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An Exploratory Study to Assess the Health Risk Factors/Impact on Tobacco users among Psychiatric OPD Patients at Civil Hospital, Hoshiarpur (Punjab) India

Amarjeet Kaur Sandhu
Principal M L M College of Nursing, Oashghat, Solan, Himachal Pradesh

ABSTRACT

An exploratory study to access the health risk factors/impacts on tobacco users amongst psychiatric OPD patients at civil hospital, Hoshiarpur was conducted during the month of January 1st to January 31st, 2014. Fifty patients were selected by randomized method. Patients were interviewed personally by investigator and self structured questionnaires on personal data and selected variables were filled from first hand information of the subject. The data was analysed according to the objectives of the study. All (100% patients) were using tobacco and nicotine products as 44% abusers were using BIDI, 46% were using CIGARETTES, 24% using GUTKA, 16% using KHAINI, 4% using DRY SNUFF, 12% using PAN MASALA and only 2% were using MAWA. On comparing physical, psychological and social impact, there was high physical impact than psychological and social.

Keywords: Tobacco abusers, Physical, Psychological and Social impact.

INTRODUCTION

Tobacco abuse is also known as substance abuse refers to mal-adaptive pattern of substance abuse.

To review the health risk related to tobacco use, we can visualize the problems/impact on abusers and also the warning signals of cancer of oral cavity, lungs, larynx and pharynx. Common cancers caused by smoking and tobacco chewing are of lungs, larynx, pharynx and oesophagus while cancers of the mouth, tongue and lip are caused by chewing of tobacco.

Cancer risk factors related to tobacco also include cancer of kidney, bladder, pancreas and stomach.

Tobacco does not affect the smoker only but also harms as a passive smoker causes lung cancer and other cardiopulmonary diseases in non-smokers also.

OBJECTIVES

1. To assess the physical, psychological and social health risk factors/impact of tobacco users.
2. To compare the physical health risk factors/impact with psychological health risk factors/impact on tobacco users.
3. To compare the psychological health risk factors/impact with social health risk factors/impact on tobacco users.
4. To compare the physical health risk factors/impact with social health risk factors/impact on tobacco users.

HYPOTHESIS

H1 - the total risk factors/impact score will be significantly higher among tobacco users.
H2 - the physical risk factors/impact score will be significantly higher among tobacco users.
H3 - the psychological risk factors/impact score will be significantly lower in tobacco abusers.

MATERIAL & METHOD

To accomplish the objectives of the study an exploratory survey approach was adopted. The
research was concerned with overall framework of conducting the study. For present study the research was utilised by calculating mean, mode, S.D and T. This difference found statistically significant at P<0.05.\(^8\)

**Research approach and design:** The requirement of defining population for the research project rises from need to specify the group to which result of the study can be applied, population of the present study were tobacco users visiting psychiatric OPD at civil hospital Hoshiarpur.\(^7\)

**Research setting:** Psychiatric OPD at civil hospital, Hoshiarpur (Punjab).

**RESEARCH METHODOLOGY**

**Sample and sample size:** 50 OPD tobacco users were included in this study.

**Sampling technique:** The investigator personally interviewed the OPD tobacco users at civil hospital Hoshiarpur.

**Criteria for sample selection:** The simple randomization method was used. The data was collected from 1\(^{st}\) January 2014 to 31\(^{st}\) January 2014.

**Development and description of the tool:** Self structured questionnaire was used to assess risk factors/impact physical, psychological and social.

**PART I:** Personal data included 15 variables like age in years, general education (academic qualification), profession, marital status, monthly income (Rs), type of family, family size, residence, residence locality, relation with family, type of substance abuse, age at time of starting use of substance, monthly spent on drugs (Rs).\(^9\)

**PART II:** Assessment of risk factors /impact: is composed of 3 types of risk factors with 45 statements.

Physical risk factors/impact consists of 15 statements.

Psychological risk factors/impact consists of 14 statements.

Social risk factors/impact consists of 16 statements.

**Scoring procedure:** The total score of physical risk factors/impact was 45, psychological risk factors/impact was 42 and social risk factors/impact was 48. It is based on 4 point scale. There are 45 statements each has 4 responses: Never, rarely, usually and always, which were scored as 0, 1, 2, 3 respectively. Statement 31 to 36 scored negatively as 3, 2, 1, 0 respectively. Again 37 to 45 scored positively. The maximum score was 135.

**FINDINGS**

**Percentage distribution of sample characteristics**

<table>
<thead>
<tr>
<th>Sample characteristics</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (yrs)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-25</td>
<td>09</td>
<td>18</td>
</tr>
<tr>
<td>25-35</td>
<td>28</td>
<td>56</td>
</tr>
<tr>
<td>35-45</td>
<td>09</td>
<td>18</td>
</tr>
<tr>
<td>45-55</td>
<td>04</td>
<td>08</td>
</tr>
<tr>
<td><strong>General Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Illiterate</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>b) Primary</td>
<td>04</td>
<td>08</td>
</tr>
<tr>
<td>c) Middle</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td><strong>Monthly income (Rs)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) 5000-10000</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>b) 10000-20000</td>
<td>05</td>
<td>10</td>
</tr>
<tr>
<td>c) 30000 and above</td>
<td>05</td>
<td>10</td>
</tr>
<tr>
<td><strong>Type of family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Joint</td>
<td>09</td>
<td>18</td>
</tr>
<tr>
<td>b) Nuclear</td>
<td>41</td>
<td>82</td>
</tr>
<tr>
<td><strong>Family size (Members)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) 1-5</td>
<td>36</td>
<td>72</td>
</tr>
<tr>
<td>b) 5-10</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>c) &gt; 10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Own house</td>
<td>31</td>
<td>62</td>
</tr>
<tr>
<td>b) Rental house</td>
<td>08</td>
<td>16</td>
</tr>
<tr>
<td>c) Government accommodation</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td><strong>Residence Locality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Village</td>
<td>05</td>
<td>10</td>
</tr>
<tr>
<td>b) Town</td>
<td>45</td>
<td>90</td>
</tr>
<tr>
<td>c) City</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td><strong>Relation with Family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Good</td>
<td>05</td>
<td>10</td>
</tr>
<tr>
<td>b) Tense</td>
<td>45</td>
<td>90</td>
</tr>
<tr>
<td><strong>Type of substance abuse</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Bidi</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>• Cigarette</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td>• Gutka</td>
<td>23</td>
<td>46</td>
</tr>
<tr>
<td>• Chani-khani</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>• Dry Snuff</td>
<td>08</td>
<td>16</td>
</tr>
<tr>
<td>• Pan Masala</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>• Mawa</td>
<td>07</td>
<td>14</td>
</tr>
<tr>
<td><strong>Age at the time of starting use of substance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) 1-10</td>
<td>06</td>
<td>12</td>
</tr>
<tr>
<td>b) 10-20</td>
<td>01</td>
<td>02</td>
</tr>
<tr>
<td>c) 20 and above</td>
<td>01</td>
<td>02</td>
</tr>
<tr>
<td><strong>Monthly spent on drugs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) 1-500</td>
<td>27</td>
<td>54</td>
</tr>
<tr>
<td>b) 500-1000</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td>c) 1000 and above</td>
<td>28</td>
<td>56</td>
</tr>
</tbody>
</table>
Table 1 shows that Majority (56%) of abusers were in the age group of 25-35 yrs, (34%) of abusers were illiterate and 24% abusers were having middle qualification.

Majority 56% abusers were Labourer. 60% abusers were married. 80% abusers were in the income group of 5000-10000 (Rs).

Majority 82% abusers were having nuclear family and 72% of abusers were living in their own house, 62% abusers belong to village community,

Majority 90% abusers had tense relationship with their family and 100% abusers were using tobacco and also using other nicotine products, 44% abusers were using bidi, 46% were using cigarette 24% were using gutka, 16% were using Khaini, 14% were using dry snuff, 12% were using pan masala and only (2%) were using mawa.

**Major findings of the study were:**

Majority (56%) of abusers were in the age group of 25-35 yrs, (34%) of abuser were illiterate and 24% abusers were having middle qualification.

Majority 56% abusers were Laborer. 60% abusers were married. 80% abusers were in the income group of 5000-10000 (Rs).

Majority 82% abusers were having nuclear family and 72% of abusers were living in their own house, 62% abusers belong to village community,

Majority 90% abusers had tense relationship with their family and 100% abusers were using tobacco and also using other nicotine products, 44% abusers were using bidi, 46% were using cigarette 24% were using gutka, 16% were using Khaini, 14% were using dry snuff, 12% were using pan masala and only (2%) were using mawa.

**CONCLUSION**

All findings described in analysis and interpretations were correlating with risk factors score of abusers during this study.

The present study was conducted to assess the physical, psychological and social risk factors/impact of tobacco abusers visiting psychiatric OPD at civil hospital Hoshiarpur.

**EXTENSIVE REVIEW** of literature provided the investigator with a deeper insight into the risk factors/impact and helped the development of tool, research design, plan of analysis and interpretation of data. The data was gathered by self structured questionnaire, analysed and interpreted and discussed as above.

**Acknowledgement:** I am thankful to Dr. Raj Kumar, psychiatrist of Civil hospital, Hoshiarpur for permitting me to collect the data of OPD patients. I also hold high regards for the patients who had cooperated with me during the study period and kept their patience while answering my questions.

**Conflict of Interest:**

This research is not sponsored by anyone but may lead to development of research material which can be further used in personal or reference studies to be completed in nearby future. I have disclosed all the facts with proper clarification and meticulous calculation. The study under taken was pre-approved from OPD incharge and subjects hence, shall not attract any sort of conflicts.

**Source of Funding:** The entire study has been personally funded by me only and no support has been taken from any person.

**Ethical Clearance:** All the participants were approached in advance and the research was explained whether to decide taking part or not in the study. Only after personal will and unpressurised consent the study was conducted. There was an ethical committee comprising myself, present doctor and staff of the patient’s ward approving the same for all patients.
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Use of Standardized Patient Actors to Evaluate RN-BS Students’ Attainment of Health Assessment Skills

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ABSTRACT

Registered nurses returning to school to advance their education, run the gamut from new graduates to well-experienced - from novice to expert. The challenge in many BSN completion programs is to integrate multiple levels of learner experience yet still offer opportunity for growth and development. Health Assessment, an increasingly important competency for nurses to possess, is typically offered as initial course in RN to BSN programs, and encompasses more than just physical assessment. Equally challenging is finding appropriate ways for registered nurse students to demonstrate competency in this area.

A unique solution identified by one RN to BSN program was to employ the use of Standardized Patients (SP) for an end of course Simulation in Clinical Health Assessment. Although used regularly in medical education, use of SPs in nursing education has been limited.

In this pilot project, a convenience sample of 60 registered nurse students participated in two randomly assigned SP encounters. Cases were developed in conjunction with nurse faculty clinical experts, an SP trainer and validated with SP actors experienced in this style of medical education. Students received feedback from the SPs on their communication, empathy and quality of health teaching skills. Sessions were recorded for evaluation by faculty of students’ examination skills, ability to address health issue, and accuracy of health teaching. To ensure the rigor of the evaluation, inter-rater reliability by three faculty was established with the use of the Creighton Competency simulation Evaluation of Instrument. Student evaluation of the positive benefit of the experience exceeded expectations.

Keywords: Health Assessment, Standardized Patient Actors, Creighton Competency Evaluation Instrument (C-CEI)

INTRODUCTION

Nursing education focuses on guiding students in the development of clinical reasoning, communication, and collaboration so they can provide safe, quality patient care. In 2000, the Institute of Medicine released a report on the status of healthcare in the United States reporting that almost 100,000 patients per year are victims of errors. Communication failures were noted to be one of the most frequent contributors to these errors. In 2004, and again in 2010, the Joint Commission issued sentinel event alerts addressing morbidity and mortality of newborn infants and maternal mortality, respectively ¹⁴, ¹³. Both alerts call for the education of healthcare providers to include inter-professional team training and communication skills. Clearly preparing nurses capable of providing safe, effective care is paramount.

Simulated experiences provide the student with the opportunity to be involved in varied patient situations that may not be readily available in actual clinical experiences such as a woman in labor. Also situations that may not be suitable for student nurses
due to patient risk such as decompensated shock. Simulation allows students to critically analyze patient data and intervene without jeopardy to patient safety.

In 2014 The National Council of State Boards of Nursing (NCSBN) conducted a national simulation study to provide evidence of the educational outcomes of students having simulation replace varying amounts of clinical time in their nursing education. It was found that up to 50 percent simulation was effectively substituted for traditional clinical experience in all core courses across the pre-licensure nursing curriculum. Additionally, the use of up to 50 percent simulation did not affect NCLEX pass rates. Study participants were also followed into their first six months of clinical practice. The study found that there were no meaningful differences between the groups in critical thinking, clinical competency and overall readiness for practice as rated by managers at six weeks, three months and six months after working in a clinical position. This report provides strong validation for the use of simulation in nursing education.

BACKGROUND

Simulation offers faculty a mechanism to assess clinical judgment and critical thinking without jeopardizing patient safety. A simulated experience allows students to critically analyze their own actions (or failure to act), reflect on their own skill sets and clinical reasoning, and critique the clinical decisions of others. Simulation promotes active learning and participation, to enhance students’ critical thinking skills especially when debriefing is included. Educators can apply well-founded simulation approaches not only to help students in clinical rotations to attain educational goals, but also to evaluate teaching methods, as well as to investigate alternatives to the goals and methods themselves. Simulation provides a new avenue for educators and researchers to improve nursing education and practice as well as advance the field of nursing as a whole.

As a teaching methodology, a clinical simulation experience is an active event with students engaged into a realistic clinical environment or situation. During this authentic clinical experience learners are required to integrate and synthesize core concepts and knowledge and apply appropriate interpersonal and psychomotor skills. Students must incorporate critical thinking and decision making skills using a process (e.g., nursing process) involving assessment, diagnosis, planning, implementation or intervention and evaluation. Emergency rooms, trauma facilities as well as nursing education programs have all adopted the use of simulation to validate skill competency.

Paige et al. reported on another use of simulation, namely team building. Creating scenarios with participants from various healthcare disciplines provides opportunities to learn collaboration skills. Simulations are a routine component of nursing education today. The rationale includes the provision of experiences students may not be exposed to in actual clinical settings as well as provision of opportunities for students to gain both competence and confidence. Additionally there is increased competition for a declining number of actual clinical experiences and recognition that some real patient experiences pose unacceptable safety risks.

The incorporation of simulations in educational practice has not been restricted to nursing Oishi and Malone et al. reported on the benefits of using simulation in medical education. Additionally, support has been provided for the incorporation of simulated learning for training doctors. Kallonis and Sampson described their development of a 3D virtual classroom for teacher professional continuing education. This technique allowed the participants to all actively visualize, hear, and respond to situations. Leung et al. investigated the effects of using virtual industrial training on task performance for employees in the manufacturing and service industries. And teaching and learning in a 3D virtual environment has been well documented. Paige et al. conducted a study to determine the impact of simulated operating room experiences on the development of teamwork. They reported significant gains in role clarity, anticipatory response, cross-monitoring, and overall team cohesion and interaction among the participants. The development of these skills can be very helpful for hospitals wishing to create emergency response teams for patient and environmental situations. In fact, New York City has held multiple mock disaster situations involving police, fire, and other groups since 911.

The use of patient simulators, however, remains a flat experience lacking real-time feedback especially
in terms of communication and patient teaching skills.

**Review of Standardized Patient Use in Nursing Education**

Much less has been reported regarding the use of standardized patients in nursing education. This approach is widely used in medical education. McIntosh et al reported a unique experience combining a case study focused on autism with a standardized patient which resulted in positive feedback from the students\(^21\). They stated that they gained in communication, assessment, priority setting and critical thinking from this experience. Enhanced communication skills were also noted by nursing students interacting with an adolescent standardized patient \(^23\). Fink et al \(^8\) reported the use of standardized patients in teaching spiritual care for end-of-life patients resulted in increased gains for the experimental group. A similar result was reported by Kameg et al \(^16\) when using standardized patients as a tool to decrease student anxiety in a mental health setting.

Several authors described their incorporation of standardized patients in advanced practice nursing education \(^29\), \(^7\), \(^25\). Using standardized patients as a means to evaluate undergraduate nursing student skills in health assessment noted mixed results \(^4\). There was no difference in theory scores, but the intervention group had higher clinical examination scores.

**RN-BS educational student needs**

Registered nurses returning to school to advance their education, run the gamut from new graduates to well-experienced - from novice to expert. The challenge in many BSN completion programs is to integrate multiple levels of learner experience yet still offer opportunity for growth and development. Health Assessment, an increasingly important competency for nurses to possess, is typically offered as initial course in RN to BSN programs, and encompasses more than just physical assessment. Equally challenging is finding appropriate ways for registered nurse students to demonstrate competency in this area.

Our program is an online RN to BS program for licensed nurses and our focus is to build upon the content and experiences in the Associate degree programs. As such we include health assessment, health teaching, and community nursing as beginning courses. Our students use virtual software as a tool in the acquisition of interview, assessment skills in the health assessment course. The Carnegie Foundation report recommends that nursing educators carefully plan nursing education to ensure practitioners are ready for current health care needs \(^27\).

We are also concerned about the validation of health assessment skills by our students. A unique solution we chose was to employ the use of Standardized Patient Actors for an end of course Simulation in Clinical Health Assessment. Although used regularly in medical education, use of SPs in nursing education has been limited. The objectives for this piloted study are:

- Identify effective communication techniques for performing a health assessment with multicultural clients.
- Perform a fundamental physical exam on diverse patients.
- Differentiate normal physiological alterations from pathological findings.
- Analyze assessed data to identify priority health problems of individuals and groups.

The three focus areas for this experience are communication, a targeted physical examination, and health teaching.

**METHOD**

In a pilot project in Fall 2014, a convenience sample of 60 registered nurse students participated in two randomly assigned SP encounters. Cases were developed in conjunction with nurse faculty clinical experts, an SP trainer and validated with SP actors experienced in this role through medical education. Each student interacted with two different Standardized Patient (SP) actors on two of three different scenarios. These scenarios included student instructions containing a brief history of the reasons for the ‘patient’ to seek care in an ambulatory setting; detailed actor information for the SP to flesh out the role; and an assessment/ feedback tool. Following each interaction individual students and actors meet to debrief. The actors use the feedback tool and primarily focus on the student’s communication, empathy and quality of health teaching skills. As previously noted they are very experienced in this role through medical
education experiences. An additional group feedback
debrief session is held at the end of the day in which
students share their perceptions of the experiences as
do the actors.

Each scenario is videotaped. Following
completion of the experiences nursing faculty
reviewed videos of the interaction and student-
actor feedback sessions. The Creighton Competency
Evaluation Instrument (C-CEI) tool \(^9\) is used to
evaluate the student performance which receives an
overall grade of Satisfactory/Unsatisfactory.

Specifically the Creighton Competency
Evaluation Instrument (C-CEI) was used to evaluate
these components of each student’s performance:

- **Assessment:** Obtains pertinent data, objective,
follow-up assessment, environment
- **Communication:** With provider, patients,
significant others
- **Clinical Judgment:** Interprets vital signs, lab
results and relevant data, prioritizes outcome
formulation, intervention performance and
rationale, evaluation of interventions, reflection,
and delegation.
- **Patient safety:** Patient identifiers, utilizes standard
precautions, safe medications administration,
equipment management, technical performance,
reflects on hazards/ errors.

Each student also has access to their videotaped
sessions and can use these for review and continued
skill development.

**FINDINGS**

Student evaluation of the positive benefit of the
experience exceeded our expectations. Evaluation
scores ranged from 95-100% satisfaction. Some of
their comments include:

- “The feedback that I received from my “patients”
was so significant that it made me reassess my
weaknesses and work on them.”
- “The feedback and suggestions of the actors/
actresses are very helpful.”
- “Until when I actually performed a focused
assessment on real “patient”- That is when I felt
what I actually learned during this semester.”

Our conclusions are that the incorporation of
the Standardized Patient Actor experiences validates
student health assessment skills as well as increases
student self-confidence and communication skills.
The use of the Creighton Competency Evaluation
Instrument (C-CEI) tool allows faculty to objectively
determine student success. Several students observed
that they would like an opportunity to practice
these skills prior to the end-of-course assessment
and so we plan to offer practice sessions during the
semester. The faculty plan to continue to incorporate
these experiences in the curriculum. Students will be
surveyed to determine how they use their access to
the videotaped sessions in their clinical practice.

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for this project.

**Ethical Clearance:** We have no actual or potential
conflict of interest. This article is original and has not
been submitted elsewhere for publication. I do not
have a financial interest/affiliation with one or more
organization that could be perceived as a real or
potential conflict of interest or ethical conflict relative
to this article.

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Nursing Students’ Perception of Clinical Experience

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ABSTRACT

Aim: Nursing students’ perception of their clinical experience provides information to the nurse educators for designing more effective strategies to improve the clinical learning of the nursing students. The main objective of this study was to assess the nursing students’ perception about their clinical experience in College of Nursing, Christian Medical College, Vellore to provide recommendations based on the findings to improve the clinical experience of the students.

Method: Qualitative study design was adopted with the use of focus group discussions to assess the students’ perception about their clinical experience. The participants were the group of volunteers consisting of 7 to 10 students from each class of undergraduate nursing students of both Degree and Diploma programmes excluding the first year. The focus group interviews were conducted at midyear month and last month of the academic year. Debriefing notes were made by the observer after each focus group discussion. The discussions were tape recorded and later transcribed.

Data Analysis: The content of the tape and the notes of the observer were compared and checked to include the nonverbal cues of the participants. The researcher analyzed the data looking for the significant statements and codes and categorized them into different themes.

Results: The following six themes emerged from the data: Clinical anxiety, clinical supervision, clinical teaching, clinical requirement, professional role and clinical environment which were considered important factors in clinical experience.

Discussion: The result of the study showed that the nursing students were not completely satisfied with their clinical experience. They experienced anxiety and stress and brought out suggestions to improve their clinical learning.

Keywords: Nursing Students, Clinical experience and Focus groups.

INTRODUCTION

Clinical experience is the vital part of nursing education. It prepares and helps the nursing students to integrate theory into practice. Supportive environment for students and opportunities for students to practise activities are important in continuous learning. The effective clinical environment and the practice help the nursing students to understand the principles in clinical practice to bridge the gap between the theory and practice.

BACKGROUND AND NEED FOR THE STUDY

Clinical experience prepares the nursing students to learn the clinical skills. It helps the students to improve their critical thinking to relate and appreciate the rationale of nursing procedures. It also helps them to prioritize the needs and problems of the patient to
plan and provide wholistic care.

Nursing students experience longer hours of study than the other collegiate students and thus have less free time. They also experience anxiety about managing patients and their relatives in the clinical area in an unfamiliar setting. They are challenged with cooperatively working along with the other health care personnel in the clinical areas. They are demanded to be more responsible than the other collegiate students of their same age.

There are numerous research studies done to assess the stress among nurses and nursing students and the effect of stress on their wellbeing.\textsuperscript{2-9} Some of the stresses of nursing students are common to those reported by practising nurses and include working with dying patients; conflicts with other staff; insecurity about one’s clinical competence; interpersonal problems with patients and work overload.\textsuperscript{9-10} They are also stressed about submission of assignments, more writing work, evaluation by the faculty in the clinical area.

The General Health Questionnaire (GHQ) has been used extensively in nursing student and other populations and, on this measure, nursing students experience levels of distress comparable or higher than that experienced by any other group of healthcare professionals, whether qualified or as a student, and that includes medical students.\textsuperscript{11}

In College of Nursing, CMC, Vellore, a well organised clinical experience is provided and every year the students written feedback is received, discussed and recommendations are made for the improvement of the program. But there is no specific study done to assess the perception of the students about their clinical experience. So the researcher realized the need for the study to assess the perception of nursing students’ regarding their clinical experience which may help the nursing faculty to plan and develop effective clinical learning strategies in student education.

**STATEMENT OF THE PROBLEM**

A qualitative study to assess the perception of nursing students about their clinical experience in the College of Nursing, Christian Medical College, Vellore, TamilNadu.

**OBJECTIVE**

The main objective of this study was to assess the nursing students’ perception about their clinical experience.

**METHOD**

A qualitative research design was adopted, involving focus group interviews. A focus group brings together individuals with a shared experience and through group interaction participants’ perspectives and views on the topic are discussed.

The participants were the group of volunteers from each class of undergraduate students both Degree and Diploma programmes of nursing. The first years students from both degree and diploma programmes of Nursing were excluded.

There were totally six groups, each consisting of about seven to ten students. The age range was 18–21 and all were female. The researcher met each class and discussed the objectives of the study and planned the schedule of the focus group discussions.

As per the plan, the focus group interviews were conducted midyear month of academic year and the last month of academic year.

Each group was told the aim of the study. The researcher began by asking the students to comment on their perception about being a nursing student generally, and then more specifically on their experiences in the clinical area. Each session took place in a class room and lasted approximately an hour. The researcher facilitated the group discussion, the observer helped the researcher by taking notes and observing students on nonverbal cues during the focus group discussion. The group discussions were audio taped.

**DATA ANALYSIS AND DISCUSSION**

The data collected by group discussion was analysed with the following steps:

1. Debriefing notes were made by the observer after each focus group session discussing with the researcher. The comments about the session and significant information were included in the notes.
2. The audio recorded discussed contents were transcribed by listening to the tape.

3. The content of the tape and the notes of the observer were compared and checked to include the nonverbal cues of the participants.

The transcriptions were then read and re-read and the data reduced to key phrases and statements that captured recurring views. The issues that emerged were then analyzed and categorized into themes.

The researcher had gone through the transcript thoroughly, looking for the significant statements and codes to categorize them into the following themes: Clinical anxiety, clinical supervision, clinical teaching, clinical requirement, professional role, clinical environment and general suggestions.

An essential aspect of focus group research is the dependability of the data or that different groups arrive at the same conclusions on the results. To achieve this, the transcripts were reviewed independently by coresearchers as a check on the themes obtained.

Clinical anxiety

Most of the second year students stated that inadequate supply in the clinical area made them anxious in completing procedure on time.

One of the students said:

‘I was so anxious when the adequate articles needed to do procedures to the patients are not available in the clinical area.’

Another student stated that,

“I was so anxious in searching for the needed articles to be collected for the particular procedure. I was so worried about spending a lot of time in searching the articles needed”.

Students expressed that they were more anxious when they were not adequately oriented by the tutors about the particular unit. Almost all the groups of students expressed that their main anxiety in the clinical area was about completing requirement.

Another cause of students’ anxiety was the students’ concern about the possibility of harming the patients especially when they were assigned to take care of more sick, unstable and immediate post operative patients.

Fourth year students expressed that they were very anxious during their initial period of their clinical experience at first and second years and they have become less anxious in their fourth year this finding is supported by Hart and Rotem (1994) and Stephens (1992).

All the group of students were anxious about the writing work related to their clinical requirement. One of the second year students stated that,

“I was too anxious about writing the care plan within 24 hours of period and submitting when I had to study for the class test on the same day”.

The finding that most of the students were anxious about making mistakes and being observed by the tutors for evaluation is consistent with findings of Kim (2003) and Melo, K et al. (2010).

Most anxious situations include the following:

Anxiety is the major obstacle to learning in the clinical setting. Faculty who are unsupportive and overly critical and unsupportive make students anxious.

The most anxiety producing situations for the students was writing explanation letters when making mistakes. They were anxious when staff-nurses were not helping them to provide care for their patients especially when they are held up in doing some procedures as their requirement.

Effective cooperation between students and staff members, becoming part of the team, and a good atmosphere are the key elements for the supportive learning environment for the students.

Clinical supervision

A good mentor from student perspective is someone who is supportive, acts as a good role model teacher, guide, and who assess generally someone who has a genuine concern and has the students interests at heart. Students want them to be treated as adults. They are discouraged to learn in the clinical unit when the tutors shout at them especially in front of others.
In practice nurse teachers adopt a variety of roles ranging from link teachers to lecturer, practitioner but generally there remains a lack of understanding and clarity about the purpose of the nurse teacher with the clinical arena. Students are dissatisfied in some of the areas where they had to learn from staff nurses. They are demotivated when they are blamed or scolded by the staff nurses. They expressed dissatisfaction towards the demand from the staff nurses to do other work not related to their assigned patients. So they want tutors in every area in meeting their learning needs.

Clinical teaching

Clinical teaching is complex and multidimensional. Clinical education provides a mechanism for nursing students to extend class room teaching into nursing practice environment. Clinical teaching is complex and multidimensional. Clinical education provides a mechanism for nursing students to extend class room teaching into nursing practice environment. Students expressed that bed side clinics are more helpful since comparing the patient picture with the book picture provide them opportunity for effective learning to integrate theory into practice. They want methods of clinical teaching to emphasise more on clinical knowledge and skill. They are interested to participate in oral quiz programme than the written quizzes.

Clinical requirements

Completing the clinical requirement is perceived to be very stressful to the students. The writing work especially the care plans and care amount of notes especially some written assignments given places a significant amount of stress on the students.

When the student is expected to care for more than two very sick patients along with concentrating on completion of their requirement, it becomes the most stressful situation to student in the clinical area.

Professional role

The students expressed their need to learn the higher level of clinical skills as they move from the basic level to the higher level of their programmes.

Most of the third year and fourth year nursing students felt that they continued to do only the basic skills such as bed making and giving sponge bath to the patients.

Clinical supervision may be viewed as a regular and in-depth reflection on clinical practice, aiming in helping the supervisee to develop high quality practice. Once they learnt to practise the basic skills independently, they can be given opportunity to learn and practise the specific higher nursing care skills. Eg. Administration of injections. Students do not want close supervision and they want to practise the skills like administration of injections, starting intravenous line and administering intravenous solutions independently after they obtain signature in their procedure book.

The fourth year students expressed that they were feeling less confident in performing the professional role at the completion of their training programme. They felt that their clinical knowledge was very superficial.

The students stated that, “We just continue to do the basic nursing care like doing bed making, giving sponge bath, giving bed pans to the patients, and the chances are not given to perform procedures like administering injection and starting intravenous line. We spend four years in studying but we are not confident about being a competent professional nurse. But, most of the times we work like an Auxiliary Nurse Midwife or a Hospital auxiliary.

Clinical environment

Students expressed that they can be allowed to sit when necessary and want to have a friendly environment. They do not like to be scolded by anyone in the clinical area. They do not like close supervision and want to practise the learnt skill independently

CONCLUSION

Nursing students expect a friendly clinical environment for their effective learning. They expressed their need to be treated as adults and want to focus on learning the professional role of nurses. They want to learn more skill oriented learning in the clinical area. Anxiety and stress negatively interfere with their leaning. So the teachers of Nursing need to provide conducive and anxiety free environment for the students for their effective learning.

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**Source of Funding:** The research study was funded by the College of Nursing, Christian Medical College, Vellore.

**Conflict of Interest:** There is no conflict of interest for the present study.

**Ethical Considerations:** The study was approved by college of nursing research committee. The information was given to students that participation was entirely voluntary; that they were free to leave at any time; that confidentiality and anonymity would be maintained at all time and that being involved would have no affect on course progression. Issues of confidentiality and possible feelings of coercion were reiterated by the researcher before the discussions began, especially that the views expressed would not affect student progression.

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The Psychological Armamentarium in the Management of Diabetes: Critical Strategies for Therapeutic Success

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ABSTRACT

Psychological symptoms are related intimately with any chronic disease, and considering the epidemiological frequency of a disorder like diabetes, the two are intertwined with great frequency. The biological basis for this relationship has been elucidated. The comorbidity may be as high as 5% with recent onset disease and a significant quantum of those with diabetes experience depression, more so women. Several prospective studies such as DAWN and DESMOND have added to the evidence base behind this field. The psychopathology is further confounded by fear of various components of treatment and disappointment response. Fear of positive or negative symptoms is common. Building a component of self-care behaviour is some is important for to tackle psychopathology and build a prophylactic barrier against further problems in this regard. Various techniques have been developed to support the armamentarium of the health care giver in handling the psychological aspects of diabetes and thereby effective in treating the disease. Techniques involving both individual and group education are used. Using leading questions and reflective questions could erase the interfering psychopathology. Interventions should be problem focused, and disease related problems should be differentiated from adjustment related psychopathology. The role of a trained counsellor in this regard is a necessity.

Keywords- Psychological, diabetes, self-care behaviour, fear and anxiety, depression, individual education, group counselling, problem focused.

INTRODUCTION

Psychological disturbances affect people living with both type 1 and type 2 diabetes, and in many instances, it occurs at the time of diagnosis or during the course of its management. The Psychosomatic Model of Medical Illness has postulated that psychosocial factors could trigger, perpetuate or maintain various disorders; such a disorder could very well be diabetes. This article dwells into the psychological reactions that occur among people with diabetes at various time points in relation to therapeutic interventions: the psychological reactions at the time of diagnoses or that of its complications, and those factors which influence day to day management of diabetes.

According to Wild et al\(^2\) the global prevalence of diabetes is on the increase and there are in excess of 171 million people with diabetes worldwide and this figure is likely to surge to more than 366 million by the year 2030. Diabetes may lead to debilitating complications such as blindness, neuropathy which progressed to foot ulcers and subsequent amputations, and also requires patients to take responsibility for their control of their disease, with changes in medications, or insulin, and self-care management in diet, exercise, Self Blood Glucose Monitoring (SBGM), foot care aspects and insulin dose adjustments. Given all these factors, one should not be surprised to find that many people with diabetes, and their families, have a significantly higher quantum of emotional disturbances and behavioural problems, than the general population.

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Psychological states in diabetes—Stress, Anxiety, and Depression

Stress stimulates the autonomic nervous system and increases circulating glucose levels and catecholamines. Surwit et al. identified this as a negative state of mood that impedes an individual’s ability to manage their diabetes. Khuwaja et al. reports an increased prevalence of anxiety and depression among general populations in developing countries have. In a prospective Caucasian population based study by Ealon et al. undetected diabetes was found in 5% of individuals who were diagnosed having type 2 diabetes for the first time. They have had experienced major stressful events in the previous 5 years. In addition Knol et al., identified depression to increase the risk of development of type 2 diabetes among young adults and older adults with depression have a 37% risk.

There is an association between higher levels of stress and inadequate glycaemic control. Optimal glycaemic control has been shown to reduce the symptoms of anxiety and depression and vice-versa. Anxiety, depression, and quality of life have shown a significant relationship in impacting glycaemic control. Lower anxiety levels and depression and a better Quality of Life (QOL) were present in subjects with good glycaemic control as reported by Mazze et al.

Diagnosis of diabetes and its psychological impact

Petral et al. reported that adjustment disorders have been associated with the onset of diabetes in adulthood within several months of diagnoses both in patients and their spouse or other family members. Adults with newly diagnosed type 2 diabetes (aged 17-40 years, n=313) had a point prevalence of 12.5% of psychiatric disorders than a reference group without diabetes, from a representative national population in Germany. Depressive episodes were twice that of the reference group (5.8% vs 2.7%) and women were significantly affected more than men (9.3% vs 3.2%). In a smaller study by Pibernik et al., half the patients did not express emotional reactions at the time of diagnoses and expressed that they were able to cope with the stress. Around 20% of them expressed negative reactions and their inability to cope due to lack of social support.

The Diabetes, Attitudes, Wishes and Needs (DAWN) study by Skvfoland and Peyrot reported diabetes-specific distress feelings of shock, guilt, anger, anxiety, depression, and helplessness at the time of diagnoses of diabetes (85.2%). Negative emotional responses and inability to accept diagnosis was associated with poor patient-reported outcomes such as perceived poor control of diabetes, high health-related stress, poor quality of life, and impaired adherence. After prolonged time period (mean duration of 15 years), problems related to living with diabetes were prevalent including fear of future complications and resulting in social disabilities, as well as social and psychological burdens.

In the DESMOND trial, high rates of prevalence of depressive symptoms at the time of diagnoses of diabetes was reported by Khunthi et al. (16.1%, n=824). Adults who were on lipid-lowering agents and anti hypertensive at the time of diagnoses reported more depressive symptoms than those on one or no medications.

Fears and phobias related to diabetes treatment

Pokin et al. identified phobic disorders to be more common among adults with diabetes than general population. Fear of insulin injections and blood related to SBGM, injury phobia, and fear of hypoglycemia have been identified as the two sequelae of insulin treatment in diabetes as reported by Wild et al. In a study on 100 patients with type 1 diabetes by Berlin et al., 94% reported at least one phobic symptom and those who had poor glycemic control expressed fear of blood or injury. They also performed SBGM less frequently and endorsed feelings of anxiety and depression.

Hypoglycaemia in diabetes is unpredictable and uncomfortable. Hepburn et al. identified fear of hypoglycaemia to be common in adults with diabetes, as well as with spouse or significant other family member in a study done by Federick et al. Furthermore, Marrero et al. reported that owing to this fear, people take efforts to avoid situations that predispose to hypoglycaemia. The symptoms related to hypoglycaemia are averse and people worry that an episode of hypoglycaemia could lead to seizures, coma, or even death. In addition to being associated with higher levels of psychological distress, Thomas et al. highlighted the fact that fear of hypoglycaemia
leads to patients treating prematurely and maintain higher level of blood glucose levels than desirable.

**Self-care or adherence behaviours in diabetes**

An individual with diabetes needs to modify his behaviour related to management of diabetes on daily basis. Adherence or compliance refers to the extent to which an individual follows the prescribed therapeutic regimen. Efficacy of treatment regimen in diabetes is best measured by assessing the patient’s self-care behaviour. Hence the terminology ‘self-care behaviour’ is better suited, rather than the term “adherence”.

A survey on self-reported, self-management behaviours by Roggiero et al reported adherence in insulin (97%) and oral antidiabetic agents (93%). About half of them always did SBGM (52%), and fewer followed advice on diet (63%) and exercise (40%). Regular SBGM, which is a significant self-care activity, has shown to reduce the Glycosylated haemoglobin levels. This clearly demonstrates that behaviorally complex activities are performed less consistently that those which are task oriented. It is evident that certain forms of self-care behaviour are more likely to be followed when compared with other more behaviourally complex activities.

**Interventions to reduce psychologic distress and self-care behaviours**

Group therapy. The main focus of group therapy is to provide medical information and enhance self-care behaviour. The Social Learning Theory (20) outlines the social context necessary for learning. The theory asserts that the inspiration and support generated by group interaction helps patients change their behaviour. Group therapy does not help in empowerment but the emotional perspective is also addressed more appropriately. It is also the responsibility of the group leader who is a health care provider to maintain the scope of group’s conversation.

The perception of complications that are related to diabetes is significant among patients who have witnessed their relatives or a loved one being affected by a severe complication. Therefore, fear and anxiety impedes the necessary steps which are required to self-manage their diabetes. Allowing interaction on the perceived complications will help patients to internalize the behaviour modifications learnt from each other. The topics that are discussed may include coming to terms with the diagnosis of diabetes, managing its complications, and dealing with guilt. These behaviour modification strategies include, techniques that could tackle improper meal planning, binge eating, or missed drugs.

Individual session engaging techniques like leading questions helps people to respect their own interest, for example: “Which part of self-management behaviour would you find the most challenging?” Reflective listening helps to assess if the patient is disturbed or not for example: “It sounds like you are significantly bothered by insulin injections” or “It appears to me that your numbness in the legs interferes with day to day activities”. This technique allows a patient to engage in a conversation, helping them to clarify doubts, develop their own solutions, and reduce their fear and anxiety related to care. Lane et al found that patients with type 2 diabetes who expressed anxiety, angry, or hostility showed improvement in their status, following progressive muscle relaxation therapy.

Empowerment helps patients to best manage diabetes and they take a personal responsibility to control diabetes. Empowering patients helps in the identification and establishment of realistic goals, evolving a stress management policy, improve self-motivation to maintain diet, motivating regular exercise, and performing SBGM. A 6 week patient empowerment program in adults with diabetes by Anderson et al showed a decline in Glycosylated haemoglobin level well as increase in ability to set goals, manage stress and make decisions on diabetes management.

A problem-focused and emotion-focused intervention as part of integrated behaviour changes support the programme as devised by Peyrot and Rubin and addresses both behavioural and psychological interventions. The interventions follow this sequence.

1. Step 1. Specify the patient’s problem;
2. Step 2. Translate the patient’s intentions to change into concrete, attainable goals;
Step 3. Collaborate with the patient to identify barriers to reach those goals and formulate effective strategies;

Step 4. Establish a ‘contract’ with the patient to meet, or approach those goals; and

Step 5. Provide continuing support.

This framework makes a lot sense from the clinical perspective and the step-by-step approach is presented with relevant examples.

**Problem-focused intervention**

1. Start with patient’s problem
   - Which is the hardest self-care activity to follow?

   For example: a Patient may say Self Blood Glucose Monitoring

2. Specify the problem
   - Can you give me an example?

   For example: Response from a patient “I did not perform SBGM for a month”

3. Negotiate and appropriate goal
   - What is your goal for the frequency of checking blood sugars and targets?

   For example: Response from patient “Once a week fasting and post breakfast 120/200mg/dL”

4. Identify barriers to goal attainment?
   - What make you to avoid doing SBGM?

   For example: Response from the patient “I fear increase in blood sugar values”

5. Formulate strategies to achieve the goal
   - How can you overcome that barrier to reaching your goal?

   For example: Response from patient “I’ll keep telling myself that I can keep my sugars under control and maintain diet, reduce periods of inactivity, and take insulin regularly”

6. Contract for change
   - How will you reward yourself for success?

   For example: Response from patient “I will buy a static cycle and perform cycling regularly”

6. Track outcomes
   - How will you keep track of your efforts?

   For example: Response from patient “I will maintain log a diet, activity and corresponding changes in SBGM”

7. Provide ongoing support
   - What can I do to help if you slip from your efforts?

   For example: Response from patient “Thank you for your help and support. I will certainly follow as you have advised. Please give me your email address and I will write you and perhaps you could help me answer my queries. My next appointment is after 3 months”

**Emotion-Based interventions**

8. Identify diabetes related distress -Do you feel let down by your SBGM values?

   For example: Response from patient “Yes many a time”

9. Alleviate diabetes distress
   - What are you saying to yourself during those times?

   For example: Response from patient “It is my responsibility to manage my blood sugars”

10. Identify depression -In the past 2 weeks have you felt depressed or lost interest or pleasure in things?

    For example: Response from patient “Yes”

11. Treat disorder or refer for treatment
    - Would you like to talk to someone who can help you resolve these problems?

    For example: Response from patient “Yes I would like to get help”

**CONCLUSION**

The easiest way to identify psychological distress is by asking the patient in an explicit manner as to what the underlying stressor is. Physicians are busy in their clinical work and find very little to talk to patients. Perhaps a clinical nurse specialist in diabetes or a diabetes educator can talk to patients and assess their psychological distress and counsel them. If there
be a need appropriate referrals can be made based on patient’s preferences.

Note: The examples given above are from author’s own experience while counselling patients with diabetes.

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Conflict of Interest - Nil

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An Exploratory Study to Assess the Perceived Stressors & Coping Strategies Adopted by Parent of Children Diagnosed with Attention Deficit Hyperactivity Disorder and Attending Child Guidance Clinics in Mumbai

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ABSTRACT

Objectives

1. To identify the stressors perceived by the parents of children diagnosed with ADHD.
2. To identify the coping strategies adopted to overcome the stressors perceived by parents of children diagnosed with ADHD in the following areas:
   • Physical, • Psychological, • Social, • Economical, • Spiritual, • Sexual
3. To find out the association between the perceived stressors and coping strategies adopted with selected variables such as:
   • Age, • Gender of child, • Education of parent, • Socio-economic status
   • Type of family, • Type of delivery

Materials & Method: In this study, an Exploratory Descriptive method and Survey design was used. It was conducted in the selected Child Guidance Clinics in Mumbai. The population was all the parents (either mother or father) of children diagnosed with ADHD in Mumbai. The samples were parents of children diagnosed with ADHD, attending Child Guidance Clinics in Mumbai and who fulfills the inclusion criteria. The sample size was 200. The sampling technique used was Non Probability Convenience Sampling. Interviewing technique was used. A semi-structured interview schedule was used for data collection.

Result: In this study, it was found that ADHD was more prevalent in male children than female children. Also, psychological stressors were higher than any other type of stressors in the parents of children with ADHD. It was found that talking to friends/relatives was the most common adopted coping strategy towards the social stressors. This study showed that fathers with ADHD children had better coping strategies than mothers with ADHD children. Also, this study revealed that religion of the parents with ADHD children helps them in adopting adaptive or maladaptive coping strategies.

Conclusion: During the study, researcher came across a number of parents of children with ADHD in the Child Guidance Clinics and found that many of the family members had various stressors due to their ADHD child. Certain parents may have adaptive coping skills whereas others may have maladaptive coping skills. It is painful to see a parent suffering from depression and in the course of time the parents may become silent sufferers of depression. Mental illness in a family can affect the whole family as a unit thus the researcher felt the need to conduct a study on the parent stressors and coping strategies.

Keywords: ADHD - Attention Deficit Hyperactivity Disorder, Parent (mother and/or father), Stressors (Physical, Psychological, Social, Economical, Spiritual, Sexual)
**INTRODUCTION**

“They can’t sit still; they don’t pay attention to the teacher,”

They mess around and get into trouble, They try to get others into trouble, They are rude, They get mad when they don’t get their way.”  
--- Anonymous

Attention-Deficit Hyperactivity Disorder has become a buzzword and is the trend in affliction that has become an epidemic in a relatively short period of time whose aetiology remains unknown. Over the past decades, our families are breaking up, respect for authority has eroded, mass media has created a short attention span culture and stress levels have skyrocketed. We live in an extremely over-stimulated society. There is a growing atmosphere of hurriedness, intensity and urgency. Our society places little value on tranquillity, solitude and the simple joy of being in nature. From all this, one co-relation which is clear to us, is the increasingly rapid pace of our highly technological society and a growing number of children diagnosed with ADHD.

ADHD is a disorder of major childhood health importance, in terms of its prevalence and the suffering, morbidity and economic burden. Parents report that approximately 9.5% or 5.4 million children from 4-17 years of age have ever been diagnosed with ADHD, as of 2007. Rates of ADHD diagnosis increased an average of 3% per year from 1997 to 2010 and an average of 5.5% per year from 2003 to 2010. Boys (13.2%) were more likely than girls (5.6%) to have ever been diagnosed with ADHD. Rates of ADHD diagnosis increased at a greater rate among older teens as compared to younger children. The highest rates of parent-reported ADHD diagnosis were noted among children covered by Medicaid and multiracial children. These are the findings mainly from abroad, but in India there is very little systematic research done in ADHD children.

**MATERIALS & METHOD**

Research Approach

An Exploratory Descriptive method was used in this study.

Research Design: Survey design was used in this study.

**Setting of the Study:** The study was conducted in the selected Child Guidance Clinics in Mumbai.

**Population of the Study:** In this study population was all the parents (either mother or father) of children diagnosed with ADHD in Mumbai.

**Sample and Sample Size:** In this study the samples were parents of children diagnosed with ADHD, attending Child Guidance Clinics in Mumbai and who fulfills the inclusion criteria. The sample size was 200.

**Sampling Technique:** The sampling technique used in this study was Non Probability convenience sampling.

**CRITERIA FOR SAMPLE SELECTION**

Inclusion Criteria:

- All Parents willing to participate in the study
- Parents of ADHD children visiting the Child Guidance Clinics in Mumbai
- Parents who can understand Marathi or Hindi or English.

**Technique and Tool:** In this study interviewing technique was used. A semi-structured interview schedule was used for data collection.

**Reliability of the Tool:** In this study, no specific tests were applied to assess reliability of the tool as, the data that was being measured was very subjective in nature and the responses could vary over a period of time, depending on various variables.

**Technical Information:** Prior to data collection, permission was obtained from the concerned authority. The researcher introduced herself to the samples. Written informed consent was taken from all the samples after explaining the purpose of the study. An interview technique with a semi-structured interview schedule with questionnaire was used for data collection.

**ETHICS**

Permission was taken from the ethical committee. Written informed consent was taken from the samples of the study. Confidentiality was maintained throughout the study.
STATISTICS

Data Analysis: It was done by following methods,

1. Demographic data of parent was analyzed using frequency percentage

2. The stressors faced by the parent of children diagnosed with ADHD was analyzed using frequency, percentage and t test

3. The coping strategies adopted by the parent of children diagnosed with ADHD was analysed using frequency, percentage and t test

4. The association between the stressors perceived & coping strategies adopted with selected demographic variables was analyzed using t-test

FINDINGS

A) For Demographic variables

Table 1: Demographic variables

<table>
<thead>
<tr>
<th>PARTICULARS</th>
<th>FREQUENCY</th>
<th>PERCENTAGE %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of parent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-30 years</td>
<td>62</td>
<td>31</td>
</tr>
<tr>
<td>31-40 years</td>
<td>127</td>
<td>64</td>
</tr>
<tr>
<td>41-50 years</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>&gt; 50 years</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No formal education</td>
<td>49</td>
<td>25</td>
</tr>
<tr>
<td>Primary education</td>
<td>26</td>
<td>13</td>
</tr>
<tr>
<td>Secondary education</td>
<td>36</td>
<td>18</td>
</tr>
<tr>
<td>Higher secondary education</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>Graduate</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>Post Graduate</td>
<td>17</td>
<td>9</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>106</td>
<td>53</td>
</tr>
<tr>
<td>Business</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>Unemployed</td>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td>Relationship with child</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother</td>
<td>130</td>
<td>65</td>
</tr>
<tr>
<td>Father</td>
<td>70</td>
<td>35</td>
</tr>
<tr>
<td>Family Income Per Month</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rs. &lt; 5000/-</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Rs. 5000 - 10,000/-</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>Rs. 10,000 - 15,000/-</td>
<td>34</td>
<td>17</td>
</tr>
<tr>
<td>Rs. 15,000 - 20,000/-</td>
<td>59</td>
<td>30</td>
</tr>
<tr>
<td>Rs. &gt; 25,000/-</td>
<td>82</td>
<td>41</td>
</tr>
<tr>
<td>Gender of the child</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Female</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>
Table 1 reveals that majority of the parents were mothers (65%), from the age group of 31-40 years and they were graduates (34%). In the study conducted by Pamela Weber⁵, it was seen that the gender of the parent, age and education level had a significant relationship with the parenting stress. So, this study supported the finding that educational level of the parents has the influence on the stress and it also varies according the age group i.e. younger parents have more stress than older parents.

It was seen that majority of the parents were belonging to the higher socio-economic group (41%). Kevin Baldwin⁶ had conducted study to identify the predictors of stress in caregivers of ADHD children. It was seen that parents from lower socio-economic backgrounds are apt to be at greatest risk for increased stress. So this finding contradicts that in Indian scenario the parenting stress is more in higher socio-economic group than lower socio-economic group.

It was also found that ADHD was more prevalent in male children (60%) than female children (40%). In the study conducted by M. S. Bhatia⁷ in Delhi, it was seen that prevalence of ADHD in boys and girls was 3:1 respectively. So, this finding supports the finding of the present study.

B) For stressors and coping strategies adopted by parents of children with ADHD:

It deals with the analysis of the stressors perceived by the parent of children diagnosed with ADHD in the following areas:

i. Physical stressors
ii. Social stressors
iii. Economical stressors
iv. Spiritual stressors
v. Sexual stressors
vi. Psychological stressors

Table 2: Analysis of the stresses perceived by the parents of children with ADHD

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Total scores</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical stressors</td>
<td>10260</td>
<td>25.65</td>
<td>21.46</td>
</tr>
<tr>
<td>Psychological stressors</td>
<td>13560</td>
<td>33.9</td>
<td>21.67</td>
</tr>
<tr>
<td>Social stressors</td>
<td>11650</td>
<td>29.125</td>
<td>28.75</td>
</tr>
<tr>
<td>Economical stressors</td>
<td>12533.33</td>
<td>31.33333</td>
<td>29.8</td>
</tr>
<tr>
<td>Spiritual stressors</td>
<td>6650</td>
<td>16.625</td>
<td>27.58</td>
</tr>
<tr>
<td>Sexual stressors</td>
<td>3675</td>
<td>9.1875</td>
<td>24.61</td>
</tr>
<tr>
<td>Total</td>
<td>145.82</td>
<td>153.87</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 indicates the analysis of overall stressors perceived by the parents of ADHD children. It shows that the Psychological stressors were very high in the parents of ADHD children. Sexual stressors were very less compared to other stressors in the parents of ADHD children.

Table 3: Analysis of the psychological stressors perceived by the parents of children with ADHD

<table>
<thead>
<tr>
<th>Psychological stressors</th>
<th>Yes</th>
<th>%</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxious about child’s treatment</td>
<td>187</td>
<td>94</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Feel sad to see child suffering</td>
<td>187</td>
<td>94</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Feeling of helpless</td>
<td>127</td>
<td>64</td>
<td>73</td>
<td>37</td>
</tr>
<tr>
<td>Feeling irritable</td>
<td>149</td>
<td>75</td>
<td>51</td>
<td>26</td>
</tr>
<tr>
<td>Abused by in laws</td>
<td>28</td>
<td>14</td>
<td>172</td>
<td>86</td>
</tr>
</tbody>
</table>

The data presented in Table 3 reveals that psychological stressors (97%) were higher than any other type of stressors in the parents of children with ADHD. So this finding justifies that having a mentally ill child or relative makes the family, parent or caregiver more stressful.
Table 4: Analysis of the coping strategy adopted by the parents of children with ADHD

<table>
<thead>
<tr>
<th>PARTICULARS</th>
<th>ALWAYS</th>
<th>SOMETIMES</th>
<th>NEVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxious about child’s treatment</td>
<td>F</td>
<td>%</td>
<td>F</td>
</tr>
<tr>
<td>Talk to the family members / friends and ventilate feelings</td>
<td>172</td>
<td>86%</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 4 indicates that talking to friends / relatives (86%) was the most common adopted coping strategy towards the psychological stressors. Communication is the best coping strategy used by the family members of the mentally ill relative or child. Communicating with the family members was considered to be an emotion focused coping strategy. This finding justifies that many of the family members, parents cope with their situation by sharing their feelings with their immediate, and through this they receive support and understanding.

For association with demographic variables:

In the study conducted by J M Norvillitis, was found that mothers of children with ADHD used significantly more coping strategies. But in this study it was found that fathers with ADHD children had better coping strategies than mothers with ADHD children. So this finding suggests that in Indian set up fathers adopts more number of coping strategies than mothers. This also highlights that mothers feels more stigmatized than fathers. It suggests that increase awareness in mothers might help mothers of children with ADHD feel less isolated.

According to Leslie et al, religion helps in either a moderate or larger extent in coping with symptom severity and it also helps them to cope with life experiences. In this study it was found that religion of the parents with ADHD children helps them in adopting adaptive or mal- adaptive coping strategies. It justifies that religious beliefs or activities are the most important things that keeps them going.

CONCLUSION

During the study it was seen that the psychological stressors were very high in majority of the parents. The study has brought the evidence that mental illness is still a social stigma and the parents undergo emotional turmoil due to the child’s condition. Thus the impact of mental illness on the parents is far greater than having a physical illness. In this era of globalisation and fast moving world and with the challenging norm of nuclear families the burden on the parents is tremendously increasing and the parents have to face many challenges. Due to the child’s illness they may not go to work thus the parents have an added responsibility of financially supporting their families. The study has explored into the stressors and the various coping strategies adopted by the parents in detail. So, in order to decrease the stressors of the parents they need to be counselled, encouraged ventilating their feelings, teach them various relaxation techniques and teach them about ADHD and its care.

Also it was surprisingly found that many of the parents and siblings of the children with ADHD were diagnosed with Depression, Anxiety disorders, Sibling rivalry, Marital disharmony and Conduct problems. Many parents and siblings of ADHD children were also undergoing psychiatric treatment. Thus, the study has put into limelight the possible association between parents stress culminating into mental disorders like depression.

Acknowledgement: The researcher feel privileged to express gratitude to her guide, Dr. Rani Shetty, Assistant Professor, L.T. College of Nursing for constant support, valuable guidance, untiring efforts, cooperation, encouragement and endless patience which has been the cornerstone of this study. The researcher is highly obliged to her family members for their constant motivation, love and support.

