illness of patients and awareness of consumer rights have led nurse educators chose simulation lab as an alternative to clinical setting. The emergence and expansion of technology has given rise to the development of human simulators that foster features for depicting scenarios of various levels of intensity. Simulation enhances student learning in a stress free environment with reduced risks for safety actual patients. This paper presents a brief literature review related to simulation in nursing education, Types of simulators and its application, implementation of simulation scenario and role of simulation in enhancing student learning.

Keywords: Simulation, Scenario, Teaching Strategy, Critical Thinking, Debriefing, Nursing Education, Safe Practice

INTRODUCTION
Nursing care of patients in health care setting is increasing in its complexity day by day. In order to provide quality care, nurses need to apply precise patient assessment skills and act promptly with critical thinking and decision making. The health care environment is growing in its complexity with its treatment options and use of technology. Nurses are at the vanguard of patient care delivery, at the point of service, the sharp end, and therefore have the opportunity to not only mitigate risk and harm but also favorably impact patient care outcomes. Simulation gives opportunity for nursing students to practice their environment that is as close as possible to an actual clinical situation allowing them to ‘think on their feet, not in their seat’. It is the ideal non threatening environment for students to learn without anxiety/fear and develop confidence before ‘real life’ situation. Simulation is an instructional process that substitutes real patient encounters with artificial models, live actors or virtual reality patients. Simulated learning environment encourages learning through experimentation and trial and error with the ability to rewind, rehearse and practice without negative patient outcomes.

Literature review: Simulators in Nursing Education
As early as 1911 Hyland and Hawkins have documented the use of life size manikins to support learning, and became popular in 1950. The first simulator to teach physical examination to student nurses by name Mrs. Chase was introduced on 1950. In 1960 Harvey, a simulator to determine heart and lung sounds came up. By 1969 ‘sim-one’ the simulator that allows for practice of endo-tracheal intubation was introduced. Since then advances in simulators were taking place steadily. Rystedt and Lindstorm mention that use of simulators in nursing education has been increasing since 1980. Currently, some states in United States are allowing 25% of their clinical learning to occur in the simulation labs. Madhavan has stated that “simulation has emerged as the third leg in the stool of science and education.

The aim of simulation in nursing education is to ‘develop an environment that enables the learner to perform naturally to gain insight into the complexity of the actual workplace’ and enable “students to transfer their learning from the simulation laboratory to the clinical setting as they care for human patients”.
skill performance, learner satisfaction, critical thinking and self-confidence as major outcomes of simulation from a large multi method multisite study. Simulation as a strategy enhances novice nurse’s transition into the workforce. Simulation also allows for students to experience both good and bad aspects of working as a nurse with a patient. Simulation has also been used as a remediation tool with nursing students to allow for multiple opportunities in order to ensure proficiency in routine assessment of skills. Undergraduate nursing curricula across the world have embraced and widely incorporated this teaching learning tool. Research has shown simulation as a superior teaching tool to effect knowledge, critical thinking, and confidence, particularly in comparison with classroom lecture techniques.

The advantages of simulated learning is that it gives opportunity for the students to visually experience a crisis before it happens in a clinical setting. It gives opportunity for the students to reflect on their performance in a non threatening environment, gives scope for creating scenario’s that are rare and of high risk in nature. Simulation scenario provides opportunity to develop the nursing student’s ability to make decisions applying the principles of critical thinking. Wong and Chung used simulation as a teaching and learning method to develop diagnostic reasoning skills in pre-registration nursing students. They describe diagnostic reasoning as a component of clinical decision-making and involve the recognition of cues and analysis of data in clinical situations.

A systematic review of quantitative evidence published from 1999 to 2009 in major database for medium to high fidelity simulation using manikins in comparison to other educational strategies in nursing was carried out. Critical appraisal skills program was implemented to assess the quality of the studies. It narrowed the review to twelve experimental or quasi experimental research studies on simulation. The findings revealed simulation as a valid teaching learning method. Additional gains in knowledge, critical thinking ability, satisfaction or confidence were noted among the group that used simulation.