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Conflict of Interest: There was no conflict of interest for this study.

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A Time and Motion Study on the Activities of the Staff Nurses and Health Centre Auxiliaries of a Secondary Hospital in Vellore District

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ABSTRACT

A time motion study was undertaken to study the activities of the Staff Nurses and the Health Centre Auxiliaries in a secondary hospital who were observed for 46.5 hours and 32.5 hours respectively during their day shift work. The staff nurses spent 68.81% of their time in direct patient care related activities. The Health Centre Auxiliaries spent 59.3% of their time in unit related activities. Staff nurses spent significant proportion of their time 11.12% of their time in non clinical activities, whereas the Health Centre Auxiliaries spent 7.3% of their time in non clinical activities. The staff nurses were spending 17.6% of their in documentation, admission procedure 13.9% and administration of medications 13.9%. Staff Nurses spent only 10.82% of their time in assessing the patients. Out of the total working hours 12.92% of the time spent by the Health Centre Auxiliaries was unproductive.

Keywords: Time motion study, health centre auxiliaries, clinical activities.

INTRODUCTION

Quality health care is a right of every citizen in a country. Qualified and motivated human resources are essential for providing adequate health services, but human resource shortages have now reached critical levels in many hospitals especially in resource limited rural health care settings.4

Health care providers today face increasing pressure from many directions. They must improve patient care, despite persistent nursing staff shortage. At approximately 30% of the total hospital staff. Nurses represents the largest constituent employee population in any hospital. They are the primary caregivers and are the common thread connecting patients to everything that touches them during their hospital stay, coordinating patient care is a vital role of nursing staff. Policy makers are challenged to maximize productivity/utilization and minimize staffing costs, while ensuring the quality of care. When faced with insufficient time, nurses generally omitted nursing interventions. The most frequently omitted interventions included care planning (48.2 %), comforting/talking (38.6 %), back/skin care (31.4 %), oral hygiene (28.7 %), patient/family teaching (23.3 %), and documentation (22.6 %).8 Next to nurses, nursing assistants play an important role as part of the healthcare team by providing direct patient care and emotional and physical support for patients. It is equally important to appraise the performance of nursing assistants frequently. Improving patient outcomes are goals of healthcare and hence understanding what factors influence performance of the health care professionals is pivotal. Quality improvement is as important in a small rural health care facility as it is in larger urban center. The interrelationship of the rural hospitals challenges suggests the need for clear vision and a comprehensive set of strategic initiatives. One strategy to improve clinical outcomes is by improving the work efficiency of health care workers. Time motion studies will catalyze hospitals to make profound changes in the staffing pattern and work assignments which is necessary in the new consumer driven era.6

Time and motion study is a major part of scientific management developed in the direction of
establishing standard times, while motion studies enable to improve the work methods. A study conducted in New Jersey, studied patient care staffing pattern and found that majority of hospitals used non nursing personnel as a predominant patient care staff. Health care personnel typically get regular formal performance feedback in the form of employee performance appraisals. Peer reviews can be powerful because it comes from those who work closest with them. Competency assessments evaluate the selected skills. These can be ideal way to identify areas for development in nursing personnel. Each of this feedback mechanism can give insights into the performance strengths and areas need further development. Combining them gives a much better, overall view of performance. Time and motion studies related to Health care personnel are scarce. Hence we find it is the need of the hour, to undertake research endeavors which study the work performance of nursing personnel scientifically. Moreover, the findings of this study have important implications in improving the quality of patient care directly and indirectly.

**OBJECTIVES**

- To determine the type of activities done by the Staff Nurses and Health Centre Auxiliaries during their working hours and the quantum of time spent on each of those activities.

- To determine the amount of time spent by the Staff Nurses and Health Centre Auxiliaries in specific areas of the secondary hospital.

**MATERIALS & METHOD**

**Design and sampling:** A time motion study design was used. The study was conducted at a 75 bedded secondary level hospital of a rural area. The staff nurses and the Health Centre Auxiliaries of the secondary hospital constituted the population. Simple random sampling technique for the staff nurses and enumerative sampling technique for Health Centre Auxiliaries were used. Data was collected by non participatory observation method from seven staff nurses and five Health Centre Auxiliaries over 46.5 and 32.5 hours of observation respectively.

**Inclusion criteria**

- The activities of the staff nurses and the

**RESULTS**

Majority of the staff nurses 71.42 % were in the age group less than 25 years. All the Health Centre Auxiliaries’ were above 25 years of age.

![Figure 1. Time spent by the staff nurses and the health centre auxiliaries on various activities during their working hours.](image-url)
The above figure 1. Shows that staff nurses spent most of their time (68.81%) in patient care related activities whereas the Health Centre Auxiliaries spent most of their time 59.3% in unit related activities. We find the HCA’s had most unproductive hours 12.92% but Staff Nurses wasted only 1.1% of their working hours.

**Table 1: Time spent by the Staff Nurses on specific activities**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Specific activities of the Staff Nurses</th>
<th>Time spent (in minutes)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Attending morning prayer</td>
<td>180</td>
<td>6.6</td>
</tr>
<tr>
<td>2.</td>
<td>Reporting</td>
<td>120</td>
<td>4.4</td>
</tr>
<tr>
<td>3.</td>
<td>Assessment of patient</td>
<td>295</td>
<td>10.82</td>
</tr>
<tr>
<td>4.</td>
<td>Administration of drugs</td>
<td>380</td>
<td>13.9</td>
</tr>
<tr>
<td>5.</td>
<td>Dressing</td>
<td>250</td>
<td>9.1</td>
</tr>
<tr>
<td>6.</td>
<td>Attending medical rounds</td>
<td>72</td>
<td>2.6</td>
</tr>
<tr>
<td>7.</td>
<td>Assisting in procedures</td>
<td>180</td>
<td>6.6</td>
</tr>
<tr>
<td>8.</td>
<td>Documentation</td>
<td>480</td>
<td>17.6</td>
</tr>
<tr>
<td>9.</td>
<td>Admission procedure</td>
<td>380</td>
<td>13.9</td>
</tr>
<tr>
<td>10.</td>
<td>Maintaining I/O chart</td>
<td>20</td>
<td>0.7</td>
</tr>
<tr>
<td>11.</td>
<td>Nebulization</td>
<td>140</td>
<td>5.13</td>
</tr>
<tr>
<td>12.</td>
<td>Urinary catheterization</td>
<td>30</td>
<td>1.1</td>
</tr>
<tr>
<td>13.</td>
<td>Baby care</td>
<td>40</td>
<td>1.4</td>
</tr>
<tr>
<td>14.</td>
<td>Others</td>
<td>149</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Note: The total time was 46.5 hours

Table 1 reveals that staff nurses mostly spent their time 17.6% in documentation. They spent only 10.82% of their time for assessing the patients. The time spent for admission procedures and administration of drugs by the staff nurses comprised of 13.9% each. They also spent 9.1% of their time in doing wound dressing for the patients.

**Table 2: Time spent by the Health Centre Auxiliaries on specific activities.**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Specific activities of the HCA’s</th>
<th>Time spent(in minutes)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Attending morning prayer</td>
<td>120</td>
<td>7.28</td>
</tr>
<tr>
<td>2.</td>
<td>Reporting</td>
<td>60</td>
<td>3.64</td>
</tr>
<tr>
<td>2.</td>
<td>Bed making</td>
<td>85</td>
<td>5.15</td>
</tr>
<tr>
<td>3.</td>
<td>Checking TPR</td>
<td>40</td>
<td>2.42</td>
</tr>
<tr>
<td>4.</td>
<td>Arrangement of trolleys and unit</td>
<td>205</td>
<td>12.42</td>
</tr>
<tr>
<td>5.</td>
<td>Assisting the staff nurses in doing procedures</td>
<td>90</td>
<td>5.46</td>
</tr>
<tr>
<td>6.</td>
<td>Directly doing procedures to patients</td>
<td>90</td>
<td>5.46</td>
</tr>
<tr>
<td>7.</td>
<td>Sterilization procedures</td>
<td>790</td>
<td>47.9</td>
</tr>
<tr>
<td>8.</td>
<td>Collection of things</td>
<td>85</td>
<td>5.2</td>
</tr>
<tr>
<td>9.</td>
<td>Others</td>
<td>73</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Note: The total time was 32.5 hours.
Table 2 illustrates that Health Centre Auxiliaries spent 12.42% of their time in arranging the trolleys and unit. Most of their time 47.9% was spent in doing sterilization procedures. They assisted the staff nurses by spending 5.46% of their time during their working hours.

Figure 2. Location of the Staff Nurses and Health Centre Auxiliaries during their working hours.

Nurses spent most of their time 71.5% in patient unit. Whereas the HCA’s spent most of their time in sterilization room 46% and treatment room 10.1% (Figure 2)

DISCUSSION

In the present study, most of the staff nurses (100%) and health centre auxiliaries (80%) were females. This is because traditionally nursing is a female dominated profession And more over 71.42% of the staff nurses were in age group of less than 25 years, whereas all the Health Centre Auxiliaries were above 25 years. Moreover, 71.42% of the Staff Nurses had less than one year of experience but all the HCA’s (100%) in the present study had more than one year of experience in their discipline.

Major proportion of the time of the staff nurses 68.81% was spent in doing patient related activities. Nurses also spent a significant proportion 19.71% of their time in doing the unit related activities like arranging the trolleys in the treatment room, arranging the unit, checking the emergency trolley, taking inventory etc. Non clinical activities of the staff nurses like billing, getting signatures from the doctors to complete the formalities, clerical work, taking the patient charts to medical records department, entering the patient details in admission and discharge registers, collecting things for patient care if needed from different areas comprised 11.12% of their working hours. But the study conducted in a western country reported that non nursing tasks occupied only 9% of the total working hours of the nurses.3 Another Canadian study posited that nurses continue to perform tasks that could be delegated to non nursing personnel including ancillary services 83.5%, housekeeping 55.1% and delivering trays 55.1%.8 The amount of time spent on non nursing task is important because this time is not spent on patient monitoring. Nurses must maintain a situation awareness of a patient’s health status. But to do so nurses should monitor patient overtime through direct (physical assessment) and indirect (charting, reviewing lab results) care processes.3 Only 1.1% of their time was spent chatting with their colleagues on matters unrelated to patient care.

The Health Centre Auxiliaries were involved most of their time 59.3% in doing unit related functions like patient unit cleanliness, arrangement of treatment room, dressing trolley, autoclaving articles for different procedures etc. Patient care related activities like bedmaking, TPR checking, minor wound dressing, simple health education comprised 17.8% of their working hours. These findings could be attributed to the job description of the Health Centre Auxiliaries who are actually expected to do more of unit related functions than direct patient care related activities. When compared to the staff nurses the Health Centre Auxiliaries it was evident that they waste 12.92% of their working hours by chatting with their colleagues, resting in the sterilization room, treatment room and taking extra break time. These findings signal the need to have intensive supervision over these HCA’s and plan strategies for the maximum utilization of the Health Centre Auxiliaries during their working hours thereby improve their work performance. These findings were coinciding with the statement that the costs of waste for frontline health care workers activities were substantial.10 A study which was conducted in Riyadh among hospital nurses found that job satisfaction and organizational commitment were strong predictors of nurse’s work performance.1 Hence a similar study can be conducted to identify the factors affecting the performance of these Health Centre Auxiliaries.

On analysis of the time taken for the specific activities of the Staff Nurses, it was observed that
they spent a significant proportion of their time 17.6% in documenting the patient care. These findings are supported by Hendrich and Chow who found that major portion of the time spent for indirect patient care by the nurses was engaged in documentation. The next major part of their productive work time 13.9% is spent on admission procedures and administration of drugs. They spent only 10.82% of their time for assessing the conditions of the inpatients. These findings are contrast with the study conducted in an intensive care unit which stated that nurses spent 52% of their time in assimilating information in clinical information system and 15% on monitoring the live vitals of the ICU patients. The discrepancy in the present study is therefore because of the difference in the health care settings where the studies were done and also there will be a difference in the type of patient care given in an ICU setting when compared to the patient care that is given in a resource poor rural health care setting. Another common observation was that the staff nurses spent 9.1% of their productive work time in doing wound dressing. Moreover, 6.6% of their time was spent for assisting various procedures to the doctors in the clinicals. Other activities like billing, getting signatures from the doctors to complete the formalities, entering patient details in the registers etc occupied 5.5% of their productive time.

When the specific activities of the Health Centre Auxiliaries were analyzed it revealed that they spent 5.15%, 2.42% of their time for bed making and TPR checking respectively. Major chunk of their productive time 47.9% was involved in doing sterilization procedures. Arranging the trolleys and unit, comprised 12.42% of their work time.

It was observed that staff nurses spent most of the time in patient unit 71.5%, in nurse’s station they spent 5.8%, few activities in the treatment room occupied 21.5% of the staff nurses time. They spent 1.2% of their time in pharmacy, billing section. The Health Center Auxiliaries spent 19.5% of their time in patient unit, and in the nurses’ station they spent 15.7%. Major proportion of the time 46% was spent in sterilization room and in other areas which included store room, medical records department, pharmacy and immunization room they spent 4.5% of their working time. In one study conducted in abroad nurses travelled between two locations, patient rooms, medication rooms, nurses station, pantries, lounge and elevators a mean of 13 times per hour, performing a mean of 1.9 activities at each location.

**LIMITATIONS OF THE STUDY**

- Since this is a observational study there is a possibility for observer bias
- Staff nurses and the health centre auxiliaries who were doing day shift alone were included in the study considering the feasibility of the study. Patient care activities will vary in different shifts.
- Work culture of the organization have a major impact on the study results

**NURSING IMPLICATIONS**

Addressing human resource concerns pose new challenges for nurse managers. Time and motion studies on health care providers especially on nurses and nursing assistants helps in establishing standard times for patient care related procedures, improve work methods and upgrading of work systems. It also helps to build on the best elements of work flows and create a standardized best nursing practice. Nurses can undertake in depth studies to identify the key factors which influence the work performance of the nurses and nursing assistants. Moreover, many studies which investigate the work efficiency of the nurses especially in resource poor settings are not conclusive of the causal relationship because of various confounders. Nurse Managers should equip themselves to adopt various research strategies to study the competencies of the subordinates and determine their time management skills so as to improve their work performance. This will indeed contribute for better patient outcomes and facilitate evidence based practice even in the quarters of nursing administration in various health care settings.

**CONCLUSIONS**

Health care leaders, policy makers and health service researchers have been unsuccessfully seeking the methods to improve the work output of various health care personnel. None of the change programs used so far, eg, Total quality management, continuous quality improvement, quality circles, and pay for performance has been shown to successfully utilize
the available health manpower. Frontline caregivers like the nurses and the nursing aids are responsible for the quality and safety of care delivery; increased attention to and support for the effectiveness of their activities is a requisite for sustainable health system improvement.

Conflict of Interest: None

Source of Funding: Self

Ethical Clearance: Permission was sought from the concerned authorities of the college of nursing, CMC Vellore before conducting the study.

Acknowledgement: My heartfelt thanks to my parents and my dear husband for being the source inspiration.

REFERENCES


Comparative Study on Conventional Side Effects of Spinal Anesthesia among Postoperative Patients in Selected Hospitals of Misurata, Libya

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ABSTRACT

The prevailing side effects of spinal anesthesia to forty (40) postoperative patients confined within twenty four (24) hours among selected hospitals in Misurata (Libya) was purposively assessed in order to obtain subjective and objective data needed with the use of the assessment checklist that was constructed by the authors (’K – R = 0.9007). A comparative-retrospective descriptive design was employed to determine the conventional side effects of spinal anesthesia among postoperative patients. The study revealed an over-all more conventional side effects of spinal anesthesia. Granting that there are individual differences related to the behavior of the respondents during assessment, no significant differences found in all the variables that were examined. This study provides important information that can be used by health care professional in planning of care of patients in any health care facility with similar cases.

Keywords: Side effects, postoperative patients, surgical procedure, spinal anesthesia.

INTRODUCTION

The practice of anesthesia in any health care institution is a specialization in the field of medicine where the technique has the possibility of prevailing side effects or complications if not performed accurately. Induction of anesthesia by the responsible anesthesiologist has different routes. One of which is the spinal route that is commonly used and the unexpected consequences can be subjectively and objectively assessed from the patients who had undergone major surgical procedures. Nevertheless, the occurrence of such side effects remains overlooked for a long period of time and little attention and sometimes ignored.

As with all anesthetic techniques there is a possibility of unwanted complications or side-effects of anesthesia [1]. The side-effects of spinal anesthesia are facilitated by a little understanding about the anatomy of the spinal area and how the technique is performed. Some post spinal anesthesia side-effects result from the technique and type of needle used. Some other side-effects are related to the type of medication injected [2].

Complications associated with spinal anesthesia may be classified as minor or major [3]. Minor complications consist of limited, transient alterations in the physiological status of the patient. Minor complications include arterial hypotension, nausea and vomiting, excessive cephalad spread leading to respiratory insufficiency, post-lumbar puncture headache and back pain. Major complications include isolated nerve injuries, meningitis, cauda equine syndrome and other neurological dysfunctions, but these occur infrequently. Although minor complications occur more commonly, they are in general, easily managed. Some complications may
result from the introduction of needles, drugs or foreign material into the subarachnoid space [1].

It was the objective of this study to assess the conventional side effects of spinal anesthesia to postoperative patients and find its level of significance as to profile variable. The authors intended that the result of this study be used in planning of care to postoperative patients.

METHOD

A comparative descriptive non-experimental design was employed in this research. Purposive or non-judgmental sampling was conducted to postoperative patients confined among selected hospitals in Misurata, Libya. Data was collected from November to December 2013 among selected hospitals. Respondents were assessed and their hospital record was reviewed. The two-part data gathering checklist prepared by the authors was first subjected to content validation and reliability testing (‘K – R = 0.9007). For the first part, researchers were required to collect necessary information about demographic profile of postoperative patients particularly on gender, age, type of surgery performed, and type of anesthesia drug and needle used. The second part of the data gathering tool is a list of spinal anesthesia complications as basis for assessment. Collected data were tallied and subsequently subjected to statistical treatment employing t-test for equality of means for the demographic variable of gender and one-way analysis of variance (ANOVA) for the age group.

RESULTS

Profile of the Respondents: The respondents consisted of 40 postoperative patients, 28 (70%) of which are males while the remaining 12 (30%) females. Among the postoperative patients, there are 12 (30%) aging 20 - 30 years old, 8 (20%) are from the age brackets of 41 - 50 and beyond 60 years old, and 6 (15%) from the respondents belongs to age bracket of 31 - 40 and 51 - 60 years old. Orthopedic and urologic surgery are the most common type of surgery performed with 10 (25%) followed by obstetric and vascular type of surgery with 7(17%) and the least is gynecologic surgery with 6 (15%). Bupivacaine heavy is the only kind of anesthesia drug utilized by the anesthesiologist while quinckie point anesthesia needle is the most commonly used with 32(80%) and the remaining is 8(20%) which is the pencil point anesthesia needle.

Prevailing side effects of spinal anesthesia

In general, the over-all side effects of spinal anesthesia were perceived as more prevailing with a mean of 2.08 out of 5. From Table 1, it can be seen that low blood pressure was the commonly prevailed with weighted mean of 3.5, followed by headache (3.30), and back pain (2.8), nausea (2.0), vomiting (1.8), difficulty of urination (1.4), itchiness (1.3). These side effects are considered to be from more to much prevailing side effects while shivering (1.1) is the only one considered as the less prevailing side effect.

Differences in the prevailing side effects by profile variable

Gender

Table 2 presented the difference on conventional side effects of spinal anesthesia as to gender. T-test was utilized to substantiate if there is no significant difference on prevailing side effects of spinal anesthesia as to gender. The computed value is 1.12 which is less than the tabular value of 1.767 at 0.05 single tailed level of significance. The result shows that there is no significant difference on prevailing side effects of spinal anesthesia among postoperative patients as to gender. Indeed, side effects of the phenomena prevail similarly to both males and females.

Age

Table 3 presented the difference on conventional side effects of spinal anesthesia as to age. The analysis of variance (ANOVA) or F-test was used and the computed value is 2.04 which is less than the tabular value 2.64 at 0.05 level of significance. With this finding, the null hypothesis is accepted in which there is no significant difference to extent of prevailing side effects of spinal anesthesia among postoperative patients as to gender. Indeed, side effects of the phenomena prevail similarly to both males and females.
### Table 1: Extent of conventional side effects of spinal anesthesia

<table>
<thead>
<tr>
<th>Side effect</th>
<th>Mean</th>
<th>Descriptive Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head ache</td>
<td>3.33</td>
<td>Much</td>
</tr>
<tr>
<td>Nausea</td>
<td>2.02</td>
<td>More</td>
</tr>
<tr>
<td>Vomiting</td>
<td>1.82</td>
<td>More</td>
</tr>
<tr>
<td>Back pain</td>
<td>2.83</td>
<td>Much</td>
</tr>
<tr>
<td>Itchiness</td>
<td>1.31</td>
<td>More</td>
</tr>
<tr>
<td>Shivering</td>
<td>1.11</td>
<td>Less</td>
</tr>
<tr>
<td>Low blood pressure</td>
<td>3.54</td>
<td>Much</td>
</tr>
<tr>
<td>Difficulty of urination</td>
<td>1.41</td>
<td>More</td>
</tr>
<tr>
<td><strong>Average Weighted Mean</strong></td>
<td><strong>2.17</strong></td>
<td><strong>More</strong></td>
</tr>
</tbody>
</table>

Less = 0.01 - 1.24; More = 1.25 - 2.50; Much = 2.51 - 3.75; High = 3.76 - 5.00

### Table 2: Difference on conventional side effects of spinal anesthesia by gender

<table>
<thead>
<tr>
<th>Side effect</th>
<th>Male</th>
<th>Female</th>
<th>Average Weighted Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head ache</td>
<td>3.66</td>
<td>3.00</td>
<td>3.33</td>
</tr>
<tr>
<td>Nausea</td>
<td>2.22</td>
<td>1.82</td>
<td>2.02</td>
</tr>
<tr>
<td>Vomiting</td>
<td>2.00</td>
<td>1.64</td>
<td>1.82</td>
</tr>
<tr>
<td>Back pain</td>
<td>3.11</td>
<td>2.55</td>
<td>2.83</td>
</tr>
<tr>
<td>Itchiness</td>
<td>1.44</td>
<td>1.18</td>
<td>1.31</td>
</tr>
<tr>
<td>Shivering</td>
<td>1.22</td>
<td>1.00</td>
<td>1.11</td>
</tr>
<tr>
<td>Low blood pressure</td>
<td>3.89</td>
<td>3.19</td>
<td>3.54</td>
</tr>
<tr>
<td>Difficulty of urination</td>
<td>1.55</td>
<td>1.27</td>
<td>1.41</td>
</tr>
<tr>
<td><strong>Average Weighted Mean</strong></td>
<td><strong>2.39</strong></td>
<td><strong>1.96</strong></td>
<td><strong>2.17</strong></td>
</tr>
</tbody>
</table>

Less = 0.01 - 1.24; More = 1.25 - 2.50; Much = 2.51 - 3.75; High = 3.76 - 5.00

### Table 3: Difference of prevailing side effects of spinal anesthesia by age

<table>
<thead>
<tr>
<th>Side effect</th>
<th>Age Group</th>
<th>Average Weighted Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20 - 30</td>
<td>31 - 40</td>
</tr>
<tr>
<td>Head ache</td>
<td>3.50</td>
<td>3.10</td>
</tr>
<tr>
<td>Nausea</td>
<td>2.12</td>
<td>1.88</td>
</tr>
<tr>
<td>Vomiting</td>
<td>1.91</td>
<td>1.69</td>
</tr>
<tr>
<td>Back pain</td>
<td>2.97</td>
<td>2.63</td>
</tr>
<tr>
<td>Itchiness</td>
<td>1.38</td>
<td>1.22</td>
</tr>
<tr>
<td>Shivering</td>
<td>1.17</td>
<td>1.03</td>
</tr>
<tr>
<td>Low blood pressure</td>
<td>3.71</td>
<td>3.29</td>
</tr>
<tr>
<td>Difficulty of urination</td>
<td>1.48</td>
<td>1.32</td>
</tr>
<tr>
<td>Average Weighted Mean</td>
<td>2.28</td>
<td>2.02</td>
</tr>
</tbody>
</table>

Less = 0.01 - 1.24; More = 1.25 - 2.50; Much = 2.51 - 3.75; High = 3.76 - 5.00

**DISCUSSION**

The most common types of surgery performed to patients in this study were orthopedic and urologic case. Road Traffic Accident (RTA) is common in this locality as revealed by official record of the Misurata Central Hospital that made an orthopedic surgery of all type in the lower extremity and urologic surgery like DJ stint insertion and removal and cystoscopic examination as the leading type. This is similar to the study that spinal anesthesia is commonly or often used for patient who undergone surgery like in orthopedic major operation on the leg bones or joints and urology operation like prostate removal, bladder operations and genital surgery wherein any operation performed below the waistline is suitable for a spinal and there are benefits to both patient and surgeon when a spinal anesthesia is used [4].

Bupivacaine heavy (marcaine) is the drug of choice among anesthesiologist. This is because of its rapid onset of action and anesthesia effect is long-lasting that it goes with the study where bupivacaine is the local anesthetic most commonly used in the
United Kingdom and it is also the only preparation currently recommended by the manufacturer for intrathecal anesthesia. On the other way around, United States commonly uses lidocaine, tetracaine, and bupivacaine as their local anesthetic agent which is most commonly employed for spinal anesthesia. In addition, bupivacaine can be better than tetracaine for use in orthopedic surgical procedures since it appears to be associated with a lower incidence of tourniquet pain.

Quincke type of spinal needle was commonly used in the induction of spinal anesthesia as revealed by this study because it can be easily inserted and locally available for it is the one commonly used by the anesthesiologist. This finding is parallel to study that this item is easily available cheaper and was found easy for insertion.

As to conventional side effects, Table 1 shows that low blood pressure or hypotension was the first in the line and was expected because of bupivacaine spinal can be systematically absorbed that can affect cardiovascular resulting to conduction, excitability, refractoriness, contractility and peripheral vascular resistance are minimal. This is similar to the findings that hypotension is the most common cardiovascular response in regional anesthesia and is the most common problem with caesarean section that is associated with maternal nausea and vomiting. It is also alluded that low-dose spinal anesthesia is generally associated with very little hypotension. Considering this, moderate fall in systolic blood pressure to 80 mmHg in a young fit patient or 100 mmHg in an older patient is acceptable, provided the patient looks and feels well and is adequately oxygenated, besides the decrease in blood pressure is approximately reduced by 39-45% after spinal and epidural anesthesia. Moreover, incidence of significant hypotension is usually observed when using bupivacaine 5mg with fentanyl 10mcg. Other study pointed out that no prophylactic technique can successfully eliminate hypotension due to pharmacological sympathectomy resulting in potential deleterious consequences for the patient.

Patients experienced headache that much though sample of this study composed of different age group which is similar to a study but are young and women patients were particularly susceptible of developing headache after spinal anesthesia. In contrary, headache is less than 1% side effect and as the result of cerebro spinal fluid leaking out to the subdural space. Other authors revealed the likelihood of headache is higher if the epidural needle is inadvertently passed through the dura mater (covering of the spinal cord). To avoid post dural puncture headache (PDPH), the use of smaller gauge or modern needles is suggested for it traumatize the dura lesser or make a smaller dura puncture, thereby lessening CSF leakage that can cause PDPH. Post-operative patient who underwent spinal anesthesia experienced backaches parallel to the findings of this study that maybe the result of tissue trauma during insertion of the spinal needle through the layers of the skin, fat, muscles and ligaments. Otherwise it may result to tissue trauma during insertion of the spinal needle through the layers of skin, fat, muscles and ligaments. Conversely, its relationship with various types and sizes of spinal needle is yet to be confirmed.

Meanwhile, nausea and vomiting during spinal anesthesia for cesarean section are very common and unpleasant events oppositely to our findings. That is maybe because the choice of agents for premedication and intraoperative sedation may significantly impact on the incidence of post-operative nausea and vomiting.

Alternatively, urinary retention is somewhat irrelevant side effect of spinal anesthesia, looking for the reason and the findings wherein in a series of 400 patients receiving sub-arachnoid block (SAB), only 4 cases of urinary retention occurred which justifies that still cases of the same can occur. It is known that urinary retention is a side effect of opioids, particularly after intrathecal or epidural administration though urinary retention is less common after a short-acting (lidocaine 5%) than after a long-acting agent (bupivacaine 0.5%).

Negligibly, itchiness is a rare condition experienced by patient who received spinal anesthesia that is opposite to the findings that most often, it is a result from narcotic pain medication that is added to the numbing medicine in the spinal. Some study reported that an incidence of pruritus of 9% when intrathecal fentanyl was used and when opiates are administered by the epidural and spinal routes,
itching occurs as a side effect \[11\].

Another opposing data to the findings of this study is shivering, it is unusually observed among post-operative patient who underwent spinal anesthesia but \[17\] stated that shivering is frequent during the post-anesthetic recovery period, and there is no clear consensus about the best strategy for its treatment. This syndrome has an estimated incidence from less than 1% to about 5% of patients undergoing spinal anesthesia, even in the highest risk subset—young, female, and pregnant \[18\].

Side effects commonly varies according to age and gender but in this study, it was proven that there is no significant difference on conventional side effects on the matter. It is expected that women were more likely to be affected than men when risk was adjusted for age. It is in contrary with study of \[19\] found that the risk of PSPH was twice as great as that of men as well as their pain perception. Women seem to process nociceptive information differently from men showing the greater sensitivity to painful stimulation that facilitates the central sensitization process. Some studies emphasis on the incidence of PSPH is higher among females and there is an inverse relationship between PSPH and increasing age. Certain patient population is also at an increased risk for the development of post spinal puncture headache patients of 20-40 years that are more susceptible.

**CONCLUSION**

Side effects in all aspect of care are a sensitive issue to be considered and addressed because of its accompanying problem it may bring to clients. The side-effects of spinal anesthesia among post-operative patients in different hospitals of Misurata, Libya were perceived as more conventional and have no significant difference to both genders at any age.

**Acknowledgement:** The researchers expresses their heartfelt thanks to the anesthesiologists, and the post-operative patients at the surgery department of Misurata Central hospital, Al Shefa Hospital and Misurata Cancer Hospital for all the support they gave in this study.

**Ethical Issues:** This study was approved by the department heads and anesthesiologists of the hospitals. Permission to conduct the study was also obtained from the Chief of Hospital and head nurses of the wards and post anesthesia care unit or recovery room.

**Conflict of Interest:** There is no professional, personal or family allegiance, bias, inclination, obligation or loyalty which may in any way affect the objectivity, independence or impartiality in making this research.

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**REFERENCES**


An Evidence-based Nursing Faculty Mentoring Program

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ABSTRACT

Aim: This article describes a model for an evidence-based nursing-specific faculty mentoring program.

Background: Given the current nursing faculty shortage internationally, recruiting and retaining expert nursing faculty is key. Experts in non-academic and practice settings who begin teaching are novices. Mentoring is recommended to support new faculty.

Method: The mixed method evaluation design used focus groups and a cross-sectional online survey measuring the quality and learning of mentoring relationships.

Results: Mentors and mentees indicated high levels of quality and learning. Focus group results included challenges with scheduling and role confusion, but a clear relationship evolution.

Conclusion: This evidence-based mentoring model met faculty development needs of new faculty and their mentors.

Keywords: Mentoring; Faculty Development; Nursing Faculty; Professional Development; Faculty Orientation

INTRODUCTION AND BACKGROUND

Given the international nursing faculty shortage, recruiting and retaining expert nursing faculty is imperative to meeting current and projected needs. Often, experts in non-academic and practice settings who begin academic teaching are novices in classroom and experiential learning environments. Mentoring is recommended to provide support to individuals transitioning into new educator roles. Formal mentorship is one solution for attracting and retaining new faculty (1, 2, 3, 4, 5). Mentoring has a long history in many professions, including nursing. Components include providing guidance, and serving as a role model, advisor, and counselor (1, 6, 2, 7, 4).

Many great nursing leaders were “mentored,” with far-reaching implications for the mentee and the nursing profession (6). Lillian Wald credited her mentor, Josephine Shaw Lowell, with guiding her as she created public health nursing at Henry Street Settlement (6). Virginia Henderson (6) noted that Annie W. Goodrich, then Dean of the Army School of Nursing, “was an influence in those early student days” (p10) and assisted her to see beyond authoritarian-type practice and focus on developing her personal nursing concept (6). This historical context reiterates the potential impact of mentoring relationships.

A formal mentoring program was identified as an important need for new faculty in a Department of Nursing at a United States university. This nursing program was rapidly expanding in response to the national nursing shortage and local efforts to increase Bachelor’s-prepared nurses. This upsurge in students resulted in a large number of new faculty hires. Although these new faculty, all nurses, were often clinical experts, many had limited or no academic experience. Therefore, the department-level Faculty Development Committee (FDC) was charged with
creating a mentoring program.

The purpose of this paper is to explain the analysis of the resultant evidence-based nursing faculty mentoring program and describe its planning, implementation, and evaluation.

**METHOD**

**Needs Assessment and Program Activities**

A well-designed mentoring program will identify and address unique faculty needs. After completing a literature review on nursing faculty mentoring models, the FDC developed a needs assessment distributed to all full-time faculty \( N = 36 \). Roundtable discussions were held with faculty before the academic year began, giving time to analyze needs, match mentor-mentee dyads, and begin activity planning.

Early in the process, an FDC member met with the university’s faculty development center to share preliminary plans, ensuring non-duplication. Prospective mentors and mentees completed the adapted Mentor/Mentee Interests and Strengths Inventory\(^{10}\). Mentor/mentee dyads were assigned after consultation with departmental administration. A Mentoring Partnership Agreement clarified expectations and goals for the year.

After compiling needs assessment data, the FDC planned a schedule in collaboration with the department chair, including monthly topic-specific lunchtime presentations, a portfolio development session, and professional development, thereby providing an avenue for mentor/mentee dyads to improve their pedagogy through faculty-facilitated collaborative events. Examples of these events included a nursing education book club, and sessions such as “Getting to know your IRB”, “Creative Clinical Conferencing”, and “Team-based Learning Techniques”.

**EVALUATION MODEL**

**Procedures**

After obtaining Institutional Review Board approval, researchers began program evaluation at the end of the academic year using a mixed method evaluation including focus groups and a cross-sectional online survey deployed to mentor/mentee participants \(^{11}\).

**Quantitative Procedures**

The internet survey included demographic items and the Quality of Mentoring Relationships scale \(^{12}\). The scale included 10 Likert-scale (1 to 6) items. This scale has demonstrated acceptable reliability in internal consistency in previous studies \(^2\). Data was downloaded from the online survey system to Statistical Package for Social Sciences (SPSS), and examined for accuracy or coding errors. Quantitative data were analyzed with basic univariate descriptive analyses.

**Qualitative Procedures**

Focus groups were separated into mentors and mentees using identical open-ended questions including probes. Non-nursing faculty led the focus groups after a brief training. Focus group questions included: 1) Describe how you and your mentee worked together. How were meetings initiated? In what ways did the relationship evolve or progress during your time together? 2) What were the ways in which the mentoring relationship supported your personal and professional growth? 3) What were some of the best things that happened in this mentoring relationship? What did you take away from it? 4) If you had to say what didn’t work, what would it be? 5) If you were appointed to a university-wide committee to design a mentoring program for professional development, what would you want to achieve?

Qualitative data were transcribed and compiled anonymously into Microsoft Word. Using a descriptive and interpretive phenomenological selective approach and an editing analysis style, two faculty investigators independently read the compiled comments, highlighted meaningful segments, and generated organizational categories \(^{13,14}\). They met to discuss, compare, and refine the analysis to generate themes. Finally, they met with the other authors to review the results (Figure 1).

**RESULTS**

**Quantitative**

A total of 11 faculty dyads \( N = 21 \) participated in the evaluation, a 95% response rate. Results (Table 1) highlighted an overall positive experience by both mentors/mentees in the first year, with mentees rating
the experience slightly higher than mentors.

QUALITATIVE

The mentoring process allowed mentors and mentees to experience academic growth and develop new relationships. After conducting focus groups, investigators discussed, compared, and refined the analysis to generate two overarching themes: Challenging Aspects of the Mentor/Mentee Process, and Evolution of the Relationship, each containing subthemes. Within “Challenging Aspects of the Mentor/Mentee Process”, five subthemes emerged: (a) Being Proactive, (b) Role Confusion, (c) Uncertainty, (d) Scheduling, and (e) Structuring the Program. Within “Evolution of the Relationship”, two subthemes emerged: (a) Became Friends and (b) Felt Supported.

Challenging Aspects of the Mentor/Mentee Process

Some subthemes varied between groups. Mentors needed to be proactive in the relationship and sometimes experienced role confusion. Mentees experienced relationship uncertainty. Subthemes of scheduling and structure were common to both groups.

Being proactive. “Being Proactive” was a subtheme in the mentor group. Mentors initiated contact, initially driving conversation. “I had to be proactive because she was so overwhelmed.” This shifted as the relationship grew, but mentors had to work with mentees to “build some trust before the person could add it [meeting] in.” Mentees still “had lots of questions.”

Role confusion. Role confusion took on many forms within the mentor focus group. Mentors noted confusion between their roles as a 1) mentor vs. experienced faculty member; 2) mentor vs. friend; and 3) mentor vs. coordinator of a team-taught course.

Several mentors recognized that there is a difference between being a mentor and an experienced faculty member; mentoring involves additional skills such as mentee needs assessment and provision of emotional support. Mentors sometimes had difficulty separating their friendship with the mentee from their mentor role. One mentor was course coordinator in a course in which the mentee was teaching. Additionally, sometimes lines were blurred between the formal university/department orientation and mentoring. Often the mentoring relationship included discussing basic questions about departmental logistics, which may have been covered in orientation.

Uncertainty. Uncertainty was a subtheme in the mentee focus group. Some mentees had uncertainty about their faculty role (e.g. contract details); others had uncertainty about transitioning from adjunct faculty to full-time. All wished that mentors did not make assumptions about knowledge level, noting that a baseline knowledge assessment should be incorporated into mentoring. One new faculty member said, “I didn’t know what I didn’t know.” Another noted, “I should have used my mentor more than I did.”

Mentee participants noted uncertainty surrounding departmental logistics, such as questions about learning management platforms. Generally, new faculty participants recognized knowledge deficits, and accurately pinpointed new role challenges.

Scheduling. Scheduling challenges was a strong subtheme throughout both focus groups. One mentor participant noted, “My mentee was very busy, so it was hard to get started.” Being too busy and having to cancel scheduled meetings was common to both groups. The academic schedule made intensive mentoring difficult. Some pairs just met for “bumps in the road” or via email, especially if the mentee had teaching experience. One mentor noted, “I didn’t always feel that we had enough time to do the job well.”

Structure. There were challenges within both groups over the ideal program structure: Should it have a formal or informal structure? Mentoring sometimes had to be informal due to scheduling difficulties. One mentor expressed frustration that the program guidelines were “fluid.” Mentees wanted a structured set-up but acknowledged that this was non-feasible. Successful mentor/mentee dyads stuck to mutually agreed-upon goals and meeting dates.
Evolution of the Relationship

During the first year the mentor/mentee relationship evolved, described as the two subthemes “becoming friends” and feeling supported”. Many mentors and mentees enjoyed relationship evolution by “sharing good ideas” about nursing education and “work/family life balance”. One mentee affirmed, “My mentor helped me grow professionally and personally.”

Becoming friends. This subtheme was reported by both mentors and mentees. Having a mentoring relationship forced interaction, which was “intentional, helpful and positive”. Office proximity facilitated the relationship. A desirable mentor/mentee relationship was described as being, “in similar places in personal life.”

Personal relationship evolution centered around such things as having lunch or tea. Most mentors and mentees indicated becoming friends. Additionally, mentors benefitted from “fresh perspectives.” One mentor had an experienced mentee: “My mentee…brought good ideas to me,” while another had a mentee whose “graduate work was in nursing education so she shared some good ideas.”

Feeling supported. Support was reciprocal. Both groups described learning new things or feeling empathy of work/social situations, “The mentors were strong, had integrity, and ... [were] very nurturing.” Mentees indicated they were shown the “nuts and bolts.” Mentors’ support included advice for student situations, year-end evaluations, policies, and pedagogy. One mentee concluded, “I don’t think I could have survived without the program.”

DISCUSSION

The evaluation results of this program mirrored those of previous research and confirmed the importance of nursing faculty mentoring programs. Four implications are apparent: 1) Need for effective matching and accessibility of mentors; 2) Need for a formal structure; 3) Recognition of relationship evolution; and 4) Challenges of meeting mentor/mentee needs.

First, a good mentor/mentee match is crucial. Without an effective match, the relationship will frequently fail (15,16). Matching must take accessibility into consideration. One study finding was the challenge of matching schedules. Blauvelt and Spath (17) found that although mentoring provides support and a safe place to express uncertainties, schedule-matching was vital.

Second, although most schools of nursing have a new faculty orientation program, sometimes including mentoring, the question is how formal a program should be(16). Dunham-Taylor et al. (1) suggest a formal approach. In this study, a formal mentoring approach facilitated the clinician-to-educator transition. Mentors and mentees identified confusion between new faculty orientation and mentoring. In year two of this program, a formal orientation checklist was developed to clearly differentiate orientation from mentoring. A formal mentor/mentee contract with an opt-out policy outlined individual objectives and schedules.

Third, the current study demonstrated relationship evolution, supported in literature. Several previous authors have described mentoring relationship stages (18,19,1). Johnson (20) described the process as a continuum with four phases – initiation, cultivation, separation, and redefinition of the mentor/mentee relationship.

Finally, although a structured mentoring program in nursing can be successful, it can be a source of frustration and stress without adequate consideration for demand placed on mentors. Mentor benefits can include career revitalization, social recognition, and mutual feelings of satisfaction, accomplishment, and companionship (21). One reason for positive feedback in this program was that mentors were given credit towards departmental service in their annual review. Departmental administration allocated resources for program activities, allowing mentors to share expertise and participate in learning with mentees. A positive work environment fostering collegiality and administrative support assist in faculty retention (22).

Limitations included a small sample size and the possibility of social desirability due to self-report. The authors attempted to minimize bias by separating mentors and mentees during the focus groups and using an online survey format (23).
Table 1: Results of the Quality and Learning of Mentoring Relationships

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mentee Mean (n=11)</th>
<th>Mentor Mean (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>My mentor/mentee and I enjoyed a high quality relationship.</td>
<td>5.33</td>
<td>4.73</td>
</tr>
<tr>
<td>Both my mentor/mentee and I benefited from the mentoring relationship.</td>
<td>5.0</td>
<td>4.6</td>
</tr>
<tr>
<td>I effectively utilized my mentor/mentee.</td>
<td>4.11</td>
<td>4.0</td>
</tr>
<tr>
<td>The mentoring relationship with my mentor/mentee was very effective.</td>
<td>4.89</td>
<td>4.45</td>
</tr>
<tr>
<td>I am very satisfied with the mentoring relationship developed with my mentor/mentee</td>
<td>5.0</td>
<td>4.73</td>
</tr>
<tr>
<td>I learned a lot from my mentor/mentee.</td>
<td>4.56</td>
<td>4.0</td>
</tr>
<tr>
<td>My mentor/mentee gave me a new perspective on many things.</td>
<td>5.0</td>
<td>3.73</td>
</tr>
<tr>
<td>My mentor/mentee and I were “co-learners” in the mentoring relationship.</td>
<td>4.67</td>
<td>4.0</td>
</tr>
<tr>
<td>There was reciprocal learning that took place between my mentor/mentee and me.</td>
<td>4.67</td>
<td>4.0</td>
</tr>
<tr>
<td>My mentor/mentee shared a lot of information with me that helped my own professional development.</td>
<td>4.89</td>
<td>3.45</td>
</tr>
</tbody>
</table>

Figure 1. Nursing Faculty Mentoring Program Themes

CONCLUSION

An evidence-based nursing faculty mentoring program can have benefits for the mentee, mentor, and organization (15). This department had a 100% retention rate for newly hired faculty after their first year, indicating that mentoring may be a feasible option for decreasing attrition (1). The need for nurse faculty mentoring is global, since there is a critical faculty shortage due to the worldwide nursing shortage. A mentoring program such as this, with the aid of details presented here, is replicable, with far-reaching benefits for faculty mentors, new faculty mentees, and Colleges of Nursing. New nursing faculty who are mentored report higher levels of job satisfaction, more job promotions, and upward career mobility compared to those without mentors (24). Mentoring relationships need to include ways to promote collaboration, communication, and collegiality (25).

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Ethical Clearance: James Madison University IRB# 13-0332

Conflict of Interest: Nil.

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A Randomized Control Study to Evaluate the Effectiveness of Counseling on Pain and Fatigue among Cancer Patients Receiving Chemotherapy in Selected Hospital, Ludhiana, Punjab

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ABSTRACT

Background: Cancer refers to any one of a large number of diseases characterized by the development of abnormal cells that divided uncontrollably and have the ability to infiltrate and destroy normal body tissue. Cancer patients face a number of problems of which Pain and Fatigue, the most common problems faced by almost all the cancer patients.

Objective: The study was done to evaluate the effect of counseling on pain and fatigue among cancer patients.

Method: The study design was experimental pre test post test control group design. Total of 20 chemotherapy patients, 10 in Counseling and 10 in control group were included. Pain and fatigue was assessed using Numerical pain rating scale and Fatigue severity scale at baseline and after 4 weeks. The cancer patients in intervention group received four sessions within 4 weeks while cancer patients in control group received treatment as usual.

Results: There was significant decrease in pre and post intervention mean Pain, fatigue scores (p>0.05) of cancer patients in intervention group, while significant increase (p>0.05) in mean pain and fatigue scores (p>0.01) of cancer patients in control group.

Conclusion: Counseling was effective in reducing pain, fatigue among cancer patients receiving chemotherapy.

Keywords: Counseling, pain, fatigue, cancer patients, Chemotherapy.

INTRODUCTION

Cancer refers to any one of a large number of diseases characterized by the development of abnormal cells that divided uncontrollably and have the ability to infiltrate and destroy normal body tissue. Cancer patients face a number of problems of which Pain and Fatigue, the most common problems faced by almost all the cancer patients. Prevalence of pain is very high i.e. 79% hospitalized cancer patients experience pain. Despite use of analgesics 51% patients experience episodes of breakthrough pain and up to 46% have moderate to severe pain. Pain being the 5th vital sign is very important to be assessed and managed in cancer patients also. Minimizing pain and fatigue among cancer patients will help to reduce suffering to a great extent and let cancer patients live a good quality of life. According to national cancer registry program by Indian council of medical research (ICMR), in India cancer disease kills 50 people in every hour. There are 2.5 million
cases at any given time, 8 lakh new cases every year and 4,40,00 death of cancer every year.\textsuperscript{2}

The international association for the study of pain’s widely used definition states: “Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage. Cancer-related pain is a multidimensional experience, consisting of physiological, sensory, affective, cognitive, behavioral, and socio cultural components. It is highly subjective and is unique to the individual experiencing it.”\textsuperscript{3}

Despite internationally accepted guidelines, cancer pain relief is an important but mostly neglected public health issue Due to the under treatment of cancer pain.\textsuperscript{4} The WHO estimates that over 80% of the world’s population is inadequately treated for moderate to severe pain including the cancer pain.\textsuperscript{5} Therefore, National comprehensive cancer network has developed evidence-based multidisciplinary clinical practice guideline for patients with cancer.\textsuperscript{6} Effective pain management especially in advanced disease is one of four priorities in comprehensive W.H.O cancer programme.\textsuperscript{7}

Cancer-related fatigue (CRF) is a common symptom in patients receiving chemotherapy, the prevalence is 75% to 90%; in those receiving radiation, 65%. The management of Cancer –related fatigue is difficult because its nature is not yet fully explained and it has a variety of causes.\textsuperscript{8} According to American cancer society, 90% of patient’s in cancer treatment experience fatigue that can range from mild lethargy to feeling completely wiped up. It affects the quality of life, interferes with ability to work, relationships with others, physical and emotional well-being.\textsuperscript{9} Now-a-days there has been growing interest in managing these symptoms with non-pharmacological treatments.\textsuperscript{10}

Although psychotherapy for cancer patients is known to be effective, there is little in the research to indicate what elements of their therapy patients find most helpful. This indicated that patients offered cognitive behavioral therapy had similar experiences to those who received a type of relaxation therapy that included time for non-specific, patient-centered ‘chat’. Central to participants’ experiences was the opportunity both therapies gave them to enter a relationship in which they could safely share their thoughts and feelings with someone who seemed genuinely interested in understanding their cancer experience and ‘truly cared’. These findings suggest that the unique perspectives of cancer patients can add considerably to our understanding of individual psychotherapy in cancer care settings and how this might be improved.\textsuperscript{11}

Few of the researches have been carried out to assess and manage fatigue among cancer patients. But very few have seen effect of P.M.R on fatigue. A review published had evaluated 41 studies, of these 17 looked at activity based interventions, as home based exercises by cancer patients. 24 studies evaluated psychological interventions as group therapy, telephone counseling on stress management and relaxation training. Jacobson and his colleagues found that patients who received either of the two types of interventions reported less fatigue than control group patients.\textsuperscript{12} A latest review article on nursing intervention for fatigue during cancer treatment from 1995 to 2005 produced 18 studies. Studies dealt with sleep promotion through instruction and education, exercise, distraction and relaxation. Significant effects were found in studies including exercise, a positive effect of education and counseling on sleep while distraction and relaxation were found effective only for few hours after intervention.\textsuperscript{13}

**FINDINGS**

To evaluate the effect of counseling on Pain and fatigue among cancer patients. Pre-intervention, mean pain scores among cancer patients were 5.60±2.54 while 4.40±2.41 after 4 weeks ( post intervention). The difference between the pre-intervention and post –intervention was found significant at p> 0.05 level. Pre-intervention, mean Fatigue score among cancer patients were 44.90 ± 13.97. while 32.10 ± 12.65 after 4 weeks ( post intervention). The difference between the pre-intervention and post –intervention was found significant at p> 0.05 level. Counseling was effective in reducing Pain( p> 0.05 ) and fatigue among cancer patients.

In control group,Pre-assessment ,mean pain scores among cancer patients were 5.70±1.82 while 7.80±1.13 after 4 weeks ( post intervention). The difference between the pre-intervention and post –intervention was found significant at p> 0.05 level.
Pre-assessment, mean Fatigue score among cancer patients were 40.20±9.30 while 54.70±10.31 after 4 weeks (post intervention). The difference between the pre-intervention and post-intervention was found significant at p> 0.05 level.

Control group had significant increase in Pain (p> 0.05) and fatigue (p> 0.01) among cancer patients.

**MATERIAL & METHOD**

**Research approach**

Quantitative research approach was considered to be appropriate for present study because it aimed at to evaluate the effectiveness of counseling on Pain and fatigue among cancer patients receiving Chemotherapy in selected hospital, Ludhiana, Punjab.

**Research design**

An experimental (Pre test-post test control group design) research design was selected to accomplish the stated objectives for the present study. In this design, subjects have been designed randomly to the experimental or the control group. The experimental treatment is given only to those in the experimental group, and the pre-tests and post tests are those measurements of the dependent variable that are made before and after the experimental treatment is performed. All true experimental designs have subjects randomly assigned groups, have an experimental treatment introduced to some of the subjects and have the effects of the treatment observed.

**Research variables**

**Independent Variables**- Independent variables in the study are intervention- Counseling. Age, Gender, Education, Religion, Marital Status, Occupation, Monthly income, Type of family, Place of residence, Dietary habits, Any other treatment received.

**Dependent Variables**- Dependent variables in the study are Pain and fatigue among cancer patients.

**Research setting**

The Present study was conducted in Chemotherapy ward in Oswal Hospital Ludhiana, Punjab. The hospital is 350 bedded multispecialty hospital and was started in the memory of late. Smt. Mohandai Oswal w/o late Sh. Vidya Sagar Oswal.

**Target population**

The target population was the cancer patients receiving chemotherapy on OPD bases in the Oswal hospital, Ludhiana.

**Sample and sampling technique**

Total sample for the study was 20 chemotherapy patients in Oswal hospital, Ludhiana. Simple random sampling technique was used. In which lottery method was used to collect sample without replacement.

**Inclusion and exclusion criteria**

**Inclusion criteria**

Cancer Patients those who were

- willing to participate
- Receiving chemotherapy
- Conscious patient
- Able to converse in Punjabi/Hindi/English.

**Exclusion criteria**

The cancer patients who were

- In advance stage
- Very debilitative stage

**Development and description of the tool**

The tool used in the study has following two parts:-

**Part 1:Socio demographic characteristics**

This part consists of eleven items for obtaining personal information i.e. age, gender, education, religion, marital status, occupational status, monthly income, type of family, place of residence, dietary habits and any other treatment received which were used to collect the baseline information of the chemotherapy patients.

**Part 2: Standardized scale**

**Numerical Pain Rating Scale (N.P.R.S).** The scale was developed by Mc Caffery, Beebe et al. in
The numerical rating scale is an 11-point scale for patient self-reporting of pain. The scale contains a 10 cm long line with scores ranging from 0 to 10. Score of 0 on the scale indicated no pain while a score of 10 indicated severe pain. In the study it measured pain intensity among cancer patients before and after 4 weeks. Pain intensity was easily marked on the scale by the patients before and 4 weeks after the intervention.

**Fatigue Severity Scale (FSS).** The scale was developed by Lauren Krupp, MD in 1989. The 9-item Fatigue Severity Scale (FSS) is one of the most commonly used self-report questionnaires to measure fatigue. A low value[1] indicates strong disagreement with the statement, whereas a high value [7] indicates strong agreements. Total score of 9-27 indicate mild fatigue, 28-45 indicate moderate fatigue and 46-63 indicate severe fatigue.

**Translation of tools**

Tools were translated into Punjabi language and the back to English by Punjabi expert.

Content validity of the tools

The content validity of the tools was determined by experts’ opinion. To ensure the content validity of the tools, the standardized scales was circulated among experts in the field of Medical Surgical Nursing, Medical Oncologists specialist. The experts were requested to give their valuable opinion and suggestions for the development of tools to conduct the study. As per the guidance and suggestions of the experts, necessary amendments and corrections were made and some items were added and deleted such as addition of no treatment in any other treatment received as a demographic variable.

**Description of the counseling**

1st session of counseling was then started after rapport building with the patient.

- Each individual counseling session take 15-20 minutes.
- Psychological support was provided to individual chemotherapy patients in terms of
  1. Listening to the problems
  2. Exploring their feelings.
  3. Providing information
  4. Clarifying the doubts
  5. Helping patients to cope with the symptoms
    - Researcher carried out individual counseling sessions for each patient in chemotherapy ward.
      - The feelings of patients was explored during communication with each individual client regarding their suffering.
      - Then the information was provided regarding the sickness, the reason for symptoms of pain, anxiety, fatigue and depression and any other information was asked by patient.
      - The doubts raised by the clients regarding the sickness, symptoms, treatment, diet etc. was clarified, as asked by the patient during counseling session.
      - Patients were told different strategies to cope with their symptoms according to their chief problems. All the patients were told ways to cope with symptoms of pain, anxiety, fatigue and depression in addition to their chief problems.
      - A counseling chart was maintained in brief for each individual patient. Chart included the same columns of listening to the problems, exploring their feelings and other areas involved in counseling. The main problems told by the patient is listed briefly.

**Pilot study**

Pilot study was conducted in the 4th week of December 2013. Four chemotherapy patients were taken as the sample for the pilot study. 2 chemotherapy patients in Counseling group and 2 in Control group. Pilot study was done to ensure the reliability of the tool and feasibility of the study. Prior permission was taken to conduct the study from oncologist and medical superintendent. With the help of standardized tool the investigator collected data from cancer patients after obtaining verbal consent. The time taken for data collection was 30 to 40 minutes.

**Reliability of the tools**

The reliability of tools for assessment of Pain,
Anxiety, fatigue and Depression was determined by test-retest method and correlation coefficient by applying spearman brown prophecy formula.

Pain Numerical Pain Rating Scale (NPRS) 0.98
Fatigue Fatigue Severity Scale 0.89

Data collection procedure

Data collection procedure started from 16th January to 13th February 2014. The total sample was 20 cancer patients receiving chemotherapy in Oswal Hospital, Ludhiana. The investigator took 20 chemotherapy patients, 10 chemotherapy patients in each Counseling group and Control group according to the research approach and design taken up for the study. The investigator first introduced herself to the chemotherapy patients, explained the purpose of study for gathering the information and took verbal permission from the chemotherapy patients for filling the standardized scales. They were assured that their responses would be kept confidential and used only for research purpose. To avoid contamination of the information the investigator first assessed the Pain ,fatigue before the beginning and at the completion of all 4 sessions (after 4 weeks). Day wise intervention assignment in two groups, 1 counselling group and 2 control group. Weekly sessions for counselling were carried out till 4 weeks. Pain and fatigue of cancer patients was assessed at the completion of all 4 sessions.

DISCUSSION & CONCLUSION

Analysis of the objective of the study i.e to evaluate the effect of counseling on Pain, and fatigue among cancer patients. In this study counseling was found to have significant effect in reducing pain and fatigue among cancer patients. While cancer patients in control group, significant increase in mean score of pain and fatigue. In the present study, counseling was found effective in reducing pain and fatigue. Similar findings reported by Devine EC, Westlake SK (1995) educational and psychosocial care provided to adults with cancer affects seven outcomes—anxiety, depression, mood, nausea, vomiting, pain, and knowledge. The results revealed that Psychoeducational care was found to benefit adults with cancer in relation to anxiety, depression, mood, nausea, vomiting, pain, and knowledge.

CONCLUSION

Counseling was effective in reducing pain and fatigue among cancer patients. while in control group had significant increased in pain and fatigue among cancer patients.

Acknowledgement: First and foremost I would like to thank, God Almighty for guiding and directing me to complete this research project. On completion of this thesis, I would like to express my gratitude and thanks to all those persons who efforts, support and participation helped me to bring this work in a complete shape.

Conflict of Interest- No Conflict in doing a study.

Source of Support- Email, thesis, library.

Ethical Considerations: Permission was taken through email from Author Lauren Krupp, MD to use Fatigue Severity Scale. Approval from the research and ethical Committee of College of Nursing and Oswal Hospital, Ludhiana was taken to conduct the study and written permission was taken for that. Chemotherapy patients who were taking part in the study were explained about the purpose of the study and were assured that the information given by them would be kept confidential and would be used purely research purpose. Anonymity of the subjects and confidentiality of information was maintained.

REFERENCES

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A Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Plotting of Partograph among the Nursing Students in Selected Nursing Colleges of Vadodara

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ABSTRACT

Introduction: The partograph provides information about deviations from the normal progress of labour and about abnormalities of maternal or fetal condition during labor. It alerts providers when a woman may need an intervention and facilitates ongoing evaluation of the effects of those interventions. A partograph is a representation of the changes that occur in labour, including cervical dilatation, fetal heart rate, maternal pulse, blood pressure and temperature. It also shows a numerical record of features such as urine output and the volume and type of intravenous infusions. It is therefore possible at a glance to identify deviations from normal in any of these variables. Objectives: The objectives of the research are to assess the existing knowledge regarding plotting of partograph among the nursing students, evaluate the effectiveness of structured teaching programme on knowledge regarding plotting of partograph among the nursing students and assess the pretest knowledge scores regarding plotting of partograph with the selected demographic variables of the nursing students.

Materials and Method: An evaluative research approach with pre experimental one group pretest posttest design was used. 50 samples were collected by using convenient method from Sigma Institute of Nursing and Nrupur Institute of Nursing Science & Research. Tool consists of 5 demographic variables and 25 structured questionnaires was administered before and after STP. The reliability of the tool was established by using test retest method. Data was analyzed by using inferential and descriptive statistics.

Results: Computed t test revealed that mean post test knowledge score regarding plotting of partograph (20.28±3.08) was significantly higher than mean pre test knowledge score (12.76±3.49) at p<0.05 level. The ‘t’ value was significant (t=2.0096) at p<0.05 level indicating the planned teaching programme regarding plotting of partograph was effective. Conclusion: The study findings revealed that STP was highly effective in improving knowledge of plotting of partograph among nursing students.

Keywords: Effectiveness, knowledge, STP, plotting of partograph, nursing students.

INTRODUCTION

The partograph provides information about deviations from the normal progress of labor and about abnormalities of maternal or fetal condition during labor. It alerts providers when a woman may need an intervention and facilitates ongoing evaluation of the effects of those interventions.

One of the tools used to monitor labor and prevent prolonged and obstructed labor is the partograph, a preprinted one-page form on which labor observations are recorded. The purpose of the partograph is to help health care providers record, interpret, analyze, and use data to make clinical management decisions while labor is in progress. The form provides a graphic overview of the progress of labor and records information about maternal and fetal condition during labor.
A partograph is a representation of the changes that occur in labour, including cervical dilatation, fetal heart rate, maternal pulse, blood pressure and temperature. It also shows a numerical record of features such as urine output and the volume and type of intravenous infusions (including oxytocin drips). It is therefore possible at a glance to identify deviations from normal in any of these variables.

When the partograph is used effectively it will prevent prolonged or obstructed labour, which accounts for about 8% of maternal deaths. The majority of the deaths and complications could be prevented by cost-effective and affordable health interventions like the partograph and indeed the same measures that would prevent maternal deaths would also prevent morbidity and improve neonatal outcome.

MATERIAL & METHOD

RESEARCH APPROACH & DESIGN: An evaluative research approach with pre-experimental one group pretest posttest design was used. The study design shows that on the first day pre-test was given to collect the data by self administration knowledge questionnaires. On the same day structured teaching programme was conducted. On the seventh day post-test was conducted to assess effectiveness of structured teaching programme with same pre-test knowledge questionnaires.

SETTING: The study is conducted in two nursing colleges, Sigma Institute of Nursing and Nrupur Institute of Nursing Science & Research in Vadodara, Gujarat.

SAMPLING TECHNIQUE: Non-probability Convenient sampling technique was used.

SAMPLE SIZE: 50 internship GNM students.

DESCRIPTION OF TOOL

• Tool I- The demographic data collection tool.

Questionaire for demographic data collection tool that are age, gender, marital status, source of information and type of family.

• Tool II- Knowledge regarding ploting of partograph

This Scale consist 25 statements to measure the level of knowledge regarding plotting of partograph. Total 25 statements comprising introduction of partograph, components of partograph, and importance of partograph.

FINDINGS

ANALYSIS OF KNOWLEDGE REGARDING PLOTTING OF PARTOGRAPH

SECTION A: DESCRIPTION OF THE LEVEL OF KNOWLEDGE

<table>
<thead>
<tr>
<th>Range of Score</th>
<th>Percentage of Score</th>
<th>Level of Knowledge</th>
<th>Number of Students</th>
<th>Percentage of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 – 05</td>
<td>00 - 20</td>
<td>Very Poor</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>05 - 10</td>
<td>20 - 40</td>
<td>Poor</td>
<td>01</td>
<td>02</td>
</tr>
<tr>
<td>10 – 15</td>
<td>40 - 60</td>
<td>Average</td>
<td>39</td>
<td>78</td>
</tr>
<tr>
<td>15 - 20</td>
<td>60 - 80</td>
<td>Good</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>20 - 25</td>
<td>80 - 100</td>
<td>Excellent</td>
<td>00</td>
<td>00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

Table I: The level of knowledge of students regarding plotting of partograph shows that, majority 39 (78%) of the sample had average knowledge, 1 (2%) of the students had poor knowledge and 10 (20%) had good knowledge.

SECTION B: AREA WISE DESCRIPTION OF KNOWLEDGE SCORE
Table II: Distribution of area wise mean, sd and mean percentage of knowledge scores

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Knowledge score</th>
<th>Maximum possible scores</th>
<th>Mean</th>
<th>SD</th>
<th>Mean percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction of partograph</td>
<td>4</td>
<td>2.26</td>
<td>0.59</td>
<td>56.5</td>
</tr>
<tr>
<td>2</td>
<td>Components of partograph</td>
<td>13</td>
<td>07</td>
<td>1.74</td>
<td>53.84</td>
</tr>
<tr>
<td>3</td>
<td>Importance of partograph</td>
<td>8</td>
<td>3.5</td>
<td>1.16</td>
<td>43.75</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>25</td>
<td>12.76</td>
<td>3.49</td>
<td>25.52</td>
</tr>
</tbody>
</table>

Table II: Area wise distribution of the knowledge scores of the students reveals that out of 25 maximum obtainable scores, the total mean score was 12.76 which is 25.52%. The highest mean percentage (56.5%) was obtained in the area of “Introduction of Partograph” with mean and SD of 2.26±0.59. The mean percentage of 53.84% was obtained in the area of “Components of partograph” with mean and SD of 2.26±1.74. The mean percentage of 43.75% was obtained in area of “Importance of partograph” with mean and SD of 3.5±1.16.

SECTION C: EVALUATION OF THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME REGARDING PLOTTING OF PARTOGRAPH

Table III: Knowledge distribution of pre-test and post-test scores of the nursing students.

<table>
<thead>
<tr>
<th>Knowledge Score</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency (f)</td>
<td>Cumulative Frequency</td>
</tr>
<tr>
<td>5-7</td>
<td>05</td>
<td>05</td>
</tr>
<tr>
<td>7-9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-11</td>
<td>24</td>
<td>29</td>
</tr>
<tr>
<td>11-13</td>
<td>11</td>
<td>40</td>
</tr>
<tr>
<td>13-15</td>
<td>5</td>
<td>45</td>
</tr>
<tr>
<td>15-17</td>
<td>4</td>
<td>49</td>
</tr>
<tr>
<td>17-19</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>19-21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23-25</td>
<td>09</td>
<td>50</td>
</tr>
</tbody>
</table>

Table III: shows that majority of respondents percentage (48%) had scores between 11-13 and all the respondents had scores below 21 in the pre-test in comparison to majority (36%) of the students in post-test had scores between 21-23.

SECTION D: AREA WISE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME

Table IV: Area wise effectiveness of Structured teaching programme distribution of Mean, SD and Mean percentage of knowledge score of nursing students

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Areas</th>
<th>No. of Statement Score</th>
<th>Knowledge Scores</th>
<th>Pre-test (x)</th>
<th>Post-test (y)</th>
<th>Effectiveness (y-x)</th>
<th>Paired ‘t’ Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>1</td>
<td>Introduction of partograph</td>
<td>4</td>
<td></td>
<td>2.26</td>
<td>0.59</td>
<td>3.78</td>
<td>0.46</td>
</tr>
<tr>
<td>2</td>
<td>Components of partograph</td>
<td>13</td>
<td></td>
<td>07</td>
<td>1.74</td>
<td>10.14</td>
<td>1.64</td>
</tr>
<tr>
<td>3</td>
<td>Importance of partograph</td>
<td>8</td>
<td></td>
<td>3.5</td>
<td>1.16</td>
<td>6.36</td>
<td>0.98</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>25</td>
<td></td>
<td>51.04</td>
<td>3.49</td>
<td>81.12</td>
<td>3.08</td>
</tr>
</tbody>
</table>
Table IV: Area wise distribution of knowledge score of the students reveal that, in Introduction of partograph the mean post-test knowledge score was 94.5% and the mean pre-test knowledge score 56.5%. The effectiveness score was 38%. The ‘t’ value was computed to find the level of significance between the means and it was observed that not significant (‘t’ = 1.9) at p < 0.05 level for the ‘partograph’.

The mean post-test knowledge score for Components of partograph was 78% and the mean pre-test score was 53.84% with the effectiveness of 24.15%. The statistical test indicates the effectiveness of score was 24.15% found highly significant (‘t’ = 5.27) at p < 0.05 level for ‘Components of partograph’.

The mean post-test knowledge score of ‘Importance of partograph’ was observed to be 79.5% and the mean knowledge pre-test score of 43.75% with the effectiveness knowledge score of 35.75% established significant result (‘t’ = 5.4) at p < 0.05 level which is highly significant.

The enhancement of knowledge score was more in the partograph (38%) followed by ‘Importance of partograph’ (35.75%) then in Components of partograph (24.15%).

TESTING THE RESEARCH HYPOTHESIS

Significant difference between pre-test and post-test knowledge scores

Hypothesis was tested using paired ‘t’ test. The value of ‘t’ was calculated to analyse the difference in knowledge of the students with their pre-test and post-test scores. The research hypothesis H1 was formulated to evaluate the effectiveness of structured teaching programme on knowledge regarding plotting of partograph.

H1: The mean post test knowledge score of subject exposed to structured teaching programme regarding plotting of partograph will be significantly higher than the mean pre test knowledge scores as measured by structured questionnaire.

Scores of respondents in pre-test and post-test

To find the significant difference between computed mean of pre-test and post-test knowledge score, the paired ‘t’ test was calculated.

Table V: Significance of the difference between pretest and post-test knowledge score

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Mean pretest</th>
<th>Mean posttest</th>
<th>Mean effectiveness</th>
<th>‘t’ value</th>
<th>Table value</th>
<th>Level of significance P&lt;0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12.76</td>
<td>20.28</td>
<td>7.52</td>
<td>12.57</td>
<td>2.0096</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Table V: Pre-test and post-test mean knowledge scores and ‘t’ value showed that the mean gain in knowledge was 12.57. The ‘t’ value was significant (t= 2.0096) at p<0.05 level indicating the planned teaching programme regarding plotting of partograph was effective. Hence, stated research hypothesis H1 is accepted.

ASSOCIATION BETWEEN THE PRETEST KNOWLEDGE SCORES AND SELECTED DEMOGRAPHIC VARIABLES

Association between the pretest knowledge scores of the nursing students and selected demographic variables like age, gender, marital status, source of information and type of family

H2: There will be significant association between pre test knowledge scores and selected demographic variables.
Table VI: Association between pretest scores and demographic variables

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Level of knowledge</th>
<th>Df</th>
<th>Chi-sq. value</th>
<th>Table value</th>
<th>Significant P&lt;0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Poor 0-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average 09-16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Good 17-25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 - 21</td>
<td>38</td>
<td>0</td>
<td>34</td>
<td>4</td>
<td>0.35</td>
<td>9.49</td>
</tr>
<tr>
<td>22 - 24</td>
<td>09</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 and above</td>
<td>03</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>14</td>
<td>0</td>
<td>13</td>
<td>1</td>
<td>0.21</td>
<td>5.99</td>
</tr>
<tr>
<td>Female</td>
<td>36</td>
<td>0</td>
<td>32</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>13</td>
<td>0</td>
<td>12</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unmarried</td>
<td>37</td>
<td>0</td>
<td>33</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Source of information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing books</td>
<td>21</td>
<td>0</td>
<td>17</td>
<td>4</td>
<td>3.29</td>
<td>9.49</td>
</tr>
<tr>
<td>Lectures</td>
<td>29</td>
<td>0</td>
<td>28</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>00</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of family</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear family</td>
<td>11</td>
<td>0</td>
<td>8</td>
<td>3</td>
<td>0.01</td>
<td>5.99</td>
</tr>
<tr>
<td>Joint family</td>
<td>39</td>
<td>0</td>
<td>29</td>
<td>10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table VI: According to the association between level of pretest knowledge scores and selected demographic variables, age group chi square value is 0.3572 (p<0.05) which is not significant. The chi square value was not significant (χ²= 0.2182) at p <0.05 level for the gender. For the marital status chi square value is 0.2295 at (p<0.05) which is not significant. In source of information the chi square value is 3.2931 at (p<0.05) is not significant. The chi square value was not significant for the type of family 0.0117 at (p<0.05). Hence, stated research hypothesis H₂ is rejected.

**DISCUSSION AND CONCLUSION**

The aim of selection of my study on plotting of partograph to improve the knowledge of internship GNM student so that after completion of their diploma course when they can use the knowledge and practice the maintenance of partograph in the labour room and prevent further complications during labour.

The findings of the pretest study showed that the level of knowledge of students regarding plotting of partograph shows that majority 39 (78%) of the sample had average knowledge, 1 (2%) of the students had poor knowledge and 10 (20%) had good knowledge and no participants belong to very poor and excellent group in pretest.

Area wise distribution of the knowledge scores in pretest of the students reveals that out of 25 maximum obtainable scores the total mean score was 12.76 which is 25.52% of the maximum score. The highest mean percentage (56.5%) was obtained in the area of “Introduction of Partograph” with mean and SD of 2.26±0.59. The mean percentage of 53.84% was obtained in the area of “Components of partograph”
with mean and SD of 2.26±1.74. The mean percentage of 43.75% was obtained in area of “Importance of partograph” with mean and SD of 3.5±1.16. These findings explain that the students had average knowledge regarding plotting of partograph.

In testing of the hypothesis $H_1$, pre-test and post-test mean knowledge scores and ‘t’ value showed that the mean gain in knowledge was 12.57. The ‘t’ value was significant ($t=2.0096$) at $p<0.05$ level indicating the teaching programme was effective. Hence, stated research hypothesis $H_1$ is accepted.

According to the association between level of pretest knowledge scores and selected demographic variables, age group, gender, marital status, source of information and type of family were not significant. Hence, stated research hypothesis $H_2$ is rejected.

Acknowledgement: The researcher deeply indebted to the Almighty God, for his omnipotent presence, bountiful blessings, wisdom and inspiration throughout the study. I would like to express my heartfelt thanks and gratitude to all faculties who guided me to complete this study. It is my privilege to convey my sincere gratitude and thanks to all the nursing students who has participated in this study.

Conflict of Interest: There are no conflict of interests that I should disclose.

Ethical Clearance: Ethical approval was obtained from the Sumandeep Vidyapeeth University Institutional Ethics Committee before conducting the research.

Source of Funding: For the research study project researcher own budget was used.

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Effectiveness of Sensitization Programme on Knowledge Regarding Premenstrual Syndrome (PMS) among Adolescent Girls

Kanwalveer Kaur¹, Prabhjot Saini²

¹Nursing Tutor, ²Associate Professor, DMCH College of Nursing, Ludhiana, Punjab

ABSTRACT

Introduction: The onset of adolescence is usually associated with the commencement of puberty and the appearance of secondary sex characteristics. Menstruation (a period) is a major stage of puberty in girls; it’s one of the many physical signs that a girl is turning into a woman. Menstruation (a period) is a major stage of puberty in girls; it’s one of the many physical signs that a girl is turning into a woman. Objectives: Therefore the present study was taken up with an objective to evaluate the effectiveness of planned teaching regarding the knowledge of premenstrual syndrome and its management among adolescent girls. Methodology: A pre experimental research design (one group pre test post test design) was used and 60 adolescent girls studying in 10th class of a selected school of rural area, district Sangrur were selected by total enumerative sampling technique. Data was collected by self-report method using multiple choice questionnaire regarding premenstrual syndrome and its management. A sensitization program on premenstrual syndrome and its management was developed and implemented after the pre test knowledge assessment. The post test knowledge assessment was 5 days later. Results: Findings revealed that out of total 60 subjects, 55% of study subjects had below average knowledge regarding premenstrual syndrome during pre test which improved to 77% of subjects gaining good knowledge in post test assessment. Findings revealed that mean knowledge score in post test assessment was higher as compared to Pretest (22.3 ± 2.59 Vs 10.4 ± 1.59 p<0.05). Conclusion: It was concluded that awareness (level of knowledge) regarding premenstrual syndrome and its management was below average among adolescent girls which improved after education. Therefore, it was recommended to organize exhibitions and health lectures regarding premenstrual syndrome and its management at school level.

Keywords: Premenstrual syndrome, knowledge, adolescent girls.

INTRODUCTION

The word adolescence is taken from the Latin word “adolescere” which means “to grow up”. Adolescence is a transitional stage of physical and psychological human development that generally occurs during the period from puberty to legal adulthood.¹ The onset of adolescence is usually associated with the commencement of puberty and the appearance of secondary sex characteristics. The pituitary gland secretes hormones that stimulate enlargement and development of the sex organs, which thus become capable of reproduction. In females the reproductive cycle of ovulation and menstruation begins, pubic hair appears, and development of the breasts and other body contours takes place.²

Premenstrual syndrome, a common cyclic disorder of young and middle-aged women, is characterized by emotional and physical symptoms that consistently occur during the luteal phase of the
menstrual cycle, often 7-10 days before the onset of menses.\(^3\)

The exact cause of Premenstrual Syndrome is not known. It is believed that several biologic factors are involved. Of these, estrogen, progesterone, and neurotransmitters gamma amino butyric acid (GABA) and serotonin are frequently studied. Sex steroid estrogen and progesterone thought to be the causes of premenstrual syndrome. Evidence also supports a role for serotonergic system dysregulation in PMS. Decreased serotonergic activity has been noted in leuteal phase, and trials of serotonergic treatment have shown symptomatic relief in women with PMS. Aldosterone system (RAAS) associates with sex steroids to alter the electrolyte and fluid balance. Some properties of progesterone and possible estrogen activation of RAAS system may contribute to symptoms like bloating and weight gain. Moreover, PMS is believed to be associated with neuroactive progesterone metabolites\(^4\).

There are many PMS symptoms. The number and severity of symptoms vary from woman to woman. In addition, the severity of the symptoms can vary from each month. Symptoms include: Breast tenderness, dizziness, headache, cramps, nausea and vomiting, food cravings, abdominal bloating, weight gain from water retention, stomach upset, swelling of the face, hands, ankles, depressed mood, crying spells, anxiety, irritability, anger, trouble falling asleep (insomnia), appetite changes or food cravings and fatigue.\(^5\)

The diagnosis of Premenstrual Syndrome can be difficult because many medical and psychological conditions can mimic or worsen symptoms of Premenstrual Syndrome. Diagnosis depends upon history and careful questioning. Temporal correlation of symptoms with the PMS phase of cycle as documented in menstrual diary help to arrive at a rational diagnosis.\(^6\)

A study was conducted among medical students of a Medical College in Delhi to assess the prevalence and the effect of menstrual disorders on daily routine and their treatment-seeking behavior. Of 276 undergraduate girl students, 112 were sampled by stratified random sampling. A semi-structured questionnaire was used to collect their responses by personal interviews. The most distressing problems associated with menstruation perceived by the study subjects were Premenstrual syndrome (67%) and dysmenorrhea (33%). The most common effect of menstrual problems on daily routine reported by the study subjects was in the form of prolonged resting hours (54%) followed by inability to study (50%). More than half (52%) of the subjects discussed their problems with their mother, and 60% of the study subjects were opted for allopathic treatment for their menstrual problems.\(^7\)

Adolescence is one of the most crucial stage in life where a young girl begins her journey into womanhood. Premenstrual symptoms can impede this transformation by adversely affecting the adolescent girl’s daily activities and quality of life. The topic holds a paramount importance in the life cycle of a woman, the time of acquiring the age of adolescence. The knowledge level of adolescent girls is very meager to accept the myths and facts of the menstrual cycle and its associated problems.

A study was conducted to gather an in-depth understanding of perceptions, impacts, and treatment seeking on menstruation-related issues from an ethnically mixed group of rural and urban girls. Among 172 participants, 27 focus group discussions were conducted between November 2008 and April 2009. Adolescent girls aged 13-19 years were taken from 7 public secondary school in the Federal Territory of Kuala Lumpur and 4 public secondary schools from the rural districts of Kelantan, in Malaysia. Many participants disclosed that they were not given or had not received detailed information about the mechanism or physiology of menstruation prior to its onset. Thus, many described the onset of menarche as shocking, an event for which they were unprepared, and which has had a tremendous impact on their emotions.\(^8\)

Although premenstrual syndrome is an issue that every girl and woman has to deal with in her life. There is lack of information on the process of menstruation and the physical and psychological changes associated with this and proper requirements for managing premenstrual syndrome. The taboo surrounding this issue in the society prevents girls and women from articulating their need, the problems and the management have been ignored or misunderstood. It is important for a woman to take charge of understanding her premenstrual syndrome.
patterns and learning about what is happening within her body. Only then she can realistically evaluate their effects on her life and make informed decisions about management. The above mentioned factors and the personal experience motivated the researcher to conduct a study to assess the selected activities of daily living before and after menstruation among adolescent girls with premenstrual symptoms.

**METHODOLOGY**

The pre experimental (one group pre test post test design) research design was adopted on 10th class adolescent girls from Pioneer Public Senior Secondary School, Gajjan Majra, district Sangrur. 60 subjects were enrolled on the basis of inclusion and exclusion criteria and total enumerative sampling technique was adopted. The tool comprised of 2 components i.e. Part 1: Socio demographic variables, Part 2: Consisted of self structured questionnaire (30) where each correct answer was marked ‘1’ score and each wrong answer was marked as ‘0’. Grading of knowledge of premenstrual syndrome and its management was done as follows: Good, Average, Below average and Poor. Content validity of tool was established by the experts from the field of Obstetrics & Gynaecological Nursing, Community Health Nursing. Reliability of the tool was established by split half method and was calculated by Karl Pearson’s coefficient of correlation and the tool found to be highly reliable (r = 0.9). Data collection was done in the second week of February, 2013. Pre test of subject was taken by administering structured questionnaire regarding premenstrual syndrome and its management. Thereafter planned teaching was given to group with the help of lesson plan and audio visual aids for 45 min. The posttest was conducted on 5th day after the planned teaching to evaluate the effectiveness of planned teaching on premenstrual syndrome and its management. With the view of ethical consideration the researcher discussed the type, purpose and samples of study with the Principal of the school and written permission was obtained. A verbal consent was taken from the adolescent girls for their participation in the study.

**RESULTS**

Table 1 depicts that majority of adolescent girls were from age group of 16-18 years and maximum subjects (73%) had achieved menarche at the age of 13-15 years with mean age at menarche 13.10± 2.16. Majority of subject’s mothers (52%) were qualified upto senior secondary. Maximum of the adolescent girls (87%) were residing in rural habitat. Most of the adolescent girls were getting information regarding postmenopausal symptoms from their teachers.

Table 1: Frequency and Percentage Distribution of Demographic Data

<table>
<thead>
<tr>
<th>S. No</th>
<th>Demographic Variable</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age ( in yrs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13-15</td>
<td>27</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>16-18</td>
<td>33</td>
<td>55</td>
</tr>
<tr>
<td>2.</td>
<td>Habitat</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>52</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>3.</td>
<td>Age of menarche</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10-12 years</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>13-15 years</td>
<td>44</td>
<td>73</td>
</tr>
<tr>
<td></td>
<td>≥ 16 years</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>4.</td>
<td>Mother’s education</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Illiterate</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Elementary</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Secondary to senior</td>
<td>31</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>secondary</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>5.</td>
<td>Source of information</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health personnel</td>
<td>2</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>Teacher</td>
<td>32</td>
<td>53.3</td>
</tr>
<tr>
<td></td>
<td>Friends and relatives</td>
<td>23</td>
<td>38.8</td>
</tr>
<tr>
<td></td>
<td>Mass media</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 2 reveals that mean knowledge score in post test assessment was higher as compared to pretest (22.3 ± 2.59 Vs 10.4 ± 1.59). The difference between the pretest mean knowledge score and posttest mean knowledge score was highly significant (p<0.05).
**DISCUSSION**

The first objective of the study was to assess the pretest knowledge score of the adolescent girls regarding premenstrual syndrome and its management. The findings reveal that majority of girls 33 (55%) had poor knowledge and 27 (45%) had average knowledge regarding premenstrual syndrome and its management. Thus it is concluded that girls had poor knowledge which was similar to the findings of Rathna Thanga Mercy H (2005) who stated that 93.33% of subjects had inadequate knowledge and 6.66% had moderately adequate knowledge regarding premenstrual syndrome.

**CONCLUSION**

The knowledge level of adolescent girls was average to poor before imparting the planned teaching
but it improved to good after imparting the planned teaching. The posttest mean knowledge score was significantly higher than the pretest mean knowledge score which shows the Planned Teaching Program was effective. The present study recommended to organize the exhibitions, health lectures regarding pre menstrual syndrome and its management. This study can be replicated on larger sample to validate and generalize its findings.

Acknowledgement: My heartfelt thanks to all those who supported and guided during the completion of the study.

Source of Funding: Self.

Conflict of Interest: the study was conducted as part of my M. Sc. (N) course and not any monitory or personal gain.

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10. RT Mercy H. A study to identify the premenstrual problems experienced by the adolescent girls and to assess their knowledge regarding measures to reduce premenstrual problems in vidyasagar public school, vijayanagaar. M.Sc.(Dissertation ) .Bangalore; rajiv Gandhi university of health and sciences; 2005.
An Operational Study on Maintenance of First Aid Box in Selected Urban Community of Amritsar, Punjab

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ABSTRACT

First aid is an essential measure to manage minor ailments in the home setting. First aid box is a collection of articles which is readily available and one can very easily assemble and arrange them at one place. The aim of the study is to motivate the respondents for preparation, maintenance and utilization of first aid box in their families. An operational design was used to conduct the study in 1-7 Blocks of Kittae, Amritsar. 60 families were selected with Non Probability Convenient sampling technique. First Aid Box inventory checklist for the preparation, utilization and maintenance of first aid box was used for the study. In present study about 23.3% were having first aid box in their families but items were incomplete, inappropriate and unorganized. Researcher motivated the families to assemble the selected nine items and purchase the remaining items to prepare the first aid box. About 73.3% families during first follow up at 15th day and 71.7% families during second follow up at 30th day used the First Aid Box. Majority (77.8%) of the families were maintaining the first aid box items in second follow up. About 23 families spent Rs. 40-60 for the preparation of first aid box in their family. First aid box is essential for every family to provide first aid care. There is need to create awareness among the people about the importance of first aid box.

Keywords: First aid box, minor ailments, preparation, maintenance, utilization.

INTRODUCTION

"First aid is the provision of initial care for an illness or injury. It is performed by a lay person to a sick or injured patient until definitive medical treatment can be assessed."¹

Most of the time; people experience minor ailments and injuries. That time, they would feel helpless and rush to the hospital. Learning first aid is the civic responsibility of each citizen.² Preparing a first aid box in the family, need a simple first aid box, containing readily available things at home. These articles, though available at home, may be laying at different places.³ First aid kits can be assembled in almost any type of container. Boxes should also be checked regularly if items are damaged or expired.⁴ So, there is need to assemble the articles of first aid properly at one place, so as to use them immediately.

Objectives

• To teach the preparation of first aid box in each family at selected urban community.
• To assess the utilization of first aid box by the families.
• To assess the maintenance of first aid box on 15th and 30th day of preparation

MATERIAL & METHOD

An operational study was conducted on the maintenance of first aid box by families of an urban community. The present study was conducted at 1-7 block of Kittae, the practice area of SGRDIMSR, Amritsar. A survey was done, out of 873 families, 60 families were selected with Non Probability Convenient sampling technique.
First Aid Box inventory observational checklist which consists of 9 items such as cotton, clinical thermometer, antiseptic ointment, antiseptic solution, analgesic, adhesive tape, a pair of scissors, bandage, list of emergency numbers was prepared for first observation and for two follow ups to ensure the utilization and maintenance of first aid box by families. Further it was validated by subject experts and reliability of tool was 0.93 calculated by inter rater and Karl Pearson co-relaton coefficient method.

Written consent was obtained from each subject after giving assurance of confidentiality. The researchers observed the first aid items already present in the family. Then, motivated the families to arrange all the items that were already present at home and purchase the remaining items. Then, the two follow ups were organised at 15th and 30th day after the preparation of first aid box to ensure utilization and maintenance of first aid box. The data was analysed on the basis of the study objectives, by using descriptive statistics.

**RESULTS**

Regarding age, 30% of the respondents were of below the age of 40 years followed by half (50%) in the age group of 40-60 years and remaining 20% were in 60-80 years age group with mean ±SD was 46.1 ±12.1 and range 20 to 73 years. Majority (80%) of the respondents was females and remaining 20% were males. More than half (60%) of the respondents had completed their senior secondary school, 23.3% were graduates, 8.3% attended middle school, 6.7% were completed their post graduate and only 1.6% had studied up to primary school education. Nearly three fourth of the respondents (78.3%) were house wives, while 10% were retired, about 6.7% working in private sector and only 5% were self-employed. Nearly half of the families (40%) were having per capita income in the range of Rs.5000-7500 with mean ±SD was 5043.2±2430.5 and range from Rs.1333-13333. More than three fourth families (78.3%) were having family members with chronic illness in their family. Nearly one fourth (23.3%) families were having the availability of health worker in their family or neighbourhood. Nearly one fourth families (23.3%) were having first aid box in their family and the items present in the first aid box were incomplete, inappropriate and unorganized.

![First day observation regarding first aid items in family](image1)

In the present study Fig 1. reveals the items available with the study families prior to the study. Majority of families (75%) had analgesics drugs followed by 60% had a pair of scissors, 53.3% had clinical thermometer, 50% had antiseptic ointment and solution, 38.3% had cotton and only 7% families had bandage and none of the family maintained a list of emergency numbers.

![Duration for the preparation of first aid box](image2)

Fig.2 represents the duration for the preparation of first aid box at their family. More than half families (66.7%) took 1-2 days, 25% took 3-4 days while five families (8.3%) took 5-6 days for the preparation of first aid box. Mean number of days consumed was 2.33 days with SD 1.16 days.

![Utilization of first aid box at first follow up (15th day)](image3)

Fig.3: Utilization of first aid box at first follow up (15th day)
Fig. 3 represents the utilization of first aid box at first follow up at 15th day. It was observed that during first follow up that nearly three fourth families (73.3%) had used first aid box after its preparation, while 16% families had not used any item of first aid box.

![Fig. 3: Utilization of first aid box at first follow up at 15th day.](image)

Fig. 4 shows the utilization of first aid box at second follow up at 30th day after the preparation of first aid box. The researcher found that nearly three fourth (71.7%) families had used first aid box items for the cure of minor injuries and ailments while 28.3% had not used any item of first aid box at their family.

![Fig. 4: Utilization of first aid box at second follow up (30th day).](image)

Table 1: Use of first aid box for different injuries and ailments

<table>
<thead>
<tr>
<th>Injuries/ailments</th>
<th>f (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Injuries</strong></td>
<td></td>
</tr>
<tr>
<td>Minor burns</td>
<td>13(21.7)</td>
</tr>
<tr>
<td>Foot</td>
<td>06(10.0)</td>
</tr>
<tr>
<td>Knee</td>
<td>05(08.3)</td>
</tr>
<tr>
<td>Ankle</td>
<td>03(05.0)</td>
</tr>
<tr>
<td>Finger</td>
<td>03(05.0)</td>
</tr>
<tr>
<td>Shoulder</td>
<td>02(03.3)</td>
</tr>
<tr>
<td><strong>Ailments</strong></td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td>26(43.3)</td>
</tr>
<tr>
<td>Fever</td>
<td>24(40.0)</td>
</tr>
<tr>
<td>Knee pain</td>
<td>17(28.3)</td>
</tr>
<tr>
<td>Skin</td>
<td>04(06.7)</td>
</tr>
</tbody>
</table>

Table1. Reveals the use of first aid box by the respondents during two subsequent follow up visits. It was observed that minor burns (21.7%) were commonly observed in the housewives during cooking, followed by foot injury (10%), knee injury (8.3%), ankle injury (5%), finger cuts (5%) and shoulder injuries (3.3%) were most frequently found during the study. Headache (43.3%), fever (40%), knee pain (28.3%) and skin infection (6.7%) were other minor ailments that were commonly recorded during the study.

**DISCUSSION**

In the present study majority of families (75%) had analgesics drugs followed by 60% had a pair of scissors, 53.3% had clinical thermometer, 50% had antiseptic ointment and solution, 38.3% had cotton in their first box and only 7% families had bandage and none of the family maintained a list of emergency numbers. Similarly a study done by Rajinder K, Inderjit Walia and Baljit Kaur also reported Analgesic drugs were found in 43.01% of total subjects families. Another study done by Harper LA, Bettinger J, Dismukes R, Kozarsky PE also revealed that the most frequent available items were analgesics. The present study depicts more than three fourth families (78.33%) were having family members with chronic illness in their family. A study done by Rajinder K, Inderjit Walia and Baljit Kaur reported about 17.20% suffering from hypertension while 2.15% had history of stroke. Similarly a study was done in 2005 by Dai S.K Sanyal K explored hypertension has increased about 30 times among urban dwellers. Present study observed about 73.3 % families during first follow up at 15th day and 71.7% families during second follow up at 30th day used the First Aid Box. Similarly a study in 2007 by Rajinder K, Inderjit Walia, Baljit Kaur explored the use of first aid box in first follow up which was 93.11% and 96.55% in second follow up respectively. In the present study other variables were not comparable because limited literature was available on first aid box preparation.

**Recommendation**

- Similar studies can be conducted in various set ups to prepare the first aid box like schools, old age homes, industries etc.
- A longitudinal study should be conducted with more number of follow ups to develop the habit in families to maintain first aid box at their family.
- Research can be conducted to assess the effectiveness of various other strategies to improve the practice of preparation, maintenance and
utilization of first aid box at their family.

**IMPLICATIONS OF THE STUDY**

**Nursing practice**
- First aid box is essential for every family to provide first aid care. The role of nurse is to motivate the families to prepare first aid box at their home so that they provide emergency care when it is essential.

**Nursing education**
- As first aid care is already included in the curriculum of the students. It should be focused on to train the students for first aid care.

**Nursing administration**
- Nursing administrators should feel responsible to provide nurses with substantive continuing education. First aid care is one most important area where the nurses, clinical and teaching abilities are highly relevant. A nurse is a resource person for the nursing students, patients and their families.

**Ethical Considerations:** A written permission was taken from the head of the community medicine department. Written consent was obtained from each subject after giving assurance of confidentiality.

**Source of Funding:** Self

**Conflict of Interest:** Nil

**Acknowledgment:** We acknowledge to all the participants of the study for spring their time. Authors acknowledge the immense help received from the scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to authors/editors/publishers of all those articles, journals and books where the literature for this article has been reviewed and discussed.

**REFERENCES**

Assertiveness, Self-esteem and Stress among Nursing Students

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¹Vice Principal, MES College of Nursing, Kerala, India, ²Clinical Psychologist, Department of Psychiatry, MES Medical College Hospital, Kerala, India

ABSTRACT

Being assertive helps the nursing students to control and handle stressful situations in a healthy manner which boosts their personal power, self confidence and self esteem. The study aimed at assessing the assertiveness, self-esteem and stress among nursing students. Quantitative Non experimental descriptive design was used for the study. Non probability purposive sampling was used to select 64 subjects for the study. Majority 98% of the study subjects were somewhat assertive, 64% had normal self-esteem, 69% had moderate stress and 25% had severe stress. There was a significant difference in the assertiveness between first and the second year with a mean difference of 11.556 at p<0.05. There was a significant difference in the self-esteem between first and third year with a mean difference of 2.732, and between the first year and internship with a mean difference of 3.160 at p<0.05. There was no significant difference in stress between the groups.

Keywords – Assertiveness, Self-esteem, Stress, Nursing.

INTRODUCTION

General nursing education is a very important stage in a nurse’s career. During their diploma education, immediately after higher secondary, students experience academic demands—tests, theoretical and practical course work, research activities, and aspects of professional practice, such as contact with health professionals and patients—as well as the practical matters of providing health services (Costa, 2007)[1].

Stressor for nursing students includes peer pressure, teachers or parent’s expectations, studies, assignments, examinations, workload. The stressors in clinical practice include clinical assignments, shift duty, fear of dealing with patients, relatives and other health care professionals, fear of handling bio medical equipments and technical advancements.

Assertiveness is an essential component for an effective communication. Assertive behavior is of great value to a student nurse to develop a healthy social and professional relationship. Being assertive helps oneself to direct life more productively, relating more easily with others and enabling one to control situations and attain self discipline. It also helps to achieve greater success in interpersonal relationships and minimize or protect oneself from bullying by others. Being assertive helps the nursing students to control and handle stressful situations in a healthy manner which boosts their personal power, self confidence and self esteem.

BACKGROUND OF THE STUDY

Assertive behavior is an invaluable component for successful professional practice. Assertive nurses believe in themselves and their abilities. It is believed that self assertion generated by this belief will eventually lead to further personal and professional development. Nurses practicing with diploma as the highest level of education were significantly less assertive than nurses having a baccalaureate or above. (klikus sp 1993)[2].

Shashank P. (2011)[3] revealed that stress as an entity is universally present among students of all medicine, engineering and nursing, irrespective of age, sex and other variables. They had shown
denial to the existence of problems, with maximum among the nursing students which may turn into serious mental and psychosocial problems. Abishek Singh (2013) found high levels of psychological disturbance among nursing undergraduate students in the middle phase of the course. Ghada et al (2014) found that both assertiveness and stress levels were higher among both second and fourth year nursing students and that indicated a positive correlation between assertiveness and stress levels. Pulido-Martos (2012) identified the most common sources of stress in nursing students as academics such as reviews, workloads and problems associated with studying among others and clinical sources such as fear of unknown situations, mistakes with patients or handling of technical equipments.

Self esteem refers to the degree or regard or respect that the individuals have for themselves and is a measure of worth that they place on their abilities and judgments (Mary Townsend) and a key feature in a person’s perception of their own worth. (Philip Burnard 2002). Deborah Edwards (2009) stated that nursing education can be a stressful experience; self esteem as an important predictor of stress and highest level of stress and lowest level of self esteem were reported in third year.

The present study was designed to assess assertiveness, self esteem and stress among diploma nursing students. Thus the findings of the study would enable the nurse educators to develop and implement various educational programmes to help the student nurses to recognize and learn assertive behavior, improve self esteem and manage stress.

MATERIAL & METHOD

The objectives of the present study were to assess the Assertiveness, self-esteem and stress among diploma nursing students. The study was carried out in a selected School of Nursing, Perinthalmanna, Kerala. Quantitative Non experimental descriptive design was used for the study. Target population consisted of nursing students studying in school of nursing. Simple random technique was used to select a school of nursing from Malapuram district. Non probability purposive sampling was used to select the 64 subjects for the study. In view of the nature of the problem and to accomplish the objectives of the study, the following tool was used and it included

Section A: Socio-demographic Variables: It consisted of 15 items which included age, year studying, gender, religion, father’s education, mother’s education, father’s occupation, mother’s occupation, family’s income, type of family, family residence, birth order, experience as class representative in school of nursing, participate in games and sports, and participation in cultural events.

Section B: It consisted of 30 items to assess the assertiveness. Participant must indicate how well each item describes him or her by using the code.

Section C: Rosenberg Self-Esteem Scale was used to assess the self-esteem. The scale is ten item Likert scales with items answered on a four point scale - from strongly agree to strongly disagree. Participants must indicate how well they agree or disagree to the statements.

Section D: Educational stress scale for adolescents by J Sun et al was used to assess the stress among nursing students.

The content validity of the tools was ensured by obtaining opinion from experts. Data were collected after obtaining permission from the principal school of Nursing. The researchers introduced themselves, gave an introduction regarding the study and its objectives to the study subjects. The study subjects were informed that the informations would be kept confidential and would be used only for the purpose of research. Data were collected from 1st week of January to the end of February 2015. The collected data were tabulated and analyzed using SPSS. Descriptive and inferential statistics were done.
FINDINGS

Table 1 Socio-Demographic variables

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years</td>
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</tr>
<tr>
<td>Sex</td>
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<td>64</td>
</tr>
<tr>
<td>Year studying</td>
<td>First year</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Second year</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Third year</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Internship</td>
<td>17</td>
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<td>Religion</td>
<td>Hindu</td>
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<td></td>
<td>Muslim</td>
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<td>Others</td>
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</tr>
<tr>
<td></td>
<td>Primary</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Middle school</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>High school</td>
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<tr>
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<td>Intermediate</td>
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<tr>
<td></td>
<td>Graduate/p.g/professional</td>
<td>-</td>
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<tr>
<td>Mother's education</td>
<td>Illiterate</td>
<td>-</td>
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<tr>
<td></td>
<td>Primary</td>
<td>1</td>
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<td></td>
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<td>-</td>
</tr>
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<td>6</td>
</tr>
<tr>
<td></td>
<td>Semi skilled</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Clerical/farmer/shop keeper</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>Semi professional</td>
<td>17</td>
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<tr>
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</tbody>
</table>

TABLE 1 displays distribution of study subjects according to the year of study, religion, and father’s and mother’s education, and father’s and mother’s occupation. All the 64 subjects were in the age group of 17-21 years, and all were female. First and second year constituted about 18% each, 17% in third year and 27% in the internship. Regarding the study subjects’ religion, 53% were Christian, 34% were Hindu and 13% belonged to Muslim. 56% of the study subject’s father had high school education, and 61% of the subject’s mother had high school education. 30% of the study subject’s father was clerk/farmer/shop keeper and 77% the study subject’s mother was unemployed.
Table 2: Socio-demographic variables

<table>
<thead>
<tr>
<th>Demographic variables</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family income</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1600</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1601-4809</td>
<td>28</td>
<td>44</td>
</tr>
<tr>
<td>4810-8009</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td>8010-12019</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>12020-16019</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>16020-32049</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>&gt;32050</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Type of family</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear</td>
<td>59</td>
<td>92</td>
</tr>
<tr>
<td>Joint family</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Extended</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Family residence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Rural</td>
<td>34</td>
<td>53</td>
</tr>
<tr>
<td>Semi urban</td>
<td>28</td>
<td>44</td>
</tr>
<tr>
<td><strong>Birth order</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>34</td>
<td>53</td>
</tr>
<tr>
<td>Second</td>
<td>23</td>
<td>36</td>
</tr>
<tr>
<td>Third and so on</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td><strong>Experience as class representative</strong></td>
<td>Yes</td>
<td>39</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
<td>25</td>
</tr>
<tr>
<td><strong>Participation in games and sports</strong></td>
<td>Yes</td>
<td>52</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
<td>12</td>
</tr>
<tr>
<td><strong>Participation in cultural events</strong></td>
<td>Yes</td>
<td>62</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
<td>2</td>
</tr>
</tbody>
</table>

TABLE 2 shows the distribution of study subjects according to the family income, type of family, family’s residence, birth order, their experience as class representative, and their participation in games, sports and cultural events. 44% were in the family income group of 1601-4809, 92% were from nuclear family, 53% were residing in a rural area, 53% were the first child in the family, 61% had experience as class representative during their study, 82% participated in games and sports and 97% participated in cultural events.

Table: 3 Frequency and Percentage distribution based on Assertiveness, self-esteem and stress among Nursing students.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Variable</th>
<th>Level</th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Level of Assertiveness</td>
<td>Situationally non assertive</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Somewhat assertive</td>
<td>63</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assertive</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>Self-esteem</td>
<td>Low</td>
<td>22</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Normal</td>
<td>41</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3.</td>
<td>Stress</td>
<td>Mild</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Moderate</td>
<td>44</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Severe</td>
<td>16</td>
<td>25</td>
</tr>
</tbody>
</table>

Data presented in the above table 3 reveals that the majority, 98% of the study subjects was somewhat assertive, 64% had normal self-esteem, 69% had moderate stress and 25% had severe stress.
Table: 4 Assertiveness, self-esteem and stress between groups among the Nursing students.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>F value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assertiveness</td>
<td>105.89</td>
<td>10.098</td>
<td>4.795*</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>17.50</td>
<td>2.889</td>
<td>4.673*</td>
</tr>
<tr>
<td>Stress</td>
<td>49.97</td>
<td>9.490</td>
<td>0.462</td>
</tr>
</tbody>
</table>

*= p<0.05

According to Table 4 ANOVA findings indicate that the mean assertiveness score was 105.89, self-esteem was 17.50 and the stress was 49.97. The first and second year Nursing students(105.70 and 116.94) had higher mean scores of assertiveness that of third year and internship(104.36 and 105.59). The mean self-esteem score had increased from 15.72 in the first year to 17.39 in the second year, 18.45 in the third year and 18.88 in the internship. The mean stress scores were highest in the second year as 51.56 compared to first, third and internship as 50.67, 49.36 and 47.94. Post Hoc analysis shows that there was a significant difference in the assertiveness between first and the second year with a mean difference of 11.556 at p<0.05. There was a significant difference in the self-esteem between first and third year with a mean difference of 1.67 at p<0.05. There was no significant difference in stress between the groups.

DISCUSSION

Anna Deltsidou et al (2009)[10] found that the assertiveness levels displayed by the students increased slightly in advanced semesters by comparison to those displayed by first semester students. Kilkus (1993)[2] reported that there was a significant difference in assertiveness between groups of nurses practicing in different clinical specialties based on the ANOVA. Likewise in the present study 98% were somewhat assertive and there was a significant difference in the assertiveness between first and second year.

Chaves et al (2013)[11], reported that among 135 Nursing students 90% were females, 68% presented with high self-esteem, 30% average and 2% low. Sima Ghezelbash et al (2015)[12] found in comparison of self-esteem among the first and fourth year Nursing students that both the years presented with highest level of social self-esteem. The fourth year students showed the highest academic and parental self-esteem compared to students in other academic areas. Similarly the findings of the present study revealed that among 64 Nursing students 100% were females, 64% had normal self-esteem, and 34% had low self-esteem. There was a significant difference in the self-esteem between the first and third year.

Nitasha Sharma et al (2011)[13] found that among 37 nursing students 97% had moderate level of stress whereas 3% had severe stress. Similarly in this present study 69% of nursing students had moderate stress, 25% had severe stress and only 6% with mild stress.

CONCLUSION

Nurse educators play a vital role in the development of high quality, professional nurses, who could be well equipped to manage and cope with situations confidently. It is suggested to include various educational programmes throughout the training period to teach, train and guide the Nursing students to impart assertive behaviour, enhanced self-esteem, and use healthy mechanisms to cope with stress.

Conflict of Interest: None.

Source of Funding: None.

Ethical Clearance: Obtained from institutional human ethical committee.

Acknowledgment: We thank god almighty for all wisdom, strength and guidance throughout. We are indebted to our parents, and our son (Mas. Neranjan.S. Nirmal) for their constant encouragement and support.

REFERENCES


[2] Kilkus SP, Assertiveness among professional


Effectiveness of Structured Teaching Programme on Knowledge of Health Promotional Activities among Housewives in a Selected Rural Community of Mangalore

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²Ph.D Scholor, Nitte Usha Institute of Nursing Sciences, Nitte University, Mangalore

ABSTRACT

Health promotion is the process of enabling people to exert control over the determinants of health and thereby improve health.

The objectives of the study were-

• To Assess the knowledge of housewives regarding health promotional activities
• To determine the effectiveness of structured teaching program in terms of gain in knowledge on health promoting activities.
• To determine the association between health promotional activities and selected variables

Method: An evaluatory approach with quasi-experimental design was used for 60 samples drawn through simple random sampling technique. The conceptual framework was developed from the Ludwig Von Bertalanffy’s General System theory. The hypotheses were, the mean post knowledge scores of housewives after STP will be significantly higher than the mean pretest knowledge scores and there will be significant association between pretest level of knowledge of housewives and selected variables. The content validity and reliability of the tool were established (r= 0.825). The pilot study was conducted on ten samples. The structured interview schedule was used to find out the pretest and posttest level of knowledge.

Results: The study findings revealed that Majority 27 (45%) of the respondents were in the age group of 20-30 years, Majority 37(62%) of the respondents had studied up to primary school, Majority 42(70%) of the respondents were having the family income between rupees 2001-5000 and Most 25(41.60%) of respondents were having more than 3 children. Maximum number of respondents 39 (65%) had average knowledge. The knowledge was significantly improved after the STP. There was no significant association between knowledge and selected demographic variables.

Interpretation and conclusion: Findings of the study revealed that the majority of the housewives had average knowledge on health promotional activities. The structured teaching programme helped them to gain knowledge on different areas of health promotional activities.

Keywords: Housewives; knowledge; effectiveness; STP.

INTRODUCTION OR BACKGROUND

Health promotion is receiving increasing attention regarding its prominent role in health care. The high costs in healthcare have necessitated a shift from the emphasis of care to the prevention of diseases or
accidents rather than strictly the treatment of these conditions. The World Health Organization (2007) underlines the importance of health promotion, including encouraging healthful lifestyles, creating supportive environments for health, strengthening community action, reorienting health services, and building public health policy.

Family plays a critical role in the development of health promoting behavior of the family members. Almost all individuals identify with a family group in which members influence one another’s ideas and actions. Each family has a characteristic value, role and power structure as well as unique communication patterns. In addition, families fulfill affective, socialization, health care, and coping functions in varying ways. Parenting styles and family environments encourage healthy or unhealthy behavior that may persist throughout the life span. Much more attention should be given to the development of strategies to promote family wellness.

Housewives contribute a lot towards health promotional activities of the other family members. The researcher through her observation noted that the knowledge regarding health promotional activities among housewives are inadequate. The researcher felt that it is important to educate housewives regarding health promotional activities because unhealthy lifestyles like eating high fat diet, smoking, less or no physical activity, tobacco use, alcohol are responsible for a major percentage of the morbidity and mortality.

MATERIALS & METHOD

An evaluative approach using pre-test (Q1) and post-test (Q2) was adopted for this study in order to accomplish the objectives.

RESEARCH DESIGN: The research design was Quasi-experimental, i.e., one group pre-test, post test design (O₁XO₂)

Setting: The study was conducted at Mangalanthi rural area under Manjanadi Panchayat of Mangalore Taluk.

Population: The population selected for this study is housewives in selected rural community of Mangalore.

Sample size: A total of 60 housewives who met the criteria were selected as the sample for the study.

Sampling criteria: Inclusion criteria

Inclusion criteria for the sampling are

- Women who are present during the study
- Women who can understand kannada and English
- Women who are below 60 years of age

Exclusion criteria: Exclusion criteria for the sampling are,

- Women who are not willing to participate in the study.
- Women who are not available at the time of study.
- Women who are antenatal or postnatal.

Sampling technique: For the present study Simple random sampling technique was used.

Description of tool: A structured interview schedule was prepared based on the review of literature, investigator’s present experience, and in consultation with the experts.

Tool to assess the knowledge of housewives regarding health promotional activities

The following tool was used in this study

- Part I: baseline demographic information of the respondents, which included age, education status, religion, family income, type of family and no of children.
- Part II: it consisted of 30 items in an interview schedule to assess the knowledge level of housewives regarding health promotional activities, which is divided into the following categories.

DATA COLLECTION PROCEDURE

Prior permission was obtained from the District Health Officer, Mangalore to conduct the study. The investigator personally visited the community, introduced herself to the concerned authority and
explained the purpose of the study. The investigator initiated contact with the respondents by introducing herself and ascertained the willingness and cooperation of the participants. The respondents were assured of anonymity and confidentiality of the information provided by them.

There were 60 housewives who were willing to participate in the study. Initially Pretest was given in the form structured interview schedule for the participants. Then structured teaching programme was administered after pretesting, which took about 45 minutes at the Anganwadi centre of Mangalanthi, and posttest was conducted after 8 days using the same structured interview schedule to evaluate the effectiveness of the structured teaching programme.

**FINDINGS**

The collected information has been organized and presented as follows:

**SECTION I: DESCRIPTION OF DEMOGRAPHIC CHARACTERISTICS**

This part deals with the distribution of participants according to their demographic characteristics. Collected data was analyzed using descriptive statistics and summarized in terms of percentage.