**Application of simulators in nursing curriculum**

Maran and Glavin, has defined fidelity as the degree to which the appearance and capabilities of the simulator resemble the appearance and function of the simulated system. Low fidelity simulators are life size manikins that can be used for task training such as hygienic care. Moderate fidelity simulators are non responsive in terms of physiologic response but can have functions like heart rate and lung sounds. High fidelity simulators can respond to student’s actions or missed actions such as cough and crackles sound in lungs with secretion, and stop coughing after suctioning. For teaching vital signs and assessment of heart and lung sounds a moderate fidelity simulator by name ‘Smart Man’ could be used. Teacher can change the physiological parameters and let students repeat procedures several times to acquire precision in their assessment skills. Low fidelity simulators which could be of great value in teaching advanced fundamental nursing skill is ‘Wound and Suture simulator’. Wounds, sutures and drains of different sizes, sites, types are depicted in this low fidelity simulator. This simulation will provide scope for assessing the application of principles of asepsis in wound care besides improving their organization of thought process.

Human patient simulators are the high fidelity simulators that are among the most recent technologic advances in instructional methodologies for medical and nursing education. These interactive mannequins are capable of realistic physiologic responses, including respiration, pulses, heart sounds, breath sounds, urinary output, and pupil reaction. Additionally, the more advanced models can communicate with the student, responding to questions posed by the learner in real time during the simulation exercise. ‘METI®’ a Human Patient Simulator developed by Medical Education Technologies Inc and ‘SimMan™’ by Laerdal™ are examples of high fidelity simulators.

In critical care nursing high fidelity simulators such as ‘Meti-Sim’ is used to simulate various types of shock, cardiac arrest, respiratory disorders etc. Critical care and advanced clinical competencies such as care of critically patient with multiple co-morbidities requiring insertion of a CVC line, intubation, measurement of central venous pressure etc could also be demonstrated. These simulators could also be used to teach and learn higher order nursing skills like drawing a sample for arterial blood gas analysis and endo-tracheal suctioning. Ability of the students to prioritize care based on assessment findings, incorporating the knowledge of anatomy physiology, pathophysiology, pharmacology and critical thinking, decision making and problem solving skills could be enhanced through carefully constructed scenarios. Application of ethical principles to resolve ethical dilemma such as withdrawing life support from a brain
dead patient, declaring ‘Do Not Resuscitate’ in a terminally ill patient could be taught and evaluated for advanced nursing students in the above scenarios.

**Building and Implementation of a Simulation Model Scenario**

The implementation of a simulation scenario involves three phases: Preparing a simulation scenario, Playing the simulation scenario and Debriefing (Figure 1).

**Preparing a simulation scenario.** The commercial simulators come with ready to apply simulation scenario. The teachers can prepare their own scenario to achieve the learning outcomes based on case studies and clinical experience. The preparation involves writing, brainstorming with the teaching team and validating the scenario, physical preparation of laboratory, simulator, and faculty capacity building. Rehearsing a simulation will help avoid surprises during the actual teaching. During this phase it is important to ensure that the teaching learning planned by simulation flows congruently with theory learning. Institutional guidelines relating to percentage of hours allotted for simulation has to be considered. It is a time consuming, intellectually draining phase involving cost in terms of material and professional hours.

**Playing the simulation scenario.** Students need to be orientated to the simulation as a method of teaching and learning, their expected role and learning outcomes. This will prepare them to suspend the reality and focus on learning from the scenario. The major process will involve presentation of chief complaints, followed by gathering of detailed or focused history of the patient, analysis of the data, prioritization of the care using critical thinking and problem solving skills, performance of psychomotor skills incorporating caring attitude and communication skills. Finally, evaluation of the patients’ condition against set objectives and appropriate documentation. Nursing skills such as insertion of a Naso-Gastric (NG) tube feeding, feeding via NG tube, and removal of a NG tube could be taught using low fidelity simulators. Scenarios can range from tube in position with acceptable residual feeds to, tube out of place and residual feed more than 50% of the previous feed. Such scenarios will help students exercise their assessment, critical thinking, and decision making skills. Communication skills and application of safety principles could be tested and enhanced simultaneously through a structured feedback mechanism called debriefing.