Table no 1: Distribution of Sample according to demographic characteristics

n=60

<table>
<thead>
<tr>
<th>S. no.</th>
<th>Variables</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Below 20</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>20-30</td>
<td>27</td>
<td>45.0</td>
</tr>
<tr>
<td></td>
<td>31-40</td>
<td>17</td>
<td>28.3</td>
</tr>
<tr>
<td></td>
<td>41-50</td>
<td>9</td>
<td>15.0</td>
</tr>
<tr>
<td></td>
<td>51-60</td>
<td>6</td>
<td>10.0</td>
</tr>
<tr>
<td>2. Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Illiterate</td>
<td>20</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>37</td>
<td>61.7</td>
</tr>
<tr>
<td></td>
<td>Secondary and higher secondary</td>
<td>3</td>
<td>5.0</td>
</tr>
</tbody>
</table>

**SECTION II: ANALYSIS OF THE KNOWLEDGE OF HOUSEWIVES REGARDING HEALTH PROMOTIONAL ACTIVITIES**

A): distribution of pretest and posttest knowledge scores of housewives

The pretest level of knowledge was assessed before the administration of structured teaching program. The knowledge scores obtained by the respondents were tabulated in the master sheet. The data was analyzed in terms of frequency and percentage. The findings are presented in Table-2.

Table 2: distribution of pretest and posttest knowledge of housewives

<table>
<thead>
<tr>
<th>Score</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor (1-37)</td>
<td>Frequency</td>
<td>Percentage (%)</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>3.34</td>
</tr>
<tr>
<td>Average (38-73)</td>
<td>39</td>
<td>65</td>
</tr>
<tr>
<td>Good (74-110)</td>
<td>2</td>
<td>31.66</td>
</tr>
</tbody>
</table>

The data presented in the Table 2 displays the frequency distribution of housewives according to...
their pretest and posttest knowledge scores. The maximum possible score is 110.

The findings of the present study revealed that in the pretest highest percentage 39 (65%) of housewives had an average knowledge regarding health promotional activities, 19(31.66%) had poor knowledge and 2(3.34%) had good knowledge regarding health promotional activities and in the postest 58 (96.7%) had good knowledge and only 2(3.3%) had average knowledge.

SECTION III: EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM

• The difference between the pretest and the posttest mean knowledge scores.

In order to determine the effectiveness of structured teaching program, the significance of difference between the mean of pretest and posttest knowledge scores of sample were computed (using a Paired ‘t’ test). To test the statistical significance of difference between the mean of pretest and posttest knowledge scores of housewives, the following hypotheses was stated at 0.05 level of significance.

Table 3: Mean, Mean Difference, Standard error of Difference, and ‘t’ value of pre-test and post-test knowledge scores of subjects

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Mean Difference</th>
<th>SE D</th>
<th>‘t’ value</th>
<th>L.O.S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>44.70</td>
<td>46.65</td>
<td>2.07</td>
<td>22.477</td>
<td>P&lt;0.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>H.S</td>
</tr>
<tr>
<td>Post-test</td>
<td>91.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

‘t’ (tab) (59)=2.008     p < 0.05     H.S-Highly significant

SECTION IV: ASSOCIATION BETWEEN PRETEST KNOWLEDGE SCORES WITH SELECTED DEMOGRAPHIC VARIABLES

Chi-square test was computed in order to test the association between the level of knowledge and selected demographic variables.

The results of this study revealed that there was no significant association between the selected demographic variables and pretest knowledge scores.

CONCLUSION

The pretest finding showed that the knowledge of housewives on health promotional activities was inadequate in all areas. It indicates that there is a need to educate housewives to improve their knowledge. After the administration of structured teaching program, the post test score showed an increase in knowledge regarding health promotional activities. Hence it was concluded that structured teaching program was an effective method to improve knowledge of housewives.

NURSING IMPLICATIONS

The findings of the study have implications in various areas of nursing i.e. Nursing services, Nursing education, Nursing Administration and Nursing Research.

NURSING SERVICES

Most of the non communicable diseases in today’s world are caused due to faulty lifestyle. It is being stressed by the health professionals that primordial prevention is the key to control these diseases by modifying the lifestyle and adopting healthy lifestyle practices from childhood. Diseases such as Diabetes Mellitus, coronary artery diseases and certain cancers can be prevented to the large extent by controlling the predisposing factors through lifestyle modification and health promotional activities.

As member of the health care team, the nurse plays an active role in prevention of diseases and promotion of health that helps in complete and accurate assessment of the individual’s health status, that is basic to health promotion and it is based on needs desires and priorities of the population.

Several implications can be drawn from the present study for nursing practice. Education programs can be conducted by the nursing personnel both in the hospital and community areas which will help in imparting knowledge to the subjects. The findings of the study could be utilized for implementing educational programs in the community. The health
information can be imparted through various methods like SIM, lecture, demonstration, mass media, pamphlets etc. Nurses are in better position to provide knowledge to the public in the community. Hence nurse should take different teaching strategies suitable for target population.

**NURSING EDUCATION**

The changing scenario of health care delivery system has shifted its emphasis from curative care to health promotion and specific protection in order to prevent and control the occurrence of diseases.

Education is the integral part of the clinical governance agenda of various governments, non voluntary and voluntary organization. However, the nursing curriculum should consist of knowledge related to health promotion. Nursing students should be made aware of their role in health promotion and disease prevention in the present and future. This may help in achieving the goal of healthy people in the healthy community. The students’ learning experiences should emphasize on preventive and promotive health care practices.

Nurses should know about innovative models of delivery of health promotion and prevention services. Nurses play a pivotal role throughout the world in mobilizing forces for change in individual, family and organizational health behaviors. Thus the development of nurses for leadership in health promotion is an international priority.

Nurses from basic education to post graduate level need to develop the skills in preparing teaching materials according to the community’s level of understanding. Improved and newer techniques have to be used for motivating various target groups in education.

**NURSING ADMINISTRATION**

The main function of the nurse administrator is planning in service education programmes for the community health workers, keeping in view the knowledge, attitude and practices of the public regarding health promotional activities so that they can help in generating awareness among them. Administrator should plan and organize continuing nursing education programmes on health promotional activities. Nurse administrator should develop community partnerships, and serves on community coalitions to promote the health of the community. The administrator should encourage the staff and students to carry out small project works, in different population so as to find out attitude and practice of the people regarding health promotion. Every nurse administrator, who is In charge of nursing care of hospitalized patient should also plan and conduct extensive programs in the community.

**NURSING RESEARCH**

There is a greater need for nursing research in the areas of health promotional activities. This study revealed only the effectiveness of structured teaching programme. There are many avenues for further studies like comparing the knowledge level of urban and rural population, conducting pure experimental study, assessing the practice and attitudes of the people etc. Community health workers should be encouraged conduct small projects and to utilize the research findings. This will increase the quest for evidence based practice and effective utilization of research approach.

**Acknowledgement:** I am obliged to the participants for sacrificing their valuable time and extending their co-operation throughout the course of the study.

**Ethical Clearance**- Taken from KSHEMA Ethics Committee, K.S. Hegde Medical Acadamy, Nitte University, Deralakatte, Mangalore

**Source of Funding**- Self

**Conflict of Interest** - Nil

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A Study to Evaluate the Effectiveness of Planned Teaching Programme on Knowledge Regarding Risk Factors and Prevention of Coronary Artery Diseases among B. Ed. Students of D.Y. Patil Colleges of Education, Maharashtra

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ABSTRACT

Objectives:
1. To assess the knowledge regarding risk factors and prevention of CAD among B.Ed. students.
2. To prepare and administer a planned teaching programme regarding risk factors and prevention of CAD among B.Ed. students.
3. To evaluate the effectiveness of planned teaching programme regarding risk factors and prevention of CAD among B.Ed. students.
4. To find out an association between pre-test knowledge score and selected socio demographic variables among B. Ed student.

Materials and method: Quantitative Evaluative Survey research approach was used; population were students of D.Y. Patil B.Ed. Colleges of Education, Maharashtra. The sample of the present study consisted of 60 students of B.Ed. Colleges of Education, Maharashtra. The technique used was simple random sampling followed by lottery method with replacement.

The research design used for this study was pre-experimental one group pre-test, post-test design that consisted of structured questionnaire based on knowledge, risk factors and prevention of CAD

Result: During pre-test out of 60 B. Ed students Majority 40 (66.66%) of B. Ed students had average knowledge, and Minimum 10 (16.66%) had poor knowledge.

After the introduction of planned teaching programme majority B. Ed students 60 (100%) had good knowledge score. and none of them were in average and poor knowledge level.

Paired’ test value of 22.695 revealed that there is a significant gain in knowledge score of B. Ed students after administrating the planned teaching program at 0.05 level of significance.

The findings reveal that the variables computed Chi-square values at df (4) for age of B. Ed. students was 4.384, at df (2) for gender was 0.2263, at df (6) for religion was 3.819, at df (2) for marital status was 2.900, which exhibits statistically that there is no significant association with pre-test knowledge scores and socio-demographic variables.

Conclusion: PTP is an effective learning method for B.Ed. students to increase their knowledge about risk factors and prevention of CAD and there is intense need to make people aware regarding the disease.

Keywords: HDL: High density lipoprotein; CVD: Cardiovascular diseases; CHD: Coronary Heart diseases; LDL: Low density lipoprotein; PTP: Planned teaching program
INTRODUCTION

"Your Heart is in your hand, Together we are stronger, A better life style now, Stronger in the new millennium"

"Coronary artery disease is a disease of all epochs."

William P. Blocker

At the threshold of the new millennium CAD is looming large as the new epidemic afflicting Indians at a relatively younger age with severe and diffuse form of lesions. Recently the subject of coronary artery disease in Indians has become a challenge for many research centers world wide.

Cardiovascular diseases are the world’s largest killers, claiming 17.1 million lives a year. Deaths from CVD will also become more than double. Most of these will on account of CAD such as acute myocardial infarction, angina, congestive heart failure and inflammatory disease. The prevalence rates among younger adults aged 40 years and above is likely to increase cardiovascular disease strikes Indians early and kills many in their productive mid life years it is expected 9.2 million potentially productive years of life been loss of 17.9 million in 2030.

MATERIALS & METHOD

Sample: The sample size for the study was 60 students from B.Ed. Colleges of Education, Maharashtra.

The technique used was simple random sampling followed by lottery method with replacement.

The research design used for this study was pre-experimental one group pre-test, post-test design that consisted of structured questionnaire based on knowledge, risk factors and prevention of CAD

Criteria for selection of sample

Inclusion criteria: The B.Ed. students who were willing to participate in the study

Exclusive criteria: The B.Ed. students on leave at the time of data collection

Technical Information: Prior to data collection, permission was obtained from D. Y. Patil B.Ed. College in Kolhapur. The researcher introduced herself to the samples. Informed consent was taken from all the samples after explaining the purpose of the study. Pre test was conducted by using simple random sampling technique through structured knowledge questionnaire on risk factors and prevention of CAD. Then, post test was conducted by using structured knowledge questionnaire.

Ethics: Consent was taken from the ethical committee. Informed consent was taken from the participants of the study. Confidentiality was maintained throughout the study.

Statistics: Descriptive statistics used for the study was

1. Frequency and percentage distribution for demographic data of B. Ed students and their knowledge scores.

2. Mean, mean percentage and standard deviation to assess the knowledge scores.

3. Inferential statistics used for the study was Paired ‘t’ test for effectiveness of PTP and hypotheses.

4. Chi-square ($X^2$) to find the association between pre-test knowledge scores and selected demographic variables.

FINDINGS

Table 1: Frequency and percentage distribution of B. Ed students according to socio demographic variables

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Socio-demographic variables</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Age in years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>19-21</td>
<td>06</td>
<td>10</td>
</tr>
<tr>
<td>b.</td>
<td>21-23</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>c.</td>
<td>23-25</td>
<td>36</td>
<td>60</td>
</tr>
<tr>
<td>2.</td>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>Male</td>
<td>16</td>
<td>26.67</td>
</tr>
<tr>
<td>b.</td>
<td>Female</td>
<td>44</td>
<td>73.33</td>
</tr>
<tr>
<td>3.</td>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>Hindu</td>
<td>52</td>
<td>86.67</td>
</tr>
<tr>
<td>b.</td>
<td>Muslim</td>
<td>02</td>
<td>3.33</td>
</tr>
<tr>
<td>c.</td>
<td>Christian</td>
<td>02</td>
<td>3.33</td>
</tr>
<tr>
<td>d.</td>
<td>Other</td>
<td>04</td>
<td>6.67</td>
</tr>
<tr>
<td>4.</td>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a.</td>
<td>Single</td>
<td>31</td>
<td>51.67</td>
</tr>
<tr>
<td>b.</td>
<td>Married</td>
<td>29</td>
<td>48.33</td>
</tr>
</tbody>
</table>
The data presented in Table 1 indicates that maximum of the students 36 (60%) belonged to the age group of 23-25 years and minimum 6 (10%) to the age group of 19-21.

Majority of students 44 (73.33%) were females maximum number of students 52 (86.67%) belonged Hindu religion and minimum 2 (3.33%) were Christian and Muslim religion, Maximum students 31 (51.67%) were married while minimum 29 (48.33%) were single.

This finding supported with the study conducted by Ms. Joy Priskilla from K.R. College of Nursing with statement of “A study to evaluate the effectiveness of structured teaching Programme on dyslexia and its identification among school teachers in Bangalore”, with similar results..

Table 2: Pre-test and post – test percentage of the knowledge scores of B. Ed. Students on risk factors and prevention of coronary artery disease

<table>
<thead>
<tr>
<th>Items on</th>
<th>Total score</th>
<th>Pre-test (x)</th>
<th>Post-test (y)</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy of heart</td>
<td>05</td>
<td>45.00 %</td>
<td>91.67 %</td>
<td>46.67 %</td>
</tr>
<tr>
<td>Risk factors of CAD</td>
<td>17</td>
<td>42.05 %</td>
<td>69.90 %</td>
<td>27.85 %</td>
</tr>
<tr>
<td>Prevention of CAD</td>
<td>18</td>
<td>45.55 %</td>
<td>83.33 %</td>
<td>37.78 %</td>
</tr>
</tbody>
</table>

Table 2: Indicates that B. Ed students had maximum 45.55% knowledge in the area of prevention of coronary artery disease, minimum (18) 45 % of them had knowledge in anatomy of heart in pretest. The percentage of knowledge showed considerably greater gain. (05) 91.67 maximum of gain in knowledge was in the area of anatomy of heart, and minimum (18) 83.33% of gain in knowledge was in the area of prevention of coronary artery disease. Overall there was an improved knowledge of risk factors and prevention of CAD.

However there was an increase in the knowledge scores among the B. Ed students after administration of the PTP on risk factors and prevention of CAD.

This finding supported with the study conducted by Sudha Ramalingam that is “effectiveness of breast self examination which shows gain in knowledge after administration of pamphlets of breast self examination”.

Table 3: Pre-test and post – test percentage mean post-test scores of knowledge of B. Ed students on risk factors and prevention of CAD.

<table>
<thead>
<tr>
<th>Items on</th>
<th>Total score</th>
<th>Pre-test (x)</th>
<th>Post-test (y)</th>
<th>Gain in knowledge (y-x)</th>
<th>Modified gain score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy of heart t%</td>
<td>300</td>
<td>45 %</td>
<td>91.67 %</td>
<td>55 %</td>
<td>0.84 %</td>
</tr>
<tr>
<td>Risk factors of CAD %</td>
<td>1020</td>
<td>42.05 %</td>
<td>69.90 %</td>
<td>57.95 %</td>
<td>0.48%</td>
</tr>
<tr>
<td>Prevention of CAD %</td>
<td>1080</td>
<td>45.55 %</td>
<td>83.33 %</td>
<td>16.67 %</td>
<td>2.26 %</td>
</tr>
</tbody>
</table>

Table 3: Indicates that B. Ed students had maximum 45.55% knowledge in the area of prevention of CAD, minimum (18) 45 % of them had knowledge in anatomy of heart in pretest. The percentage of knowledge showed considerably greater gain. (05) 91.67 maximum of gain in knowledge was in the area of anatomy of heart, and minimum (18) 83.33% of gain in knowledge was in the area of prevention of coronary artery disease overall there was an improved knowledge of risk factors and prevention of CAD.

However there was an increase in the knowledge scores among the B. Ed students after administration of the PTP on risk factors and prevention of CAD. Modified gain score is a ratio of the amount actually
gained to the amount that could possibly have been gained. The difference between the mean pre-test and post-test percentage scores indicates the actual gain. The difference between the mean pre-test percentage scores and the possible score is measure of possible gain.

This finding supported with the study conducted by Mrs. Bittu P. George, with a statement of “a study to evaluate the effectiveness of self instructional module on promotion of mental health of adolescent’s among high school teachers of selected schools at Bangalore” shows that there is significant association between knowledge and socio demographic variables.

**Table 4:** Frequency and percentage (%) distribution of knowledge scores of B. Ed students  

<table>
<thead>
<tr>
<th>Score</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>(%)</td>
</tr>
<tr>
<td>Good (23-40) (SD+X)</td>
<td>10</td>
<td>16.66</td>
</tr>
<tr>
<td>Average (14-22) (SD+X) - (SD-X)</td>
<td>40</td>
<td>66.66</td>
</tr>
<tr>
<td>Poor (0-13) (SD-X)</td>
<td>10</td>
<td>16.66</td>
</tr>
</tbody>
</table>

**Table 4:** Reveals that in pretest maximum 40 (66.66%) of B. Ed students had average knowledge, and minimum 10 (16.66) had poor knowledge scores, and in post – test maximum 60 (100%) had good knowledge score. Therefore there was an improvement in the knowledge scores after the administration of PTP regarding risk factors and prevention of CAD.

**Table 5:** Mean Median mode, Standard deviation and range of knowledge scores of B. Ed students regarding the risk factors and prevention of CAD.  

<table>
<thead>
<tr>
<th>Areas of analysis</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Standard deviation</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest (x)</td>
<td>17.93</td>
<td>19</td>
<td>21</td>
<td>4.63</td>
<td>21</td>
</tr>
<tr>
<td>Post-test (y)</td>
<td>31.2</td>
<td>31</td>
<td>32</td>
<td>4.45</td>
<td>15</td>
</tr>
<tr>
<td>Difference (y-x)</td>
<td>13.27</td>
<td>12</td>
<td>11</td>
<td>0.18</td>
<td>06</td>
</tr>
</tbody>
</table>

**Table 5** indicates that the knowledge of B.Ed. students gained by 13.27 units. The variability around the mean of knowledge distribution (SD) is decreased by 0.18 units. The range between the highest and lowest score is decreased by 06 units after administration of PTP.

**Table 6:** Mean difference, standard Error Difference (SED) and Paired’t’ values of knowledge scores of students.  

<table>
<thead>
<tr>
<th>Mean difference (d)</th>
<th>Standard Error</th>
<th>Paired’ values</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difference (S. Ed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.26</td>
<td>0.5846</td>
<td>22.694 *</td>
<td>59</td>
</tr>
</tbody>
</table>

* p < 0.05

**Table 6** Reveals that calculated paired’t’ test value ($t_{cal} = 22.695$) is greater than tabulated value ($t_{tab} = 2.2$). There is a significant difference between mean pre-test and post knowledge score hence $H_0$ is rejected and $H_1$ is accepted.
Table 7: Association between B.Ed. students and selected socio demographic variables  

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Variables</th>
<th>Good</th>
<th>Average</th>
<th>Poor</th>
<th>chi-square value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Calculated</td>
</tr>
<tr>
<td>1.</td>
<td>Age in years</td>
<td></td>
<td></td>
<td></td>
<td>tabulated</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Df</td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

There was no association between knowledge scores on risk factors and prevention of CAD with selected demographic variables. Hence $H_{02}$ was accepted.

DISCUSSION

1) Findings related to socio-demographic variables of the B.Ed. students.

The findings showed that, out of 60 B.Ed. students maximum 36 (60%) belonged to the age group of 23-25 years and minimum 6 (10 %) belonged to the age group of 19-21. This is because, the age group of 23-25 years, left their professional course to join B.Ed. education.

The total number of female B.Ed. students were 44 (73.33 %), whereas, the total number of male B.Ed. students were 16 (26.67%). This showed that the overall ratio of female was greater than the males.

Maximum students 31 (51.67 %) were unmarried, minimum 29 (48.33%) were married. This showed that most of them were career oriented.

Maximum students 52 (86.67%) were Hindu, minimum 2 (3.33%) were Christian and Muslim. This may be because if we consider the ratio of Indian religion there is an increase in population of Hindus.

2. Findings related to the effectiveness of PTP among B.Ed. students on risk factors and prevention of CAD.

Finding showed that, area wise distribution of pre-test and post- test percentage of knowledge exposed significant gain in all areas namely anatomy of heart 91.67 %, knowledge regarding risk factors of CAD was 69.90 %, while 83.33 % regarding prevention of CAD.

The mean post – test knowledge score 31.2 was greater than the mean pre-test knowledge score 17.93.

Paired ‘t’ test results showed that there was a gain in knowledge ($p<0.005$) after the administration of planned teaching program on risk factors and prevention of CAD. Calculated 22.694, greater than tabulated value 2.2 calculated paired ‘t’ test value ($t_{cal} > t_{tab} = 2.2$). There is a significant difference between mean pre-test and post knowledge score hence $H_0$ is rejected and $H_1$ is accepted.

The mean difference was 13.26 and standard error difference was 0.5846. Hence, $H_1$: The mean post- test knowledge score of B.Ed.
students exposed to planned teaching program will be significantly greater than their mean pre-test knowledge scores at 0.05 level of significance is accepted.

3. Findings related to association between the existing pre-test knowledge of B.Ed. students and selected socio-demographic variables.

Findings showed that the association between the knowledge scores and the socio-demographic variables values at df (4) for age of B.Ed. students was 4.834; at df (2) for gender was 0.2263; at df (6) for religion was 3.819; at df (2) for marital status was 2.900. All the variables are having calculated value less than tabulated value, Hence, the $H_2$ hypothesis is not accepted.

CONCLUSION

Based on the findings of the study, the following conclusions were drawn:

1. Knowledge scores of the B. Ed students were found to be inadequate in pre-test.

2. There was an intense need for a PTP for the B. Ed students on knowledge regarding risk factors and prevention of coronary artery disease.

3. There was evident increase in the knowledge score in all the areas such as anatomy of heart, risk factors and prevention of CAD.

Thus it can be concluded that PTP is an effective method for B. Ed students to increase their level of knowledge about risk factors and prevention of CAD and there is intense need to make people aware regarding the disease.

Acknowledgement: The researcher is thankful to the Guide, Prof. Mrs. Suhasinee Rathod; Vice Principal, Class Coordinator & HOD. I express my gratitude to Dr. M.I. Momin, Principal and H.O.D., Community Health Nursing of D.Y. Patil College of Nursing, Kolhapur. I extend my sincere gratitude to all my teachers for their continuous support throughout this study. I thank the Dean of D.Y. Patil University for providing the administrative permission to conduct study.

Source of Funding: No funds or grants were availed for the study.

Conflict of Interest: There was no conflict of interest for this study.

REFERENCES


Prevalence of Helminthic Infestation among School Children and their Reported Hygienic Practices

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1 Associate Professor, Govt. College of Nursing, Thiruvananthapuram, Kerala,
2 Deputy Director of Nursing Education, Kerala (Rtd)

ABSTRACT

Intestinal parasitic infections are still a serious public health problem in the world, particularly in developing countries.

Objectives

• To estimate the prevalence of helminthic infestation among school children.
• To find out the reported hygienic practices of school children.
• To find out the association between prevalence of helminthic infestation and reported hygienic practices.

Materials & Method: Research design was cross sectional. Population included students of 5th, 6th and 7th standards of Government upper primary schools of Neyyattinkara Taluk. Sampling technique adopted was multistage cluster sampling and sample size was 353. Interview schedule, threepoint rating scale and microscope was used as tool.

Results: Prevalence of helminthic infestation in school children was 44.2%. 39.1% had good, 39.1% had poor and 21.8% had average hygienic practices. Statistically significant association was found between prevalence of helminthic infestation and the reported hygienic practices of students.

Conclusion: The study reveals that prevalence of helminthic infestation in school children is 44.2%. Statistically significant association was found between prevalence of helminthic infestation and reported hygienic practices of school children.

Keywords: Prevalence, Helminthic Infestation, School Children, Reported Hygienic Practices.

INTRODUCTION

Worldwide more than 3.5 billion people are infected with intestinal worms, of which 1.47 billion have round worms, 1.3 billion have hook worms and 1.05 billion have whip worms. It is also estimated that about 400 million school age children are infected with round worm, whip worm and hook worm worldwide.1

The prevalence of helminthic infestation in school going children of Cape Town of South Africa was 55.8%.2 A study conducted by the Delhi Government Health and Family Welfare Department in association with Development Partner Deworm the World among 3251 children of different school across Delhi found that the prevalence of helminthic infestation in North East Delhi was 26.7% and Central District of Delhi 25.4%.3 A study was conducted on the pediatric age group at Kattakkada, Thiruvanthapuram, Kerala found that the prevalence of helminthic infestation was 58%.4

The prevalence of helminthic infestation among 9 to 12 year aged children from Municipal Elementary schools of Thiupathy was 51%. The three common types of helminthic infestation reported were round worm, pin worm and hook worm 28%, 5% and 18% respectively.5 A study conducted by Swarajam to assess the knowledge and practice of school going children regarding worm infestation in selected rural community, Bengaluru found that majority have moderately adequate knowledge (65%) and moderate
Absence of ova in the stool was associated with better education of parents, presence of toilets in the house, use of toilets by children, the practice of washing hands with soap and water after defecation and use of foot wear by children.

**OBJECTIVES**

- To estimate the prevalence of helminthic infestation among school children.
- To assess the reported hygienic practices of school children.
- To find out the association between the prevalence of helminthic infestation among school children and their reported hygienic practices.

**HYPOTHESIS**

There is no significant association between prevalence of helminthic infestation among school children and their reported hygienic practices.

**METHODOLOGY**

**Research design**- Cross sectional

**Setting**- Government Upper Primary Schools of Neyyattinkara Taluk, Thiruvananthapuram, Kerala.

**Population**- Students studying in 5, 6 and 7 standards.

**Sample size**- 353.

**Sampling technique**- Cluster sampling.

**Tools and Technique**- The tools used for the study were structured interview schedule, three point rating scale, a microscope and the techniques used were interview and observation. The three point rating scale consisted of 10 questions with positive and negative statements and had a maximum score of 20. For positive statements highest score was given if the answer is always, for negative statements highest score was given if the answer is never. Practice score below 33.3% was considered as poor, 33.3% – 66.7% as average and above 66.7% as good. Saline smear examination of stool was used for identifying the worms.

**DATA COLLECTION PROCESS**

First permission was obtained from the concerned authorities. Two days before data collection the investigator visited the school, consent form were given to students to obtain consent from their parents on the next day. On the next day sterilized bottles were given to 30 students those who brought consent from their parents for collecting the stool specimen. Daily about 30 samples were collected. The investigator interacted with students and explained to them how to collect, when to collect the specimens and how to transport it to school. On the next day specimens were collected from the school by the investigator and sent to concerned Primary health Centers in the morning. After that data was collected by using the interview schedule and rating scale.

**RESULTS**

Table 1: Distribution of students according to Age, Sex, Religion, Place of Residence and Income of Family

<table>
<thead>
<tr>
<th>Age in years</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>83</td>
<td>23.5</td>
</tr>
<tr>
<td>10</td>
<td>115</td>
<td>32.6</td>
</tr>
<tr>
<td>11</td>
<td>155</td>
<td>43.9</td>
</tr>
<tr>
<td>Total</td>
<td>353</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>149</td>
<td>42.21</td>
</tr>
<tr>
<td>Female</td>
<td>204</td>
<td>57.79</td>
</tr>
<tr>
<td>Total</td>
<td>353</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religion</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hindu</td>
<td>163</td>
<td>46.2</td>
</tr>
<tr>
<td>Muslim</td>
<td>25</td>
<td>7.1</td>
</tr>
<tr>
<td>Christian</td>
<td>165</td>
<td>46.7</td>
</tr>
<tr>
<td>Total</td>
<td>353</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Place of Residence</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coastal</td>
<td>78</td>
<td>22.1</td>
</tr>
<tr>
<td>Rural</td>
<td>275</td>
<td>77.9</td>
</tr>
<tr>
<td>Total</td>
<td>353</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monthly Income of Family</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above Rs.15000</td>
<td>63</td>
<td>17.8</td>
</tr>
<tr>
<td>Rs.10000-15000</td>
<td>20</td>
<td>5.7</td>
</tr>
<tr>
<td>Rs.5000-10000</td>
<td>41</td>
<td>11.6</td>
</tr>
<tr>
<td>Below Rs.5000</td>
<td>229</td>
<td>64.9</td>
</tr>
<tr>
<td>Total</td>
<td>353</td>
<td>100.0</td>
</tr>
</tbody>
</table>
The above table shows that majority of students (43.9%) completed 11 years, 32.6% completed 10 years and 23.5% completed 9 years. Majority of students in the study were females (57.79%). The study group consisted of students from Hindu, Muslim and Christian religion, 46.2% Hindus, Muslims 7.1% and Christians 46.7%. In the present study 22.10% of students were from coastal area and 77.90% from rural area. Majority of the students (64.9%) had family income of below Rs.5000 per month.

Table 2: Distribution of students based on the Presence of Helminthes (Prevalence) in Stool Examination (Overall and Sub groups)

<table>
<thead>
<tr>
<th>Group</th>
<th>Frequency</th>
<th>Prevalence in the study group</th>
<th>95% confidence limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>353</td>
<td>44.2</td>
<td>38.9 – 49.5</td>
</tr>
<tr>
<td>Boys</td>
<td>149</td>
<td>39.6</td>
<td>31.6 – 47.6</td>
</tr>
<tr>
<td>Girls</td>
<td>204</td>
<td>47.5</td>
<td>40.5 – 54.5</td>
</tr>
<tr>
<td>9 years</td>
<td>83</td>
<td>45.8</td>
<td>34.9 – 56.7</td>
</tr>
<tr>
<td>10 years</td>
<td>115</td>
<td>47</td>
<td>37.7 – 56.3</td>
</tr>
<tr>
<td>11 years</td>
<td>155</td>
<td>41.3</td>
<td>33.4 – 49.2</td>
</tr>
<tr>
<td>Coastal</td>
<td>78</td>
<td>69.2</td>
<td>58.8 – 79.6</td>
</tr>
<tr>
<td>Rural</td>
<td>275</td>
<td>37.1</td>
<td>31.3 – 42.9</td>
</tr>
</tbody>
</table>

The table 2 reveals that the prevalence of helminthic infestation in the study group was 44.2% and the 95% confidence limits are 38.9 to 49.5%. This means that in the general population of children the prevalence could vary from 38.9% to 49.5% and in 95% of the times the population values will be contained by this interval and in 5% of the time, the population prevalence may be outside the interval. The prevalence of helminthic infestation in boys is 39.6% and the 95% confidence limits are 31.6 to 47.6%. The difference is prominent in coastal areas. An examination of the 95% confidence limits also reveals the higher prevalence in the sub groups of girls as well as children hailing from coastal areas.

Table 3: Distribution of students based on the type of helminthes present in the stool

<table>
<thead>
<tr>
<th>Type of worm</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round worm</td>
<td>106</td>
<td>68</td>
</tr>
<tr>
<td>Whip worm</td>
<td>19</td>
<td>12.2</td>
</tr>
<tr>
<td>Round worm &amp; whip worm</td>
<td>23</td>
<td>14.7</td>
</tr>
<tr>
<td>Round worm &amp; pinworm</td>
<td>7</td>
<td>4.5</td>
</tr>
<tr>
<td>Whip worm &amp; pinworm</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>156</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

From table 3, it is clear that among the 156 helminthic infected children (worm infected) majority of them were infected with round worm (68%).

Table 4: Distribution of students according to their reported hygienic practices

<table>
<thead>
<tr>
<th>Practice</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>138</td>
<td>39.1</td>
</tr>
<tr>
<td>Average</td>
<td>77</td>
<td>21.8</td>
</tr>
<tr>
<td>Good</td>
<td>138</td>
<td>39.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>353</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table 4 shows that 39.1% were having good hygienic practice 39.1% were having poor hygienic practice and 21.8% were having average hygienic practice.
Table 5: Association between Prevalence of Helminthic Infestation reported Hygienic Practices of Students

<table>
<thead>
<tr>
<th>Presence of helminth</th>
<th>Practice</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Poor</td>
<td>Average</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Present</td>
<td>85</td>
<td>61.6</td>
</tr>
<tr>
<td>Absent</td>
<td>53</td>
<td>38.4</td>
</tr>
<tr>
<td>Total</td>
<td>138</td>
<td>100</td>
</tr>
</tbody>
</table>

\[ X^2 = 38.8 \quad P = .000, \text{ Odds ratio 3.3, 95\% confidence limits 2.1 to 5.1.} \]

Table 5 reveals that there exists a significant association between the hygienic practice and presence of helminthic infestation. Percentage having helminthic infestation decreases with improvements in practices.

**LIMITATIONS OF THE STUDY**

- Ova may not be visible by single saline smear examination.
- Only Government schools were selected for the study.
- Only reported hygienic practice was recorded.

**CONCLUSION**

The study revealed that prevalence of helminthic infestation among school children was 44.2\%(95\%CL is 38.9-49.5). Majority of students were infected with ascaris lumbricodes. There was statistically significant association between prevalence of helminthic infestation and the reported hygienic practices of children.

**RECOMMENDATIONS**

The same study can be conducted in another setting.

Similar study can be replicated in hospitals and communities.

Similar study can be carried out in adult population.

A comparative study in govt. and private school children can be carried out.

The same study can be conducted among food handlers in hotels.

**Acknowledgement:** My sincere thanks to Dr. P.K. Babu, The Director of Public Instructions, District Medical Officer, Dr. A. Santosh Kumar, Professor Prasanna Kumary Y, Professor Valsa K Panicker and Dr. Saleena Shah

**Conflict of Interest:** There was no such issue.

**Funding:** It was self-financed.

**Ethical Considerations:** Before data collection, permission was obtained from Research Committee Medical College, Thiruvananthapuram, Institutional Human Ethics Committee Medical College Thiruvananthapuram, Director of Public Instructions, District Medical Officer, Medical Officers of Primary Health Centers, School Authorities and written consent from parents.

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Effectiveness of Orientation Programme on Knowledge and Anxiety among Patients Undergoing Coronary Angiography at Selected Hospital

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ABSTRACT

Background: According to WHO, (2008), Out of the 17.3 million cardio vascular deaths, heart attacks were responsible for 7.3 million deaths and strokes were responsible for 6.2 million deaths. Coronary artery disease (CAD) is the leading cause of death in the world, coronary angiography remains the gold standard for detecting clinically significant atherosclerotic CAD. The aim of the study was to evaluate the effectiveness of orientation programme on knowledge and anxiety among patients undergoing coronary angiography at selected hospital. Method: A pre-experimental design was adopted for a total samples of 30 patients through non-probability convenience sampling technique. A pre test was conducted using a structured interview schedule to collect information regarding demographic variables and the Speilberger’s state anxiety scale was used to assess the anxiety and a semi structured questionnaire to assess the knowledge. The post test was given on the 7th day to assess the knowledge and anxiety. Result: The paired ‘t’ value for knowledge was 20.26, which was significant at P<0.05 level. Hence, H1 was retained. The obtained ‘t’ value for anxiety was 17.5, which was significant at P<0.05 level. Hence H2 was retained. The pre test and post test ‘t’ value for knowledge and anxiety was –0.223 and –0.340 respectively, showing a negative correlation between the pre test and post test scores of knowledge and anxiety among patients undergoing coronary angiography. Hence H3 was retained at P<0.05 level. There was a significant association ($\chi^2=8.44$) between anxiety and sex of the patient and significant association ($\chi^2=9.71$) with patient’s dietary habit at P<0.05 level. Hence H4 was retained for these two variables and rejected for all other variables. The study concluded that orientation programme was effective in improving the knowledge and reducing the anxiety of the patients undergoing coronary angiography.

Keywords: Anxiety, Coronary angiography Effectiveness, Knowledge, Orientation programme.

INTRODUCTION

Coronary artery disease is the leading cause of death in the world. Every year approximately 8 million deaths occur due to CAD. Myocardial infarction (MI) and sudden cardiac death accounts for 50% of deaths, approximately 3.8 million men and 3.4 million women die each year from CAD. An estimated 17.5 million people died from CVD’s in 2012. WHO, estimated 17.5 million people died from CVD’s in 2012, representing 31% of all global deaths. Of these deaths, an estimated 7.4 million were due to coronary artery disease. Heart disease is the leading cause of death for men and women. More than half of the deaths due to heart disease in 2009 were in men. Coronary heart disease is the most common type of heart disease, killing over 370,000 people annually.

Coronary angiography remains the gold standard for detecting clinically significant atherosclerotic CAD. Coronary angiography allows visualization of the coronary arteries and helps determine the treatment and prognosis. Guided by flouroscopy, a catheter introduced into the femoral or brachial
artery. Dye is injected into each coronary opening, allowing visualization of the main coronary branches and any abnormalities such as stenosis on obstruction. Narrowing of the vessel lumen by more than 50% is considered significant; most lesions that cause symptoms involve more than 70% narrowing, vessel obstructions are noted on a coronary artery 'map' that provides a guide for tracking disease progression and for elective treatment with angioplasty or cardiac surgery.\(^5\)

The patient education on anxiety undergoing coronary angiography was assessed using State Trait Anxiety Inventory (STAI). The study results concluded that the level of anxiety was reduced after the education.\(^6\) Researches prove that provision of good quality pre-procedural information facilitates patients' active involvement in their care and therefore contributes to overall increase in satisfaction, and maximize their positive effects on patients undergoing elective procedures.\(^7\)

Patients need to be adequately assessed, well educated and prepared both clinically and psychologically before the procedure. The researcher believes that orienting the patients with adequate information regarding the pre, intra and post procedural care can reduce the anxiety in the patient and enhance a speedy recovery. Hence, the researcher has selected this topic.

**Statement of the Problem:** A study to evaluate the effectiveness of orientation programme on knowledge and anxiety among patients undergoing coronary angiography at selected hospital, Salem.

**Objectives:** (1) To assess the knowledge and anxiety among patients undergoing coronary angiography. (2) To evaluate the effectiveness of orientation programme on knowledge and anxiety among patients undergoing coronary angiography. (3) To associate knowledge and anxiety among patients undergoing coronary angiography with their selected demographic variables.

**Hypotheses:** \(H_1\): There will be a significant difference between the pretest and the post test scores of knowledge and anxiety among patients undergoing Coronary Angiography at \(p<0.05\) level. \(H_2\): There will be significant association between knowledge and anxiety among patients undergoing coronary angiography with their selected demographic variables at \(p<0.05\) level.

**MATERIALS & METHOD**

The research design adopted for this study was pre-experimental, one group pre test and post test design. The population of this study comprises of patients who are admitted for elective coronary angiography at selected hospital, Salem. The sample of the study comprised of patients undergoing coronary angiography and who fulfilled the inclusion criteria. Sample size of the study was 30 patients undergoing coronary angiography at selected hospital, Salem. The sampling technique adopted for this study was non-probability convenience sampling technique.

**Inclusion criteria:**

Patients who were,

- admitted in the ward one day prior to coronary angiography,
- between the age of 30-70 years,
- could speak and understand Tamil and English and
- conscious and well oriented.

**Variables:** Independent variable: Orientation programme. Dependent Variable: Knowledge and anxiety.

**Description of Tool: Section-A:** Demographic variables, This section consists of demographic variables like age, sex, occupation, family monthly income, dietary pattern, habit of smoking, habit of alcohol consumption and habit of exercise. The base line data was collected using semi structured interview schedule.

**Section-B:** Structured questionnaire to assess knowledge among patients undergoing coronary angiography. The questions were under the sub headings related to anatomy of heart, coronary angiography and post procedure care.

There were 25 statements where the correct answer was scored 1 and each wrong answer was
scored 0. Scoring procedure for knowledge, Adequate Knowledge = 75-100%, Moderately adequate Knowledge = 50-74%, and Inadequate Knowledge = <50%.

Section C: Spielberger’s state anxiety scale was used to measure anxiety of patients undergoing coronary angiography. It consists of 20 items from 1-20. The scores were divided into the following categories, mild anxiety = 20 – 40, Moderate anxiety = 41 – 60, and Severe anxiety = 61 - 80.

Validity of the tool was established with the consultation of Experts from the field of Nursing and Medicine. The tools were found adequate and minor suggestions given by the experts were incorporated. The reliability of the semi structured questionnaire to assess the knowledge was checked and was established by using Test-Retest method and the obtained $r'$ value was 0.97 and the reliability of Spielberger’s state anxiety scale was checked and was established by using Test-Retest method and the obtained $r'$ value was 1 which showed that both the tools were reliable.

DATA COLLECTION PROCEDURE

The patients who fulfilled the inclusion criteria was selected by non probability convenience sampling technique from the selected hospital. The demographic variables was collected by the semi structured interview schedule and the knowledge of the patients was assessed by a Structured questionnaire and anxiety was assessed using the Spielberger’s State anxiety scale on the day of admission. After the pre test, the patients were given information through pictures regarding “Anatomy of the heart” and information about “the coronary angiogram” and “the post procedure care” and follow up was given using slides and information regarding “the procedure” was given through a video programme. The patients were taken directly to catheterization lab and the Intensive Care Unit and were oriented to the settings and the staff. The post test anxiety was assessed using Spielberger’s State anxiety scale after coronary angiography when the patients were in Intensive Care Unit. Post test knowledge was assessed after 7 days using structured questionnaire when the patients came for review to the OPD.

RESULTS

Section-A: Distribution of patients undergoing coronary angiography according to their demographic variables. The distribution of patients according to their demographic variables. Most of the patients 13(43.33%) of them were in 51–60 years of age. Majority 19(63.33%) were males and 11(36.67%) were females. Most of the patients 10(33.34%) were illiterate. Among the total patients 11(36.67%) were unemployed/retired and 11(36.67%) were doing their business. Majority of the patients 17(56.66%) had their monthly income above 8000 rupees. Most of the patients 29(96.67%) were Non Vegetarians. Majority of the patients 19 (63.33%) were not having habit of smoking. About 25(83.33%) were not having the habit of alcohol consumption. Majority of the patients 30(100%) were not having the habit of exercise.

Section-B: Distribution of patients undergoing coronary angiography according to pre test score of knowledge and anxiety. All patients 30(100%) undergoing coronary angiography had inadequate knowledge. Majority of 22(73.33%) patients had severe anxiety and 8(26.67%) patients had moderate anxiety before undergoing coronary angiography.

Section-C: Distribution of patients undergoing coronary angiography according to post test score of knowledge and anxiety. 23(76.67%) patients had adequate knowledge and 7(23.33%) patients had moderately adequate knowledge. Regarding anxiety level 26(86.67%) patients had mild anxiety and 4(13.33%) patients had moderate anxiety after the orientation programme.

Section-D: Comparison between the pretest and post test scores on knowledge and anxiety among Patients undergoing Coronary Angiography.

![Fig 1: Percentage Distribution of Patients undergoing Coronary Angiography according to their pre test and post test scores of knowledge.](image)
Figure -1 represents that, all the patients (100%) had inadequate knowledge in the pretest, where as in the post test 23(76.67%) patients had adequate knowledge and 7(23.33%) patients had moderately adequate knowledge. This diagram represents that in post test none of the patients had inadequate knowledge. It highlights that orientation programme improved the knowledge of the patients undergoing coronary angiography.

Figure -2 represents that, 8(26.67%) patients had moderate anxiety in the pretest and 22(73.33%) patients had severe anxiety, where as in the post test 26(86.6%) patients had mild anxiety and 4(13.33%) patients had moderate anxiety. This highlights that, the orientation programme reduced the anxiety among patients undergoing coronary angiography.

**Table-1: Mean, Standard deviation, paired ‘t’ value on knowledge & anxiety scores among patients undergoing Coronary Angiography before and after the orientation programme.**

<table>
<thead>
<tr>
<th>Observations</th>
<th>Knowledge</th>
<th>Anxiety</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D</td>
</tr>
<tr>
<td>Pre Test</td>
<td>7.1</td>
<td>2.87</td>
</tr>
<tr>
<td>Post test</td>
<td>21.43</td>
<td>7.231</td>
</tr>
</tbody>
</table>

*Significant at p<0.05 level; Table Value = 2.05.

The above table reveals that, the mean pre test score of knowledge was 7.1±2.87 and mean post test score was 21.43±7.231. The paired ‘t’ value was 20.26 which was greater than the table value. The pre test anxiety was 61.83±5.95 and mean post test score was 34.13±42.66. The paired ‘t’ value was 17.5 which was greater than the table value. Hence the research hypothesis H1 was accepted at p<0.05 level. Thus it becomes evident that orientation programme was effective in improving the knowledge and in reducing the anxiety of the patients undergoing coronary angiography.

**Table-2: Relationship between the pre test and the post test scores of knowledge and anxiety among patients undergoing coronary angiography.**

<table>
<thead>
<tr>
<th>S.No</th>
<th>Group</th>
<th>Knowledge</th>
<th>Anxiety</th>
<th>‘r’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>1.</td>
<td>Pre test</td>
<td>7.1</td>
<td>2.87</td>
<td>61.83</td>
</tr>
<tr>
<td>2.</td>
<td>Post test</td>
<td>21.43</td>
<td>7.23</td>
<td>34.13</td>
</tr>
</tbody>
</table>

* Significant at p<0.05 level;

The table above reveals that, there was a negative correlation observed between the pre test and post test scores of knowledge and anxiety among patients undergoing coronary angiography. Hence the research hypothesis H2 was rejected at p<0.05 level.
Table-3: Association on anxiety among patients undergoing coronary angiography with their demographic variables.

<table>
<thead>
<tr>
<th>S.No</th>
<th>Demographic variables</th>
<th>df</th>
<th>$\chi^2$</th>
<th>Table Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>2</td>
<td>0.646</td>
<td>5.99</td>
</tr>
<tr>
<td>2</td>
<td>Gender</td>
<td>2</td>
<td>8.44*</td>
<td>5.99</td>
</tr>
<tr>
<td>3</td>
<td>Education</td>
<td>10</td>
<td>6.907</td>
<td>18.31</td>
</tr>
<tr>
<td>4</td>
<td>Occupation</td>
<td>8</td>
<td>5.074</td>
<td>15.51</td>
</tr>
<tr>
<td>5</td>
<td>Dietary habit</td>
<td>2</td>
<td>9.71*</td>
<td>5.99</td>
</tr>
</tbody>
</table>

*Significant at $p<0.05$ level

The above table shows that there was a significant association observed between anxiety and the patient’s gender and dietary habits. It also reveals that there was no significant association with other demographic variables. Hence $H_3$ was retained only for the variables like gender of the patient and their dietary habits.

DISCUSSION

The mean pre test score of knowledge was $7.1\pm2.87$ and mean post test score was $21.43\pm7.231$ respectively. The ‘t’ value was $20.26$ which was significant at $p<0.05$ level. The mean pre test score of anxiety was $61.83\pm5.95$ and mean post test score was $34.13\pm42.66$ respectively. The ‘t’ value was $17.5$ which was greater than the table value. Hence the research hypothesis $H_1$ was accepted at $p\leq0.05$ level.

There was a negative correlation observed between the pre test and post test scores of knowledge and anxiety among patients undergoing coronary angiography. Hence the research hypothesis $H_2$ was rejected at $p<0.05$ level.

There was a significant association observed between anxiety and the patient’s gender and dietary habits. It also reveals that there was no significant association with other demographic variables. Hence $H_3$ was retained only for the variables like gender of the patient and their dietary habits.

This study is consistent with an experimental study which evaluated the effectiveness of video information regarding level of anxiety among patients undergoing coronary angiography. Two hundred consecutive patients undergoing coronary angiography were selected randomly. The 1st hundred were assigned to conventional education and the second hundred assisted by video information. The outcome variables for the comparison consisted of a standard anxiety score (Spielberger scale) obtained at baseline and immediately after written informed consent. The study results revealed that the level of anxiety among patients prior to conventional education was $56.6\pm11.6$ and after the education was $49\pm12.7$ with a mean difference (20). The level of anxiety among patients prior to video information was $66\pm13$ and after the video information was $36\pm9$ with a mean difference (34) with $p<0.048$. The study revealed that the patients who watched the video were significantly less anxious. ($^8$)

CONCLUSION

The study was done to evaluate the effectiveness of orientation programme on knowledge and anxiety among patients undergoing coronary angiography at selected hospital. The results of this study revealed that orientation programme was effective in improving the knowledge and reducing the anxiety among patients undergoing coronary angiography.

Recommendations

1. A similar study can be conducted with larger sample size.
2. A similar study can be conducted with a control group.
3. A comparative study can be conducted with two different population.
4. The study can be conducted with using other teaching methods and auto visual aids.
5. The study can be conducted for patients undergoing all major diagnostic and therapeutic procedures to assess the anxiety level.

Acknowledgement: I thank the hospital
authorities and the patients that have extended their cooperation in completing this study.

**Conflict of Interest:** The author declares no conflict of interest.

**Source of Funding:** Self

**Ethical Clearance:** Ethical clearance was obtained from institutional review board and the authorities from the hospital along with written informed consent from the patients.

**REFERENCES**

Life Satisfaction of Elderly in Families and Old Age Homes: A Comparative Study

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ABSTRACT

Background: Old age is one of the difficult stages of life, affecting overall wellbeing of elderly population. They indeed face financial, health related and other social issues which has negative impact on their life during this stage of life. Proper support, care and love from the beloved ones can help elderly overcome the difficulties of this stage of life. This study was undertaken to assess and compare the life satisfaction of the elderly living in families and old age homes.

Objectives: Assess and compare the life satisfaction among the elderly residing in families and old age home.

Design: Descriptive comparative design

Settings: The study was conducted in seven old age homes and in families in urban areas.

Participants: The population selected for the study is elderly people above the age of 60 years, A total of 102 elderly participated in the study 51 from families and other 51 from old age homes, participants were approached conveniently.

Materials and Method: Self administration of questionnaire technique were used to collect the data. Life Satisfaction Index for the third age (LISTA) tool was used, which was translated to local language and after establishing the reliability and validity the tool was administered to the participants. Descriptive statistics and inferential statistics were used to test the hypothesis. Independent ‘t’ test to compare the life satisfaction of the elderly living in families and old age homes.

Results: A total of 102 elderly were included in the study. About 33.3% of the elderly individuals living in old age homes are dissatisfied with life while it is about only 5.9% in those living in families. 90.2% and 62.7% of the elderly are satisfied with life among those living in families and old age home respectively. 03.9% in each group are very satisfied with their life.

Conclusions: The life satisfaction of elderly living in old age homes were severely affected than those living in families. This information can be utilized for providing interventional programmes for the elderly in the old age homes to maintain their autonomy and thus their individuality.

What is already known about this topic?

• Old age is a phase of dependency, the elderly population is facing various challenges during this phase

• Quality of life decreases with increasing age

What this paper adds?

1. The study outlines that the life satisfaction of elderly living in old age homes were severely affected than those living in families so certain strategies should be adopted for the institution living elderly to conserve the satisfaction with life.

Keywords: life satisfaction, elderly individuals, old age home, family.
BACKGROUND

Old age is a challenging stage of life, the people once healthy, hardworking and has spent their life tendering, nurturing their own families remains unwanted by their own children, grandsons, finally abandoning their parents in the old age homes. Even if at all they are not left in old age home the old age people are left all alone in the families and are suffering through a period of isolation which affects their quality of life.

The global proportion of people over 60 years of age was 8 per cent in 1950, rose to 11 per cent in 2009 and is projected to reach 22 per cent by 2050. “Globally, the population of older persons is growing at a rate of 2.6 per cent per year1. In this paper the focus is on comparing the life satisfaction of elderly people living in families and old age home, which will enlighten with need for implementing strategies for addressing these needs of the elderly population in the country for improving their quality of life.

METHOD

Study Hypotheses:

The following hypotheses were tested at 0.05 level of significance

\[ H_0: \text{there will be no significant mean difference in life satisfaction among elderly living in families and old age homes} \]

Study Design and study population

This quantitative study adopted a comparative design since the present study tried to compare the life satisfaction of elderly living in two different settings; family and old age homes. The population selected for the study was old age people above the age of 60 years living in families and in old age homes. The purposive sampling was used to select the old age homes and convenient sampling for families from urban areas. The sample size was calculated to be 51 in each group i.e. in families and in old age homes. The sample size calculation was done after pilot study using the formula:

\[
 n = \frac{2(Z_{1-\alpha/2} + Z_{1-\beta})^2 \sigma^2}{d^2}
\]

Administrative permissions was obtained from respective areas like authority of ethical clearance, administrators of old age homes and consent was taken from the participants of the study.

1. Data collection instruments and measurements

The following tools were used to collect data

Tool 1: Demographic Proforma

This was developed by the investigator to gather background information about the samples selected for the study. The items of the tool include age, gender, marital status, religion, educational status, socio economic status, monthly income, occupation, number of children, place of stay, and years of stay in old age home, history of any diseases for all types of participants. Constructed tool has 13 items. The tool was validated by seven experts, translated to local language and pretested among five elderly living in families and old age homes.

Tool 2: Life Satisfaction Index for the Third Age (LISTA)

The life satisfaction for third age index (LISTA) was used to assess the life satisfaction of the elderly individuals. This instrument has 35 items. The items are scored on a six point likert scale.

The scoring was done as strongly disagree- 1, disagree -2, disagree somewhat -3, agree somewhat -4, agree -5, strongly agree-6. Reverse coding was done for suggested 15 items. The tool was validated by seven experts and translated to local language and pretested among five elderly living in family and old age homes and the reliability was tested among twenty elderly individuals living in families , \( \alpha = 0.726 \)

DATA COLLECTION PROCEDURE

The participants were given questionnaire, the participants were explained the purpose of the study and obtained consent after assuring the subjects about the confidentiality of the data. The total time taken for each subject was approximately 25 minutes.

STATISTICAL ANALYSIS

The data were analysed using both Descriptive
and inferential using Statistical Package For Social Science Version 16 (SPSS 16)

- Descriptive statistics Frequency and percentage distribution was used to describe the sample characteristic and Inferential statistics independent ‘t’ test was done.

**RESULTS**

Table 1- Frequency and percentage distribution of sample characteristics of elderly living in families and old age homes (n = 102)

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Sample characteristics</th>
<th>Elderly living in families</th>
<th>Elderly living in old age homes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>1.</td>
<td>Age in years</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60-70</td>
<td>34</td>
<td>66.7</td>
</tr>
<tr>
<td></td>
<td>71 -81</td>
<td>15</td>
<td>29.4</td>
</tr>
<tr>
<td></td>
<td>82 -92</td>
<td>02</td>
<td>03.9</td>
</tr>
<tr>
<td>2.</td>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>16</td>
<td>31.4</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>35</td>
<td>68.6</td>
</tr>
<tr>
<td>3.</td>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Single</td>
<td>05</td>
<td>09.8</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>20</td>
<td>39.2</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>03</td>
<td>05.9</td>
</tr>
<tr>
<td></td>
<td>Widow/widower</td>
<td>23</td>
<td>45.1</td>
</tr>
<tr>
<td>4.</td>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Christian</td>
<td>18</td>
<td>35.3</td>
</tr>
<tr>
<td></td>
<td>Hindu</td>
<td>29</td>
<td>56.9</td>
</tr>
<tr>
<td></td>
<td>Muslim</td>
<td>04</td>
<td>07.8</td>
</tr>
<tr>
<td>5.</td>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Primary(1-4th)</td>
<td>04</td>
<td>07.8</td>
</tr>
<tr>
<td></td>
<td>Upper primary(5-7th)</td>
<td>17</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td>High school(8-10th)</td>
<td>18</td>
<td>35.3</td>
</tr>
<tr>
<td></td>
<td>PUC</td>
<td>04</td>
<td>07.8</td>
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<tr>
<td></td>
<td>Diploma</td>
<td>01</td>
<td>02.0</td>
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<tr>
<td></td>
<td>Graduate</td>
<td>07</td>
<td>13.7</td>
</tr>
<tr>
<td></td>
<td>Post graduate</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6.</td>
<td>Source of monthly income</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pension</td>
<td>09</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td>Old age allowance</td>
<td>06</td>
<td>11.8</td>
</tr>
<tr>
<td></td>
<td>Supported by family</td>
<td>22</td>
<td>43.1</td>
</tr>
<tr>
<td></td>
<td>Self support</td>
<td>03</td>
<td>05.9</td>
</tr>
<tr>
<td></td>
<td>Savings</td>
<td>04</td>
<td>13.7</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>07</td>
<td>07.8</td>
</tr>
<tr>
<td>7.</td>
<td>Monthly income (in rupees)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Below 4000</td>
<td>34</td>
<td>66.7</td>
</tr>
<tr>
<td></td>
<td>4001-8000</td>
<td>08</td>
<td>15.7</td>
</tr>
<tr>
<td></td>
<td>8001-12000</td>
<td>04</td>
<td>07.8</td>
</tr>
<tr>
<td></td>
<td>12001 above</td>
<td>05</td>
<td>09.8</td>
</tr>
</tbody>
</table>
About 51 elderly individuals living in families the majority of the samples lie between the age group of 60-70 years i.e 34(66.7%) and 18(35.3%) in the age group of 82-92 years in the old age homes.

Both in the families and old age home females comprised of higher percentage 35 (68.6%) and majority of the samples were 29 (56.9 %) and females 30(58.8%) and 21(41.2%) were males respectively.

The majority of elderly living in families are financially supported by families i.e about 22(43.1%), 9 (17.6%) lives with their pension, 6(11.8%) old age allowance and 3 (5.9%) are self support ways of living and for those living in the old age home about 13(25.5%) each is having pension, old age allowance and are living on their savings, 8 (15.7%) are supported by families.

The 74.5% of elderly living in families had three or more than three children for the family living elderly and for the elderly living in old age homes about 36(70.6%) had no children, 6(11.8%) had one or two children ,only 3(5.9%) had more than three children.

Figure 1. Bar diagram showing percentage of life satisfaction among elderly residing in families and old age homes

The figure 1 shows that 33.3% of the elderly individuals living in old age homes are dissatisfied with life while it is about only (5.9%) in those living in families.(90.2%) and (62.7%) of the are satisfied with life among those living in families and old age homes respectively. (03.9%) in each group are very satisfied with their life.
The comparison of life satisfaction among the elderly living in families and old age homes is given in the table 3. When LISTA score was considered, there was significant difference between the two groups (p = .001) with a mean score of 141.02 in the elderly living in families and 128.75 in those in old age homes. These findings signify that there is significant difference in the life satisfaction of elderly living in families and old age homes.

**DISCUSSION**

The present study assessed the life satisfaction among the elderly living in families and old age homes. The marital status of elderly living in families; about 45.1% were widow/widower and the married samples comprises of 39.2% in the but in elderly living in old age home marital status about 43.1% were single, 37.3% were widow/widower, 11.8% were married and 7.8% divorced. This trend of marital status in the old age homes was almost similar to the other study conducted by Fakhri Khader where the elderly who were single was higher than widow, married or divorced.

When over all LISTA score was considered, there was significant difference between the two groups (p = .001) with a mean score of 141.02 in the elderly living in families and 128.75 in those in old age homes. These findings signify that there is significant difference in the life satisfaction of elderly living in families and old age homes. The life satisfaction was significantly predicted by family support among elderly in the present is almost similar to that reported by Zhang Ay and Yu. The study conducted by Dubey A, Bhasin S, Gupta N and Sharma N supports the present study as the results of both the studies shows that the elderly individuals living in families are more satisfied with life than those living in old age homes. But there are some contradictory findings, according to the present study survey about 66.7% of the elderly individuals living in the old age homes are involved in hobbies than those living in families, 37.3%, but it is about 66.3% of the elderly in the families and 39.9% old age home elderly are involved in recreational activities.

**CONCLUSION**

The family provides important resources that sustain the well-being of its members at every stage of the life-course. Exchanges of support between family members is a life-time activity and for the elderly, the family takes on added importance as aging-related changes increase their dependency especially to their beloved ones. Family is a framework that has capacity to function as sources of support to the vulnerable elder members. Thus from the study it can also be concluded that there should be a proper guidance and supervision for the aging member of the family so that they can be helped with the deficiencies of aging and help them in achieving a healthy, happy and safe, illness free aging. Also there can be more measures from the part of the government for helping the old age people to lead a more healthy, secure life by implementing certain interventions in regard to these matters.

**LIMITATIONS OF THE STUDY**

This study has limitation as the old age homes and the families were selected purposively limits the
generalization of study findings, also cultural and psychological factors may play as confounders.

**RECOMMENDATIONS**

Keeping in view of the findings of the study, following recommendations are made:

1. Replication of the study with larger samples can be done
2. Random sampling of the samples can be done
3. Comparative study can be conducted in institutions of urban and village areas
4. Comparative study can be conducted in families of urban and village areas
5. An interventional study can be done related to improving the life satisfaction among the elderly in the old age homes
6. A study can be done on old age and its related problems considered from an elderly perspective.

**Acknowledgement:** We acknowledge all those who have directly and indirectly supported the study, Also Dr. Anice George (Manipal College Of Nursing Manipal). Also I deeply thank Mr. Andrew J Barret who gave me permission to use the LISTA tool for the study.

**Source of Funding:** The source of funding was by the researcher alone.

**Conflict of Interest:** There was no funding for the project so no conflict of interest exists.

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Perception on Nursing Education among Freshmen College Students in Misurata University, Misurata, Libya

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ABSTRACT

This study focused on perceptions of one hundred eight (108) freshmen college students of Misurata University on nursing education for the months of December 2013 and January 2014. A descriptive non-experimental research design was employed and a self-made questionnaire was used to gather needed data after reliability test done (‘K – R = 0.9107). The purpose of this endeavor is to come up with holistic view on nursing education as a key for an effective decision making in building the niche of nursing profession or vocation in Libya as partner in the rendition and management of health care services. Essential findings which is critical to consider and conclusions were made as the basis in coming up with recommendations that are necessary for the future of nursing education in Libya.

Keywords: Nursing, nursing education, nursing profession, nursing vocation, perception.

INTRODUCTION

The chief task of education is above all to shape man or to guide the solving dynamism through which man forms himself as a man. Education implies experience, insight and adjustment on the part of man as he is stimulated towards growth and development. Education enables a man to realize higher values of life which are essential to become roof and crown of all creation. The concept of education is still in the process of evaluation and it will never come to an end. In short, the concept of education is dynamic, it can never be static. The heart of the matter of education is once again man-making.

Nursing education is the process of preparing individuals for careers as nurses. Through nursing education, future nurses learn the skills necessary to provide patient care developed and execute treatment plans and teach patients how to care for their medical conditions. This may result in a variety of degrees, including associate and bachelors at the undergraduate level and master’s and doctorates at the graduate level. This features classroom-based lectures and practice in treating patients that also include a clinical component, during which nurses gain hands-on experience caring for patients in any health care facilities. Professionals who work in the field of nursing education teaching prospective nurses are called nurse educators. To teach at community college, a master’s degree in nursing education is typically necessary, while a doctoral degree is generally required for work at traditional colleges and universities. It consists in the theoretical and practical training provided to nurses with the purpose to prepare them for their duties as nursing care professionals. This education is provided to nursing students by experienced nurses and other medical professionals who have qualified or experienced for educational tasks. Most countries offer nurse education courses that can be relevant to general nursing or to specialized areas including mental health nursing, pediatric nursing and post-operative nursing. A course leading to autonomous registration as a nurse typically lasts four years. Nurse education also provides post-qualification courses in specialist subjects within nursing.
The aim of nursing education is a development of the nursing profession. One way to promote development is to clarify the professional role. The role definition for nursing is mostly transmitted through tacit knowledge. We consider that the professional development of the nursing profession in Sweden requires a clear and well-defined nurse role. Stated goals of professional programs for nursing do not include the entire body of tacit knowledge. The overall development requires recognition of a professional status together with a clear and well-defined role. We have found a significant change in the distribution of role-conceptions which occurred after the nurses had experienced their first year as registered nurses, and which did not occur during the educational process. This indicates that the conceptions of the need for a more clearly defined nursing role are assimilated during work experience. This confirms the necessity and importance of role modelling, role repetition and interactions with a professional group as part of the educational process. The diversified description of nursing profession or vocation initiated the interest of the authors to find out why nursing education is not that cognizant to Libyans in comparing to other nationalities that nursing education is found to be known and important.

METHOD

Descriptive non-experimental design was employed in this research. Convenient-snowball sampling was employed and data was collected from November to December 2013 among 108 non-nursing freshmen students of Misurata University. The tool has two-part that is being prepared by the authors that was first subjected to content validation and reliability testing ($\kappa = 0.9107$). For the first part, respondents were required to provide necessary information about demographic profile particularly on course, gender, and age and the second part included questions pertaining to perception on nursing education. Collected data were tallied and subsequently subjected to descriptive statistical treatment.

RESULTS

Profile of the respondents: As to age of the respondents, 86 (80%) are 18-20, 20 (19%) at 21-23 and 2 (1%) belongs to 24-26 years old respectively. There are (62) males’ non-nursing freshmen college students or 57% of the total respondents and females accounted (46) or 43%. This result shows that there are more males than females students involved in this study. The baccalaureate degree courses where respondents belong are as follows: 22 (20%) are from the college of medicine, 21 (19%) in the college of arts, 20 (19%) belongs to the college of sciences, 20 (19%) are taking dentistry course, 15 (14%) are pharmacy students and 10 (9%) are enrolled in the college of economics. In support with the courses enrolled by the respondents, follow up question were asked if it is their first choice to enroll. With this, 82 (76%) agreed that it is their first choice and 26 (24%) expressed disapproval. Next related data gathered was the one who influenced them to take the course. There are 77 (71%) of them claimed they themselves, 12 (11%) said it’s the influence of their father, 5 (5%) were influenced by their mother and 14 (13%) were by a friend.

PERCEPTION ON NURSING EDUCATION

At first, respondents were asked if they have information about the existence of nursing education at Misurata University where 99 (92%) of them responded negatively. Thus, only 9 (8%) claimed positive. Source of information was the follow up question to those who confirmed of having information about nursing education. There are 2 in each who claimed that it is from their family, friends, television and hospital with total of 8 respectively and only 1 heard from the radio to complete the total number of 9. Relatives or family members and friends who are enrolled in nursing were the considered common possible sources of information regarding the study that was the next informative data solicited. The outcome reveals that only 17 (16%) who optimistically answered that they have relatives or family members enrolled in nursing while 91 (84%) who don’t have. On the other way around, only 23 (21%) confidently answered they have friends enrolled in nursing and 85 (79%) contradicted the earlier answer. Lastly, respondents were asked reasons why they did not considered nursing as their course to enroll. At this point, most of them reasoned out on sameness of treatment among baccalaureate and non-baccalaureate degree in nursing with 44% (48), 15% (16) is due to social factors, 12% (13) is because of English language as the medium of instruction in this.
It's quite difficult and sometimes confusing if we just say nursing education. Only if its history is well understood so limitations and coverage can be defined in terms of its duration and the equivalent functions. In this study, it's unbelievable that majority of the students never heard or no information about nursing education most especially that the university itself has the curriculum leading to Bachelor of Science in nursing. Other countries have opposite insight for the curriculum of this type is globally in demand in terms of employment and the kind of services it may render to clientele. In the Philippines, nursing education is that expensive to handle but most of family with any kind of economic status are fully aware on nursing education for they knew that nursing as a profession or vocation can make their lives into much better kind of living and the unique kind of care it may render to humanity. Considering the kind of environment and opportunities for Libyans to undertake from the possessions of their country, though minimal problems but manageable intervened, still, the importance of expanding services in education and health is of much important as education enables a man to realize higher values of life which are essential to become roof and crown of all creation and the sustenance of health is essential to mankind for it is considered as a non-valuable wealth that each can maintain for good life.

Lesser number of those who have relatives or family members and friends enrolled in nursing reflects the image of nursing profession or vocation in this locality is somewhat unclear. It was a major reason by students for withdrawing from the nursing program was that they no longer liked or wanted nursing as a career choice that is consistent with several previous studies cited 6, 7, 8 that a change in career choice is one of the main reasons for withdrawal from nursing program. Other studies revealed that the image of nursing influences recruitment to the profession. Mendez et al9 surveyed nursing and non-nursing college students regarding their image of nursing and ideal careers. They found that although there was a positive image of nursing, the image of nursing as a career did not meet the image of an ideal career. Nursing students held a more positive view of nursing, even though they did not describe nursing as the ideal career.

There are times that nursing was recognized by its meaning and is the same with how respondents perceived the matter, that definition of its functions in the hospital is unclear and the standing of proper manpower placement in the hierarchy of nursing service department. English language is one of the reasons why some respondents' stay away of taking the nursing course for this curriculum used as the medium of instruction. Job descriptions, responsibilities and compensation differ in baccalaureate and non-baccalaureate program from other countries but not observed at presents in Libya. This made the respondents chose not to enroll nursing and some were influenced by their families. Lastly, timeframe of the curriculum to finish and low compensation is also considered as reasons. Kohler et al10 agree with the findings of this endeavor as nursing was perceived by some as underpaid and strenuous without a lot of prestige. However, some studies show that nurses perceive a more positive image of themselves compared to their perceptions of the public's image of nurses and nursing.11, 12, Rheume et al13 found that nursing students had a positive image of nursing and thought that salaries were fairly good. On the other way around, a study by Vanhanen et al14 revealed that students' orientation toward nursing (caring, professional self-concept, and life orientation) is higher at the end of the nursing program than when they entered the program. These authors define a caring orientation as having the perception that nursing provides opportunities to care for people. An actual interview conducted to two allied health professionals and a saleslady on how they perceived nursing education in an attempt to have an idea related to the findings of this study. A medical technologist in one of the hospitals in Misurata, Libya claimed that nursing education is only good for those who do not deserve to enroll medicine but still preferred to graduate as medical technologist than be a nurse because of the functions and responsibilities (M. A. Albushka, March 3, 2014). W. A. Altanashi(March 6, 2014),
a microbiologist prefer to work in the laboratory studying bacteria, fungi and alike than in the nursing service department which has plenty of work but less salary. On the other way around, a saleslady don’t like to work in the hospital for nursing is a dirty job (K. M. Mohammed, March 11, 2014).

**CONCLUSION**

Most of the respondents are male aging 18 – 20 years old who decided to enroll in the college of medicine as their first choice. They perceived nursing education negatively for they are not familiar and claimed of no information. Thus, for those who have information, the source is from their family, friends, television and hospital. Majority from them has no relative or friends enrolled in nursing. It is also common for them the sameness of treatment among baccalaureate and non-baccalaureate degree in nursing that is why nursing is not their preferred course of study to enroll.

**RECOMMENDATIONS**

Nurses’ are the ultimate health care professionals that have more time and direct contacts with clients. They are the one with most critical responsibilities for they are the main sources of information about health status and at the same time give initial necessary interventions and report to other health care professionals for further management. With this, it is important to begin nursing education by determining whether Libyans have realistic perceptions of nursing profession or vocation. This is essential before a student can apply and begin the nursing program because unrealistic perceptions most likely affect the recruitment in nursing education. Realistic perception can be attained through proper dissemination with an advertisement that all Libyans can be reached. Bench marking by the Ministry of Health and Ministry of Higher Education & scientific Research on nursing and other allied health education is an advantage. Establish a council or a board responsible in the formulation of rules and regulation in the implementation of nursing education.

**Acknowledgment:** The authors express their warm heartfelt gratitude to the respondents for sharing their time and effort to answer the questionnaire. We thank our colleagues who provided their insights and expertise that greatly assisted and for sharing their pearls of wisdom with us during the course of this research.

**Conflict of Interest:** There is no professional, personal or family allegiance, bias, inclination, obligation or loyalty which may in any way affect the objectivity, independence or impartiality in making this research.

**Source of Funding:** This research has no specific grant from any funding agency in the public, commercial or not-for-profit sectors. It was supported by the authors themselves of the university.

**Ethical Clearance:** This research was conducted with the approval of the college dean. A letter/informed consent was made and given to the different colleges without objections. Confidentiality of the names and other personal information of the respondents were maintained.

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Effectiveness of Planned Teaching Program on Knowledge Regarding Kangaroo Mother Care (KMC) among Postnatal Mothers in Dhiraj Hospital, Vadodara

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ABSTACT

Background: KMC started in 1978 in Colombia as a way of dealing with overcrowding and scarcity of resources in hospitals caring for low birth weight infants. Currently the intervention comprises two components: kangaroo position (skin-to-skin contact), kangaroo nutrition (exclusive breast-feeding). Different authors have adopted and adapted diverse components of the KMC to suit the particular needs of their parents. We discuss different modalities of kangaroo care reported in developed and in developing countries and also describe in some detail the components of the whole KMC program. In addition, results from a systematic review of kangaroo-related papers published in English between 1991 and 1995 are provided, together with a summary of current knowledge (evidence-based) and research needs.

Method: 50 post natal mothers were selected through non-probability convenient sampling technique. Existing knowledge was assessed through a pretest after which they were given a PTP on knowledge regarding KMC. A posttest was conducted after a week through the same tool as administered during pretest. The module covered aspects on care in KMC: definition. Components, benefits, preparation, position. Benefits of KMC. The pretest test and posttest score were compared and analyzed through descriptive and inferential statistics.

Results: Comparison between the pre-test and post-test scores was obtained by paired ‘t’ test. To test the hypotheses the level of significance was set at 0.05 level of significance. The value of “t” was calculated to analyze the difference in knowledge of the post natal mothers with their pre-test and post-test scores after calculation “t” calculated 18.87 is more than “t” table 1.699 at the 0.05 level of significance so it shows the very highly significant and association between pretest and posttest knowledge score of post natal mothers.

To find out an association of pretest and posttest knowledge score of with their socio demographic variable the mean, SD, “p” value, “t” value are calculated and result of study reveals that there is no any significant association of age group, gender, and economic condition with pre and posttest knowledge of respondents but there is significant association between place of residence and source of previous knowledge of respondents with their pre and posttest knowledge score.

Conclusion: The planned teaching programme on KMC was found to be effective in increasing the knowledge in post natal mothers. The sample had highly significant gain in knowledge in all the content areas KMC among post natal mothers. Planned teaching programme in the form health education is an effective method of educating the post natal mother.

Keywords: KMC, KMC, PTP, Planned Teaching Program.
BACKGROUND

KMC is a special way of caring of low birth weight babies. It fosters their health and well being by promoting effective thermal control, breastfeeding, infection prevention and bonding. ¹

KMC is a special modality of care of low birth weight babies. It fosters their health and well being by promoting effective thermal control, breast feeding, infection prevention and bonding.²

In KMC, the baby is continuously kept in skin-to-skin contact by the mother and breastfed exclusively to the utmost extent, KMC is initiated in the hospital and continued at home.³

The two components of KMC are: I. Skin-to-skin contact (Early, continuous and prolonged skin-to-skin contact between the mother and her baby is the basic component of KMC. The infant is placed on her mother’s chest between the breasts.) ii. Exclusive breastfeeding (The baby on KMC is breastfed exclusively. Skin-to-skin contact promotes lactation and facilitates the feeding interaction)

Weaning is the process of gradual and progressive transfer of the baby from the breast feeding to the usual family diet. Weaning does not mean discontinuity of breast feeding. Weaning foods are given in addition of breast feed when the amount of breastfeeding is inadequate.⁴

A healthy population is the nation’s prosperity. Healthy children today, make a healthier nation tomorrow. The role of the mother in a healthy nation is eminent and beyond explanation. Among the life span of the childhood period. The neonatal period is very crucial to large extent determines the overall health status of the child and in turn adult life. Birth is a major challenge to the newborn to negotiate successfully from intrauterine to extra uterine life.⁵

MATERIAL & METHOD

RESEARCH APPROACH: In the present study the investigator aimed at evaluating the effectiveness of a planned teaching programme on KMC for post natal mother’s gain in knowledge scores.⁶

RESEARCH DESIGN: The study design selected for study was pre-experimental one group pre-test and post-test design.

VARIABLES: EXTRANIOUSE VARIABLE previous knowledge regarding KMC.

INDEPENDENT VARIABLE: It is the variable that stands alone and does not depend on any other.

DEPENDENT VARIABLE: In this study it refers to the selected variables such as age, education, occupation, family income, and order of birth of the child and relationship with the husband.

SETTING: The setting selected was postnatal ward in selected Dhiraj general hospital Vadodara.

POPULATION: The population consisted of all post mothers attending the selected hospital in Vadodara.

SAMPLE AND SAMPLING TECHNIQUE: The study sample comprised of 50 post natal mothers and Simple random sampling was used for selecting the sample. Convenience sampling was used in selecting the hospital.

DEVELOPMENT AND DESCRIPTION OF THE TOOL

A structured knowledge questionnaire was used to collect the data. A blueprint was prepared, which showed the distribution of items according to the content areas as well as the domains of objectives - knowledge, comprehension and application.

CONTENT VALIDITY OF THE TOOL

The tool was validated by eight experts – seven nursing experts, one pediatrician. As some of items were beyond the level of being assessed within a short period of 7 days after the planned teaching programme, three items were deleted.

PRE-TESTING

The structured knowledge questionnaire was pre-tested by administering it to 6 post natal mothers. The post natal mothers took an average of 45 minutes to complete the questionnaire. After pre-testing, one item was simplified owing to their level of knowledge.

RELIABILITY OF THE TOOL

To check the internal consistency, the investigator collected data from 06 post natal mothers and ‘Kuder-
Richardson’s formula was applied. The reliability coefficient obtained was 0.81, which was considered to be reliable.

**DESCRIPTION OF THE TOOL**

The final tool designed for the study consisted of two parts:

Part 1: Consist of demographic variables such as mothers age, education, occupation, type of family, monthly income, previous knowledge of KMC

Part 2: Questionnaire will be used to assess the knowledge. 25 questions will be used.

- **SCORING PROCEDURE**

  For knowledge assessment. If answer is right – 1
  If answer is wrong – 0

- **SCORING INTERPRETATION**

  The items were of multiple-choice type with one correct answer and each carrying equal score. Thus the total maximum score would be 25. The scores were arbitrarily graded as

  Excellent   above 90%
  Good         65-90%
  Average      50-65%
  Poor         below 50%

**CONTENT VALIDITY OF THE MATERIAL**

The PTP and audio-visual aids along with the evaluative criteria were given to eight experts. There was 100 percent agreement. Simplification of language was suggested and was modified accordingly.

**PILOT STUDY**

The planned teaching programme was conducted for 06 postnatal mothers on 04.09.12. The time taken for PTP was 45 minutes. Post-test was conducted after 7 days and the post-test scores ranged from 56% to 76%. The result showed that the knowledge scores increased after PTP.

**DATA COLLECTION**

The data were collected from 16.09.14 to 30.09.2014.

Eighty postnatal mothers responded and agreed to participate in the study. Random sampling was done and a sample of 50 postnatal mothers was selected and divided into four groups (15,15,10,10).

Pre-test knowledge questionnaire was administered for each group, separately on consecutive days. The average time taken for pre-test was 45 minutes. Then PTP was administered soon after pre-testing, which took another 45 minutes. On the 8th day post-test was conducted for each group by the investigator using the same questionnaire at the same place. The data collected was then compiled for data analysis.

**PLAN FOR DATA ANALYSIS**

**Section I**

Baseline Performa would be analysed using frequency and percentage.

**Section II**

A – Effectiveness of PTP

The knowledge of postnatal mothers about “KMC” would be analysed in terms of frequency, percentage, mean and standard deviation.

The significance of difference between the mean, pre and post-test knowledge scores would be found out by students paired 't' test.

B – Association between the pre-test knowledge scores and selected variables

Association between the educational status and income of the mothers to the pre-test knowledge score would be tested by chi-square ($\chi^2$) method.

**FINDING**

Objectives:

- To assess the existing level of knowledge of postnatal mother about KMC.
- To evaluate the effectiveness of PTP on knowledge regarding KMC.
- To prepare and find out the association between pre test knowledge score with selected demographic variables.
ORGANISATION OF FINDINGS

Section I: Sample characteristics.

Post Natal Mother were selected through purposive sampling from Dhiraj Hospital, Vadodara. The frequency and percentage of the sample according to their sample characteristics are presented in Table I.

Table 1: Distribution Of Subjects According To Their Sample Characteristics

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Variables</th>
<th>Frequency</th>
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<td>1</td>
<td>Age in years</td>
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</tr>
<tr>
<td>a</td>
<td>30 – 40</td>
<td>24</td>
<td>48</td>
</tr>
<tr>
<td>b</td>
<td>40 – 50</td>
<td>23</td>
<td>46</td>
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<tr>
<td>c</td>
<td>50 – 60</td>
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<td>2</td>
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</tr>
<tr>
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</tr>
<tr>
<td>c</td>
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<td>38</td>
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<tr>
<td>d</td>
<td>Degree/professional</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Unemployed</td>
<td>41</td>
<td>82</td>
</tr>
<tr>
<td>b</td>
<td>Semiskilled</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>c</td>
<td>Skilled</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>d</td>
<td>Professional</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Type of family</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Joint</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b</td>
<td>Nuclear</td>
<td>49</td>
<td>98</td>
</tr>
<tr>
<td>c</td>
<td>Extended</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>d</td>
<td>Blended</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Monthly income (Rs).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>1000 – 3000</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>b</td>
<td>3000 – 5000</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>c</td>
<td>5000 – 7000</td>
<td>29</td>
<td>58</td>
</tr>
<tr>
<td>d</td>
<td>7000 and above</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>Heard about Kangaroo Mother care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Yes</td>
<td>48</td>
<td>96</td>
</tr>
<tr>
<td>b</td>
<td>No</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>If yes, source of knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Friends</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>b</td>
<td>Relatives</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>c</td>
<td>Magazines</td>
<td>43</td>
<td>89.4</td>
</tr>
<tr>
<td>d</td>
<td>Doctors/health workers</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>e</td>
<td>Advertisements</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>f</td>
<td>other media</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Section II: Effectiveness of PTP on KMC.

This section deals with the analysis and interpretation of data to evaluate the effectiveness of PTP on KMC of Post Natal Mother in terms of knowledge scores.

Table 2: Distribution of Pre And Post-test knowledge Scores

<table>
<thead>
<tr>
<th>Knowledge scores</th>
<th>Pre-test</th>
<th></th>
<th>Post-test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>Cumulative frequency</td>
<td>f</td>
</tr>
<tr>
<td>6-10</td>
<td>8</td>
<td>6</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>10-14</td>
<td>4</td>
<td></td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>14-18</td>
<td>13</td>
<td>26</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>18-22</td>
<td>14</td>
<td>28</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>22-26</td>
<td>10</td>
<td>20</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>26-30</td>
<td>1</td>
<td>2</td>
<td>50</td>
<td>7</td>
</tr>
<tr>
<td>30-34</td>
<td></td>
<td></td>
<td>23</td>
<td>46</td>
</tr>
<tr>
<td>34-38</td>
<td>19</td>
<td>38</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td>38-40</td>
<td>1</td>
<td>2</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

Maximum score – 39

Data described in Table 2 indicates that maximum of number of respondents had the score 18-12 in the pre-test and maximum of number of respondents in the post-test had the score 30-34. On comparing the pre-test and post-test knowledge scores it was found that post-test knowledge scores were higher than the pre-test scores.

Table 3: Grading Of Knowledge Scores

<table>
<thead>
<tr>
<th>Grading</th>
<th>Pre-test</th>
<th></th>
<th>Post-test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Very good</td>
<td>-</td>
<td></td>
<td>34</td>
<td>68%</td>
</tr>
<tr>
<td>Good</td>
<td>7</td>
<td>14</td>
<td>16</td>
<td>32%</td>
</tr>
<tr>
<td>Average</td>
<td>24</td>
<td>48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>19</td>
<td>38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Comparison Of Range, Mean, Median And Standard Deviation Of Pre And Post-Test Scores

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Range</th>
<th>Mean</th>
<th>Median</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>6-26</td>
<td>16.7</td>
<td>18</td>
<td>5.514</td>
</tr>
<tr>
<td>Post-test</td>
<td>27-38</td>
<td>32.6</td>
<td>33</td>
<td>2.689</td>
</tr>
</tbody>
</table>

Maximum score = 39.

Data in ss show that in the post-test the respondents’ knowledge scores range (27-38) were higher, when compared to their pre-test knowledge scores range (6-26).

It is evident from the data in that the mean post-test knowledge scores ($\bar{x} = 32.6$) were higher than the mean pre-test knowledge scores ($\bar{x} = 16.7$). It indicates that the increase in post-test scores due to the PTP.
Table 5: Area Wise Mean Percentage And Mean Gain Of Pre And Post-Test Knowledge Scores

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Areas</th>
<th>Mean percentage</th>
<th>Mean gain O₂ – O₁</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meaning</td>
<td>59</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>Purpose</td>
<td>58</td>
<td>22</td>
</tr>
<tr>
<td>3</td>
<td>Practice</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>4</td>
<td>Procedure</td>
<td>32</td>
<td>49</td>
</tr>
<tr>
<td>5</td>
<td>Time schedule</td>
<td>25</td>
<td>58</td>
</tr>
<tr>
<td>6</td>
<td>Follow-up</td>
<td>88</td>
<td>7</td>
</tr>
</tbody>
</table>

**Difference between the mean pre-test and post-test knowledge scores**

The data related to hypothesis to examine the significance of mean difference between the pre-test and post-test knowledge scores were presented in Table 5. In order to find out the significant difference between the pre-test and post-test knowledge scores, a paired ‘t’ test was computed.

To test the statistical difference a Research hypothesis was stated.

H₁: The mean post-test knowledge score of the Post Natal Mother regarding KMC will be significantly higher than the mean pre-test knowledge scores.

H₂: There will be significant association between pre-test knowledge score and selected demographic variables.

Table 6: Mean, Mean Difference, Standard Deviation And ‘t’ Value Between Pre And Post-Test Scores

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Pre-test</th>
<th>Mean Post-test</th>
<th>Mean difference</th>
<th>Standard deviation of difference</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Natal Mother</td>
<td>16.2</td>
<td>32</td>
<td>16</td>
<td>5.865</td>
<td>18.87</td>
</tr>
</tbody>
</table>

‘t’ value - The calculated value of ‘t’ (t₄₉) = 8.87 is greater than the tabled value t (t₄₉) = 1.699 (P < 0.05) So PTP was effective in increasing the scores and study was significant.

Table 7: Area Wise paired ‘t’ Value Of Pre And Post-Test Knowledge Scores

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Areas</th>
<th>‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Meaning</td>
<td>6.603</td>
</tr>
<tr>
<td>2</td>
<td>Purpose</td>
<td>6.978</td>
</tr>
<tr>
<td>3</td>
<td>Practice</td>
<td>12.4</td>
</tr>
<tr>
<td>4</td>
<td>Procedure</td>
<td>19</td>
</tr>
<tr>
<td>5</td>
<td>Time schedule</td>
<td>13.6</td>
</tr>
<tr>
<td>6</td>
<td>Follow-up</td>
<td>3.6</td>
</tr>
</tbody>
</table>

Tabled value of ‘t’ (t₄₉) = 1.699

The Hence we can conclude that PTP was effective in increasing the knowledge scores in all areas and study was significant.

**Association between the level of knowledge and selected variables**

This deals with the association between the level of knowledge and selected variables such as age,
educational status, occupation, Types of family and monthly income. In order to determine the association, following Research hypothesis was stated.

**H2:** there will be significant association between pre-test knowledge score and selected demographic variables.

**Table 8: Chi-Square Value Between Level Of Knowledge And Selected Variables**

<table>
<thead>
<tr>
<th>Selected variables</th>
<th>Level of knowledge</th>
<th>χ² value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; mean</td>
<td>&gt; mean</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-40 years</td>
<td>7</td>
<td>18</td>
<td>12.82</td>
</tr>
<tr>
<td>40-60 years</td>
<td>17</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate and primary</td>
<td>15</td>
<td>6</td>
<td>11.613</td>
</tr>
<tr>
<td>Secondary and degree professional</td>
<td>8</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed and semiskilled</td>
<td>29</td>
<td>17</td>
<td>83</td>
</tr>
<tr>
<td>Skilled and professional workers</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Monthly Income (Rs).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000-5000</td>
<td>7</td>
<td>8</td>
<td>9.12</td>
</tr>
<tr>
<td>5000 and above</td>
<td>20</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Types of family</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuclear family</td>
<td>26</td>
<td>23</td>
<td>0.029</td>
</tr>
<tr>
<td>Joint family</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

χ² = 3.84, P<0.05 significant at 0.05 level.

Pre-test mean value = 16.2

I. Association between pre-test knowledge scores and age

Data indicate that the computed chi-square value at df (1) for pre-test knowledge scores and age (χ² = 12.82, P<0.05) was significant at 0.05 level of significance. This indicated that knowledge of Post Natal Mother at the age of 30-40 years was more than the Post Natal Mother at the age of 40-60 years.

II. Association between pre-test knowledge scores and educational status

Data presented in Table show that the computed chi-square value at 1 df for pre-test knowledge scores and educational status (χ² = 11.613, P<0.05) was significant at 0.05 level of significance.

III. Association between pre-test knowledge scores and occupation

Data presented that computed chi-square value at 1 df for pre-test knowledge scores and occupation (χ² = 83; p<0.05) was significant at 0.05 level of significance.

IV. Association between pre-test knowledge scores and monthly income (Rs).

Data presented show that computed chi-square value at 1-df-for pre-test knowledge scores and monthly income (χ²= 9.12; p<0.05) was significant at 0.05 level of significance. So there was association.

V. Association between pre-test knowledge scores and Types of family

Data presented in that computed chi-square value at 1-df-for pre-test knowledge scores and Types
of family ($\chi^2=0.029$, $p>0.05$) was not significant at 0.05 level of significance. So there was no association.

CONCLUSION

The following conclusions were drawn on the basis of the findings of the study.

1. Pre-test findings showed that knowledge on KMC among Post Natal Mother was difficult. Majority of the respondents had poor knowledge in the area of procedure and practice of KMC.

2. The PTP in the study was found to be effective in improving the knowledge of the Post Natal Mother. The mean post-test knowledge score was found to be significantly higher than the mean pre-test knowledge score.

3. Area wise mean percentage, both for pre test and post test was computed and it indicated an actual gain in knowledge in all the areas. Area wise paired‘t’ test was computed and post-test knowledge scores were significantly higher than pre-test scores in all the areas.

4. There were significant association between the pre-test scores and age and educational status.

Acknowledgement: The authors wish to appreciate and thank all those who collaborated and participated this research, including the post natal mothers and staff of sumandeep nursing college and dhiraj hospital vadodara.

Conflict of Interest: There is no obvious conflict of research as perived during the course of the study.

Source of Support: Financial expense borne by self, intellectual support from research guide, open access to learning resource centre.

Ethical Clearance: Taken

REFERENCE


Translation of Knowledge and Skills from Controlled Learning Environment to Clinical Practice

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1Instructor, Practical Nursing Department, Faculty of Health Studies, NorQuest College, Canada

ABSTRACT

The main objective of the study was to explore the potential theory-practice gaps experienced by students as they go through clinical rotation. The study was conducted at Northern Community College in the Prairie region in the Western part of Canada. A group of students schedule for long term care clinical rotation were invited to participate in the study. Thematic analysis revealed the following categories; how I learn, what I learn and when I learn. Though clinical environment had some challenges, all students who participated in this study agreed that what they learned in theory enhanced their knowledge and skills they needed to apply in clinical settings. This study provides some baseline data that might inform clinical instructors in preparing students for clinical rotation.

Keywords: Clinical Teaching, Controlled Learning Environment, Knowledge Translation.

INTRODUCTION

Nursing schools are designed to equip students with requisite skills and knowledge they need in their clinical practice to ensure patient safety. As pointed out by Morgan (2006) nurse education combines theoretical and practical components where students are expected to integrate the knowledge skills and attitude for them to be successful in clinical settings. Consequently, nurse education curriculum is organized in such a way that students acquire requisite knowledge and skills before practice to ensure patient safety (Yang, 2013). Clinical education plays a critical role in imparting the clinical skills which a nursing student requires in the practical world. However, despite all the efforts to equip students with skills they need, it is widely believed that there is a gap between what students learn in nursing school and practice in clinical setting (Newton, Billett, Jolly & Ockerby 2009).

Research has shown that, students do not adapt well to clinical practice and had difficulties in learning process. Though learners are excited to go and apply their knowledge in clinical setting; most students are doubtful of whether they will perform well and in some cases also felt the patient’s pain. Clinical rotations provide students with opportunities to learn in an environment where they are supported by their clinical instructor and also have an opportunity of interdisciplinary/professional collaboration and learning (Parks, Longsworth & Espadas, 2010). Despite all the preparations the students go through, students’ anxiety and fears could impact on their learning and performance in clinical.

The difficulties have been associated with anxiety, models of supervision, opportunities to practice, unpredictable patient response, ongoing policy changes, learning process, levels of support students receive, potential gaps between what they learned in nursing school vs. what they experience in clinical practice setting. It is believed that if nursing education can help reduce the theory-practice gap, then students will improve on their practice in clinical setting. There is an assumption that knowledge learned in classroom setting will be transferred or applied in other settings (Rahnavard, Nodeh, & Hosseini, 2013; Rosenzweig et al 2012).
Given this background, the main objective was to assess how students translate their knowledge and skills from theory to practice during long term care clinical rotation.

**METHODOLOGY & METHOD**

Data collection involved participant interviews and instructor observations. Interpretative, inductive and iterative approaches (Corbin, & Strauss, 1990) that requires deconstruction and construction of text (Frohmann, 1994) were used to identify themes that emerged. Interpretivist perspectives informed this study as we made interpretations of the data and correlated with different sources (Geertz, 1973).

**Research context**

Pseudonyms were used to protect identities of the college and participants. The study was conducted at Northern Community College in the Prairie region in the Western part of Canada. A group of seven students enrolled for the Practical Nursing program who were in their first long term care clinical rotation accepted to participate in the study and they all signed informed consent form.

**Demographic of Participants**

The study participants were 7 female students enrolled for their clinical experience in a long term care facility. Three participants were below 30 years of age and 4 were above 30. Four had high school diploma as their highest level of education; 2 had college diploma and 1 had a university degree in another field. Besides one student who had no health care experience, the rest had some experience of being in a health care facility taking care of patients as nurse aides.

**Data Collection Tools and Analysis**

Participant completed a questionnaire to solicit students’ demographic data and their experiences in clinical setting. Students completed the questionnaire at the end of their clinical rotation and after their clinical mark was assigned by their instructor. The questionnaire captured students’ perception on the relationship between what they learn in theory, skills lab and how that relates to their clinical practice experiences. Thematic analysis was used to identify emerging themes with open ended questions.

**Results and Discussion**

Despite all the knowledge gained through the studies, researchers continue to report on discrepancies between what is learned in controlled environment and what is implemented in real life situation (Freeth & Fry, 2005; Houghton et al, 2013; Jerlock et al, 2003). Even though the participants had experience in being in a health care facility, they indicated that they were nervous to be in clinical rotation for the first time. The statement below was said by Zoya who had 1 year experience working as an aide in a health care facility.

“I was a little nervous when we first began the clinical, but this was due to the fact that we were dealing with real live patients which is different from dealing with manikin. This was a natural anxiety due to change in environment and I was able to overcome it” (Zoya, July 31, 2014).

Zoya’s comment was also raised by all students that they were nervous. Despite having worked in health care facilities, students were still nervous and anxious about the clinical rotation process.

The interview responses were coded in accordance with thematic analyses approach to data analysis (Creswell, 2009). We identified three themes that might influence students’ knowledge integration and translation in clinical settings. The themes are; how I learn, what I learn and when I learn. Figure 1, show the knowledge translation themes that emerged from our data analysis. The themes are presented and discussed below.

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CENTRAL ISSUES</th>
<th>THEME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theory</td>
<td>Curriculum, Relevance, Timing, Sequencing</td>
<td>How I learn</td>
</tr>
<tr>
<td>Skills Lab</td>
<td>Application, Practice, Manikin, Guided Practice, Simulations</td>
<td>What I learn</td>
</tr>
<tr>
<td>Clinical Practice</td>
<td>Application, Relevance, Equipment, Patients, Environment</td>
<td>When I learn</td>
</tr>
</tbody>
</table>

**Figure 1. Knowledge Translation Themes**
How I learn

“It is a lot more difficult to apply the knowledge I learn in college to the clinical setting because even when two people have same disease and illness for example they may show slightly different signs and react differently. So the Knowledge that we learn in the books is pretty straight forward but in real life it takes a bit more critical thinking” (Karen, July 29, 2014).

The above quote from Karen indicate that the difference between controlled environment and clinical setting can be a challenge in knowledge integration. The sentiments raised by the students concur with when they argued that practice in real settings presents its unique challenges that require judgments expressed in actions. In their study, 3 found out that when students are exposed to different instructional strategies and actively participate in clinical setting it enhances their skills and their learning. In addition, Hatlevik (2011)14 pointed out that apart from instructional strategies; context in culture within which learning occurs matters. In other words, learning and integrating knowledge is a complex outcome that might be influenced by many factors.

In this study, we found some differences in terms of what students learn vs. the clinical expectation. For example, students had been taught to use manual blood pressure technique to record blood pressure. However, in the clinical rotation students were in a setting where there were no manual gadgets and had to learn to use electronic/digital blood pressure monitors. The following quote from Karen shows that students can get nervous if the equipment and techniques from their nursing school do not match what they come across in clinical setting

I do not agree that knowledge learned in my theory classes on vital signs was useful because the knowledge in theory classes gives a background for the knowledge needed in the skills lab classes but it is not sufficient. I had a fellow employee to show me techniques and I was nervous in my Clinical Integration Assessment (CIA) when being tested taking blood pressure (Karen, July 29, 2014)

It is also important to note that at the time the data was collected, Karen had been working as a health care aide for about 14 years. Though most students found it easy to learn using the electronic blood pressure monitors, it is important for schools of nursing to be current on technology used in clinical settings so as to minimize the gap in knowledge and skills.

The participants in this study had to learn using electronic devises during their rotation and not during the skills laboratory- indicating a huge gap in terms of technology and skills of using such devises. However, most the nursing schools are still using the traditional medication cart for teaching the students “medication administration”. We argue that nursing schools should try to be ahead in terms of technology used in health care facilities so that nursing students gain the skills before going for rotation or for employment. Though the technology might be easy to use, there is no point of testing for a skill in the lab that will not be ‘translated’ in clinical setting- rather its might be better to teach both traditional and modern ways of checking vital signs, ordering medication and documentation.

Instructor’s Observations. The clinical instructor observed that at a times students were not flexible in ways they were taught in controlled environment. For example, students indicated that in skills lab they were taught to dress a patient using a specific sequence and they had to follow. We argue that it is important that during instruction in controlled environment, emphasis is also to put on critical thinking skills.

What I learn

Knowing what the “normal” vital signs are, and the reasons that they can be altered helps a lot when assessing patients and performing care for them (Flora, July 18, 2014)

Flora agreed that the knowledge and skills acquire in controlled environments help students to understand the normal ranges of the vital signs. In skills labs students got the opportunity to acquire knowledge and skills of measuring vital signs. In the skills lab, students practice the skills with their peers as patient. In a majority of cases, the measurements are within the normal ranges for the vital signs. Students indicated that though skills and knowledge
acquired in controlled environment is important; practice in clinical settings enabled them to master the skill (Davies & Clarke, 2004).

Another student argued that “it is sometimes difficult to fully understand something like medication administration without being able to see everything and practice it (Zoya, July 31, 2014).

Instructor’s Observations. The clinical instructor observed that most students could not relate ‘out-of-range’ measurements to pathological conditions and what could be causing such differences. It is in this view that we recommend the use of scenarios or problems (in nursing school) that mimic real situations so as to enhance development of critical thinking skills for students.

When I learn

Faster placements, waiting for nine to twelve months is a long time to wait. Skills and theory need more review for longer wait time (Jennifer, July 30, 2014).

Distance student in the program have no set date for clinical placements unlike their on-campus peers. Jennifer’s comment was shared by all participants that the waiting time is way too long and that it might interfere with the way they translate knowledge and skills to clinical setting. Students highlighted that they might forget what they will have learned if they have to wait too long before practice in clinical setting.

In this study, we found out the wait time for students was rather long and students expressed that it was challenging as they needed to review their content and skill again before clinical rotation. The students reported a wait time between 4 and 12 months.

Additional, some students expressed concern about accessing open skills lab. Campus open skills lab is where students are given an opportunity to practice some skills in the presence of a facilitator. Open labs create non-threatening environment mainly because students are not ‘graded’ on their performance. Paige’s quote summaries some of the problems that distance students face when they want to practice skills in open lab.

“Access to open labs is a huge problem. I was unable to book any (open lab) during one of my course.” (Paige, August 1, 2014).

Clinical rotations that are instructor-led are done in health facilities in the college’s home town. In the above quote, Paige highlighted that distance students need to be notified well ahead of time when they will be going for their clinical rotation. Based on the findings in this study, we recommend the need to place students for clinical rotation not too long after they have completed their requisite courses. There is not much empirical research that recommended maximum time lapse between students’ learning in controlled environment and their placement for clinical practice.

Instructor’s Observations: It was observed that three out of town students were distressed by being given a short notice to come for clinical. Student opted for distance learning for various reasons including financial, family etc. Hence the importance of providing support that meet their needs especially on providing enough planning time and information about clinical rotations.

IMPLICATIONS AND CONCLUSIONS

In this study, we found out that there are discrepancies in technology use in nursing school versus what is used in health care facilities; theory and skills lab environments are not providing a wide range of pathological scenarios that mimic real life situations and that students do wait for too long before they are deployed for clinical rotation. Based on these findings, we recommend the need to re-evaluate the instructional strategies used in controlled environment so as to minimize the theory-practice gap. In addition, it is important to re-evaluate the placement process for distance learners to avoid too much wait time as well as providing adequate notice for students to plan. The study was carried out with one group of students in a clinical rotation at only one site. The findings provided some baseline data that might inform curriculum development, instruction and streamlining the process for distance learners. Thus, further research using multisite and larger sample is suggested so as to gather more data on students’ experiences and ways of reducing anxiety as student integrate knowledge and acquire requisite professional competencies.
Acknowledgement: We are thankful to the participants who took time to provide information. We thank NorQuest College Research Office for their support and facilitating ethical approval.

Conflict of Interest: None

Source of Funding: None

Ethical Clearance: Written ethical clearance was granted from Red Deer Ethics Review Board in partnership with NorQuest College. Informed written consent was signed by each participant.

REFERENCES


An Experiential Learning: Action Learning Set in Nursing Education Setting

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ABSTRACT

Action learning set has been used in many fields including in health care practice with approach of group member empowerment by sharing knowledge, skills and experience through questioning and challenging. The paper presents an experiential learning of action learning set in nursing education setting that is part of group assignment in Education Development subject. The steps taken from the checking in to evaluation phase were performed with the discussion of problems in nursing education from different countries. Within one semester activity, each member could learn every phase which has different purpose and reach its goal. From this activity, many skills were agreeably improved among group members such as organization skill, ability to listen effectively, critical thinking, collaboration skill, embracing disagreement and being empathy. Action learning set activity that was completed in this subject gave new approach in problem solving that it is highly likely to be beneficial for self development, organization and profession.

Keywords: Action learning set, nursing education, grade inflation.

INTRODUCTION

Action learning set has been used for change in clinical practice\(^1\),\(^2\) which has different approach that is bottom-up\(^3\). This approach of change uses the member resource not the managerial resource that it also enhances management and practice development\(^4\). A certain area was identified for action learning set activity which is accomplished during Education Development subject according to the steps that are determined. The aim of this essay is to describe the development of action learning set process for change in nursing area. It includes a brief explanation about action learning, the experience of being its member and the development of skills and knowledge for individual and institution.

The Action Learning Set Process

Action learning set is defined as the process of solving problem or issues using the power of group through exploring members’ experience, knowledge and skills with questioning and challenging in a non threatening way\(^5\),\(^6\),\(^7\). In the action learning set, there used to be few people involved that is initiated by getting to know each other and starting to solve the problem or issue using their experiences. In nursing education, action learning set is needed in the clinical setting where learning in a group is a must. It is because the approach to solve the problem in the set lies on the members and they support each other. It makes a different as in action learning the problem solving comes from each member’s experience and knowledge, not from the advice of senior or manager’s instruction\(^2\). Like in clinical setting, there are many issues that should be solved in education setting such as in academic, professional, student\(^8\) and research issues.

The benefit of action learning was agreed as it provides support for the staff development and the services they give and it facilitates learning and development of each member\(^2\),\(^9\). It is likely that action learning has a potential development in nursing as this field faces the changes all the time\(^2\).

One of issues that became a theme for action learning set is grade inflation in clinical stage in nursing faculty in my institution. Grade inflation is a condition when there is an increase of grade point average without the same increase in students’ real
competency. In a study by King-Jones & Mitchell, which focused on the gap of grade in academic and clinical stage, the finding showed the average grade for subjects in the clinical stage is close to the maximum point, while the average grade in academic stage is in normal distribution. From this finding, the gap between both stages can be questioned in many ways such as the factor(s) that make the different, how real the given grade reflects students' competency, the impact of it to the students and stakeholders, and the action to solve this problem. The implication of grade inflation is huge as it can decrease the quality of nursing student while the high quality of care is required. Moreover, the education institution carries major responsibility of producing qualified nurses. Besides its impact on nursing profession, students are suffered by grade inflation both short and long term. It is including lack of confidence, dissatisfaction, decrease of competition and effort, depression, and the likeliness of institution where they apply for job will be unsure about their written achievement. As the implication of grade inflation costs largely, the solution is urgently required to prevent a more severe impact. For this reason, action learning set is needed to overcome this issue through the exploration of the members’ experience, knowledge and skills in nursing practice.

Establishment, Development and experience in Action Learning Set

Action learning set is started by the determination of set member that in this subject is determined by students. A set member is better if it consists of people from various background and the number is ideally ranged from four to ten. The guideline set a four times meeting for this subject. Those meeting tasks are in accordance with the steps of action learning that are found in many literatures.

Action learning consists of many steps that each of it has its own purposes. The first step is checking in or clarifying, it is where everything is stated and introduced. When the member is already determined, the next step would be set the rule and statement for the tasks during action learning. In many literatures, it is stated that checking in is an important phase where all member getting know each other even personally. Furthermore, Hughes and Bourner stated that the best meaning of checking in is characterized by personal contextualization, orientation phase, act as individual rather than as what in the job position, and increasing empathy.

This ground rule is the basic and reference for the whole action learning activity so that it should be clearly stated. For some extents, the member might not clear what action learning is and the things should be done during this phase. That is the reason why action learning’s objectives and process should be explained at the very first meeting. The rule that has been made including the scope of problem, time limit for problem solving, the schedule for meeting, frequency, the chance for each member to give opinion. At first, there was misunderstanding about the task of action learning in group that some members thought that the group is working in the same problem. It seemed that the purpose of action learning was not clear therefore further discussion of what action learning is and what we should do during the process was carried out. A clearer objective of action learning which had been discussed made it clear for our next action learning activities. In this case, unclear ground rule and purposes of action learning was restated. Even though it took time as it should have had moved already in the next stage, this discussion became a lesson as we figured out how important the clarity in the first stage is.

After the checking in or clarifying, the next step is the core of the action learning in which we should discuss the issue. Lee stated this step as ‘attending step’ since it is the time when the development and process of presenting the problem and finding the solution occur. As been agreed in the checking in step, each member should present their problem in five to ten minutes and another ten minutes for questioning and discussion. There is no literature stated the best time for presentation so we set it in that duration. The same field background among members made it easier to understand the problem and the causing factors which may contribute. However in some literatures, it is said that the diversity of members can make a richer understanding and suggestion for each other.

In each presentation, other members listened to it and prepared for what they want to ask and suggest. In fact, in the first presentation we need to remind ourselves many times from interrupting as we tend
to have our say during the presentation. We learnt about listening as the skill in action learning and tried it hardly at the beginning of presentation. However, we applied it well and asking and suggesting at the given time.

Asking in action learning should not criticizing but challenging. In this way, I found it hard to differ both terms as it has the same form that is questioning. After a certain time and more reading, it is known that the different lies on the purpose, expression and direction. In challenging, we give question in a non threatening way to lead to the possible solution and hindrance that may arise in solving the problem. In criticizing, we give question to defeat the presenter and tend to make it end without solution.

The presentation of my issue went well with the positive respond from all members as they noticed grade inflation as a new common problem. The identified causing factors are lack of time for assessment, demand for higher grade and inappropriate assessment tool. The implication is that the possible solution was found based on their experience and knowledge about grade inflation. The questioning which challenged in action learning is useful because we explore possible solution and think about the anticipation in applying the solution. It is interesting that sometimes in the middle of the questioning the members found that they had read literature related to the problem. Therefore, questioning in action learning also explores ideas and is a way to practice critical thinking.

The solution that is suggested after questioning time is designing an appropriate assessment tool that exactly evaluates the students’ performance and avoiding bias. This way, the grade can be justified and arguable. We have to look at the competency and the expectation from the learning. The making of new assessment tool should use references from national and international research. It has to be prepared thoroughly and presented clearly the competency. Meeting for teacher and clinical instructor is the next step to create the same perception regarding evaluation to avoid differences in grading. Socializing assessment tool may require more time as there might be correction and suggestion from the staff. The final result of assessment tool is then decided. The effectiveness of this assessment tool will be evaluated after two period of clinical rotation to recognize if there are different results between the rotations.

Being a member of action learning set allow me to learn many useful things for myself such as discipline with the rule, tolerant with others’ opinion, be able to listen effectively and think critically. Knowing broader issues is also another lesson from action learning and at the same time each member thinks about the solution for other issues in the group. In this case, we are aware that we have support system.

Development of Skills and Knowledge

Based on my experience as a set member, there are aspects that are considered may develop for my skills and knowledge.

Organization skill can be achieved through action learning. In organization, we interact with people that we need skill to communicate, behave and treat those people. In action learning, listening effectively, accepting other’s opinion, questioning without judging, support each other, empathy and set the ground rule reflect the ability as a leader and a member of organization. This skill is important in nursing since we work in team and department. More importantly, self development will create a survival and initiative as a leader.

Ability to listen effectively is improved during the presentation of each member that all members listen actively, critically and effectively. It means that we listen to the presenter and think about the question, solution, alternative and anticipation. Also, we explore our knowledge and skills related to the presentation topic.

Critical thinking appears when listening, questioning and suggesting. A comprehensive knowledge and skills is required so that we need to be critical for the best solution. According to DeLeon, Havnes and Kesby, action learning may develop skill on critical reflection. This skill could be explored when all members are actively contributing and challenging in the action set.

Collaboration skill among members is enhanced as in action learning members supporting each other by thinking what the best for each member’s issue is. Giving opinion and select alternative solution and
anticipation mean that we help each other and are a practice for collaboration in team and department. It is because in working collaboration needs support and togetherness.

**Accepting and embracing disagreement** needs a serious practice since it is like mental gymnastics. In attending phase, other members will give their opinion that might different with other’s opinion. For many times I found that my opinion was not match with other members’. However, I finally could accept it because I am aware that all members think hardly and want to give the best to find the solution. Also, we know that nobody wants to defeat or feel that they are superior. In this way, knowing each other is beneficial.

**Empathy** may come after the checking in phase and presentation as we know each other’s position in this issue. During the process we did not talk only about the issue we have but also other accompanying issues like condition of institution, individual vision and the expectation from our position.

**Evaluation of Action Learning Set**

Action learning set which we learn from this subject gave a new picture of problem solving and self development. The four meeting in this set was sufficient because there is a guideline for and we were supported with many literatures. However, facilitator is needed to observe and evaluate the group’s progress for its sufficient and satisfactory. More direction and evaluation will be helpful since we were new in this experience. By reading literatures which provide the explanation, process and pitfall in action learning we got deep understanding about the whole process of it.

**Change in Education Setting**

Action learning set will be beneficial for education setting since it can enhance self development of the staff. It is important because in education, rapid changes are inevitable to anticipate the higher demand of qualified nurses. Self development of teacher can improve their personal skills in teaching and learning, organization, skills and knowledge. This improvement can be achieved by sharing experiences, reading more literatures, conducting research, sharing the ideality and knowledge which included in action learning activity.