**Debriefing.** Debriefing is an instructor mediated reflection or discussion that follows every simulation exercise. During the debriefing, the instructor discusses the progress of the simulation, communication, and technical skill, incorporation of principles of patient safety whether or not patient outcomes were achieved. Reflection using video recording and peer evaluation can enhance the strength of learning during debriefing session. Dreifuerst described structure in the debriefing process as an empirical referent for best educational practices and suggested that structured debriefing requires a facilitator to guide students in reflection in order to promote higher-order judgment and reasoning, as well as meaningful learning through clinical reasoning. Debriefing is usually done after the session by the instructor and the students who are watching simulation. Self-assessment is the starting point with the student to reflect and comment on his/her performance. Negative comments are sandwiched with the positive comments. Acknowledgement is obtained from the student’s understanding and agreement upon the comments made. Remedial measures/tips on improvement are given.

![Fig. 1. Phases of implementing a simulation scenario and major steps involved in each phase](image)

**Enhancing Student learning using Simulation**

Simulation involves use of same psychomotor skill in different contexts/scenarios will enhance student’s ability to critically think and make decisions. For example, insertion of NG tube would be a nursing intervention for an unconscious patient, for a pre op patient and for treatment of ingested poisoning. The skill is same but the patient scenarios are different. Thus student is expected to gather information in the light of the scenario, think critically and make decision
about the set of nursing intervention to be carried out. The implementation of communication and caring skills will change from one scenario to other. The unconscious patient cannot respond but can hear, a pre-op patient will be very anxious and will require repeated explanations and reassurance, a patient who has ingested poison may be depressed and require a empathetic approach. Thus appropriate scenario building can bring the realism and enhance acquisition of competencies.

Multitasking is a mandatory nursing competency which could be acquired to some extent through simulation. Students can appreciate its importance in simulated environment. If this skill is taught by traditional methods and demanded in a real life situation it can lead to frustration and dislike of the profession among students who cannot multitask. Based on the severity of the problem the interventions such as reporting to a medical person, drawing blood sample with standard precaution, documentation and ensuring comfort & safety of the patient are carried out simultaneously. The above procedures that require multi tasking with prioritization are carried out with critical thinking and decision making.

The experience and learning outcome of associate degree colleges with simulation in eight nursing courses after the inclusion of simulation in the curriculum was investigated by Wolfram and Quinn 21. Their experience showed higher skill scores and greater reported student comfort and confidence in clinical settings after participation in simulation. Wolfram and Quinn report that simulation, when used as a learning strategy in theory courses, has generally resulted in increases in theory examination scores of 2.5% or greater.

Mariani et al 14 examined the effects of structured debriefing after two clinical simulation experiences on 86 junior-level baccalaureate nursing students’ clinical judgment using mixed method. The students perceived the structured debriefing sessions as being learner-focused discussions that provided a holistic approach that included a review of knowledge, technical skills, and their reactions and emotions about the learning experiences. Debriefing promoted reflective learning and cultivated a community of professionals who practice in a culture of safety awareness18. According to Jeffries, debriefing, where the process and outcome of the scenario, the application of the scenario to the clinical setting, and relevant teaching points are discussed, foster reflection and to develop reflective practice and metacognition skills among students, while emphasizing the affective domain of learning 14.

CONCLUSION

The aim of simulation is to allow students to perfect their skills in a non threatening environment and enable them to transfer their learning from the simulation laboratory to the clinical setting 11 enhanced skill performance, increased clinical knowledge, and more-refined critical thinking abilities are possible student outcomes of well-designed clinical simulation experiences 21. However, the responsibility for understanding, assimilating and its timely application of is with the learner. The learner should be able to suspend reality and interact with simulator perceiving it as real patient. However simulation is becoming a major strategy in nursing education as more evidence is produced and best practices are developed. Patient satisfaction, enhanced quality of care and safety are the major expected outcomes of nursing education. Simulation can certainly support nursing education to a greater extent in safely achieving this outcome.

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