The possibility of action learning’s application in my institution will be related to the resources, people, training for facilitator and application in student. Action learning probably can be applied initially for faculty members. As it is a new institution, there will be many issues that should be worked out and staff’s development is important to anticipate the changes in nursing education. The preparation for action learning includes training for facilitators, determination of who become the facilitators, the procedure of action learning, the people who are responsible for this activity, and evaluation of action learning.

**CONCLUSION**

Action learning set is a method to solve the problem with the approach of member empowerment by sharing knowledge, skills and experience through questioning and challenging. Action learning activity that was completed in this subject gave a new approach in problem solving that it is very likely to be beneficial for education setting in terms of self improvement, organization and profession development. Knowing that this method has been used widely in health care setting, it is suggested that it will also be applied in my institution with consideration of potential resources and possibility of pitfalls which may emerge. Issues and changes in the profession can be overcome with the staff empowering through action learning that will explore positive aspects in staff. If action learning can be applied successfully, the development of staff and organization will be dynamic.

**Acknowledgement** – Nil

**Ethical Clearance**

This research has passed the ethical clearance by the ethical committee of Faculty of Medicine, Brawijaya University

**Source of Funding** – The researcher

**Conflict of Interest** - Nil

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12. Edwards CH. Grade inflation: The effects on educational quality and personal well being. Education. 2000;120(3).
Evaluate the Effectiveness of Structured Teaching Program on Knowledge Regarding Prevention and Management of Deep Vein Thrombosis (DVT) in Patients among Nursing Staffs

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²Professor, ³Assistant Professor, Mata Sahib Kaur College of Nursing, Mohali

ABSTRACT

Deep vein thrombosis is a condition in which a blood clot leads to the formation of blockage in deep veins. Occlusion of deep veins can be life threatening when clot gets stuck in the brain, lungs, heart, or other area, leading to severe damage and must be treated as medical emergency. The present study’s main aim was to evaluate the effectiveness of structured teaching program on knowledge regarding prevention and management of DVT in patients among nursing staffs. Quantitative approach was applied and quasi experimental pre test post test research design was used for the study. The sample of 60 nursing staffs, 30 in control and 30 in experimental group were selected by convenient sampling technique from the Civil hospital, Phase-6, Mohali. A self administered structured knowledge questionnaire was used to collect the data. Ethical and legal issues were taken into consideration throughout the study. Pre test was taken from both the groups. Then structured teaching program was administered to experimental group. After four days of teaching post test was taken from both the groups. The data analysis was done by using both descriptive and inferential statistics. The data collected was tabulated and analyzed by using frequency distribution, percentage, mean, chi-square and unpaired ‘t’ test. It was found that mean pre test knowledge score of control group was 15 and in experimental group it was 13.8 whereas mean post test knowledge score in control group was 14 and 20.2 in experimental group. The difference between mean pre test and post test knowledge score of experimental group was statistically significant at p < 0.05. It was found that majority of study variables were not significantly associated with pre test knowledge level of nursing staffs except source of information. So, it was concluded that structured teaching program was highly effective in enhancing the knowledge of nursing staffs regarding prevention and management of DVT.

Keywords: Evaluate, Effectiveness, Structured Teaching Program, Knowledge, Prevention, Management, Deep Vein Thrombosis.

INTRODUCTION

Occlusion of a deep vein by thrombosis is called deep vein thrombosis. A worldwide survey conducted by World health organization (WHO) showed that Deep vein thrombosis is a common disease and leads to pulmonary embolism and survivors may experience serious and long term complications.¹ World statistics revealed that 25% to 40% of patients over the age of 40 years, operated for one or more hours develop deep vein thrombosis, therefore knowledge on prevention is essential.² The formation of a DVT can be due to one or a combination of predisposing factors which includes surgery, restricted mobility, inherited clotting disorder, heart disorders, cancer, respiratory failure, infectious diseases, obesity, family history, over age, prolonged sitting and more common in pregnancy, using estrogen and hormonal replacement therapy.³ It is estimated that only one in nine cases will present clinically, all patients who are identified to be at risk should be carefully assessed, examined
and monitored. DVT and pulmonary embolism are major health problems that often result in significant postsurgical morbidity and mortality, so careful monitoring by staff postoperatively can minimize the morbidity and mortality. Various strategies can be used to educate the nursing staffs such as teaching program, self instructional module, planned teaching program etc. which will enhance the knowledge of nursing staffs from 27 percent to 85 percent who are empowered through structured teaching program. Their increased level of knowledge undoubtedly leads to an improvement in the delivery of patient care. Systematic assessment, early detection, physical and pharmacological prophylaxis are some ways of preventing deep vein thrombosis. Awareness of nursing staffs regarding DVT can contribute to a great extent in reducing various risk factors at an early stage of disease. Nurses should focus on prevention by the early recognition and adequate prophylaxis of those at increased risk. An awareness of diagnostic and treatment strategies will enable nurses to inform patients. This will help to improve both concordances with treatment and disease outcome. The nurse can observe and assess how the patient is managing her or his treatment and adapting to lifestyle changes, leading to an improved quality of life.

Trends in nursing care are challenging. Therefore, nurses must acquaint themselves with changing trends. To obtain successful outcome, the educational needs of each individual in interdisciplinary team must be met and then guidelines regarding DVT prophylaxis given were carefully followed by them while practicing in clinical settings. The reduction of DVT lies in the hands of nurses through their knowledge and ability to initiate and maintain preventive mobility measures. Nurses need to know about methods of Deep vein thrombosis prophylaxis which includes mechanical means (i.e. exercise, range of motion, compression stockings, compression devices), pharmacological agents or a combination of both. Despite the availability of resources for DVT prophylaxis, there is still ignorance regarding its use in medicals and paramedicals. Recognizing the lack of awareness about deep vein thrombosis among nursing staffs, researcher felt need to undertake study, and also was interested to assess the knowledge of nursing staffs regarding prevention and management of deep vein thrombosis before and after the structured teaching program.

MATERIAL & METHOD

Research approach - Quasi experimental approach

Research design - Pre test post test research design

Research settings - Civil hospital, phase-6, Mohali

Target population - Nursing staffs in selected hospital

Sampling technique and sample - 60 nursing staffs were selected by using convenient sampling technique; 30 in experimental group and 30 in control group

Tool - Structured knowledge questionnaire

Part A: Socio-demographic variables

Part B: Self administered structured knowledge questionnaire

Data analysis & interpretation of data - Analysis was done by using descriptive and inferential statistics.

Criteria measure -

<table>
<thead>
<tr>
<th>Level of knowledge</th>
<th>Knowledge Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>0 – 8</td>
</tr>
<tr>
<td>Average</td>
<td>9 – 16</td>
</tr>
<tr>
<td>Good</td>
<td>17 – 24</td>
</tr>
</tbody>
</table>

Validity of tool – The self administered structured knowledge questionnaire and structured teaching program were given to ten experts in field of medical surgical nursing and their suggestions were accepted and incorporated.

Reliability of tool – Reliability of the questionnaire was computed by applying split half method using Karl pearson’s coefficient formula i.e. r = 0.91 which shows tool was internally consistent.
FINDINGS

Table 1.1: Frequency & percentage distribution of nursing staffs according to socio-demographic variables

<table>
<thead>
<tr>
<th>Socio demographic variables</th>
<th>Control group $n_c = 30$</th>
<th>Experiment group $n_e = 30$</th>
<th>$\chi^2$, df, p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$F_c$</td>
<td>%</td>
<td>$F_e$</td>
</tr>
<tr>
<td>Age (in years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-35</td>
<td>6</td>
<td>20.0</td>
<td>6</td>
</tr>
<tr>
<td>36-45</td>
<td>10</td>
<td>33.3</td>
<td>12</td>
</tr>
<tr>
<td>46-55</td>
<td>14</td>
<td>46.7</td>
<td>12</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hindu</td>
<td>12</td>
<td>40.0</td>
<td>11</td>
</tr>
<tr>
<td>Sikh</td>
<td>15</td>
<td>50.0</td>
<td>14</td>
</tr>
<tr>
<td>Christian</td>
<td>3</td>
<td>10.0</td>
<td>5</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GNM</td>
<td>22</td>
<td>73.3</td>
<td>28</td>
</tr>
<tr>
<td>B.Sc.</td>
<td>3</td>
<td>10.0</td>
<td>1</td>
</tr>
<tr>
<td>Post Basic</td>
<td>5</td>
<td>16.7</td>
<td>1</td>
</tr>
<tr>
<td>Designation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing sister</td>
<td>2</td>
<td>6.7</td>
<td>0</td>
</tr>
<tr>
<td>Staff nurse</td>
<td>28</td>
<td>93.3</td>
<td>30</td>
</tr>
<tr>
<td>Income(in Rs)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤15000</td>
<td>1</td>
<td>3.3</td>
<td>1</td>
</tr>
<tr>
<td>15000-20000</td>
<td>1</td>
<td>3.3</td>
<td>1</td>
</tr>
<tr>
<td>20000-25000</td>
<td>10</td>
<td>33.3</td>
<td>8</td>
</tr>
<tr>
<td>≥25000</td>
<td>18</td>
<td>60.0</td>
<td>20</td>
</tr>
<tr>
<td>Experience in years</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5</td>
<td>8</td>
<td>26.7</td>
<td>5</td>
</tr>
<tr>
<td>6-10</td>
<td>4</td>
<td>13.3</td>
<td>5</td>
</tr>
<tr>
<td>≥10</td>
<td>18</td>
<td>60.0</td>
<td>20</td>
</tr>
<tr>
<td>Working Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical Care Area</td>
<td>7</td>
<td>23.3</td>
<td>7</td>
</tr>
<tr>
<td>Medical Area</td>
<td>10</td>
<td>33.3</td>
<td>10</td>
</tr>
<tr>
<td>Surgical Area</td>
<td>13</td>
<td>43.3</td>
<td>13</td>
</tr>
<tr>
<td>Source of information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Printed material</td>
<td>25</td>
<td>83.3</td>
<td>27</td>
</tr>
<tr>
<td>Electronic media</td>
<td>2</td>
<td>6.7</td>
<td>1</td>
</tr>
<tr>
<td>Health worker</td>
<td>3</td>
<td>10.0</td>
<td>2</td>
</tr>
</tbody>
</table>

In control and experimental group majority of nursing staffs were in age group of 36-55 years and belonged to Sikh religion. Most of nursing staffs had GNM level of educational status and were designated as staff nurse. Maximum of nursing staffs had ≥ 25000 income per month. More than half of nursing staffs had ≥ 10 years of experience, worked in surgical area and there source of information was printed material.
Table 2.1: Comparison of pre test level of knowledge among nursing staffs of control and experimental group.  

<table>
<thead>
<tr>
<th>Knowledge score</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control</td>
<td>Experiment</td>
</tr>
<tr>
<td>Mean</td>
<td>15.0</td>
<td>13.8</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>2.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Unpaired t, df, p-value</td>
<td>1.670, 58, 0.100</td>
<td>-10.914, 58, 0.000***</td>
</tr>
</tbody>
</table>

*** indicates highly significant at p < 0.05

There was no significant difference between mean pre test knowledge score of both groups (t = 1.670, p > 0.05). But there was significant difference between mean post test knowledge score of both groups (t = -10.914, p < 0.05). Thus results implied that that structured teaching program was an effective tool in improving the knowledge of nursing staff regarding prevention and management of deep vein thrombosis.

Table 3.1: Association between pre test level of knowledge among nursing staffs and socio-demographic variables  

<table>
<thead>
<tr>
<th>Socio demographic variables</th>
<th>Poor f1(%)</th>
<th>Average f2(%)</th>
<th>Good f3(%)</th>
<th>Total</th>
<th>χ², df, p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-35</td>
<td>2( 50.0)</td>
<td>7(17.1)</td>
<td>3(20.0)</td>
<td>12(20.0)</td>
<td>6.291,4,0.178NS</td>
</tr>
<tr>
<td>36-45</td>
<td>2(50.0)</td>
<td>17(41.5)</td>
<td>3(20.0)</td>
<td>22(36.7)</td>
<td>8.205,4,0.084NS</td>
</tr>
<tr>
<td>46-55</td>
<td>0(0.0)</td>
<td>17(41.5)</td>
<td>9(60.0)</td>
<td>26(43.3)</td>
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<tr>
<td>Religion</td>
<td></td>
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</tr>
<tr>
<td>Hindu</td>
<td>0( 0.0)</td>
<td>16(39.0)</td>
<td>7(46.7)</td>
<td>23(38.3)</td>
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</tr>
<tr>
<td>Sikh</td>
<td>4(100.0)</td>
<td>17(41.5)</td>
<td>8(53.3)</td>
<td>29(48.3)</td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>0(0.0)</td>
<td>8(19.5)</td>
<td>0(0.0)</td>
<td>8(13.3)</td>
<td></td>
</tr>
<tr>
<td>Educational status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GNM</td>
<td>4(100.0)</td>
<td>34(82.9)</td>
<td>12(80.0)</td>
<td>50(83.3)</td>
<td>0.925,2,0.630NS</td>
</tr>
<tr>
<td>Graduation &amp; above</td>
<td>0(0.0)</td>
<td>7(17.1)</td>
<td>3(20.0)</td>
<td>10(16.7)</td>
<td></td>
</tr>
<tr>
<td>Designation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing sister</td>
<td>0(0.0)</td>
<td>2(4.9)</td>
<td>0(0.0)</td>
<td>2(3.3)</td>
<td>0.959,2,0.619NS</td>
</tr>
<tr>
<td>Staff nurse</td>
<td>4(100.0)</td>
<td>39(95.1)</td>
<td>15(100.0)</td>
<td>58(96.7)</td>
<td></td>
</tr>
<tr>
<td>Income( in Rs.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤25000</td>
<td>3(75.0)</td>
<td>15(36.6)</td>
<td>4(26.7)</td>
<td>22(36.7)</td>
<td>3.177,2,0.204NS</td>
</tr>
<tr>
<td>≥25000</td>
<td>1(25.0)</td>
<td>26(63.4)</td>
<td>11(73.3)</td>
<td>38(63.3)</td>
<td></td>
</tr>
<tr>
<td>Experience (in years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5</td>
<td>3( 75.0)</td>
<td>8(19.5)</td>
<td>2(13.3)</td>
<td>13(21.7)</td>
<td>7.730,4,0.102NS</td>
</tr>
<tr>
<td>6-10</td>
<td>0(0.0)</td>
<td>7(17.1)</td>
<td>2(13.3)</td>
<td>19(15.0)</td>
<td></td>
</tr>
<tr>
<td>≥10</td>
<td>1(25.0)</td>
<td>26(63.4)</td>
<td>11(73.3)</td>
<td>38(63.3)</td>
<td></td>
</tr>
<tr>
<td>Working Area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical Care Area</td>
<td>2( 50.0)</td>
<td>7(17.1)</td>
<td>5(33.3)</td>
<td>14(23.3)</td>
<td>5.936,4,0.204NS</td>
</tr>
<tr>
<td>Medical Area</td>
<td>1(25.0)</td>
<td>17(41.5)</td>
<td>2(13.3)</td>
<td>20(33.3)</td>
<td></td>
</tr>
<tr>
<td>Surgical Area</td>
<td>1(25.0)</td>
<td>17(41.5)</td>
<td>8(53.3)</td>
<td>26(43.3)</td>
<td></td>
</tr>
<tr>
<td>Source of information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Printed material</td>
<td>4(100.0)</td>
<td>38(92.7)</td>
<td>10(66.7)</td>
<td>52(86.7)</td>
<td>7.092, 2, 0.029*</td>
</tr>
<tr>
<td>Electronic media/ Health</td>
<td>0(0.0)</td>
<td>3(7.3)</td>
<td>5(33.3)</td>
<td>8(13.3)</td>
<td></td>
</tr>
</tbody>
</table>

* indicates highly significant at p < 0.05
There was no association found between pre-test level of knowledge among nursing staffs with their age, religion, educational status, designation, experience, income and working area.

There was association between pre-test level of knowledge among nursing staffs regarding prevention and management of deep vein thrombosis with their source of information. It was found to be statistically significant at $p < 0.05$.

**CONCLUSION**

From the findings of present study following conclusions were drawn:

1. Nursing staff had average level of knowledge regarding prevention and management of DVT.
2. Structured teaching program was effective in enhancing the knowledge of nursing staffs regarding prevention and management of DVT.
3. Source of information had an impact on the prior knowledge of nursing staffs regarding prevention and management of DVT.
4. Age, religion, educational status, designation, income per month, working area and experience had no influence on the prior knowledge of nursing staffs regarding prevention and management of DVT.

**Acknowledgement:** I express my sincere gratitude to Mrs. Neelam Kalia (Statistician), administration of Civil Hospital, Administration of College, sincere thanks to all the participants in the study for their wholehearted cooperation, without whom this study would have been impossible and my parents. I owe a deep sense of gratitude to all those who have contributed to the successful completion of this study.

**Conflict of Interest:** None

**Source of Funding:** Self

**Ethical Clearance**

- Permission for research study was taken from Principal of Mata Sahib Kaur College of Nursing, Mohali.
- Permission for research study was taken from ethical and research committee of Mata Sahib Kaur College of Nursing, Mohali.
- Written permission was taken from the Civil surgeon, Phase-6, Mohali.
- Researcher explained the purpose of the study to the subjects and had taken written informed consent for their participation in the study.
- Confidentiality of information was maintained for all respondents.
- Hospital work was not interrupted while doing interventions.

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Effectiveness of Structured Teaching Programme on Knowledge Regarding Cardiac Rehabilitation among Patients Undergone Coronary Artery Bypass Grafting Surgery in Dhiraj General Hospital, Piparia, Vadodara

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ABSTRACT

Introduction: Cardiac rehabilitation (CR) is a medically supervised program that helps improve the health and well-being of people who have heart problems. Rehabilitation programs include exercise training, education on heart healthy living, and counseling to reduce stress and help you return to an active life. Coronary artery bypass graft surgery, also known as CABG or bypass surgery, can help to restore blood flow to an area of the heart. However, surgery does not stop the progression of atherosclerosis (coronary heart disease), which deposits fatty material into artery walls, narrowing them and eventually limiting blood flow. Most people who have undergone bypass surgery benefit from participating in a structured, comprehensive cardiac rehabilitation program.

Objectives: Objectives of the study were To assess the existing knowledge regarding cardiac rehabilitation among patient undergone CABG, evaluate the effectiveness of structured teaching programme on knowledge regarding cardiac rehabilitation of CABG patient and determine the association between pretest knowledge score of CABG patient with selected socio-demographic variables.

Material & Method: An evaluative research approach with pre-experimental design was used. The sampling technique used was non-probability convenient sampling. Data was collected from 40 CABG patients from Dhiraj General hospital at Vadodara from 12-09-2014 to 20-09-2014. The tool consist of section: 1 Demographic profile, section:2 – knowledge regarding Cardiac rehabilitation 25 items. The reliability of the tool was established by using test retest method. Data was analyzed using descriptive and inferential statistics. RESULTS: The mean post test score and SD among CABG patients’ knowledge regarding cardiac rehabilitation is 18.82 ± 1.65 higher than mean pretest score 10.45 ± 1.979 among CABG patients regarding Cardiac Rehabilitation. The mean posttest knowledge scores (18.82) was higher than the mean pretest knowledge scores (10.45). The computed ‘t’ value 24.561 is higher than the tabled value t99 at p<0.05 level of significance. Hence hypothesis is accepted and thus shows that STP was highly effective in increasing the knowledge of Cardiac Rehabilitation among CABG patients.

CONCLUSION: The study findings revealed that structured teaching programme was highly effective in improving knowledge of Cardiac Rehabilitation in CABG patients.

Keywords: Effectiveness, Knowledge, Structured teaching programme, Cardiac rehabilitation, CABG patients.

INTRODUCTION

Cardiovascular disease is the major cause of the death in the world. Acute coronary syndrome which include unstable angina and myocardial infarction with or without ST-segment elevation, are the life threatening disorders that remain a source of high morbidity and mortality despite advances in treatment.
The World Health Organization (WHO) estimated that 60% of the world’s cardiac patient will be Indian by 2010. Recent studies show that Coronary Heart Disease rate in India have doubled in both rural and urban India. The prevalence of CHD is now four-fold higher in urban India than in United States.¹

Cardiovascular disease (CVD) is the world’s leading killer, accounting for 16.7 million or 29.2 per cent of total global deaths in 2003. In United States about 57 million Americans live with some form of CVD, which causes more than 40% of all deaths in the United States; 950,000 Americans every year.²

CABG surgery is a surgical procedure performed to relieve angina and reduce the risk of death from coronary artery disease. CABG is more effective than medical management at relieving symptoms. Coronary bypass surgery is a big event for most patients and cardiac rehabilitation has been adopted as a very important component of recovery.³

Coronary artery bypass grafting or CABG is an open-heart procedure to relieve the blockages of the arteries of the heart. It is a surgery consists of the construction of new vessels to transport blood between the aorta, or other major arteries, and the myocardium distal to the obstructed arteries. The procedure involves one or more grafts using the internal mammary artery, saphenous vein, radial artery, gastroepiploic artery and inferior epigastric artery.⁴

Cardiac rehabilitation services are divided into 3 phases, i.e. Phase 1 - Initiated while the patient is still in the hospital, Phase 2 - A supervised ambulatory outpatient program spanning 3-6 months, Phase 3 - A lifetime maintenance phase in which physical fitness and additional risk-factor reduction are emphasized.⁵

MATERIALS & METHOD

SOURCE OF DATA COLLECTION: Data will be collected from the patients admitted in Dhiraj general hospital.

RESEARCH DESIGN: The research design will be one group pre-test and post test under quasi experimental approach.

<table>
<thead>
<tr>
<th>GROUP</th>
<th>PRE-TEST</th>
<th>INTERVENTION</th>
<th>POST-TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>CABG patients in Dhiraj hospital, Piparia, Vadodara</td>
<td>O₁</td>
<td>X</td>
<td>O₂</td>
</tr>
</tbody>
</table>

KEY WORDS

O₁ – Pre-test to assess the knowledge level of CABG patient regarding cardiac rehabilitation.

X- Administration of structured teaching programme regarding cardiac rehabilitation.

O₂ – Post test to assess the knowledge level of CABG patient regarding cardiac rehabilitation.

RESEARCH SETTING: The study will be conducted at Dhiraj General hospital, Piparia, Vadodara.

POPULATION

Target population – All CABG patients.

Accessible population – CABG patient admitted in Dhiraj hospital.

SAMPLING CRITERIA

SAMPLE: The sample consists of CABG patient who fulfil the inclusion criteria.

SAMPLE SIZE: The sample size for the study will be 60 patients.

SAMPLING TECHNIQUE: Sampling procedure adopted for the study will be convenient sampling.

INCLUSION CRITERIA

The study includes CABG patient who:

- Are willing to participate in the study.
- Are available at the time of data collection.
- Can read and write Gujarati/ Hindi/ English.
EXCLUSION CRITERIA

The study excludes CABG patient who are

- Critically ill and cannot respond.
- In pacemaker insertion.
- Health personnel

METHODS OF DATA COLLECTION

INSTRUMENTS FOR STUDY

The data collection will be done with the help of structured knowledge questionnaire.

It consist of

Section A – To analyze demographic data, structured questionnaire contains variable like age, gender, religion, qualification, occupation, marital status and source of information.

Section B – It consists of structured knowledge questionnaire regarding cardiac rehabilitation.

DEVELOPMENT OF TOOL

- Tool - I - The Demographic Data Collection Tool.
  
  Questionnaire for demographic data collection tool that are age, gender, religion, qualification, occupation, marital status and source of information.

- Tool-II- Structured knowledge questionnaire regarding cardiac rehabilitation.

The investigator prepared this tool based on the objective of the study to assess. This tool consist 25 multiple choice questions to assess the level of knowledge regarding cardiac rehabilitation by samples. Total 25 multiple choices questions involving education on modification of cardiac risk factor such as exercise, reducing stress level, healthy diet, quit smoking and alcohol.

1. The samples have to select the correct option from given choices by putting a tick mark (✓) in given space (   ) in front of correct option. Samples have to give answers of all questions.

2. All questions are positive. There is no negative question in this tool.

3. Thus, the total score will be count for each sample.

PLAN FOR DATA COLLECTION

PROCEDURE

Content validity will be ascertained in consultations with guides and experts in the field of medicine and nursing. Reliability of the tool will be established by test and re-test method.

After obtaining permission from the concerned authority an informed consent will be obtain from the subject. The process of the study will be explained to the subjects. After explaining the process of study, socio demographic data will be collected with the help of a structured questionnaire. The knowledge of patients regarding cardiac rehabilitation after CABG will be assessed by using structured knowledge questionnaire. Structured teaching programme will be provided to patients regarding cardiac rehabilitation after CABG on the same day of pre test.

After 7 days post test will be conducted to evaluate the effectiveness of structured teaching programme on cardiac rehabilitation among CABG patient.

FINDINGS

Part I : description Demographic characteristic of the samples

Percentage distribution of CABG patients participated in the study according to their age shows that 35% (14) of them were in the age group of 50-59 years being the highest and only 10% (4) in the age group 30-39 years, being the lowest.

The finding related to gender of the CABG patients shows that majority (70%) of the respondents were male and (30%) of the respondents were female.

The percentage distribution of CABG patients according to their marital status shows that maximum number of CABG patients participated in the studies were married 29 (72.5 %).

The percentage distribution of CABG patients according to their monthly income shows that maximum number of CABG patients participated in the studies were have 13 (32.5 %) monthly income Rs. 5001 to 10000.

The percentage distribution of CABG patients
according to their Educational qualification shows that maximum number of CABG patients participated in the studies were 13 (32.5%) were diploma holder, 25% were SSLC and other qualifications, 7% samples were graduated.

The percentage distribution of CABG patients according to their participation in CR programme in last one month shows that maximum number of CABG patients participated in the studies 34 (85%) had not attended any CR programme.

**PART II: EVALUATION OF THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME REGARDING CR**

**TABLE II Quartile distribution of pre-test and post-test knowledge scores of CABG patients N = 40**

<table>
<thead>
<tr>
<th>Knowledge Score</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency (f)</td>
<td>Cumulative Frequency</td>
</tr>
<tr>
<td>5-7</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>7-9</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>10-11</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>11-13</td>
<td>13</td>
<td>28</td>
</tr>
<tr>
<td>13-15</td>
<td>10</td>
<td>38</td>
</tr>
<tr>
<td>15-17</td>
<td>2</td>
<td>40</td>
</tr>
<tr>
<td>17-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19-21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23-25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Data in above table shows that majority of respondents percentage (70%) had scores between 11-13 and all the respondents had scores below 17 in the pre-test in comparison to majority (75%) of the students in post-test had scores between 19-21.

**Fig. 1 : Quartile distribution of knowledge scores of the CABG patients in pre-test and post-test.**

The data presented in the form of ogive shows that there is a significant difference between pre-test and post-test scores. By graphical method the pre-test median score was 11 whereas post-test median score was 19. The ogive plotted shows that the post-test score is higher than the pre-test score in the first and the third quartile. The ogive indicates that there is a significant increase in knowledge of the students regarding CPR technique.

**PART III : TESTING THE RESEARCH HYPOTHESIS**

Significant difference between pre-test and post-test knowledge scores

Hypothesis was tested using paired ‘t’ test. The value of ‘t’ was calculated to analyze the difference in knowledge of the CABG patients with their pre-test and post-test scores. The research hypothesis H<sub>1</sub> was formulated to evaluate the effectiveness of the structured teaching programme on knowledge of CABG regarding CR.

Scores of respondents in pre-test and post-test

To find the significant difference between computed mean of pre-test and post-test knowledge score, the paired ‘t’ test was calculated.

H<sub>1</sub> The mean post test knowledge score of CABG patient regarding cardiac rehabilitation will be significantly higher than the mean pre test knowledge score.
Table III: Significance of the difference between pre-test knowledge score  \( N = 40 \)

<table>
<thead>
<tr>
<th>Areas</th>
<th>Mean effectiveness</th>
<th>‘t’ value</th>
<th>Table value</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General concept about CR</td>
<td>1.4</td>
<td>11</td>
<td>2.920</td>
<td>P&lt;0.05</td>
</tr>
<tr>
<td>2. Physical activities in CR</td>
<td>1.7</td>
<td>5.072</td>
<td>2.015</td>
<td>P&lt;0.05</td>
</tr>
<tr>
<td>3. Medication and nutritional aspects</td>
<td>4.4</td>
<td>5.78</td>
<td>1.782</td>
<td>P&lt;0.05</td>
</tr>
<tr>
<td>4. Other long term maintenance</td>
<td>0.82</td>
<td>2.929</td>
<td>2.920</td>
<td>P&lt;0.05</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>8.37</strong></td>
<td><strong>24.761</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VHS = very highly significant

Pre-test and post-test mean knowledge scores and ‘t’ value showed that the mean gain in knowledge was 8.37. The ‘t’ value was significant \((t= 24.761)\) at \( p < 0.05 \) level indicating the Structured teaching programme regarding CR was effective. Hence, stated research hypothesis is accepted.

II. Association of the pre-test knowledge scores with selected demographic variables \((N=40)\)

\( H_2 \): There will be a significant association between selected socio-demographic variables with pre test knowledge score of CABG patient regarding cardiac rehabilitation.

Table IV: Association of the pre-test knowledge scores with selected demographic variables

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Very Poor (0-5)</th>
<th>Poor (5-10)</th>
<th>Average (10-15)</th>
<th>Good (15-20)</th>
<th>D.f.</th>
<th>Chi- sq. value</th>
<th>Table value</th>
<th>Significant p&gt;.100</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 - 99</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>9</td>
<td>14.878</td>
<td>14.484</td>
<td>S</td>
</tr>
<tr>
<td>40 – 49</td>
<td>9</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 – 59</td>
<td>14</td>
<td>1</td>
<td>3</td>
<td>10</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60–Above</td>
<td>13</td>
<td>1</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2. Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>28</td>
<td>1</td>
<td>7</td>
<td>8</td>
<td>2</td>
<td>3</td>
<td>6.705</td>
<td>6.251</td>
<td>S</td>
</tr>
<tr>
<td>Female</td>
<td>12</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>3. Marital status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>29</td>
<td>2</td>
<td>8</td>
<td>17</td>
<td>2</td>
<td>9</td>
<td>6.909</td>
<td>14.484</td>
<td>S</td>
</tr>
<tr>
<td>Unmarried</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widow</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divorce</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Data shows that the chi square values of demographic variables, ie age, gender, marital status, participation in CR programme within last one month of research study are significant at 1.00 level of significance. Hence the null hypothesis $H_2$ is accepted. Thus it is concluded that there was significant association of pre-test knowledge score of CABG patients regarding CR.

III. Association of the pre-test knowledge scores with selected demographic variables

Data shows that the chi square values of demographic variables, ie age, gender, marital status, participation in CR programme within last one month of research study are significant at 1.00 level of significance. Hence the null hypothesis $H_2$ is accepted. Thus it is concluded that there was significant association of pre-test knowledge score of CABG patients regarding CR.

CONCLUSION

i) Significant difference between pre-test and post-test knowledge scores

In order to determine the effectiveness of STP on Knowledge of CABG patients regarding CR, research hypothesis was formulated.

Hypothesis was tested using paired ‘t’ test. The value of ‘t’ was calculated to analyze the difference in knowledge of the CABG patients with their pre-test and post-test scores.

Pre-test and post-test mean knowledge scores and ‘t’ value showed that the mean gain in knowledge was 8.37. The ‘t’ value was significant ($t=24.561$) at $p < 0.05$ level indicating the Structured teaching programme regarding CR was effective. Hence, stated research hypothesis is accepted.

ii) Association of the pre-test knowledge scores with selected demographic variables

Data shows that the chi square values of demographic variables, ie age, gender, marital status, participation in CR programme within last one month of research study are significant at 1.00 level of significance. Hence the null hypothesis $H_2$ is accepted. Thus it is concluded that there was significant association of pre-test knowledge score of CABG patients regarding CR.
Acknowledgement: I express my gratitude and thanks towards all who have directly or indirectly helped me to complete this study and their support in each major step of the study.

Source of Funding: This is individual study. Source of funding was by researcher’s self only.

Ethical Standards: This study was conducted after getting approval from the Institutional Ethics Committee and after obtaining written consents from all subjects.

Conflicts of Interest: Nil

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Transcultural Nursing: Its Importance in Nursing Practice

Kanchana M N¹, Sangamesh N²

¹Assistant Professor and HOD Dept of Paediatric Nursing, ²Principal and HOD Dept of Community Health Nursing, Sri Kalabysareshwara Swamy College of Nsg, Bangalore

ABSTRACT

Transcultural nursing is an essential aspect of healthcare today. This requires nurses to recognize and appreciate cultural differences in healthcare values, beliefs, and customs. Nurses must acquire the necessary knowledge and skills in cultural competency. Culturally competent nursing care helps ensure patient satisfaction and positive outcomes. Transcultural nursing is both a specialty and a general practice area. It focuses on worldwide cultures and comparative cultural caring, health, and nursing phenomena. Narayanasamy developed the ACCESS model in order to help health professionals bridge the cultural gap and provide acceptable transcultural care¹:

- **Assessment**: focus on cultural aspects of client’s lifestyle, health beliefs, and health practices
- **Communication**: Be aware of variations in verbal and non-verbal responses
- **Cultural negotiation and compromise**: become more aware of aspects of other people’s culture as well as understanding client’s views and explaining their problems
- **Establishing respect and rapport**: A therapeutic relation which portrays genuine respect for client’s cultural beliefs and values is required
- **Sensitivity**: Deliver culturally sensitive care to a culturally diverse group
- **Safety**: Enable clients to derive a sense of cultural safety

*Keywords: Transcultural, ACCESS, cultural gap.*

DEFINITION

Transcultural nursing is a comparative study of cultures to understand similarities (culture universal) and difference (culture-specific) across human groups¹

**Cultural competence has been defined as:**

- Developing an awareness of one’s own beliefs, sensations, and thoughts without letting it have an undue influence on those from other backgrounds.
- Demonstrating knowledge and understanding of the client’s culture.
- Accepting and respecting cultural differences
- Adapting care to be congruent with the client’s culture

STEPS TO ATTAIN CULTURAL COMPETENCE

**Step 1. Adopt Attitudes to Promote Transcultural Nursing Care**

Certain attitudes have been associated with effective and culturally competent nursing care. Caring is one of four important attitudes necessary for promoting transcultural and culturally competent nursing care. Nurses demonstrate a caring attitude when they take time to understand and appreciate their patients’ cultural needs and perspectives. This also shows true respect and concern for these individuals. Patients feel confident that they are being cared for because nurses have addressed their cultural preferences. Empathy is the second quality for nurses to adopt for cultural competency. This
requires that nurses view problems or situations from the patients’ cultural perspectives. This gives patients a sense of security, knowing that their cultural ways are understood and appreciated by their nurses caring for them. Openness is the third attitude for nurses to cultivate for effective transcultural nursing. Having openness to others’ cultural perspectives shows patients that nurses give consideration to their particular ways. Flexibility is the fourth attitude nurses should adopt to become culturally competent. They need to integrate their patients’ cultural beliefs, values, and practices into nursing care plans for these individuals and not impose their own cultural desires in caring for these persons. Nurses demonstrate flexibility by showing their willingness to provide care based on their patients’ cultural ways, which helps them feel reassured that their care is individualized, and consequently, helps achieve mutually set goals.

Step 2. Develop Awareness for Cultural Differences

To provide culturally competent care, nurses should be aware that their patients may have various cultural differences. Certain variables are important for nurses to know in order to design a care plan that meets the needs of their patients while complying with their cultural requirements. Individuals have beliefs, values, practices that may deviate from their cultures. This points out the need for nurses to take the next step toward cultural competency, which is to perform cultural assessments on their patients.

Step 3. Perform a Cultural Assessment

A concise cultural assessment is an effective way to obtain pertinent information about patients’ perspectives on important aspects of their care. It is important for nurses to learn which foods are culturally acceptable and if there are certain foods that are not tolerated. These questions guide nurses in planning care. More important, it gives nurses better insight as to which foods are considered healthy and helpful when experiencing an illness. Nurses will also gain pertinent information when they conduct a medication assessment. A thorough investigation will identify whether these patients subscribe to alternative medicine, as well as traditional medicine. Learning about patients’ family structures is important to understand when performing a cultural assessment. Nurses should develop their plan of care with their patients in order to derive mutual goals that are compatible with their cultural norms. Patients will develop trust with their nurses and be comfortable with the nursing care plan because it is consistent with their cultural values and practices.

FACTORS OF TRANSCULTURAL NURSING

A model that encompasses six factors can be used to promote transcultural nursing and assess nurses’ cultural competency. The first factor is awareness. Nurses need to be aware of personal biases and prejudices toward others from different cultures. Skill is the second factor. Nurses must have the skill to conduct cultural assessments in a sensitive manner. The third factor is knowledge. Nurses must adopt a broad perspective regarding different points of view to accommodate patients’ various cultural views. Encounters is considered the forth factor for transcultural nursing. It is important for nurses to expose themselves to patients from diverse backgrounds and provide effective care that is congruent with their cultural ways. The fifth and most important factor is desire. Nurses must want to achieve cultural competency. This means having an enthusiastic attitude to learn about others’ cultural ways and integrate them into the nursing care plans. The last factor is assessment. Nurses must perform a self-assessment to determine whether they are culturally competent in their nursing care.

TRANSCULTURAL NURSING AND ETHICS

Nurses encounter difficult ethical situations in daily practice. These situations may be even more challenging for nurses when the patients involved are from various cultural backgrounds. One ethical dilemma is whether nurses should discuss advance directives to patients who are uncomfortable about this because of cultural differences in their health beliefs.

One of the roles of nurses is to provide patients with information about advance directives. These are to protect patients’ autonomy in circumstances when they can no longer make a decision. Nurses learn that veracity and fidelity are ethical principles that guide their interactions with patients and families. Nurses are taught to support individual autonomy to benefit the patient. In the American culture, nurses provide
truthful information to the patient in order that they can then make a decision about their healthcare. However, in other cultures, family members are the decision makers about the patient’s health matters. This is especially true when an illness is terminal. In certain cultures, it is the family’s role to protect the patient from the anxiety and distress associated with the knowledge of impending death. Families from Eastern cultures are especially protective of the terminally ill. They believe it is their responsibility to protect the patient, allowing the patient to die in peace. Nurses must maintain cultural competency in their care. It is important for nurses to be always aware of cultural differences in health beliefs. It is necessary for nurses to attain information about their patients’ cultural perspectives in order to provide care that is culturally congruent with their patients’ views and wishes. In making ethical decisions, nurses need to safeguard the health of their patients, yet still provide culturally competent nursing care in these situations.

EDUCATION AND TRANSCULTURAL NURSING

Nurses have repeatedly expressed their frustration that they lack the education necessary to provide culturally competent care for a diverse mix of patients from other cultures. They have also acknowledged their limitations in caring for these individuals because they do not have enough transcultural knowledge and skills to enable them to deliver culturally sensitive nursing care. Nurses have stated that their basic nursing education did not prepare them to be culturally sensitive or enable them to provide care to patients of various cultures. Practicing nurses should be offered a staff development program that focuses specifically on the knowledge and skills needed for transcultural nursing. In this program, nurses would first develop an awareness of their own cultural values and beliefs. This is necessary to do before nurses can go to the next step of accepting different cultural ways in healthcare. Nurses, who are able to accept others’ cultural beliefs, would then be able to learn to conduct cultural assessments. The last segment of this program would be for nurses to evaluate themselves regarding their ability for providing culturally competent nursing. Patients showing trust in their nurses and satisfaction with their care may be proof of culturally competent nursing care.

NURSING PROCESS AND ROLE OF NURSE

- Determine the client’s cultural heritage and language skills.
- Determine if any of his health beliefs relate to the cause of the illness or to the problem.
- Collect information that any home remedies the person is taking to treat the symptoms.
- Nurses should evaluate their attitudes toward ethnic nursing care.
- Self-evaluation helps the nurse to become more comfortable when providing care to clients from diverse backgrounds.
- Understand the influence of culture, race, & ethnicity on the development of social emotional relationship, child rearing practices & attitude toward health.
- Collect information about the socioeconomic status of the family and its influence on their health promotion and wellness.
- Identify the religious practices of the family and their influence on health promotion belief in families.
- Understanding of the general characteristics of the major ethnic groups, but always individualize care.
- The nursing diagnosis for clients should include potential problems in their interaction with the health care system and problems involving the effects of culture.
- The planning and implementation of nursing interventions should be adapted as much as possible to the client’s cultural background.
- Evaluation should include the nurse’s self-evaluation of attitudes and emotions toward providing nursing care to clients from diverse sociocultural backgrounds.
- Self-evaluation by the nurse is crucial as he or she increases skills for interaction.

CONCLUSION

Transcultural nursing is essential in daily nursing practice. The ever-growing number of patients from various cultural backgrounds creates a major challenge for nurses to provide individualized and
holistic care based on each patient’s cultural needs. This requires nurses to understand cultural differences in healthcare values, beliefs, and customs. Nurses must be open-minded and have a positive interest as well as a sincere desire to learn other cultural ways. Transcultural knowledge is important for nurses to acquire in order for them to become sensitive to the needs of patients from various cultures especially as societies become increasingly global and complex.

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Ethical Clearance: Ethical clearance was obtained from the appropriate authority.

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2. [https://www.nooruse.ee/e-ope/mitmek.../transcultural_nursing.pdf](https://www.nooruse.ee/e-ope/mitmek.../transcultural_nursing.pdf)
Nutrition and Health Education Programme of ICDS Scheme for Pregnant Women in Rural Punjab

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ABSTRACT

The Integrated Child Development Services (ICDS) Scheme is one of the flagship programmes of the Government of India and represents one of the world’s largest and unique programmes for early childhood care and development. ICDS was launched on 2nd October 1975, on the auspicious occasion of the 106th birth anniversary of Mahatma Gandhi, the Father of the Nation. ICDS has been operating in the parts of Punjab for decades. Present study was conduct to examine the impact of Nutrition and Health Education (NHED) of ICDS on the pregnant women in terms of enhancing their knowledge in the critical Health Care areas like, health check-up, immunization, nutrition care of children and women, prevention of nutritional deficiency diseases, etc. and the extent to which the pregnant women put this knowledge into practice. The study was conducted in all three ICDS project: Barnala, Sehna and Mehal Kalan of the Barnala District of Punjab. A total of 30 villages (10 from each ICDS project) were selected on the basis of random. From each village 2 pregnant women were selected randomly. Thus a total of 60 pregnant women were in the sample, from all 30 villages which were having Anganwadi for at least the last 25 years, as such pregnant women are expected to avail the NHED service of ICDS scheme. It was found that (80%) of the women received two doses of tetanus toxoid. It is good that a majority (63.32%) of pregnant women was able to get iron and folic acid tablets as per nutrition norms. A majority (66.66%) of the pregnant women did not receive supplementary nutrition food from the AWCs. Again majority (66.66%) of the women had no proper awareness about initial breast feeding for a newly born. A high majority (81.66%) of the pregnant women did not know about the names of different types of vaccinations given to their children. Again A high (81.66%) pregnant women did not know real reasons behind measles. A majority (76.66%) of the pregnant women were not sure about managing measles. It is recommended that Supervisors should be given the responsibility of organising formal NHED sessions at regular intervals in AWCs under their supervision. Continuous and effective monitoring by Child Development Project Officers (CDPOs) and district officials, as also active participation of health functionaries, can go a long way in the effective implementation of this component.

Keywords: ICDS, AWW, AWC, NHED, IFA, SN.

INTRODUCTION

The Integrated Child Development Services (ICDS) Scheme is one of the flagship programmes of the Government of India and represents one of the world’s largest and unique programmes for early childhood care and development. ICDS was launched on 2nd October 1975, on the auspicious occasion of the 106th birth anniversary of Mahatma Gandhi, the Father of the Nation. In the initial stages ICDS was implemented in 33 selected community development blocks all over India. ICDS has expanded considerably in subsequent years and Up to 31st March 2013; there are 7076 sanctioned projects, 7025 operational projects in India. In Punjab ICDS program has expanded very rapidly. At present, there are 155 sanctioned and 154 operational projects. Vijay Rattan is his book (1997) gave details about genesis, growth, components of ICDS and described a package of seven services comprising supplementary nutrition, immunization, health check-ups, and referral services’ treatment of illness, Nutrition and health education and non-
formal pre-school education which are provided under ICDS.

Nutrition and Health Education (NHED) component of ICDS scheme for Women has the long-term goal of capacity building of women in the age group of 15-45 years especially Pregnant women and Nursing women, so that they can look after their own health, nutrition and development needs as well as that of their children and families. NHED comprises basic health, nutrition and development information related to childcare and development, infant feeding practices, utilization of health services, family planning and environmental sanitation, maternal nutrition, antenatal care, prevention and management of diarrhoea, acute respiratory infections and other common infections of children. NHED is delivered by Anganwadi workers (AWW) and ANMs through interpersonal contacts and discussions at Anganwadi (literally meaning “the courtyard”) Centres (AWC).

But, Ajay Kumar, Monika Singh and Kuldeep Bauddh (2010) presented very grim realities saying that every sixth malnourished child in India lives in U.P., about 56% children born to illiterate mother were under weight, every second adolescent girls was anemic, about 49% women was below 45 kgs, less than 3% mothers received the minimum full dosage of iron, Folic acid tablets, only one in 20 new born was put to the breast within the first hours of birth and 23% mother undergo health check-up after delivery.

In the background of these observations, it is very important to investigate the relevance and effectiveness of the world’s largest and most unique ICDS programme. So, this field study carried out in the Barnala district of Punjab to examine the impact of NHED of ICDS on the pregnant women in terms of enhancing their knowledge in the critical Health Care areas like, health check-up, immunization, nutrition care of children and women, prevention of nutritional deficiency diseases, etc. and the extent to which the pregnant women put this knowledge into practice.

**MATERIALS & METHOD**

The present study was conducted in all three ICDS project: Barnala, Sehna and Mehal Kalan of the Barnala District of Punjab. The study was conducted during August to December 2012. A total of 30 villages (10 from each ICDS project) were selected on the basis of random. From each village 2 pregnant women were selected randomly. Thus a total of 60 pregnant women were in the sample, from all 30 villages which were having Anganwadi for at least the last 25 years, as such pregnant women are expected to avail the NHED service of ICDS scheme. These women were interviewed by house to house survey using interview schedule consisting of close ended question.

**FINDINGS**

Keeping in view the specific objective, personal interviews with pregnant women were conducted. Interviews and observations brought important facts to light. The results are presented in the tabular form below.

**Table 1: Have you received Ternus Texoid Vaccine? If yes, number of doses received?**

(Pregnant Women)

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Responses</th>
<th>Barnala ICDS Project</th>
<th>Sehna ICDS Project</th>
<th>Mehal Kalan ICDS Project</th>
<th>Responses of Total Pregnant Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>One dose</td>
<td>----------</td>
<td>--------------------</td>
<td>--------------------</td>
<td>------------------------</td>
<td>20</td>
</tr>
<tr>
<td>Two dose</td>
<td>16(80)</td>
<td>16(60)</td>
<td>16(100)</td>
<td>48(80.00)</td>
<td></td>
</tr>
<tr>
<td>Not received</td>
<td>02(20)</td>
<td>04(40)</td>
<td>04(40)</td>
<td>10(16.66)</td>
<td></td>
</tr>
<tr>
<td>Does not know</td>
<td>02(20)</td>
<td></td>
<td></td>
<td>02(03.33)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>60(100)</td>
<td></td>
</tr>
</tbody>
</table>

*Source:* Culled from Primary data. Figures in brackets are percentages.
All the pregnant women are immunized by two doses against tetanus. As per norms, the minimum interval between two doses of tetanus toxoid should be at least one month. Table 1 indicates that a high majority (80%) of the pregnant women reported that they received two doses of tetanus toxoid. Some (16.66%) of the women replied that they did not receive any dose of tetanus toxoid vaccination at all. 03.33% women answered that they did not know about the importance of this vaccination.

**Table 2: Have you received Iron & Folic Acid tablets? If yes, from where?**

(Pregnant Women)

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Responses of Barnala ICDS Project</th>
<th>Responses of Sehna ICDS Project</th>
<th>Responses of Mehal Kalan ICDS Project</th>
<th>Responses of Total Pregnant Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anganwadi centre</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Primary health centre</td>
<td>13(65)</td>
<td>10(50)</td>
<td>08(40)</td>
<td>31(51.66%)</td>
</tr>
<tr>
<td>Private hospital</td>
<td>04(20)</td>
<td>------</td>
<td>03(15)</td>
<td>07(11.66%)</td>
</tr>
<tr>
<td>Did not take</td>
<td>03(15)</td>
<td>10(50)</td>
<td>09(45)</td>
<td>22(36.66%)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>60</td>
</tr>
</tbody>
</table>

**Source:** Culled from Primary data. Figures in brackets are percentages.

The coverage regarding the distribution of iron and folic acid tablets to the beneficiaries as shown in Table 2 describes that about 51.66% of the pregnant women received iron and folic acid tablets from primary health centers. Some (11.66%) pregnant women received iron and folic acid tablets from private Hospitals. It was shocking to note that 36.66% of the pregnant women did not receive any iron and folic acid tablets at all.

**Table 3: Have you received Supplementary Nutrition food from AWC? If yes, did you consume the given food?**

(Pregnant Women)

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Responses of Barnala ICDS Project</th>
<th>Responses of Sehna ICDS Project</th>
<th>Responses of Mehal Kalan ICDS Project</th>
<th>Responses of Total Pregnant Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>All consumed</td>
<td>05(25)</td>
<td>01(05)</td>
<td>02(10)</td>
<td>08(13.33)</td>
</tr>
<tr>
<td>Some was consumed</td>
<td>4(20)</td>
<td>06(30)</td>
<td>02(10)</td>
<td>12(20.00)</td>
</tr>
<tr>
<td>Did not consume</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Did not receive</td>
<td>11(55)</td>
<td>13(65)</td>
<td>16(80)</td>
<td>40(66.66)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>60(100)</td>
</tr>
</tbody>
</table>

**Source:** Culled from Primary data. Figures in brackets are percentages.

The quantity of supplementary nutrition to be supplied to each AWCs is based on predetermined target of beneficiaries in each category. It is evident from the Table 3 that a majority (66.66%) of the pregnant women did not receive SN food from the AWCs. Only 33.33% pregnant women received SN food from the AWCs. Out of them, only 13.33% pregnant women told that they consumed all given food and 20% answered that they consumed only some part of the given food. It was sad to find that utilization of supplementary nutrition food by pregnant women was much less than the expected/required.
Table 4: When we should start breast feeding the child?

(Pregnant Women)

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Responses</th>
<th>Responses of Total Pregnant Women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Barnala ICDS Project</td>
<td>Sehna ICDS Project</td>
</tr>
<tr>
<td>1-2 hours</td>
<td>09(45)</td>
<td>03(15)</td>
</tr>
<tr>
<td>2-12 hours</td>
<td>07(35)</td>
<td>13(65)</td>
</tr>
<tr>
<td>12-24 hours</td>
<td>-----</td>
<td>02(10)</td>
</tr>
<tr>
<td>After 24 hours</td>
<td>04 (20)</td>
<td>02(10)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Culled from Primary data. Figures in brackets are percentages.

Ideally, the baby should start the first breastfeed as soon as possible and preferably within the first hour of birth. The data presented in the Table 4 clearly indicates that only one third (33.33%) of the pregnant women knew the appropriate time for feeding colostrum. They answered that it should start immediately within one-two hours of the birth. About 45% of pregnant women felt that initial breast feeding should be within 02-12 hours of the birth. Some (10%) pregnant women viewed that the child may be given breastfeeding within 12-24 hours of the birth. The remaining 11.66% pregnant women of the sample answered that the child should be started breast feeding after 24 hours from the birth.

Table 5: Do you know which type of vaccination should be given to a child up-to three years of age?

(Pregnant Women)

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Responses</th>
<th>Responses of Total Pregnant Women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Barnala ICDS Project</td>
<td>Sehna ICDS Project</td>
</tr>
<tr>
<td>Yes</td>
<td>04(20)</td>
<td>03(15)</td>
</tr>
<tr>
<td>No</td>
<td>16(80)</td>
<td>17(85)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Culled from Primary data. Figures in brackets are percentages.

Children are considered fully immunized, if they have received one BCG injection to protect against tuberculosis, three doses each of DPT (diphtherias, peruses, tetanus), polio vaccination and one measles vaccine. In the present investigation as described in Table 5, a high majority (81.66%) of the pregnant women did not know about the names of different types of vaccinations given to their children. Only 18.33% of pregnant women knew about the different types of child vaccinations. Thus, the awareness and knowledge about child vaccination of pregnant women under present study was not adequate.
Table 6: What causes Measles? (Pregnant Women)

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Responses Barnala ICDS Project</th>
<th>Responses Sehna ICDS Project</th>
<th>Responses Mehal Kalan ICDS Project</th>
<th>Responses of Total Pregnant Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due to some infection.</td>
<td>02(10)</td>
<td>05(25)</td>
<td>04(20)</td>
<td>11(18.33)</td>
</tr>
<tr>
<td>Due to some deficiency.</td>
<td>01(05)</td>
<td>------</td>
<td>01(05)</td>
<td>02(03.33)</td>
</tr>
<tr>
<td>Due to some curse.</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>------</td>
</tr>
<tr>
<td>Do not know.</td>
<td>17(85)</td>
<td>15(75)</td>
<td>15(75)</td>
<td>47(78.33)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>60(100)</td>
</tr>
</tbody>
</table>

Source: Culled from Primary data. Figures in brackets are percentages.

Measles is one of the most dreaded human diseases caused by infection to the child and can cause serious illness, lifelong complication and even death. The Table 6 clearly indicates that a majority (78.33%) pregnant women did not know about the cause of measles. About 18.33% logically answered that measles occur due to some viral infection. Merely two (3.33%) pregnant women believed that it was due to some deficiency in human body.

It was disappointing to find that a high (81.66%) pregnant women did not know real reasons behind measles.

Table 7: Do you know how to prepare ORS (Oral Rehydration Solution)? If yes, who advised you? (Pregnant Women)

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Responses Barnala ICDS Project</th>
<th>Responses Sehna ICDS Project</th>
<th>Responses Mehal Kalan ICDS Project</th>
<th>Responses of Total Pregnant Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, Private health staff.</td>
<td>01(05)</td>
<td>------</td>
<td>04(20)</td>
<td>05(08.33)</td>
</tr>
<tr>
<td>Yes, Government health staff</td>
<td>07(35)</td>
<td>03(15)</td>
<td>03(15)</td>
<td>13(21.66)</td>
</tr>
<tr>
<td>Yes, AWWs</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Did not know</td>
<td>12(60)</td>
<td>17(85)</td>
<td>13 (65)</td>
<td>42(70.00)</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>60(100)</td>
</tr>
</tbody>
</table>

Source: Culled from Primary data. Figures in brackets are percentages.

It is observed that most of the deaths of children below three years of age are caused by diarrheal diseases. Oral rehydration solution has effectively prevented or treated the diarrheal dehydration. The Table 7 explains that a majority (70%) of the pregnant women did not possess the skill to prepare oral rehydration solution. The remaining 30% pregnant women had proper skill to prepare oral rehydration solution. Out of them 8.33% pregnant women learnt the method to prepare oral rehydration solution from private health staff and 21.66% received the same from government health staff. The performance is again insufficient at the level of pregnant women and the staff.

DISCUSSION

A study on health and nutrition education component of ICDS programme on pregnant women was analysed on 60 pregnant women in rural area of Barnala district of Punjab. It was found under the present study that 80% women received tetanus toxoid vaccination. The position is different in Chhattisgarh, as Sharma et al. (2013) observed that 39.84% of eligible pregnant women received tetanus toxoid vaccination. Singh et al. (2013) in Rajasthan also contrasting our findings, where they found that 43.33% women received tetanus toxoid vaccination. It was found that 36.66% of the women did not receive any iron and folic acid tablets at all. In Gujarat,
slightly better position was found as Chudasama et al. (2014)\(^8\) indicated that 71.7% of the women received iron and folic acid tablets. On the other hand, iron and folic acid tablets were distributed by 50% AWWs according to Kumar et al. (2014)\(^9\) in Jharkhand. It was sad to find that a majority (66.66%) pregnant women did not receive supplementary nutrition ration from AWCs due to various reasons. The best result, however, came from a study conducted by Thakare et al. (2011)\(^{10}\) in Maharashtra as it revealed that 76.29% of the pregnant women received supplementary nutrition food from the AWCs. A majority (81.66%) of the women did not know about the different types of vaccinations to be given to child. The position was good in Odisha to compare present findings as Paul, B et al. (2012)\(^{11}\) found that 50.9% of the women were known about the different types of routine vaccination of children. It was shocking to note that 81.66% women did not have awareness about the main cause of measles. Other comparable study by SEDEM (2005)\(^{12}\) showed still better results in Rajasthan as 61.6% women did not know what causes measles. However, it is clear that Punjab, as shown by the present study, is begging behind in this regards.

**CONCLUSION**

The results showed that the pregnant women did not have adequate knowledge and proper awareness about nutrition and health care areas related to the children and women. In this regard, it is recommended that Supervisors should be given the responsibility of organising formal NHED sessions at regular intervals in AWCs under their supervision. Continuous and effective monitoring by Child Development Project Officers (CDPOs) and district officials, as also active participation of health functionaries, can go a long way in the effective implementation of this component.

**Acknowledgement:** Nil

**Ethical Clearance:** Taken From Appropriate Committee.

**Source of Support:** Self- Finance

**Conflict of Interest:** Nil

**REFERENCES**

Psychological Outcome of Stroke and Determinants of Psychological Problems among Stroke Survivors

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ABSTRACT

Psychological problems may significantly impact stroke survivors in their long-term functioning and quality of life, reduce the effects of rehabilitation services and lead to higher mortality rates. Data regarding psychosocial problems among stroke survivors from developing countries are scarce. The objectives of the study were to estimate the proportion of the psychological problems of patients with stroke and identify the determinants of psychological problems among stroke survivors. The study was conducted at Department of Neurology, Medical College Hospital, Thiruvananthapuram, India, using a hospital based cross sectional design. Patients who had completed two months since the onset of stroke up to five years in the age group of 25-65 years attending Neurology OPD formed the sample for study by consecutive sampling technique (N=310). The proportion of psychological problems of stroke was estimated to be 66.8% with proportion of behavioural problems as 61.9% and emotional problems 65.5%. Duration of stroke, gender, rate of disability and financial status were significant determinants of psychological problems of stroke. Health care professionals must recognize and be sensitive to the profound impact of stroke on psychological wellbeing.

Keywords: Psychological problems, determinants, stroke survivors, proportion.

INTRODUCTION

Stroke is a life-threatening and life-altering event, which leaves many physical and mental disabilities, thus creating major social and economic burden.¹ It is also a leading cause of functional impairments, with 20% of survivors requiring institutional care after 3 months and 15% - 30% being permanently disabled.² Psychological changes including emotional, behavioural and cognitive changes are common after stroke.³ The major emotional and psychological problems of stroke survivors were frustration at their limitations, fear of another stroke, anxiety, emotional sequences, stigma and isolation.⁴

BACKGROUND OF THE STUDY

Psychological problems may significantly impact long-term functioning and quality of life, reduce the effects of rehabilitation services and lead to higher mortality rates.⁵ Data regarding psychosocial problems among stroke survivors from developing countries are scarce.⁶ No proved strategy yet exists to address the psychosocial difficulties of patients with stroke and their families. Chronic stroke survivors should be routinely screened for psychological problems, and its negative impact on functional outcome and quality of life.⁷ Our work was to study the psychological outcome in terms of problems and identify its determinants so that these data may help identify those patients at greatest risk of poor psychological outcome and thus help in planning trials and delivering appropriate interventions.

OBJECTIVES

Ø Estimate the proportion of the psychological...
problems of patients with stroke.

Ø Determine the association between socio demographic and clinical variables with psychological problems of patients with stroke.

Ø Identify the determinants of psychological problems among stroke survivors.

Hypotheses

H1: The estimate of the proportion of psychological problems would be more than fifty percent.

H2: The factors such as age, gender, education, occupation, type and duration of stroke, compliance, financial status and ability to work have significant associations with problems of patients with stroke.

MATERIALS & METHOD

Research approach: Quantitative approach

Design: Cross sectional design (hospital based).

Study setting: Department of Neurology, Medical College Hospital, Thiruvananthapuram, India

Population: Patients who had completed two months since the onset of stroke, up to five years in the age group of 25-65 years, attending a government tertiary care centre for follow up treatment.

Exclusion criteria: Patients in acute stage, having altered level of consciousness or disorientation, having associated other neurologic/psychiatric problems, unmarried/widow/widower patients and not willing to participate.

Sample: Patients who had completed two months since the onset of stroke up to five years in the age group of 25-65 years attending Neurology OPD.

Sample size: The formula for calculation of sample size for estimating a single proportion was used for calculating the sample size. N= 310.

Sampling Technique: Consecutive sampling. It involves taking every subject who presents herself/himself over a specified time period. They are not strictly random techniques, but they avoid bias in selection. They are next to random and feasible for hospital prevalence studies. In this study researcher has selected all patients with stroke who satisfied the sampling criteria in the age group of 25-65 yrs when they attended Neurology OPD for follow up treatment during the study period.

Variables under study

i) Socio demographic variables

• Age, Gender, Area of residence, Living arrangement, Education, Occupation, Financial status, Ability to work and Insurance.

ii) Clinical variables

• Type of stroke, Duration of stroke, Co-morbidities and Compliance to treatment regimen

Outcome variable

• Psychological Problems of patients with stroke.

Tools and Techniques:

The tools for data collection comprised of the following measures.

i) Interview Schedule to Assess Socio demographic data and Clinical profile

ii) Stroke Impact Assessment Questionnaire (SIAQ)

Stroke Impact Assessment Questionnaire (SIAQ) is the new tool developed and validated by the researcher using patient centered approaches in each stage of construction and tested to have acceptable levels of psychometric properties and had thirty items distributed in physical, psychological, social and economical domains. Items from psychological domain were used to measure the psychological problems.

Data Collection Process: The data collection was done on patients with stroke who satisfied the sampling criteria when they came for follow up treatment at Neurology OPD. After obtaining informed written consent from the patients data were collected by personal interview technique. The Malayalam (local language) version of the tool was administered. They were interviewed in a separate room of OPD in a relaxed atmosphere. The administration of questionnaire took about 20 minutes approximately for each patient.

Ethical Considerations

• Sanction was obtained from the Institutional
Informed written consent was obtained from the participants of the study. The autonomy of the participant was given prime importance. Confidentiality of the data was assured to the participant when consent was taken.

**FINDS OF THE STUDY**

**Section I: Socio demographic data**
- In the present study majority of the patients 88.1% were above 45 years. 28.1% were in the age group of 45-54 yrs and 45.5% were in the age group 55-64 yrs group and 14.5% were 65 years. The mean age of the patients were 54.95 yrs ± 8.5 SD and median age was 56 yrs.
- Out of 310 patients under study 78.1% were males and 21.9% were females.
- 30.6% of the patients with stroke were from urban area, 69.4% from rural area.
- 87.1% of patients were living with their spouses and 12.9% were living with their children.
- 13.9% were illiterate, 47.1% had only primary education and 36.8% and 12.2% had studied up to high school level.
- 20.6% were unemployed, 47.1% were unskilled labourers, 15.2% were skilled labourers, 11.0% were office goers / executives, 3.1% belonged to group others which included pensioners, doing business, and professionals.
- 43.5% smoked and consumed alcohol, 21.6% were only smokers, 6.5% consumed alcohol alone and 28.4% had no unhealthy habits.

**Section II: Clinical data**
- 88.4% had ischemic stroke and for 11.6% type of stroke was hemorrhagic in origin.
- 68.7% had their duration of stroke from two months to one year. 31.3% were more than one year past the onset of stroke.
- 81.6% had compliance towards treatment regimen and 18.4% were not having compliance to treatment regimen.
- 44.2% belonged to Above Poverty line (APL) category and 55.8% to Below Povety line (BPL) category.
- Regarding ability to work after the onset of stroke, 81.9% couldn’t do any work, 10.0% could work as before, 8.1% were able to work to some extent or had to change their job.

**Estimate of proportion of problems**

Table 1: Estimate of proportion of problems of patients with stroke with 95% CI

<table>
<thead>
<tr>
<th>Problems</th>
<th>Percentage of proportion (moderate to severe)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological</td>
<td>66.8</td>
<td>61.38 - 71.85</td>
</tr>
<tr>
<td>Behavioural</td>
<td>61.9</td>
<td>56.51 - 67.31</td>
</tr>
<tr>
<td>Emotional</td>
<td>65.5</td>
<td>60.20 - 70.76</td>
</tr>
</tbody>
</table>

The proportion of psychological problems of stroke were estimated to be 66.8% with 95% CI (61.38 to 71.85) The proportion of behavioural problems was 61.9% with 95% CI (56.51 - 67.31) and emotional problems 65.5% with 95% CI (60.20 - 70.76).

**Univariate Analysis of psychological problems of stroke with variables**

Table 2: Association of psychological problems of stroke with sociodemographic and clinical variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Moderate to severe (N=207)</th>
<th>Mild (N=103)</th>
<th>Total (N=310)</th>
<th>χ²</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Age group (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 45 years</td>
<td>27</td>
<td>73.0</td>
<td>10</td>
<td>27.0</td>
<td>37</td>
<td>100.0</td>
</tr>
<tr>
<td>≥ 45 years</td>
<td>183</td>
<td>67.0</td>
<td>90</td>
<td>33.0</td>
<td>273</td>
<td>100.0</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>52</td>
<td>76.5</td>
<td>16</td>
<td>23.5</td>
<td>68</td>
<td>100.0</td>
</tr>
<tr>
<td>Male</td>
<td>158</td>
<td>65.8</td>
<td>84</td>
<td>34.7</td>
<td>242</td>
<td>100.0</td>
</tr>
</tbody>
</table>
A highly significant association was found with psychological problems and the variables financial status and ability to work (p < 0.05) in univariate analysis. There was no statistically significant association observed between psychological problems of stroke and the variables age, gender, religion, area of residence, living arrangement, education, and occupation.

Table 3: Association of psychological problems of stroke with clinical variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Moderate to severe (N=207)</th>
<th>Mild (N=103)</th>
<th>Total (N=310)</th>
<th>( \chi^2 )</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Stroke</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ischemic</td>
<td>186</td>
<td>67.9</td>
<td>88</td>
<td>32.1</td>
<td>274</td>
</tr>
<tr>
<td>Haemorrhagic</td>
<td>24</td>
<td>66.7</td>
<td>12</td>
<td>33.3</td>
<td>36</td>
</tr>
<tr>
<td>Duration of stroke</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1 year</td>
<td>154</td>
<td>72.3</td>
<td>59</td>
<td>27.7</td>
<td>213</td>
</tr>
<tr>
<td>&gt;1 year</td>
<td>56</td>
<td>57.7</td>
<td>41</td>
<td>42.3</td>
<td>97</td>
</tr>
<tr>
<td>Compliance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>170</td>
<td>67.2</td>
<td>83</td>
<td>32.8</td>
<td>253</td>
</tr>
<tr>
<td>Irregular</td>
<td>40</td>
<td>70.2</td>
<td>17</td>
<td>29.8</td>
<td>57</td>
</tr>
</tbody>
</table>

Among the clinical variables, duration of stroke was found to have significant association with psychological problems (p = 0.011). The patients within one year duration after stroke (72.3%) had higher proportion of moderate to severe problems as compared to patients who had duration of stroke more than one year (57.7%). Other variables type of stroke and compliance had no significant association with psychological problems.

Multivariate analysis of psychological problems with significant variables using logistic regression.
The statistically significant variables up to 10% level in univariate analysis were considered for multivariate analysis using binary logistic regression.

**Table 4: Logistic regression of significant variables with psychological problems**

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>S.E</th>
<th>Wald</th>
<th>df</th>
<th>p</th>
<th>OR</th>
<th>95.0% C.I.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.704</td>
<td>0.347</td>
<td>4.120</td>
<td>1</td>
<td>0.042*</td>
<td>2.024</td>
<td>1.024 - 4.000</td>
</tr>
<tr>
<td>Occupation</td>
<td>-0.047</td>
<td>0.314</td>
<td>0.023</td>
<td>1</td>
<td>0.880</td>
<td>0.954</td>
<td>0.516 - 1.764</td>
</tr>
<tr>
<td>Ability to work</td>
<td>-0.016</td>
<td>0.299</td>
<td>0.003</td>
<td>1</td>
<td>0.957</td>
<td>0.984</td>
<td>0.548 - 1.767</td>
</tr>
<tr>
<td>Duration of illness</td>
<td>0.684</td>
<td>0.269</td>
<td>6.490</td>
<td>1</td>
<td>0.01*</td>
<td>1.982</td>
<td>1.171 - 3.355</td>
</tr>
<tr>
<td>Financial status</td>
<td>0.551</td>
<td>0.255</td>
<td>4.677</td>
<td>1</td>
<td>0.03*</td>
<td>1.734</td>
<td>1.053 - 2.856</td>
</tr>
<tr>
<td>Constant</td>
<td>-3.060</td>
<td>0.801</td>
<td>14.605</td>
<td>1</td>
<td>0.00</td>
<td>0.047</td>
<td></td>
</tr>
</tbody>
</table>

- According to the above table female gender is found to have two times more Odd’s to have psychological problems compared to their counterparts.

- Patients with duration of stroke less than one year had two times more chance to have psychological problems of stroke (p=0.01).

- BPL patients compared to those with APL status were 1.7 times more likely to have moderate to severe psychological problems of stroke (p=0.03).

**DISCUSSION & CONCLUSION**

The proportion of psychological problems of stroke was estimated to be 66.8 % with proportion of behavioural problems as 61.9 % and emotional problems 65.5%. Duration of stroke, gender, rate of disability and financial status were significant determinants of psychological problems of stroke. Raju 2010 in her study conducted at Ludhiana has stated that 24% of patients had anxiety and 37% of patients had depression. Kapelle and colleagues also had reported inability to work and poorer economic status were associated with psychological problems. Although most studies on stroke outcome have focused on the physical consequences, there is increasing evidence that patients are also prone to psychological problems. Estimates of the frequency of psychological problems vary depending on the type of stroke patients included, the timing of assessments, and the measurement tools used. The study highlights the need for early and prompt detection of these problems to institute better rehabilitation programmes for stroke survivors with emphasis on psychological aspects to improve their quality of life.

**Implications of the study.**

- Recovery from stroke is often a long term process that can continue for many years or even lifelong. All stroke survivors and their carers should be assessed for psychological problems and their impact on stroke recovery at all stages of stroke to help them attain a near normal life adjusting to the disabilities imposed.

- Nation should invest on stroke rehabilitation with appropriately trained multidisciplinary team with emphasis on psycho social rehabilitation. Provision of services by clinical psychologists and stroke nurses trained as counsellors who should ideally be part of the multidisciplinary stroke team, both in hospital and in the community has to be encouraged.

**Suggestions for further research**

- The study suggests that patients with stroke have persisting problems on psychological aspects
that are not being addressed by health professionals and support agencies hence more studies can be conducted focusing on these problems.

- Developing and testing effective interventions for psychological problems to facilitate better stroke rehabilitation

**RECOMMENDATIONS**

As a result of the study, the researcher has come up with following recommendations for clinical practice:

- Health care professionals must recognize and be sensitive to the profound impact of stroke on psychological wellbeing.

- Statutory counseling services should be available to the stroke patients and their spouses on both an acute and long-term basis to help them cope with the complex issues like adapting to the disabilities imposed, returning to work and sexual problems.

**LIMITATIONS**

As a community study was not feasible for estimating the proportion of the psychological problems in the absence of a registry at community level, the researcher adopted a hospital based study for estimating the proportion of psychological problems of patients with stroke.

Psychological problems were not surfaced during acute period or during hospitalisation and more over many were in a varied level of consciousness and unable to respond, the study was limited to patients past two months after onset of stroke.

**Acknowledgement:** The authors are thankful to the Principal and Superindentdent of Medical College Thiruvananthapuram for granting permission to conduct the study and Institutional Ethics Committee of Medical College Thiruvananthapuram. We also extend our genuine gratitude to all patients and caregivers who participated in this study.

**Conflict of Interest:** Nil

**Source of Funding:** Self

**REFERENCES**

Knowledge and Practice of Mothers of Under-Five Children on Worm Infestation in Rural Community in Dakshina Kannada District

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¹Assistant Professor, Department of Community Health Nursing, ²Assistant Professor, Department of Medical Surgical Nursing, ³B.Sc (N) Students, Manipal College of Nursing, Mangalore, Manipal University

ABSTRACT

The descriptive correlational study was done to identify the knowledge and practice of mothers of under-five children regarding worm infestation with the view to develop a health education pamphlet in rural community in Dakshina Kannada district. The main objective of this study was to determine the knowledge and practice of mothers of under-five children regarding worm infestation and to find the correlation between the knowledge and practice scores of mothers of under-five children. A total of 200 mothers of under-five children were participated in the study. Results: the result showed that 38.0% of mothers of under-five children had fair knowledge and 34.5% of mothers had poor knowledge regarding worm infestation; 92.5% of mothers of under-five children had satisfactory practice. And also the study results showed that, there is a significant relationship (p<0.05) between the knowledge and practice scores. Thus, the findings of the study can be interpreted as that, even though, majority of the mothers of under-five children are having satisfactory practice to prevent worm infestation, but they are still lack of having adequate knowledge on worm infestation.

Keywords: Knowledge, practice, mother, children, pamphlet.

INTRODUCTION

Worldwide, more than 3.5 billion people are infected with intestinal worms, of which 1.47 billion have roundworm, 1.3 billion have hookworm and 1.05 billion have whipworm. Children aged 5 – 15 years make up the group with the highest infection rate and highest worm burden, which contributes greatly to the contamination of the environment and poor sanitation and hygiene. It is estimated that about 400 million school-age children are infected with roundworm, whipworm and hookworm worldwide.¹

Intestinal parasitism is a priority health problem. Since worm infestation is seldom the direct cause of death, they tend to be regarded as relatively unimportant. In India, the problem is likely to be more common because of bad hygiene, poor awareness, illiteracy, misbeliefs, poverty and variety of allied factors¹. Studies carried out in various parts of India have reported a prevalence of intestinal parasitism up to 30-50% and anaemia from 40-73% among school going girls.² It is estimated to affect over 200 million people in India and public health specialists are concerned that these infections impair children’s growth and development.³

A study about prevalence of worm infestation among communities in rural Delhi stated that, worm infestation is a major problem in developing countries due to bad hygienic conditions. It produces nutritional
deficiencies and anemia in children, especially when hookworm infestation is present. Much number of studies have reported a high prevalence of worm infestation among school children in different parts of the country. Children aged between one and five years are particularly vulnerable to disease caused by soil-transmitted helminths (STH). Periodic deworming (T. Albendazole) has been shown to improve growth, micronutrient status (iron and vitamin A).

The researcher also observed that, the helminthic infection in under-fives was reported very commonly among the rural community population during the field work. This made the researcher to take up interest on analyzing the knowledge and practice of mothers of under-five children; the primary care taker of children on worm infestation.

LITERATURE REVIEW

The percent prevalence of worm infestation was 71.73%. The maximum infestation was of Ascarislumbricoides (23.73%) followed by Hymenolepsis nana (16.36%), Entamoebahistolytica (10.34%), Ankylostomaduodenale (8.46%) and Trichuristrichiura (6.34%). In severely anemic children, Ankylostomaduodenale infestation was 4.76% and multiple infestations was seen in 5.56% of girls. Enterobiusvermicularis, Giardia lamblia, and Diphyllobothriumlatum were demonstrated in 2.76%, 2.16% and 1.1% cases respectively. Out of 281 non-anemic girls, 177 (62.98%) had worm infestation, while of the 435 anemic girls, 334 (76.8%) demonstrated evidence of worms in their stool. Prevalence of worm infestation was 86.66%, 68.16% and 82.97% in mild, moderate and severely anemic groups' respectively.

The world health organization estimates that infection with round worm (Ascarislumbricoides) whip worm (Trichuristrichiura) and hook worms with associated morbidity, affect approximately 250 million, 46 million and 151 million people respectively. About half the populations in south India and 50% of school children in tribal areas of central India are infected with Ascarislumbricoides, Trichuristrichiura and hook worm.

This study conducted in Hubli, Karnataka. In this study of fecal samples from 1000 children aged below 6 years was obtained and 680 (68.0%) among them detected to have intestinal helminthic infection. The incidence of intestinal helminthiasis in urban group of children was 56.8% (284 out of 500 tested) while in rural group of children was 79.2% (396 out of 500 tested). All cultures of fecal samples positive for hook worm ova revealed the prevalent species as Necator americanus in this area.

The study was conducted among school going children of Baiga, Abuihmadia and Bharia tribes of Madhya Pradesh to assess the prevalence of anemia and intestinal parasitic infestation among themselves. A total of 776 school going children were included in the study of which blood samples of all and stool samples of 409 were collected. The results revealed that 30.3% of the children had severe anemia and 50% children had intestinal parasites. Though hookworm ova loads indicated mild to moderate infestation in most of the children, the continued presence of worms in marginally nourished children could contribute significantly to blood loss in the intestine with resultant anaemia.

The study was conducted by Amar Tripura, Taranga Reana, Kaushik Tripura, Arundhuti Roy on knowledge and practice on intestinal helminthiasis among rural tribal mothers of under five children in Mohankur block, west district of Tripura a north eastern state of India. This study was conducted among 117 mothers of under 5 children who were selected through systematic random sampling method in the year 2012 and face to face interview was performed using semi structured questionnaire in the rural village under Mohankur rural development block. The result showed that, about 51.60% of the respondents were unable to describe even single helminthic infection.

Objectives:

- To determine the knowledge and practice of mothers of under five children regarding worm infestation.
- To find the correlation between the knowledge and practice scores of mothers of under-five children.

MATERIALS & METHOD

The descriptive correlational design was used in this study. Non-probability purposive sampling technique was used to obtain the data from a total
of 200 mothers of under-five children aged between 15 to 45 years residing in selected rural areas (i.e., Shivanagar, Moodshedde, Pilikula) of Dakshina Kannada district. The administrative permission was obtained from the Moodshedde, Shivanagar panchayat of DK district to conduct the study and this study included only the mothers those who are having children below the age of 5 years.

Based on the review of literature, the demographic proforma, structured knowledge questionnaire ($r = 0.71$) and the rating scale ($r = 0.99$) i.e., opinionaire to assess the practice of mothers of under-five children was developed. After obtaining the written consent from study participants, the pre tested tools were applied to obtain the data. The pamphlet was developed to provide information on various aspects of worm infestation which includes incidence, causes, mode of transmission, life cycle, signs and symptoms, diagnosis, treatment, complications, preventive measures and the simple home remedies. Pamphlet was prepared in Kannada language and it was distributed as a complimentary copy for the study participants after the collection of data and it is not considered for the analysis of the study.

Data were entered in SPSS 16.0 windows and analyzed. The descriptive and inferential (Spearman’s rank correlation coefficient) statistics was used to analyze the data.

**RESULTS**

The SPSS (Version 16.0) was used to analyze the collected data of this study. The descriptive and inferential statistics were used to interpret the findings.

**I. Demographic characteristics:**

Majority of the participants (58.0%) were belonged to 26-35 years of age group, 45.5% of samples belonged to nuclear family, 47.5% of mothers have reported that, they have two children, Maximum number (30.5%) of samples said that, they have education qualification till high school, 46.5% of mothers reported that they are unemployed, and 41.0% of the family lives in tiled types of house, 41.0% of mothers reported that, their family income ranges from Rs. 5001-10000/-.

Most (42.5%) of the mothers reported that, the health facilities which they frequently access is clinic, 43.5% of mothers said that, they receives information on worm infestation from health care worker.

Majority (76.0%) of the samples reported that, they were immunized their children as per the schedule, 52.5% mothers said that, their child did not suffered with worm infestation in the past, and 41.5% mothers reported that, they give deworming tablets to their child once in six months.

**II. Knowledge and Practice of mothers of Under-5 children:**

Knowledge and Practice of mothers of under-five children was assessed by the knowledge and practice questionnaire on worm infestation. Individual scores were calculated based on the responses to each item. Data were collected from 200 mothers with under five children in rural community of Dakshina Kannada. Knowledge and Practice scores of mothers were analyzed and presented according to the scoring category (arbitrary) in tables.

**A. Knowledge of mothers of under-five children:**

The frequency and percentage of knowledge scores of mothers of under-five children were computed and presented in table 1.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Knowledge Category</th>
<th>Frequency (f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Poor</td>
<td>69</td>
<td>34.5</td>
</tr>
<tr>
<td>2</td>
<td>Fair</td>
<td>76</td>
<td>38.0</td>
</tr>
<tr>
<td>3</td>
<td>Good</td>
<td>35</td>
<td>17.5</td>
</tr>
<tr>
<td>4</td>
<td>Excellent</td>
<td>20</td>
<td>10.0</td>
</tr>
</tbody>
</table>

The data presented in table 1 show that 38.0% of mothers of under-five children had fair knowledge and 34.5% of mothers had poor knowledge regarding worm infestation.

**B. Practice of mothers of under-five children:**

The frequency and percentage of practice scores
of mothers of under-five children were computed and presented in table 2.

Table No 2: Frequency and percentage of practice scores of mothers of under-five children.

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Practice Category</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Satisfactory</td>
<td>185</td>
<td>92.5</td>
</tr>
<tr>
<td>2.</td>
<td>Unsatisfactory</td>
<td>15</td>
<td>7.5</td>
</tr>
</tbody>
</table>

The data presented in table 2 shows that 92.5% of mothers of under-five children had satisfactory practice on worm infestation.

III. Correlation between Knowledge and Practice of mothers of under-five children:

The Spearman’s rank correlation coefficient test was used to find the correlation between the knowledge and practice exact scores and presented in table 3.

Table No 3: Correlation between Knowledge and Practice scores.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Spearman’s rank correlation (r)</th>
<th>Significance (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>0.406</td>
<td>.000*</td>
</tr>
<tr>
<td>Practice</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data presented in table 3 shows the correlation between knowledge and practice scores. The obtained ‘r’ value between knowledge exact scores with practice exact scores was found to be significant at 0.05 level of confidence (p<0.05). Hence, it is interpreted that, there is a statistically significant relationship between knowledge and practice scores.

DISCUSSION

The findings of the study have been discussed with reference to the objectives and also with regard to the findings of the other studies.

Present study finding showed that maximum number (38.0%) of mothers of under-five children had fair knowledge and 34.0% of mothers had poor knowledge and Most of the mothers of under-fives (92.5%) had satisfactory practice on worm infestation.

This findings of knowledge score was supported by the study which was conducted by Amar Tripura, Taranga Reana, Kaushik Tripura, Arundhuti Roy on knowledge and practice on intestinal helminthiasis among rural tribal mothers of under five children in Mohankur block, west district of Tripura; a north eastern state of India”. This study was conducted among 117 mothers of under 5 children who were selected through systematic random sampling method in the year 2012 and face to face interview was performed using semi structured questionnaire in the rural village under Mohankur rural development block. The result showed that, about 51.60% of the respondents were unable to describe even single helminthic infection.

Present study finding on knowledge of mothers are also supported by the study which was conducted by Jeba Subitha.Y to “assess the effectiveness of STP on knowledge regarding prevention of worm infestation among mothers of under-five children in selected hospital, Bangalore. There were 30 samples included in this study and the result showed that, the pretest knowledge score of mothers of under-five children on worm infestation was inadequate 26 (86.7%).

The study on effectiveness of structured teaching programme on knowledge and practice regarding prevention of worm infestation, among mothers with under-five children in selected rural areas at Uttarahalli, Bangalore. The result of pretest showed that, Majority (87%) mothers had inadequate knowledge and 13% of mothers had Moderate knowledge in experimental group and in the control group 84% of mothers had inadequate knowledge; 13% of mothers had moderate knowledge and only 3% mothers had adequate knowledge. And also it showed that 77% mothers had inadequate practice; 23% of mothers had moderate practice in experimental group and majority (83%) mothers had inadequate practice and only 17% mothers had moderate practice in control group. It concluded that the mothers with under-five children knowledge and practice level were very low regarding prevention of worm infestation. These study findings of knowledge
score was supportive to the present study and the practice score was contradict to the present study.\textsuperscript{11}

CONCLUSION

The present study finding showed that maximum number (38.0\%) of mothers of under-five children had fair knowledge and 34.0\% of mothers had poor knowledge and most of the mothers of under-fives (92.5\%) had satisfactory practice on worm infestation. And also it showed that there is a significant correlation between knowledge and practice of mothers of under-five children. The findings of the study can be interpreted that, even though, majority of the mothers of under-five children are having satisfactory practice to prevent worm infestation, but they are still lack of having adequate knowledge on worm infestation. According to the researcher, it is important to have an adequate knowledge for any practice because any long term practice towards promotion of health or prevention of disease is influenced by good knowledge of people in the community on the concern subject. Hence the researcher concludes that, the certain measures such as IEC, BCC, Out-reach programmes on worm infestation need to be more incorporated along the existing health programmes in order to improve their knowledge and to have an consistent improvement in the good practice which further reduces the morbidity rates of worm infestation/parasitic infection in rural India.

Acknowledgement: Dr. Christopher Sudhaker, Dean, MCON & All faculties of MCON, Mangalore, Sumaya Nandoth, Tenzin Tsephl, Sandeep Kaur Antal B.Sc (N) Students, MCON, Mangalore.

Ethical Clearance: Obtained from Institutional Research Committee (IRC).

Source of Funding: Self

Conflicts of Interest: Nil

REFERENCES

A Comparative Study to Assess the Effectiveness of Planned Teaching Versus Information Booklet on Selected Aspects of Care for Antenatal Mothers Diagnosed with Hypertension

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ABSTRACT

Objectives:
1. To assess the knowledge of ante-natal mothers with hypertension regarding selected aspects of care before and after planned teaching.
2. To identify the knowledge of antenatal mothers with Hypertension regarding the selected aspects of care before and after the use of information booklet.
3. To compare the knowledge gained through planned teaching and the use of an information booklet on the selected aspects of care for ante-natal mothers diagnosed with hypertension.

Materials and Method:

Methodology: The research approach used in this study was, “Quasi experimental study.” The data gathering process started after getting required permission from respective authorities. The knowledge of the samples regarding hypertension during pregnancy was obtained by structured questionnaire in terms of pre-test and post-test.  

Result: Results suggests that there is significant increase in the knowledge scores of the group in the post-test (after receiving planned teaching) than in the pre-test (before planned teaching).

Conclusion: The results indicated that an equal positive response to the Booklet and the planned teaching was found really useful to them. The samples expressed that they were expecting more of such kind of information with pictures and planned teaching.

Keywords: Planned teaching, Information booklet, Ante-natal mothers.

INTRODUCTION

Depending upon the vulnerability of an individual to stress and the nature of the environment, stress is likely to bring about a disturbance in hormonal and neurotransmitter balance. This will result in disease like hypertension, bronchial asthma, diabetes mellitus, and peptic ulcer. The normal growth and development of the fetus can be adversely affected by a number of factors such as infection, complications during pregnancy like Pregnancy induced hypertension, Diabetes etc. The most important thing that a pregnant woman can do to detect disorder is to receive regular prenatal examinations. Serious problems are usually prevented in women who develop this disorder if they are receiving regular prenatal care.

MATERIALS & METHOD

SAMPLE SIZE AND SAMPLING TECHNIQUE: The sample consisted of 50 patients, (25) Information Booklet + (25) Planned Teaching. Antenatal mothers who are diagnosed with hypertension during pregnancy. The technique used was non-probability, purposive sampling.

SAMPLING CRITERIA: Antenatal mothers were selected according to the following criteria.
1. Pregnant mothers diagnosed only with hypertension and whose blood pressure was 130/90 mm of Hg.
2. Pregnant mothers who understand speak or read Hindi, Marathi or English.
3. Pregnant mothers who are willing to participate in the study.

**TECHNICAL INFORMATION**

**TOOL AND TECHNIQUE:** The following steps were carried out in preparing the tool:

1. Literature review.
2. Preparation of the blue print.
3. Consultation with the guide and subject experts.

Structured questionnaires were used to collect data and knowledge of samples regarding hypertension during pregnancy. To establish content validity the tool was prepared and given to ten subject experts for validation. The reliability of the questionnaire was calculated by using the Split Half Method\(^8\). The study was carried out obtaining written permission from the concerned authorities.

**DATA GATHERING PROCESS:** The data gathering process started after getting required permission from respective authorities. The knowledge of the samples regarding hypertension during pregnancy was obtained by structured questionnaire in terms of pre-test and post-test.

**VALIDITY:** There was common agreement among the experts, who were incorporated there after in the tool. Thus the content validity of the tool was established.

**RELIABILITY:** The reliability of the questionnaire was calculated by using the Split Half Method. The formula used is Spearman Brown Prophesy Formula.\(^1\)

\[
r = \frac{1}{1+\frac{1}{2} r^\frac{1}{2} \cdot \frac{1}{2}} = 0.91
\]

**ETHICS:** Informed consent was taken from the samples of the study.

**STATISTICS:** Statistics included frequency, percentage, mean, standard deviation and inferential statistic including ‘t’ test and co-relational coefficients.

**FINDINGS**

Table 1 – A: distribution of knowledge scores with regard to exercises and relaxation management of hypertension during pregnancy

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Items Exercises And Relaxation</th>
<th>Group I (Booklet) Pre F % Post F %</th>
<th>Group II (Planned teaching) Pre F % Post F %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>* To combine your daily work with daily exercise a. Walk about. b. Do most of the work yourself. c. Do exercises as per availability of the time. d. Don’t know.</td>
<td>5 20 11 44</td>
<td>3 12 6 24</td>
</tr>
<tr>
<td>3</td>
<td>* Best technique for relaxation of the body and to reduce stress, tension, blood pressure a. Deep breathing. b. Reading book. c. Watching television. d. Bathing.</td>
<td>9 36 19 76</td>
<td>6 24 21 84</td>
</tr>
</tbody>
</table>
With respect to the “best exercise when advised complete bed rest”. It was noted that in the pre-test 76% (19) of the samples gave the correct response that is, the best exercise, when advised complete bed rest is yoga. The score changed to 96% (24) in the post-test for Group I, In Group II 80% (20) of the samples gave the correct response in the pre-test which improved to 96% (24) in the post-test. In relation to the “combining daily work with daily exercises”, it was identified that in the pre-test, that 20% (5) and 12% (3) of the samples of Group I and Group II respectively gave the correct response to the question that antenatal mothers had to do exercises as per the availability of the time but they could combine their daily work with daily exercise; whereas the scores slightly improved to 44% (11) and 24% (6) in Group I and Group II in the post-test. It was noted in the pre-test 36% (9) and 24% (6) of the samples from Group I and Group II respectively showed the correct response to the question- what was the best technique for relaxation of the body and to reduce stress, tension and blood pressure, and the answer was deep breathing; whereas in the post-test scores improved to 76% (19) and 84% (21) in Group I and Group II respectively.

Table I– B: Distribution of the knowledge scores with regard to exercises and relaxation management of hypertension during pregnancy for both the groups.

<table>
<thead>
<tr>
<th>No.</th>
<th>Items</th>
<th>Frequency of correct responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exercises And Relaxation</td>
<td>Group I (Booklet)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre</td>
</tr>
<tr>
<td>1</td>
<td>Best measure to regulate daily activities with rest and sleep</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>a. Plan daily routine including family members.</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>b. Plan and organize work to save energy.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Combine short work periods with short rest periods.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Don’t know.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Best technique of maintaining weight when diagnosed with pregnancy induced hypertension</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>a. Heavy exercises.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Gymnastics.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Do nothing.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Combination of prescribed diet with regular and safe exercises.</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>Intervention for reducing edema from legs.</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>a. Run.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Walk.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Massage the legs.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Elevate the feet on pillows.</td>
<td></td>
</tr>
</tbody>
</table>

Related to the “best measure to regulate daily activities with rest and sleep”, in the pre-test it was found that in Group I, samples were not at all aware of the best method to regulate daily activities with rest and sleep that is how to plan their daily routine including that of their family members. After reading the booklet 28% (7) of the samples gave the correct response to the question; whereas in Group II, in the pre-test only one gave correct response but the score improved in the post test to 44% (11). Combination of a prescribed diet with regular and safe exercises was stated by 72% and 92% of the samples from Group I and Group II respectively during the pre-test. However there was no major change in the scores as it improved to 88% and 96% in Group I and Group II.
respectively during the post-test. With regard to the “intervention for reducing edema from legs”, it was noted that in the pre-test 72% of the samples from both Group I and Group II gave the correct response to the asked question that is to elevate the feet on pillows for reducing edema from legs. Post-test score improved to 80% and 72% respectively from Group I and Group II.

Table I C: Distribution of the knowledge scores with regard to exercises and relaxation management of hypertension during pregnancy for both the groups.  

<table>
<thead>
<tr>
<th>No.</th>
<th>Items</th>
<th>Frequency of correct responses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Group I (Booklet)</td>
<td>Group II (Planned teaching)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>Best position to lie down during pregnancy.</td>
<td>18</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>a. Supine.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Left lateral.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Prone.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Right lateral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Effect of deep breathing exercises.</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>a. Reduces stress and tension.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Lung expansion.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. To wash out carbon dioxide.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. Don’t know.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With respect to the “best position to lie down during pregnancy”, it was identified in the pre-test that 72% (18) and 60% (15) of the samples gave the correct response to the asked question namely, best position is to lie down during pregnancy is left lateral and in the post-test 76% (19) and 64% (16) of the samples gave the correct response to the asked question in Group I and Group II respectively.

With reference to the “effect of deep breathing exercises”, it was noted that in the pre-test, Group I, 16% (4) of the samples gave the correct response to the asked question namely the effect of deep breathing exercises to reduce stress and tension. This score changed to 64% (16) in post-test; whereas in Group II in the pre-test the score to the correct response was 28% (7) which improved to 88% (22) in the post-test.

Table – II: Distribution of the knowledge scores with regard to the pharmacological management of hypertension during pregnancy for both the groups.  

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Items</th>
<th>Frequency of correct responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Group I (Booklet)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F</td>
</tr>
<tr>
<td>1</td>
<td>A way to control pregnancy induced hypertension with relation to medication/ prescribed pharmacological treatment.</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>a. Regular intake of prescribed medication.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b.Irregular intake of prescribed medication.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c. Excess intake of medicines.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>d. None of the above.</td>
<td></td>
</tr>
</tbody>
</table>
With regard to the “pharmacological treatment”, in the pre-test, 80% and 64% samples from Group I and Group II respectively gave the correct response as regular intake of prescribed medication to control pregnancy induced hypertension; whereas in the post-test 96% and 80% samples from Group I and Group II gave the correct response respectively.

Table III: Distribution of knowledge scores with regard to their dietary management of pregnancy induced hypertension for both the groups.

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Items Diet</th>
<th>Frequency of correct responses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Group I (Booklet)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Pre</strong> F</td>
</tr>
</tbody>
</table>
| 1       | Effect of salt on blood pressure.  
   a. Increases fluid retention.  
   c. Increases the blood pressure.  
   d. All of the above. | 5 | 20 | 11 | 44 | 3 | 12 | 16 | 64 |
| 2       | Average daily intake of salt.  
   a. 1 teaspoon/day.  
   b. 2 teaspoon/day.  
   c. 3 teaspoon/day.  
   d. Don’t know. | 14 | 56 | 21 | 84 | 7 | 28 | 19 | 76 |
| 3       | Food items which can be consumed in plenty  
   a. Fruits, vegetables, fruit juices.  
   b. Junk food, butter, cheese.  
   c. Cow’s milk.  
   d. Bakery items. | 22 | 88 | 24 | 96 | 21 | 84 | 24 | 96 |

Regarding the “effect of salt on blood pressure”, during the pre-test, in Group I, 20% (5) of the samples gave the correct response to the question that is the effect of salt on blood pressure as it causes increase fluid retention. In the post-test the score changed to 44% (11); whereas the pre-test score of Group II was 12% (3) and the post-test score improved to 64% (16) which was a major improvement in comparison to Group I. With respect to “Average daily intake of salt”, it was found that in the pre-test in Group I, 56% (14) of the samples gave the correct response that is one tea-spoon per day should be the average daily intake of salt. After intervention this score changed into 84% (21) in the post-test and in Group II 28% (7) of the samples gave the correct response, which changed to 76% (19) in the post-test. With regard to the “food items which can be consumed in plenty”, fruits, vegetables and fruit juices to be consumed in plenty was stated by 88% (22) and 84% (21) of the samples in Group I and Group II respectively; whereas the scores changed in the post-test to 96% (24) for both Group I and Group II. With reference to the “food items which can be consumed in moderate”, in the pre-test, 40% (10) and 28% (7) samples in Group I and Group II respectively gave the correct response to the question, food items which can be consumed moderately are lime, vinegar, rock salt; whereas in the post-test, knowledge scores changed to 76% (19) and 88% (22) respectively in Group I and Group II. Regard to “Food items which are not permitted to be consumed”, in the pre-test, 64% (16) and 52% (13) of the samples from Group I and Group II gave the correct response that dried fish and fried foods are not permitted to be consumed; whereas the knowledge score improved to 96% and 80% in the post-test.

Regarding the “importance of small and frequent meals”, 72% (18) and 48% (12) of the samples from Group I and Group II respectively stated that small and frequent meals were important to prevent discomfort and for easy digestion. The knowledge scores improved in the post-test to 84% (21) and 92% (23) from Group I and Group II respectively.
SECTION III

(A) Comparison of the pre-test and post-test scores in Group I.

Result suggests that there was significant increase in the knowledge score of the group that received the booklet after the pre-test. It can be concluded that the increase in knowledge was due to the effective Booklet on, “Manage your hypertension during pregnancy.” So, the post-test mean was significantly higher than the pre-test mean. This indicates that there was a significant increase in the ‘t’ value, as compared to the table value. This result supports the importance and effect of the Booklet in the improvement of the knowledge of antenatal mothers with hypertension.

(B) Comparison of the pre-test and post-test scores in Group II.

Results suggest that there is significant increase in the knowledge scores of the group in the post-test (after receiving planned teaching) than in the pre-test (before planned teaching). It can be concluded that increase in knowledge was due to the effect of planned teaching on, “Manage hypertension during pregnancy.” This suggests the importance and the effect of planned teaching to improve the knowledge of ante-natal mothers with hypertension.

(C) Comparison of the pre-test knowledge scores between Group I (Booklet) and Group II (Planned teaching). It can be concluded that knowledge scores of Group I and Group II in the pre-test was same before administration of the booklet or planned teaching respectively.

(D) Comparison of the post-test knowledge scores between Group I (Booklet) and Group II (Planned teaching). Result concluded that there was a significant difference in the knowledge of Group I and Group II during post-test phase. But the above table also shows that, calculated ‘t’ value was less than table ‘t’ value at 0.01 level. Therefore null hypothesis was accepted and H1 was rejected at 0.01 level. That means there was no significant difference in the knowledge scores of Group I and Group II in the post-test phase. The reason for this conclusion may be that the booklet and the planned teaching construction were done by the same investigator and the content matter was also the same for both.

CONCLUSIONS

During the study it was observed that, all samples from Group I and Group II were very conscious and interested to learn, the selected aspects of care during ante-natal period diagnosed with hypertension. The need for information was irrespective of education, type of family, income and parity status. The results indicated that an equal positive response to the Booklet and the planned teaching was found really useful to them. The samples expressed that they were expecting more of such kind of information with pictures and planned teaching.

Acknowledgement: The researcher feels privileged to express gratitude to her guide, Ms. Nancy Fernandez, Lecturer, L.T. College of Nursing for constant support, valuable guidance, for this study. The researcher is highly obliged to her family members for their constant motivation, and support.

Source of Funding: No funds or grants were availed for the study.

Conflict of Interest: There was no conflict of interest for this study.

REFERENCES

An Overview of Ebola Virus Disease: Global Scenario

Vijayaraddi Vandali  
M.Sc (N), PGDHA, PGCDE, MIPHA., Sriganganagar, Rajasthan

ABSTRACT

Ebola first appeared in 1976 in 2 simultaneous outbreaks, in Nzara, Sudan, and in Yambuku, Democratic Republic of Congo. The latter was in a village situated near the Ebola River, from which the disease takes its name. Ebola virus disease is caused by the Ebola virus.

Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals. The incubation period, that is, the time interval from infection with the virus to onset of symptoms is 2 to 21 days. Characterized by Sudden onset of fever, intense weakness, Muscle pain, Headache Sore throat, Vomiting, Diarrhea & Rash.

Ebola virus infections can be diagnosed definitively in a laboratory through several types of tests: Antibody-capture enzyme-linked immunosorbent assay (ELISA) antigen detection tests, Reverse transcriptase polymerase chain reaction (RT-PCR) assay Virus isolation by cell culture.

Vaccine and treatment no licensed vaccine for EVD is available. Severely ill patients require intensive supportive care. No specific treatment is available yet. Nurses responsibility is first to reach the front lines of an epidemic, the first to recognize and try to relieve patient pain. Knowledge and awareness of existing local infection prevention and control policies for the management of VHF and key contact points within and out of hours.

Keywords: Ebola Virus Disease, Viral Hemorrhagic Fever, WHO, RT-PCR.

INTRODUCTION

Ebola virus disease (EVD). Ebola is a type of viral hemorrhagic fever (VHF). Ebola virus disease (EVD), formerly known as Ebola hemorrhagic fever.

Ebola first appeared in 1976 in 2 simultaneous outbreaks, in Nzara, Sudan, and in Yambuku, Democratic Republic of Congo. The latter was in a village situated near the Ebola River, from which the disease takes its name.

Genus Ebola virus is 1 of 3 members of the Filoviridae family (filovirus), along with genus Marburgvirus and genus Cuevavirus. Genus Ebola virus comprises 5 distinct species.

1. Bundibugyo ebolavirus (BDBV)
2. Zaire ebolavirus (EBOV)
3. Reston ebolavirus (RESTV)
4. Sudan ebolavirus (SUDV)
5. Tai Forest ebolavirus (TAFV).

DEFINITION

Ebola virus disease is caused by the Ebola virus. A notoriously deadly virus that causes fearsome symptoms, the most prominent being high fever and massive internal bleeding. Ebola virus kills as many as 90% of the people it infects. It is one of the viruses that is capable of causing hemorrhagic (bloody) fever.

Ebola Virus

Figure: 01
Transmission of infection

Figure: 02

Epidemiology:

Affected countries (West Africa) according to WHO

- **Guinea**: 1 540 cases and 904 deaths as of 19 October 2014;
- **Liberia**: 4 665 cases and 2 705 deaths as of 18 October 2014;
- **Sierra Leone**: 3 706 cases and 1 259 deaths as of 19 October 2014;
- **Mali**: one imported confirmed case from Guinea was reported in Kayes, Mali on 23 October;
- **Spain**: one case, no deaths.
- **Nigeria**: 20 cases and 8 deaths. Nigeria was declared Ebola free on 19 October 2014;
- **Senegal**: 1 confirmed imported case, no deaths. Senegal was declared Ebola free on 17 October 2014.

(Since December 2013 and as of 19 October 2014, WHO has reported 9 936 cases of Ebola virus disease (EVD) in West Africa including 4 877 deaths).

**CAUSE/SPREAD OF INFECTION**

Ebola is introduced into the human population through close contact with the blood, secretions, organs or other bodily fluids of infected animals.

Ebola spreads in the community through human-to-human transmission, with infection resulting from direct contact (through broken skin or mucous membranes) with the blood, secretions, organs or other bodily fluids of infected people.

Indirect contact with environments contaminated with such fluids. Burial ceremonies in which mourners have direct contact with the body of the deceased person can also play a role in the transmission of Ebola.

Men who have recovered from the disease can still transmit the virus through their semen for up to 7 weeks after recovery from illness.

Health-care workers have frequently been infected while treating patients with suspected or confirmed EVD. This has occurred through close contact with patients when infection control precautions are not strictly practiced.

Among workers in contact with monkeys or pigs infected with Reston ebolavirus, several infections have been documented in people who were clinically asymptomatic. Thus, RESTV appears less capable of causing disease in humans than other Ebola species.

However, the only available evidence available comes from healthy adult males. It would be premature to extrapolate the health effects of the virus to all population groups, such as immune-compromised persons, persons with underlying medical conditions, pregnant women and children.

**SIGNS AND SYMPTOMS**

- Sudden onset of fever,
- Intense weakness,
- Muscle pain,
- Headache
- Sore throat.
- Vomiting,
- Diarrhea,
- Rash,
- Impaired kidney and liver function,
- In some cases, both internal and external bleeding.

**LABORATORY FINDINGS**

- Low white blood cell
- Platelet counts
- Elevated liver enzymes.
- People are infectious as long as their blood and secretions contain the virus.
- Ebola virus was isolated from semen 61 days after onset of illness in a man.

The incubation period, that is, the time interval from infection with the virus to onset of symptoms is 2 to 21 days.
DIAGNOSIS

Other diseases that should be ruled out before a diagnosis of EVD can be made include: Malaria, typhoid fever, shigellosis, cholera, leptospirosis, plague, rickettsiosis, relapsing fever, meningitis, hepatitis and other viral hemorrhagic fevers.

Ebola virus infections can be diagnosed definitively in a laboratory through several types of tests:

- Antibody-capture enzyme-linked immunosorbent assay (ELISA)
- Antigen detection tests
- Serum neutralization test
- Reverse transcriptase polymerase chain reaction (RT-PCR) assay
- Electron microscopy
- Virus isolation by cell culture

VACCINE AND TREATMENT

- No licensed vaccine for EVD is available.
- Several vaccines are being tested, but none are available for clinical use.
- Severely ill patients require intensive supportive care.
- Patients are frequently dehydrated and require oral rehydration with solutions containing electrolytes or intravenous fluids.
- No specific treatment is available yet.

PREVENTION AND CONTROL

Controlling Reston Ebola virus in domestic animals

No animal vaccine against RESTV is available. Routine cleaning and disinfection of pig or monkey farms (with sodium hypochlorite or other detergents) should be effective in inactivating the virus.

If an outbreak is suspected, the premises should be quarantined immediately. Culling of infected animals, with close supervision of burial or incineration of carcasses, may be necessary to reduce the risk of animal-to-human transmission. Restricting or banning the movement of animals from infected farms to other areas can reduce the spread of the disease.

As RESTV outbreaks in pigs and monkeys have preceded human infections, the establishment of an active animal health surveillance system to detect new cases is essential in providing early warning for veterinary and human public health authorities.

Reducing the risk of Ebola infection in people:

In the absence of effective treatment and a human vaccine, raising awareness of the risk factors for Ebola infection and the protective measures individuals can take is the only way to reduce human infection and death.

- Reducing the risk of wildlife-to-human transmission from contact with infected fruit bats or monkeys/apes and the consumption of their raw meat.
- Animals should be handled with gloves and other appropriate protective clothing. Animal products should be thoroughly cooked before consumption.
- Reducing the risk of human-to-human transmission in the community arising from direct or close contact with infected patients, particularly with their bodily fluids. Close physical contact with Ebola patients should be avoided.
- Gloves and appropriate personal protective equipment should be worn when taking care of ill patients at home.
- Communities affected by Ebola should inform the population about the nature of the disease and about outbreak containment measures.

Controlling infection in health-care settings:

Figure: 03
Human-to-human transmission of the Ebola virus is primarily associated with direct or indirect contact with blood and body fluids.

Transmission to health-care workers has been reported when appropriate infection control measures have not been observed.

It is not always possible to identify patients with EBV early because initial symptoms may be non-specific. For this reason, it is important that health-care workers apply standard precautions consistently with all patients – regardless of their diagnosis – in all work practices at all times. These include basic hand hygiene, respiratory hygiene, the use of personal protective equipment safe injection practices and safe burial practices.

Health-care workers caring for patients with suspected or confirmed Ebola virus should apply, in addition to standard precautions, other infection control measures to avoid any exposure to the patient’s blood and body fluids and direct unprotected contact with the possibly contaminated environment. When in close contact (within 1 metre) of patients with EBV, health-care workers should wear face protection (a face shield or a medical mask and goggles), a clean, non-sterile long-sleeved gown, and gloves (sterile gloves for some procedures).

Laboratory workers are also at risk. Samples taken from suspected human and animal Ebola cases for diagnosis should be handled by trained staff and processed in suitably equipped laboratories.

Standard precautions are recommended in the care and treatment of all patients regardless of their perceived or confirmed infectious status. They include the basic level of infection control hand hygiene, use of personal protective equipment to avoid direct contact with blood and body fluids, prevention of needle stick and injuries from other sharp instruments, and a set of environmental controls.

NURSES RESPONSIBILITY

- Nurses are the first to reach the front lines of an epidemic, the first to recognize and try to relieve patient pain.
- Knowledge and awareness of existing local infection prevention and control policies for the management of VHF and key contact points within and out of hours.
- Symptomatic nursing care as per requirement of patient and care must priority based.
- Availability of protective clothing to manage patients presenting efficiently and effectively – consider the use of a ‘high risk infection grab bag’ in a dedicated place containing all necessary equipment and available 24 hours a day.
- FIT testing of respiratory equipment – consider whether refresher training is required for some staff groups
- Awareness of staff on how to remove personal protective equipment (PPE) in the correct order and procedures to follow following removal.
- Highest, optimal standard of personal protective equipment for Health Care Workers
- Extensive hands-on training, ongoing education and review of the use of protective clothing, equipment and infection control protocols
- Adequate numbers of appropriately prepared nursing staff to safely meet patient needs.
- Nurses must train workers about the sources of Ebola exposure and appropriate precautions.
- Nurses must train workers required to use personal protective equipment – the optimal protective equipment, when and how they must use it, and how to dispose of the equipment.
- Where Nurses are exposed to blood and potentially aerosolized pathogens from bodily secretions that contain infectious materials, employers must provide the training required by the Blood-borne Pathogens/Aerosol Transmissible Diseases standards.
- Nurses must also provide information about how to recognize tasks that may involve exposure and the methods to reduce exposure must be included: engineering controls, work practices.
- It is not always possible to identify patients with EBV early because initial symptoms may be non-specific. For this reason, it is important that nurses should apply standard precautions consistently with all patients – regardless of their diagnosis – in all work practices at all times.
Acknowledgement - Nil

Ethical Clearance - Taken from SNTI research committee.

Source of Funding - Self

Conflict of Interest – Nil

REFERENCES


Strategies to Eliminate Medication Error among Undergraduate Nursing Students

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¹Senior Instructor, ²Assistant Professor, Aga Khan University School of Nursing and Midwifery, Karachi, Pakistan

ABSTRACT

The process of medication skill is a bit complex and involves multiple decisions. Therefore, it is important to consider that there are some factors which may contribute to the errors related to medication. Students enrolled in undergraduate nursing program are also trained for this complex process of medication administration with variety of learning strategies. Faculty provides facilitation and support as the skill is complex and very new for the learners. At times they also have to help the learner to overcome the hindrances occurring during medication administration process. The whole process is usually very time consuming and require full attention. As students are doing it first time on real set up they are usually anxious. This may therefore, lead to the chance of medication error. Thus, a retrospective study was conducted to identify the reported medication errors, their types and associated factors, through a document review, for the enrolled four year BScN students at AKUSONAM between 2010 to 2013. This paper aims to discuss about the possible factors which might have contributed towards the reported errors, even after moving with the vigilant process. Universal sampling process was used to recruit the samples from the population of all four year BScN program. Data was entered in, and analysed through SPSS version 19. Descriptive analysis was used to analyse the data. There were total 325 BScN students from 3 admission cohorts between 2010 and 2013. Reviewing the advisory files indicated that out of the total 325 students, seven errors (2.3%) were reported. There are some strategies that can decrease the rate of error in the undergraduate program.

Keywords: Medication Errors, Nursing Students, Mathematics, Strategies.

BACKGROUND

Nurses are the one who play a vital role in medication administration. They review physician order, prepare it, administer it while taking care of five rights, document it and then observe the medication effect on the patient. This all process is a bit complex and involves multiple decisions by different teams for example, physician, pharmacy, suppliers and nurses. Therefore, it is important to consider that there are some factors which may contribute to the errors related to medication. These errors could be: communication between or among the multidisciplinary team, individual factors such as knowledge and skills, the repetitive nature of a task, environment in which the medication is ordered, reviewed prepared and administered; which may include noise, lighting, system errors etc.¹ Research indicates medication events or errors are often a result of system failures, that is, errors related to team, task, environment, individual and system factors.² ³ ⁴ ⁵ Students enrolled in undergraduate nursing program are also trained for this complex process of medication administration with variety of learning strategies which includes mathematical basic concepts, drug and dosage calculations, case base tutorials, demonstration and re-demonstration of medication skill performance in a skill lab etc. All these efforts are planned to help the student learn and get sensitize to become vigilant and critical while performing medication skill in a real ward setting.

At the time of the this research study; the setup of undergraduate nursing program and as per the national nursing curricula, the students who entered in year one are taught with basic sciences so that they become equipped with proper reasoning and understanding of how human body
functions normally. They were also taught with basic mathematical skills along with drug and dosage calculation. In the following year they start with Adult Health Nursing course in which the students learn about oral, intra muscular, intra venous, rectal, dermal, sub-cutaneous and other eye, nose and ear instillations as route of medications. This skill also demands that students must integrate the learnt mathematical concepts of year one. Therefore, at the time of performance student not only demonstrate the process of administering a medication but calculate the dosage and drop factor as well. After such a vigilant effort the students demonstrate the same performance in real set up but under faculty supervision. Faculty provides facilitation and support as the skill is complex and very new for the learner. At times they also have to help the learner to overcome the hindrances occurring during medication administration process. The whole process is usually very time consuming and require full attention. As students are doing it first time on real set up they are usually anxious. This may therefore, lead to the chance of medication error. Thus, a retrospective study was conducted to identify the reported medication errors, their types and associated factors, through a document review, for the enrolled four year BScN students at AKUSONAM between 2010 to 2013. This paper aims to discuss about the possible factors which might have contributed towards the reported errors, even after moving with the vigilant process.

LITERATURE REVIEW

It is an integral aspect of health care education system to prepare professionals in such a manner that they are able to deliver safe and effective care to the client, this require practice and proper education in order to addresses the complexity associated with the learnt or under learnt skills. The environment in which the learners are facilitated is also important, this will help them to develop and rehearse the appropriate skills in a safe environment. In one of the study exploring the preparedness of UK medical graduates regarding prescribing in practice showed that lack of preparedness is related to lack of exposure to, and preparation for, clinical practice.

In a research study conducted with graduating nursing students and intern registered nurses, it was suggested that it is important to have emphasis on the basic nursing education along with introducing medication procedures at the time of clinical practice to improve the nurses’ medication knowledge and reduce the risk of error. Another similar idea was presented by author that to ensure a safe practices and avoid accidental happenings the nurses confirm the storage, dispensing and administration of the drugs, it was also highlighted that the nurses should have the knowledge of the pharmacological principles for each drug which include the guidelines to manage drugs; precautions for preparation; and considerations concerning administration to patients. Moreover, the other reasons for errors were also picked up in that research lack of knowledge, routine failure, and insufficient practical skills.

It is everywhere in world that the nursing students of the undergraduate programs or nurses not holding the license to practice are kept under supervision and not allowed to perform medication tasks by themselves, even though it has been found that there are reported administration errors in 26–40% of the processes. A study was conducted in USA on 1300 nursing students regarding medication errors, it was informed that 51% of the errors were caused by performance deficits whereas; the reason for 27% errors was knowledge deficit. There some other research studies conducted around the world which revealed that it is important to take serious actions for medication errors among nursing students.

It is important to see the reasons associated with medication error and literature confirmed one reason as being over confidence, at times when students do it correctly first time they feel that they can attempt it second time as well. The similar study highlighted the reason of age and feeling less responsible towards medication management in patient care areas, students nurses are at higher risk of performing error. Findings of a Pakistani study revealed two major factors associated with medication errors by health care professionals: stress and workload, and the violation of policies that contributed to the medication errors. It is also seen that lack of dexterity and performance deficit are also major reason of medication errors among nursing students. Lack of having experience in medication regulations and distractions during medication preparation and administration were also identified as major factors. Antimicrobial drugs
and Insulin were the medications, whereby students made errors frequently.

**METHODOLOGY AND FINDINGS**

Retrospective review of records was selected as the study design to review the medication errors made by undergraduate nursing students who are enrolled in a private university. Universal sampling process was used to recruit the samples from the population of all four year BScN program. There is a process of advisor system in the university, in which all the students are assigned to one advisor who then record student progress and concern during the academic period. The advisee files also hold the records of leaves or notes from the faculties. Thus, review of records was done through students ‘advisory files, in which students’ academic records are maintained. The notion behind the medication errors was that it can be any error in drug and dosage calculation, preparation, administration. Along with this, in this study, near miss errors were also considered.

The confidentiality and anonymity was maintained, data were protected with a password. Data was entered in, and analysed through SPSS version 19. Descriptive analysis was used to analyse the data. The ethics review was sought from the university ethical review committee and permission to conduct research at school of nursing was taken from Dean School of Nursing. From the number of medication errors reported by undergraduate students, types and characteristics of medication errors committed, trends in reported errors, extent of harm to the patient in response to medication errors, and actions taken by faculty/administration in response to the errors were identified.

There were total 325 BScN students from 3 admission cohorts between 2010 and 2013.

Reviewing the advisory files indicated that out of the total 325 students, seven errors (2.3%) were reported. It was important to note that there was no further repetition of any medication error by the same student. Errors in the preparation phase were committed by five students (71%). Out of these five preparation errors, four students (57%) did unsupervised preparation of medication, while one student (14.3%) did not read the medical record number of the patient and committed the error (see Table 1). In administration phase, one error (14.3%) occurred due to use of wrong route for medication administration, one error (14.3%) occurred due to wrong dose, three errors (42.9%) occurred as the medication was administered by the student without supervision. One error (14.3%) was identified when the student was about to administer the medication without supervision, one error (14.3%) occurred because of lack of manual dexterity in administering intravenous medications. (See below Table1).

<table>
<thead>
<tr>
<th>Type of medication error</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation Error:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsupervised preparation</td>
<td>4</td>
<td>80.0</td>
</tr>
<tr>
<td>Did not check name and MR number of the patient.</td>
<td>1</td>
<td>20.0</td>
</tr>
<tr>
<td>Administration Error:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wrong route</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>Wrong dose</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>Unsupervised administration</td>
<td>3</td>
<td>42.9</td>
</tr>
<tr>
<td>About to administer medication prepared by the staff</td>
<td>1</td>
<td>14.3</td>
</tr>
<tr>
<td>Lack of manual dexterity in intravenous administration</td>
<td>1</td>
<td>14.3</td>
</tr>
</tbody>
</table>

Despite of these seven reported errors the patients did not had any harm. The supervisor of these students kept on remediation to five students (71.4%), who successfully completed the remediation and other two students (28.6%) were given a file note for being careful next time. These records were then kept in the file of the students. Three out of seven files included the justification of the error by the students themselves. The main cause was notified as environmental factor which led the provocation of the error. The areas notified were: increased patient acuity (14.3%), stress due to attendant’s shouting (14.3%), and insistence by staff (14.3%).

**DISCUSSION**

As reported in the findings that study showed that the reported medication errors occurred in the preparation and administration phases; the most common reasons of errors were found to be increased patient acuity (14.3%), stress due to attendant’s shouting (14.3%), and insistence by staff (14.3%). It is important to note that the process of
teaching medication skill, as explained earlier in the background, is very vigorous. The students are educated well about each moment in a process of medication administration. It was reflected by the researchers of current study that when we teach about the medication skill, it is purely skill lab based teaching. The environment is just a simulator and not the real one. May be students who are performing skills in the calm lab environment may feel distracted when they encounter the number of patients in the ward setting. The sign off is done on two three similar medications which may not be same as in ward, therefore, looking at the different medication and may be unknown drug kinetics could increase the anxiety of the students which may have led to medication errors. The students may also have felt underpowered and thus have come under influence of staff which have provoked the medication error.

Looking at these reason some strategies could be carried out to decrease the medication error, first is to practice for drug dosage calculations, the students are already doing in classroom set up but its reinforcement and integration can be practiced in real ward setting. The second strategy is to inform the demerits of not performing the medication error without the policy. They must understand and informed in the beginning that they are not licensed and practice with their faculties only. The skill lab must hold the stock of different drug types so that students can gain acquaintance with changes in drug appearance and learn to improve the manual dexterity. In the ward set up the staff should be informed prior that they cannot influence the students or pressures them to do or handle medication. The faculty can arrange a calm or little non noisy place at ward site to provide a conducive environment for medication process.

CONCLUSION

This study was the first of its kind, which explored medication errors among nursing students in South Asia. The types and number of errors are most important for the development of nursing educators, so that they can implement the strategies. There could be more strategies to improve on alleviating the number of errors in medication management by the nursing students, but above mentioned were relevant to the context and study site. The scope was to identify the reported error but this article explored some strategies which could help to decrease the errors.

RECOMMENDATIONS

The findings must be shared with nursing student body too so that they can truly understand the type and consequences of the reported medication error. May be with this study no patient harm was seen but it can be seen in future as well. Therefore, students and educators must learn from this error about preventive measure. These findings can be shared with pure nursing subjects course coordinators so that they can inform and re-look at the way of teaching about medication skill. In the ward setting the head nurses and related admin staff shall be added in the part of such research activities so that the errors that can be done during the summer or winter clinical settings can be traced easily.

Acknowledgement: Nil

Ethical Clearance: Mentioned in text.

Source of Funding: Self

Conflict of Interest: Nil

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Effectiveness of Indian Ginger Tea in Management of Chemotherapy Induced Nausea and Vomiting- a Nursing Perspective among Cancer Patients

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ABSTRACT

Background: Cancer is the leading cause of death in developed countries and the second leading cause of death in developing countries¹. Despite of recent advances and growing number of newer antiemetic regimens, nausea and vomiting continue to be among the most significant adverse events following chemotherapy². The aim of the study was to assess the effect of Indian ginger tea to subside chemotherapy induced nausea and vomiting among cancer patients which is simple and less expensive intervention.

Design: quasi-experimental non equivalent pre test – post test control group design.

Sample and Sampling technique: purposive sampling technique was adopted to select 60 patients having chemotherapy induced nausea and vomiting, 30 each in experimental and control group.

Tool: nausea and vomiting assessment scale (observation scale) and patient judged nausea and vomiting assessment scale.

Results: The analysis of the findings revealed that, the administration of Indian ginger tea was effective in reducing the nausea and vomiting as the independent ‘t’ values in post test 2 and post test 3 was statistically significant at 0.05 level of significance. Also, there was no association between pre test nausea and vomiting grades with their selected personal variables.

Conclusion: The oral administration of Indian ginger tea will help to reduce the chemotherapy induced nausea and vomiting among cancer patients. This study adds one more evidence to the fact that Indian ginger tea is effective in management of chemotherapy induced nausea and vomiting among cancer patients.

Keywords: Cancer patients; Nausea; Vomiting; Indian ginger tea.

INTRODUCTION AND NEED FOR THE STUDY

Worldwide, one in eight deaths is due to cancer. It is expected that, by 2030 the global burden will grow to 21.4 million new cancer cases and 13.2 million cancer deaths³. From 1970’s chemotherapy is established as an effective treatment modality for cancer⁴. Uncontrolled nausea and vomiting includes among the most feared treatment-related side effects among 60% of people receiving chemotherapy⁵. Studies on efficacy of ginger shows that various bioactive compounds present in ginger are responsible for various properties of ginger like antiemetic, anti oxidant, anti inflammatory agent, anti tumor promoting agent as well as hyperglycemic⁵. Hence the researcher felt that, the current study would try to explore the effect of ginger tea to subside chemotherapy induced nausea and vomiting among cancer patients which would enable them to have a good compliance towards the treatment regimen.
STATEMENT OF THE PROBLEM

A study to assess the effectiveness of Indian ginger tea in management of chemotherapy induced nausea and vomiting - A nursing perspective, among cancer patients in a selected cancer hospital at Mysore.

OBJECTIVES

1. To assess the level of nausea and vomiting among cancer patients receiving chemotherapy.

2. To evaluate the effectiveness of Indian ginger tea in management of chemotherapy induced nausea and vomiting among cancer patients in a selected Cancer hospital at Mysore.

3. To determine the association of the effectiveness of Indian ginger tea in management of chemotherapy induced nausea and vomiting with their selected personal variables.

HYPOTHESES

$H_1$: The mean post test nausea assessment grade of cancer patients who have taken Indian ginger tea will be significantly lower than the mean post test nausea assessment grade of cancer patients who have not taken Indian ginger tea.

$H_2$: The mean post test vomiting assessment grade of cancer patients who have taken Indian ginger tea will be significantly lower than the mean post test vomiting assessment grade of cancer patients who have not taken Indian ginger tea.

$H_3$: There will be a significant association between chemotherapy induced nausea and vomiting among cancer patients and their selected personal variables.

METHODOLOGY

Research Approach

Quasi-experimental non equivalent pre test – post test control group design.

Variables of the study

- Dependent variable: Chemotherapy induced nausea and vomiting in cancer patients.
- Independent variable: Indian Ginger tea.
- Personal variables: Age, Gender, Area of residence, Religion, Type of family, Income, Use of antiemetic and Cycles of treatment.

Setting of the study: Bharat Hospital and Institute of Oncology at Mysore.

Population: Cancer patients with chemotherapy induced nausea and vomiting.

Sample and sampling: Cancer patients with chemotherapy induced nausea and vomiting in a selected Cancer Hospital at Mysore. Sample size is 60 cancer patients, 30 each in experimental group and control group.

Sampling technique: Purposive Sampling followed by Random Sampling Technique.

Data collection technique and instruments.

1. Performa for personal variables:
2. Nausea and Vomiting Assessment scale (Observation Scale)
3. Description of Patient judged nausea and vomiting assessment scale.

DATA COLLECTION PROCEDURE

Formal administrative permission for conducting the study was obtained from the Medical Superintendent and HOD of Oncology, Bharat cancer hospital, Mysore. After obtaining ethical clearance for conducting the study from the ethical committee of the college and informed consent from the respondents, 30 samples each in experimental and control group was selected. An average of 15 samples was included in the study per week. Pre-test was done for both experimental and control groups on the 1st day. Oral administration of Indian ginger tea was given to the experimental group during the cycle of chemotherapy. Oral administration of Indian ginger tea was not given to the control group. Post test was done for both groups on 2nd, 4th and 6th days of the cycle.

RESULTS

The findings of the study show that, majority (55.0%) of samples belonged to the age group of 30-60 years and 51.7% of them were females. Maximum (73.3%) number of samples belongs to Hindu religion and Majority (61.7%) of the samples resided in rural
area. Most (66.7%) of the samples belong to joint family and as many as 58.3% of samples had monthly income of Rs. 2001 to Rs.5000. It was found that 100% of the samples were using anti emetics and almost 33.3 % of samples were undergoing 3rd cycle of chemotherapy.

**TABLE 1**

Frequency and percentage distribution of cancer patients with chemotherapy induced nausea and vomiting in experimental and control group according to their selected personal variables.

<table>
<thead>
<tr>
<th>Selected personal variable</th>
<th>Experimental group</th>
<th>Control group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n = 30</td>
<td>n = 30</td>
<td>n = 60</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>%</td>
<td>F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age in years</th>
</tr>
</thead>
<tbody>
<tr>
<td>30- 60 yrs</td>
</tr>
<tr>
<td>60-90 yrs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area of residence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
</tr>
<tr>
<td>Urban</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hindu</td>
</tr>
<tr>
<td>Christian</td>
</tr>
<tr>
<td>Others</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint</td>
</tr>
<tr>
<td>Nuclear</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 2000</td>
</tr>
<tr>
<td>2001 – 5000</td>
</tr>
<tr>
<td>Above 5000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cycles of treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle 1</td>
</tr>
<tr>
<td>Cycle 2</td>
</tr>
<tr>
<td>Cycle 3</td>
</tr>
<tr>
<td>&gt;3 Cycles</td>
</tr>
</tbody>
</table>
TABLE 2: Mean score, SD difference and independent ‘t’ value of pre-test nausea and vomiting grades in experimental and control group. n=60

<table>
<thead>
<tr>
<th>Scale</th>
<th>Pre test Mean Score</th>
<th>S.D difference</th>
<th>Independent ‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified CTCAE nausea assessment scale.</td>
<td>3.5</td>
<td>3.6</td>
<td>±0.1</td>
</tr>
<tr>
<td>Patient judged nausea assessment scale.</td>
<td>3.5</td>
<td>3.6</td>
<td>±0.0034</td>
</tr>
<tr>
<td>Modified CTCAE vomiting assessment scale.</td>
<td>2.63</td>
<td>2.7</td>
<td>±0.02</td>
</tr>
<tr>
<td>Patient judged vomiting assessment scale.</td>
<td>2.53</td>
<td>2.6</td>
<td>±0.02</td>
</tr>
</tbody>
</table>

\[ t(58)=2.00 \; p>0.05 \]

It shows the equivalency of the both experimental and control group with regard to their pre-test nausea and vomiting assessment scale score.

TABLE 3: Mean score, SD difference and independent ‘t’ value of pre-test nausea and vomiting grades in experimental and control group. n=60

<table>
<thead>
<tr>
<th>Scale</th>
<th>Post test</th>
<th>Post test Mean Score</th>
<th>S.D difference</th>
<th>Independent ‘t’ value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified CTCAE nausea assessment scale.</td>
<td>I</td>
<td>3.3</td>
<td>3.6</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>2.6</td>
<td>3.63</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>1.6</td>
<td>3.7</td>
<td>0.09</td>
</tr>
<tr>
<td>Patient judged nausea assessment scale.</td>
<td>I</td>
<td>3.23</td>
<td>3.5</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>2.63</td>
<td>3.53</td>
<td>0.28</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>1.57</td>
<td>3.47</td>
<td>0.19</td>
</tr>
<tr>
<td>Modified CTCAE vomiting assessment scale.</td>
<td>I</td>
<td>2.53</td>
<td>2.67</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>1.77</td>
<td>2.7</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>1.47</td>
<td>2.63</td>
<td>0.02</td>
</tr>
<tr>
<td>Patient judged vomiting assessment scale.</td>
<td>I</td>
<td>2.4</td>
<td>2.57</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>1.6</td>
<td>2.6</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>1.23</td>
<td>2.53</td>
<td>0.12</td>
</tr>
</tbody>
</table>

\[ t(58)=2.00 \; *Significant (p<0.05). \]

The analysis of the findings revealed that Independent ‘t’ value based on CTCAE nausea assessment scale and patient judged nausea assessment scale in post test 2 and post test 3 were found to be significant at 0.05 level of significance. In post test 2 and post test 3, Independent ‘t’ value based on CTCAE vomiting assessment scale and patient judged vomiting assessment scale were found to be significant at 0.05 level of significance, indicating that, Indian ginger tea was effective in the reduction of chemotherapy induced nausea and vomiting among cancer patients.
TABLE 4: Repeated Measures of ANOVA within the subjects with chemotherapy induced nausea and vomiting among experimental and control group.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Source</th>
<th>df</th>
<th>Sum Of squares</th>
<th>Mean square</th>
<th>F Ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modified CTCAE nausea assessment Scale</td>
<td>Decrease in grade</td>
<td>3</td>
<td>33.433</td>
<td>11.144</td>
<td>72.809</td>
<td>0.01*</td>
</tr>
<tr>
<td></td>
<td>Decrease with respect to group</td>
<td>3</td>
<td>28.333</td>
<td>9.478</td>
<td>61.920</td>
<td>0.01*</td>
</tr>
<tr>
<td>Patient Judged nausea assessment Scale</td>
<td>Decrease in grade</td>
<td>3</td>
<td>26.746</td>
<td>8.915</td>
<td>56.701</td>
<td>0.02*</td>
</tr>
<tr>
<td></td>
<td>Decrease with respect to group</td>
<td>3</td>
<td>34.646</td>
<td>11.549</td>
<td>73.450</td>
<td>0.02*</td>
</tr>
<tr>
<td>Modified CTCAE vomiting assessment Scale</td>
<td>Decrease in grade</td>
<td>3</td>
<td>18.683</td>
<td>6.228</td>
<td>60.035</td>
<td>0.01*</td>
</tr>
<tr>
<td></td>
<td>Decrease with respect to group</td>
<td>3</td>
<td>16.767</td>
<td>5.589</td>
<td>53.876</td>
<td>0.01*</td>
</tr>
<tr>
<td>Patient Judged vomiting assessment Scale</td>
<td>Decrease in grade</td>
<td>3</td>
<td>15.646</td>
<td>5.215</td>
<td>41.015</td>
<td>0.01*</td>
</tr>
<tr>
<td></td>
<td>Decrease with respect to group</td>
<td>3</td>
<td>13.979</td>
<td>4.660</td>
<td>36.646</td>
<td>0.01*</td>
</tr>
</tbody>
</table>

*p<0.05; *Significant

The computed repeated measures of ANOVA was significant within the groups for both the modified CTCAE nausea and vomiting assessment scales and patient judged nausea and vomiting assessment scales at 0.05 level of significance. Thus the findings revealed that, Indian ginger tea was effective in the reduction of chemotherapy induced nausea and vomiting among cancer patients.

The findings of the study also show that, there was no association between grades of chemotherapy induced nausea and vomiting among cancer patients and their selected personal variables.

NURSING IMPLICATIONS

**Nursing Practice:** As the psychological effects of a diagnosis of cancer and the side effects of chemotherapy have a major impact on a patient’s health-related quality of life, Ingestion of Indian ginger tea can be adopted for the reduction of chemotherapy induced nausea and vomiting, which is a simple and less expensive intervention.

**Nursing Education:** The findings of the study can help the nursing students and nurses to enhance their knowledge and skills to provide a quality patient care in their daily professional activities among cancer patients. Also, curriculum reform committee thus can draw evidence from the findings of the study to include ingestion of Indian ginger tea as an alternative and complementary therapy in the syllabus.

**Nursing Administration:** The nurse administrators can convince the authority to provide means to practice the intervention of oral ingestion of Indian ginger tea for chemotherapy induced nausea and vomiting based on the type of clientele in their respective organizations. Also, training sessions on complementary alternative therapies can be incorporated in order to make nurses more competent with their skills.

**Nursing Research:** The preventative approach provides the patient a sense of control over the symptom. Further research can be carried out in this particular area to establish the efficacy of ginger as an antiemetic in chemotherapy induced nausea and vomiting, as a cheaper alternative.

RECOMMENDATIONS

1. Large scale study can be conducted to generalize the findings.

2. A similar study can be conducted by adopting true experimental design.
3. A similar study can be replicated for patients undergoing chemotherapy.

4. A comparative study can be performed about different alternative therapies and its effects on chemotherapy induced nausea and vomiting among cancer patients.

CONCLUSION

Cancer is an iceberg disease which affects all communities worldwide. Nausea and vomiting remains to be one among the most feared chemotherapy treatment-related side effects. The findings of the present study concluded that, the administration of Indian ginger tea was effective in reducing the chemotherapy induced nausea and vomiting among cancer patients receiving chemotherapy.

Acknowledgement: Lord almighty, Our Family, PG faculty of JSS College of Nursing, Respondents and Management of Bharat Hospital and Institute of Oncology, Mysore

Source of Funding - Self
Conflict of Interest- Nil

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Effectiveness of Team Based Learning on Quality Assurance in Clinical Practice among Nursing Students

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ABSTRACT

Objective: Assess the knowledge and Attitude about Team Based Learning among Nursing Students, Assess Quality Assurance in Clinical Practice among nursing students, Find the Association about Team Based Learning on Quality Assurance in Clinical practice among Nursing Students with selected variables.

Method: Quantitative research approach and Descriptive design was used for conducting the study. Non probability convenient Sampling Technique was adopted for this study. 43 Samples were B.Sc Nursing Students in selected Nursing Colleges. Demographic Data, Multiple choice questions on knowledge on Team Based Learning for Quality Assurance in Clinical Practice, Five point likert scale for attitude of Team Based Learning for Quality Assurance in clinical practice was used for data collection.

Results: Among the 43 Nursing Students in relation to knowledge and attitude about Team Based Learning for Quality Assurance in clinical practice 19 (44.18%) were moderately accepted, 16 (37.20%) were highly accepted and only 8 (18.60%) were mildly accepted that the Team Based Learning is necessary for Quality Assurance in Clinical practice. The mean and SD is 13.88 & 4.86 respectively. A significant association was found knowledge and attitude with selected variable age, sex medium of instruction has got statistical significant at p<0.01.

Conclusion: The findings give an insight for Nursing Students Team Based Learning has become increasingly accepted as a positive programme in Educational Institutions to improve quality assurance in clinical practice.

Keywords: Knowledge, Attitude, Team Based Learning, Quality Assurance, Nursing Students.

INTRODUCTION

Team –based learning (TBL) possibly relies on small group interaction more heavily than any other commonly used instructional strategy in quality assurance in clinical practice. TBL group work is central to exposing students to improving their ability to apply course content. The vast majority of class time is used for group work. Courses taught with typically involve multiple group assignments that are designed to improve the development of self managed learning teams. The primary learning objective in TBL is to go beyond simply covering content and focus on ensuring that students have the opportunity to practice using course concepts to solve problems1.

Effectiveness using TBL typically requires redesigning a course from beginning to end and the redesign process should begin well before the start of the school term. The process involved making decisions amount and designing activities at four different times before class. Begins the first day of class each major unit of instruction and near the end of the course. In this Team based Learning discuss the practical steps a TBL instructor takes at each of the points, but for a treatment that is even detailed and practical for direct readers2.
OBJECTIVES

1. Assess the knowledge and Attitude about Team Based Learning among Nursing Students.


3. Find the Association about Team Based Learning on Quality Assurance in Clinical practice among Nursing Students with selected variables.

REVIEW OF LITERATURE

In the late 1970s, Dr. Larry Michelson developed team-based learning. At the time, he was a faculty member confronted with the challenge of teaching a business course to a large class of students. Although Michelson had used group activities effectively in smaller classrooms, he was now facing classrooms of 120 students. Instead of using lecture, he decided to use the class time for group activities. During the first semester in which Michelson initiated team-based learning, three obvious outcomes occurred: Students found the learning strategy beneficial, the strategy enhanced learning and Michelson actually had fun teaching.

A study conducted on team-based learning inters professional quality improvement and patient safety curriculum. Nurses and physicians share responsibility for improving quality and safety in healthcare systems, arguing for shared learning about these concepts. 185 students (94%) completed pre and post surveys. Students rated the workshops favorably on achieving content (mean ratings 4.4-5.6 on a 7-point scale, SD 0.9-1.4) and interprofessional (means 5.2-5.6, SD 1.1-1.5) objectives. Nursing students reported more favorable attitudes toward dealing with medical errors and addressing systems issues and placed more value on interprofessional learning than medical students (all p values < 0.05). Medical students placed more value on individual judgment (p<0.001). At the end of the course, several of these differences were reduced in the interprofessional learning teams, compared to the medical only teams. There were no differences in self-assessments of knowledge. Even at this early stage, important attitude differences exist between medical and nursing students.

A study on Using Team Based learning in the literature survey course. Rubrics were used on the essays to measure the quality of the written work. The students’ aggregate results were above 80% in every writing criterion, above 90% in some of them. Journal entries revealed a higher level of engagement than typically found in a survey course. The best strategy is to define a number of desired learning outcomes and use team-based learning to help students achieve them.

The Impact of Team-Based Learning Strategies on Student Performance. In the Foundation Year of Medicine and Dentistry of Sharjah, United Arab Emirates. 140 students participated. At the end of the course, students completed a course evaluation survey with three subscales: learner participation, learner enjoyment of class, and instructor performance. Every student completed a peer evaluation form for his/her teammate. Comparing the previous traditional lecture methods, students responded best to TBL, in term of width and depth of knowledge retention, engagement, and transferable skills.

A Controlled Study of team-based learning for undergraduate clinical neurology education. The study shows mean percentage change in scores was greater in the TBL versus the Passive Learning group in post-test 1 (8.8% vs 4.3%, P=0.023) and post-test 2 (11.4% VS 3.4%, p= 0.0001). After adjustment for gender and second year examination grades, mean percentage change in scores remained greater in the TBL versus the PL group for post-test 1 (10.3% vs 5.8%, mean difference 8.1%, 95% CI 3.7-12.5%, P=0.001), indicating further score improvement 48 hours post TBL. Academically weaker students, identified by poorer examination grades, showed a greater increase in scores with TBL versus strong students (p<0.02). Measures of engagement were high in the TBL group, suggesting that continued improvement in knowledge in scores 48 hours post-TBL may result from self-directed learning. Compared to Passive Learning, TBL showed greater improvement in knowledge scores, with continued improvement up to 48 hours later. TBL is an effective method for improving knowledge in neurological localization and neurological emergencies in undergraduates.

A study conducted on comparing the efficacy of team based learning strategies in a problem based learning curriculum. The result of the student attitudinal survey indicated an 88% agreement that
TBL enhanced their understanding of pathology concepts and critical analysis. Most of the participants (85%) found RVS-TBL to be more useful. Post TBL end of semester examination results proved beneficial for the students in risk. The study demonstrated that RVS-TBL may be preferably adopted to enhance the philosophy of TBL in a PBL curriculum.

A team-based learning in information Literacy Course. The author implemented team-based learning (TBL) in a credit-bearing information literacy course that meets a general education requirement at the university at Albany. TBL is a highly structured teaching method that includes a number of components not found in more traditional use of teams in the classroom. It required substantive changes in the course which were notably repaid by the impact on student preparedness and engagement. The main elements of team-based learning are explained in the setting of this course.

BRIEF DESCRIPTION OF METHODS AND PROCEDURES

Research Approach: -Quantitative research approach.

Research Design: The Descriptive design was used for conducting the study.

Population: Basic B.Sc Nursing Students

Sampling: Samples were B.Sc Nursing Students in selected Nursing Colleges at Kollam District.

Sampling Technique: Non probability convenient Sampling Technique.

Sample Size: Forty – Three Nursing Students.

Description of the tool: 1. Demographic Data, 2. Multiple choice questions on knowledge on Team Based Learning for Quality Assurance in Clinical Practice. 3. Five point Likert scale for attitude of Team Based Learning for Quality Assurance in Clinical Practice.

FINDINGS AND INTERPRETATION:

In relation to demographic variables majority of them were 41 (95.35%) aged between 18-20, 27 (62.79%) are female, 25 (58.14%) of their mother tongue is Malayalam, 37(80.05%) were instructed by English in pre- college programme and 34 (79.07%) are the residence of urban area. In relation to knowledge and attitude about Team Based Learning for Quality Assurance in clinical practice 19 (44.18%) were moderately accepted, 16 (37.20%) were highly accepted and only 8 (18.60%) were mildly accepted that the Team Based Learning is necessary for Quality Assurance in Clinical practice. The mean and SD is 13.88 & 4.86 respectively.

In relation to association of knowledge and Attitude about need Team Based Learning for Quality Assurance in clinical practice with selected variable with selected variable age, sex medium of instruction has got statistical significant at p<0.01 and mother tongue and residence has achieved statistical significant at p<0.001.

CONCLUSION

The findings give an insight for Nursing Students Team Based Learning has become increasingly accepted as a positive programme in Educational Institutions to improve quality assurance in clinical practice. It is a set of responsibilities of the Nursing faculties and Nursing Institutions should legitimately perform it is high time that those who handle the students realize the importance of understanding the difference approaches available to them.

Acknowledgement: The author would like to thank all the participants for their time and inputs in this study.

Conflict of Interest: There is no conflict interest in this study.

Source of Funding: Self

Ethical Clearance: Obtained by way of understanding to protect the rights of respondents.

Informed consent was prepared and informed consent from study participants.

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Effect of Antenatal Yoga on Postnatal Depressive Symptoms among the Primipara Women of a Selected Hospital

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ABSTRACT

Introduction: Parenthood is a demand with lots extra responsibilities. The bonding and self efficacy of the women depends on the antenatal care and support from the spouse, family members and health care personnel.

Objective: The aim of the study was to compare the postnatal depressive symptoms of the women in the control and yoga group during first week of postnatal period.

Materials and Method: Total 160 antenatal women with first time pregnancy enrolled in the study, 80 each in the control and yoga group. The rating scale on postnatal depressive symptom was used to collect the data. The women in the yoga group received six sessions of yoga and they practiced yoga daily until delivery. The women in the control group received regular care and treatment. The data collected following the normal vaginal delivery and cesarean section on 4th and 5th day of the postnatal period.

Results: There was no significant difference in the postnatal depressive symptoms among the women who practiced yoga and did not practice yoga (p>0.05).

Conclusion: The Indian practice of the presence of mother along with the postnatal woman during postnatal period improves the mental status of the women and prevents her from postnatal depression. The strong family support during postnatal period helps to overcome with the hormonal disturbance during the postnatal period.

Keywords: Yoga, primigravid women, postnatal blues.

INTRODUCTION

The women during pregnancy undergo many physiological, physical and psychological changes due the growing fetus and hormonal influence. The physical activity during pregnancy keeps women physically fit and promotes comfort as and when she experiences pregnancy discomfort. Yoga is a physical exercise along with the breathing exercise which promotes wellbeing to the pregnant woman and increases fetal circulation. The studies have proved that yoga is effective in preventing postnatal depression and increases the self efficacy of the postnatal woman.¹

For many women, having a baby is the biggest physical, emotional and social upheaval they have ever experienced. Mothers can feel elated, delighted, incredibly tender and fiercely protective of their baby. But they might also feel angry, frightened, guilty, and no longer in control of their own lives. Little wonder mothers sometimes feel confused or inadequate after the birth.⁴
Some women feel wonderful during pregnancy even though they have occasional doubts and negative thoughts or dreams. Other women become anxious, depressed and irritable during pregnancy and this may be related to housing or financial problems, relationship difficulties, being unsure about the pregnancy, previous losses or worries about older children. These worries can affect the health of both mother and baby and could lead to postnatal anxiety and depression.\(^4\)

The complementary therapies exercises and mind body interventions relaxes the mind and body of the women. She is better able to cope up during the postnatal period.

The objective of the current study was to compare the postnatal depressive symptoms between the primipara women in the control and yoga group during the first week of postnatal days.

**MATERIALS & METHOD**

The current study was conducted in the medical college hospital of urban area. The woman from rural and urban community visits the hospital for maternity services. The primigravid women were recruited for the study at 14 week of gestation by purposive sampling and allocated to the control and yoga group randomly. A written consent for the study participation was obtained and leaflets on study were given to the women. Altogether 160 primigravid women enrolled in the study, 80 in each group. A six sessions of yoga practice was given to the women from 14 weeks of gestation and they practiced yoga daily at home until delivery. The compliance of the yoga practice was monitored by diary and phone calls. The yoga program was validated by the experts. The women in the control group received the regular care and treatment. The yoga program designed for the antenatal women consisted of asanas, pranayama, meditation and yoga nidra. The rating scale on postnatal depressive symptoms was validated by the experts of the field and found to be reliable \((r=0.9)\). It had 8 items under physical, emotional, physiological and psychological categories. The women were assessed following normal vaginal delivery on 4\(^{th}\) postnatal day and cesarean section on 5\(^{th}\) postnatal day in the postnatal wards. The women of both the group completed the rating scale on postnatal depressive symptoms within 5 minutes and returned to the investigator. The collected data were analysed using SPSS 16.

**RESULTS**

The Baseline data on religion, education, occupation and BMI of the 160 women was collected. The most of the participants were Muslim in religion, many had completed the 10th standard of education and maximum were home makers. The BMI ranges from 19-22. The mean age of the women was 24. Most of the women delivered at 38-39 weeks of gestation.

![Fig 1. Assessment of postnatal depressive symptoms of the women in the yoga and control group](image)

The mean scores of the postnatal depressive symptoms of women in the yoga group (3.48) is less than the control group (3.61). The women who practiced yoga during the antenatal period experienced and expressed decreased number of symptoms. The scores of the rating scale 0 for never, 1 for some times, 2 for very often and 3 for always. \(^3\) The minimum score was 0 and maximum score was 24. The most of the women had none of the symptoms in both the groups. The common symptoms expressed by the women are crying for no reason, feeling sad & upset, and difficulty in sleeping and loss of appetite.

**Table 1. Comparison of postnatal depressive symptoms between the primipara women in the yoga and control group.**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>Mean difference</th>
<th>(t)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control (n=80)</td>
<td>3.61</td>
<td>3.55</td>
<td>-0.138</td>
<td>.25</td>
<td>.802</td>
</tr>
<tr>
<td>Yoga (n=80)</td>
<td>3.48</td>
<td>3.36</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(\text{df(158)}\ p>0.05\) level of significance
The table 1 shows that there is no significant difference in the postnatal depressive symptoms of the women of both the group (p>0.05). The research hypotheses is rejected and null hypotheses accepted stating that there is no difference in the postnatal depressive symptoms experienced and expressed by the women in the yoga and control group.

DISCUSSION

The postnatal blues appear among most of the women due to the disturbance in the hormonal levels after birth, sleep deprivation and breast feeding problems. The women experience mood swings, irritability, sleep disturbance, crying for no reason etc. The current study elicited the symptoms like crying for no reason, feeling sad and upset, and difficulty in sleeping, lost appetite. Only two women sometimes had thoughts of harming the baby and they were and observed and referred to the counselor. The women who practiced yoga experienced less postnatal depressive symptoms in comparison to the women in the control. The comparison showed no significant difference in the postnatal depressive symptoms experienced by the women of both the group (p>0.05). The several psychological or psychosocial interventions appear to be effective to be effective for treating the disorder, such as cognitive-behavioral therapy, counseling with or without antidepressants, health visitor-led counseling, peer support and interpersonal psychotherapy. But in regard to prevention no psychosocial or psychological intervention shown clear benefit in preventing the development of postnatal depression. The abstract of published dissertation on ‘efficacy of yoga on postnatal depression’ showed that women practiced yoga had better quality of life and relaxation. Women had 16 sessions of yoga and they watched video at home. The yoga taught by the yoga instructor. The methodology is consistent with the current study but there is a difference in the population. In the current study had women were not diagnosed as having depression. The participants were normal primigravid women without high risk at the time of enrolling to the study. There are no studies related to the efficacy of yoga on postnatal depressive symptoms or postnatal blues. The most of the clinical trials are on prevention of postnatal depression or women with postnatal depression.

CONCLUSION

The current study shed light on the number of women experiencing postnatal depressive symptoms irrespective of whether they practiced yoga or received regular care or treatment. There was no difference in the postnatal depressive symptoms experienced by the women in the yoga group and non yoga group. In both the group majority of the women did not experience any symptoms during first 4 and 5 days of postpartum period. The care received by the women during the postnatal period from the family members as per the Indian culture is stronger and protects the women going into the depression. The strong family network and care of the health personnel during the antenatal period and postnatal period makes difference in the health of the women.

ETHICAL CLEARANCE

The ethical clearance was obtained from Yenopoya University and Father Muller Ethical Committee. The study proposal was presented before the panel of both the institution and ethical clearance was obtained for the study in the year 2010 at Yenepoya University and 2011 at Father Muller Medical College hospital.

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Perceived Impact of Parenting Style on Self-Esteem among Early Adolescents at Selected Schools, Ernakulam

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ABSTRACT

Introduction - The beginning of the early adolescence period is the most difficult and critical period of development for both adolescents and their parents. Every reaction parents express consciously or unconsciously is absorbed by children and influences their self-concept. Aim- To assess the perceived impact of parenting style on self-esteem among early adolescents at selected schools, Ernakulam. Methods - Correlation study design, among 200 early adolescents between (11-14 years), using non-probability convenience sampling technique and the data was collected Tool 1 Rosenberg’s Self Esteem(SE) Scale, Tool -2 Parenting Style (PS) questionnaire developed by the researchers on the basis of standardised tool by John Buri. Results – Nearly half of 97 (48.5%) subjects reported with high level of SE in Flexible Parenting Style( FPS). FPS was the predominant PS in maternal and paternal parenting, followed by Strict Parenting Style (SPS), Liberal Parenting Style (LPS) and Neglectful Parenting Style (NPS). Positive correlation was found between maternal FPS (r=0.441) and paternal FPS (r=0.526) and SE among early adolescents. There was no correlation between SPS and LPS (maternal and paternal) and SE among early adolescents. A negative correlation was found between maternal NPS (r=-0.360) and paternal NPS (r=-0.336) and SE among early adolescents. A significant association was found between SE of early adolescents and selected demographic variables – gender, area of residence, education of father and monthly income of the family (p- value <0.05). Conclusion- Positive parenting style are believed to produce excellent qualities and attitudes in children, such as higher levels of self-esteem, responsibility, motivation for goal achievement and friendliness.

Keywords- SE-Self-Esteem, FPS-Flexible Parenting Style, SPS-Strict Parenting Style, LPS-Liberal Parenting Style, NPS-Neglectful Parenting Style, PS- Parenting Style.

INTRODUCTION

The beginning of adolescence, the early adolescence period is the most difficult and critical period of development for both adolescents and their parents, as the adolescent has to meet the demands of the changing self and the society. Each and every reaction parents express consciously or unconsciously is absorbed by children and influences their self-concept. Parenting is most challenging yet rewarding experience and all parents have their own unique styles of dealing with their children. PS can be understood as attitude towards the child, that are communicated to them and create an emotional climate in which parents behaviour is expressed. Each style demonstrates a particular relationship that occurs between the parents and children at a specific point of time. Four parenting styles can be distinguished: 1. Flexible or Authoritative (high demand and high responsiveness), 2. Strict or Authoritarian- (high demand and low responsiveness), 3. Liberal or Permissive- (low demand and high responsiveness) and 4. Neglectful or Uninvolved- (low demand and low responsiveness). Each one carries different characteristics and brings out different reactions in children which they are used on. Parents are the major influence in their
children’s lives. Parenting can also play an important role in self-esteem development of children. Research studies have investigated that family process and resources (i.e., parent’s aspirations and expectations; the amount of help, interest, and attention given; and other ongoing and dynamic resources) determines the early adolescents self-esteem. Self-esteem is one of the key elements of mental health. Positive self-esteem contributes to better health, positive social behaviour and promote healthy functioning. Various studies indicate that children with high self-esteem have higher cognitive aptitudes. Positive parenting styles are believed to produce positive qualities in children, such as higher levels of self-esteem, responsibility, motivation for goal achievement and friendliness. Researchers in the past too have uncovered convincing links between parenting styles and the effects of these styles on children.

The objectives of the study were to 1. assess the self-esteem among the early adolescents. 2. identify the predominant parenting styles among the parents of early adolescents. 3. determine the correlation between the maternal and paternal parenting style with level of self-esteem among early adolescents. 4. find the association between the level of self-esteem among the early adolescents and selected demographic variables.

**MATERIAL & METHOD**

The present research Non-experimental correlation study was conducted in three settings in Ernakulam district- St. Michael’s Public school, Thirumarayoor (a private school with a strength of 200 students), St. Paul’s High school, Velliyanadu (a Government aided school of 720 students) and St. George High school, Arakkunnam (a Christian management school with 567 students), situated 35 kilometers away from Ernakulam district. Non probability convenience sampling technique was used for the selection of subjects. Two hundred subjects were selected from the schools according to inclusion criteria. The data collection instruments included- Tool I: Demographic profile of subjects consists of age, gender, name of the school, religion, whether residing with both the parents or with single parent and number of siblings. Socio-demographic profile of parents of subjects includes- their area of residence, monthly income of the family, education of mother and father, mother’s and father’s occupation and type of family.

Tool II: Rosenberg’s Self-Esteem Scale to assess the level of self-esteem among early adolescents. A standardized Likert scale with 10 items, that are answered on a four point scale comprising five positive and five negative statements. Score ranging from 0-30. reliability, was established by the authors, using Cronbach’s alpha and it was found to be in the range of 0.77 to 0.88 and validity was 0.91. Tool III: Parenting Style Questionnaire to assess the perceived parenting style of parents among the early adolescents. The tool was, developed from a standardized tool named Parenting Authority Questionnaire by John Buri comprising of 30 statements. The tool has been prepared after getting prior permission from the author and named as Parenting Style Questionnaire. The present tool has 40 statements each for mother and father. The tool consists of totally 10 statements on each parenting styles ie. Flexible, Strict, Liberal and Neglectful parenting.

The tool statements on neglectful parenting was prepared by the researchers after intensive study of the literature available on the subject. The scale is a 5-point likert scale After getting prior permission from the author, the modified version, with the help of linguistic experts was translated into Indian (Malayalam) language and re-translated to English. The tool has 40 statements for father and 40 statements for mother, 10 of each parenting style (Flexible, Strict, Liberal and Neglectful). Based on review the fourth parenting tool was developed by the researchers, as same heading as other three parenting style questionnaire. A 5-point likert scale in which responses are indicated on the scale ranging from strongly agree to strongly disagree. Each scale ranges from 10-50. The highest score among the describes the type of parenting. Reliability using Crohnbach’s alpha for parenting style questionaire was 0.75-0.95, while validity was found to be 0.94.
FINDINGS

The first objective was to assess the self-esteem among early adolescents. n= 200

The findings were supported by a study conducted by Tom CL, Chong A, Kairvelu A, Khoo Y to investigate the effect of parenting styles on adolescents self-efficacy level in Malaysia.\(^9\)

The second objective was to identify the Predominant maternal and paternal parenting style among parents of early adolescents. n= 200

The third objective was to determine the relationship between maternal and paternal parenting style with self-esteem among early adolescents. n =200

Figure 1: Frequency and percentage distribution of level of self-esteem among early adolescents.

Figure 2: Percentage distribution of predominant maternal parenting styles.

Figure 3: Percentage distribution of predominant paternal parenting styles.

Figure 4: depicts positive correlation between maternal flexible parenting and self-esteem among early adolescents.

Figure 4: shows statistically significant positive correlation between maternal flexible parenting and self-esteem among early adolescents (r=0.441) significant at 0.001 level. As maternal flexible parenting increases self-esteem of early adolescents is also found to increase.

Figure 5: depicts positive correlation between paternal flexible parenting style and self-esteem among early adolescents.

Figure 5: shows statistically significant positive correlation between paternal flexible parenting style and self-esteem among early adolescents (r=0.526) significant at 0.001 level. As flexible parenting of father increases, self-esteem of early adolescents is also found to increase.

The current study results were supported by the result of the study conducted by Savarimuthu RJS, in 2014 conducted a study to assess self-esteem among urban adolescents at Vellore. Among the respondents, majority(80.7%) had moderate degree of self-esteem, few(18.2%) had high level of self-esteem and least(1.1%) had low self-esteem.\(^9\)

The second objective was to identify the Predominant maternal and paternal parenting style among parents of early adolescents.
Table 1: Correlation between maternal strict parenting style and self-esteem of early adolescents

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Correlation (r)</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>18.94</td>
<td>4.249</td>
<td>0.010</td>
<td>0.890</td>
</tr>
<tr>
<td>Strict Parenting Style</td>
<td>36.77</td>
<td>6.005</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: shows that there is no correlation between maternal strict parenting and self-esteem of early adolescents (r=0.010). There is no effect of strict parenting of mother on self-esteem of early adolescents.

Table 2: Correlation between paternal strict parenting style and self-esteem of early adolescents

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Correlation (r)</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>18.94</td>
<td>4.249</td>
<td>0.021</td>
<td>0.770</td>
</tr>
<tr>
<td>Strict Parenting Style</td>
<td>36.59</td>
<td>5.388</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: shows that there is no correlation between paternal strict parenting style and self-esteem of early adolescents (r=0.021, p>0.001). There is no effect of strict parenting of father on self-esteem of early adolescents.

Table 3: Correlation between maternal liberal parenting style and self-esteem of early adolescents

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Correlation (r)</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>18.94</td>
<td>4.249</td>
<td>-0.109</td>
<td>0.123</td>
</tr>
<tr>
<td>Liberal Parenting Style</td>
<td>27.58</td>
<td>6.598</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: shows that there is no correlation between maternal liberal parenting and self-esteem of early adolescents (r= -0.109). There is no effect of liberal parenting of mother on self-esteem of early adolescents.

Table 4: Correlation between paternal liberal parenting style and self-esteem among early adolescents

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Correlation (r)</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-esteem</td>
<td>18.94</td>
<td>4.249</td>
<td>-0.120</td>
<td>0.090</td>
</tr>
<tr>
<td>Liberal Parenting Style</td>
<td>27.75</td>
<td>5.673</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4: shows that there is no correlation between paternal liberal parenting style and self-esteem of early adolescents (r= -0.120). There is no effect of liberal parenting of father on self-esteem of early adolescents.

Figure 6: depicts negative correlation between maternal neglectful parenting style and self-esteem among early adolescents.
Figure 6: shows statistically significant negative correlation between maternal neglectful parenting and self-esteem among early adolescents ($r= -0.360$) significant at 0.001 level. As neglectful parenting of mother increases, self-esteem of early adolescents is found to decrease.

Figure 7: depicts negative correlation between paternal neglectful parenting style and self-esteem among early adolescents. Figure 7: shows statistically significant negative correlation between paternal neglectful parenting and self-esteem among early adolescents ($r= -0.336$). As neglectful parenting of father increases, self-esteem of early adolescents is found to decrease.

This findings were supported by a study conducted by Hasnain.N, Faraz.B, Adlakha.P in 2012, on self-esteem and happiness of children and mothers of different parental authority in Delhi. Results for self-esteem showed that children of flexible parenting style had higher self-esteem than the children with liberal and strict parenting styles. However, self-esteem of children of liberal and strict parenting styles did not differ significantly in their self-esteem and no significant difference between happiness of children with different parenting was found.11

A study conducted by De Souza JF , Paul P, in 2013, to examine the influence of perceived paternal parenting style on the social competence of middle-school children in Goa. Results revealed that perceived paternal parenting style was found to be flexible followed by strict parenting style. Perceived paternal parenting style has a significant influence on social competence. No significant gender differences exist in the perceived parenting style.12

The fourth objective was to find the association between the level of self-esteem and selected demographic variables and self-esteem of early adolescents

Statistical analysis was done using Fisher’s exact test and significant association was found between the level of self-esteem among early adolescents and selected demographic variables – gender, area of residence, education of father and monthly income of the family as their p-value (<0.05).

Findings were supported by a study conducted by Alami A, Khosravan S, SadeghMoghadam L, Pakravan F, Hosseni F, on associations between adolescents’ self-esteem and perceived maternal parenting styles as well as its dimensions in terms of family type, in 2014. Dominant parenting style in both families was flexible style. There were significant associations between the respondents’ self-esteem and their perceived parenting styles, after matching sex, family income, level of education, and parents job (P<0.005).14

**DISCUSSION**

The study reveals that 97 (48.5%) of subjects reported high level of self-esteem, 92 (46%) of subjects with moderate level of self-esteem and 11 (5.5%) of subjects with low level of self-esteem. The predominant parenting style (both maternal and paternal) according to early adolescents was flexible parenting, followed by strict, liberal and neglectful parenting respectively. A positive correlation was found between flexible parenting style of mother and father with self-esteem of the early adolescents. A negative correlation was found between neglectful parenting style of mother and father with self-esteem of early adolescents. A significant association was found to exist between level of self-esteem of early adolescents and gender, area of residence, monthly income of the family and education of father as their p-value is < 0.05. Results revealed neglectful parenting was adopted by mother’s 13(6.5%) than that of father’s 10(5%).

**CONCLUSION**

The study findings revealed that predominant parenting style adopted by parents of early adolescents was FPS. The next superior parenting was SPS followed by liberal and neglectful parenting. The early adolescents (11-14 years) brought up under FPS and LPS had increasing levels of SE. Surprisingly mother’s were perceived to be more neglectful than that of father’s. Hence study concludes that the parenting style affects the self-esteem of early adolescents.
Conflict of Interest: Nil

Funding: Self

Acknowledgement: Nil

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Nursing Curriculum Framework a Comparison between Switzerland and India: Insights from Faculty Exchange Programme

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ABSTRACT

This paper is designed to compare and exchange ideas about the Nursing curriculum and teaching strategies adapted in India and Switzerland and identify similarities and differences in building competencies in the Baccalaureate Nursing programmes. Teaching and learning entails the holistic process of development of life-long Skills etc. It then becomes exigent for educators, administrators.

Keywords: Curriculum, Teaching strategies, Baccalaureate Nursing education, Course framework, training

BACKGROUND

Teaching, which is the primary function of a faculty, besides research and development entails giving instruction, imparting knowledge, facts, skills, attitudes, interests and aptitude. ¹Rapid technological advances has affected the curriculum development and a variety of teaching techniques simulations, e-learning, multimedia, PBL (Problem based Learning); reflective learning techniques are adapted globally. ²The NLN (2003) urged nursing education to move from content focused reform effort to a major paradigm shift in how education is delivered. They have called on nurse educators to validate assumptions that underlie current teaching practices, abandon unsubstantiated practices, and realign nursing education with the contemporary health system. ³Faculty autonomy has been the norm in relation to curriculum, with faculty choosing the teaching strategy content and delivery and outcome measures that are appropriate for the courses.⁴

Nursing being a practice oriented profession clinical teaching with sound theoretical knowledge of subjects in the nursing curriculum is integral in nursing profession. The delivery of the curriculum with an appropriate mix of theory, practice and technology is vital.

Internationalization serves as a key marker of an institutions prestige, as it assists in facilitating and strengthening international academic linkages.⁵International interest in developing and implementing discipline-specific pedagogies is becoming increasingly apparent in the nursing literature.

This initiative started with the Board of Higher Education of Canton de Vaud (DGES), Switzerland, with idea of establishing professional collaboration with Nursing Institutions in India towards their objective of international exchange learning. They explored various nursing institutes in India and approached PSG college of Nursing TamilNadu India for an International Exchange program focused on developing, facilitating, and strengthening international partnerships. As both nursing programs offer a baccalaureate degree and expressed interest, a memorandum of understanding (MOU) was initiated. In this context of MOU a faculty exchange was initiated.

The exchange aimed:

1. To identify the similarities and differences in building competencies in undergraduate Nursing students.

2. To identify the different teaching strategies in
the field of Nursing.

3. To exchange the ideas on the benefits of various methods considering the cultural, economical and political context.

**METHODOLOGY**

Descriptive exploratory design was adopted and data was collected through observation of curricular documents and key informant interviews. The curricular framework and academic and clinical planning were explained by the study participants during the faculty exchange programme. The teaching strategies adapted using various techniques were observed in both the institutions.

**FINDINGS**

**Presentation of the Schools**

PSG College was founded in 1926 by PS Govindaswamy Naidu. It covers a range of professional technical and medical courses, along with the Nursing course which was created in 1994. PSG College of Nursing is affiliated to The Tamilnadu DR.M.G.R Medical University.

L’Ecole de la Source was founded in 1859 by the Countess Valérie de Gasparin. It is the first secular nursing school in the world. Today it is part of the Foundation La Source which includes the Ecole (College) and a Clinic. The College consists of two distinct parts: the Haute Ecole de la Santé La Source, member of the HES-SO (University of Applied Sciences- UAS) and the Institute La Source, the private part of the Institution.

**Training Context**

**Admission Requirements**

The entrance age to nursing studies is different in each country; it is over 18 years old in Switzerland and 17 years and above during the admission year in India. However, the number of preceding years spent in school is the same, that is to say 12 years schooling and a validated level of secondary education. In both regions there are several possible admission ways. Further, candidates must be in good health.

**Training Duration**

Training takes 4 years in India, which includes the preclinical subjects in first year, whereas it takes only 3 years in Switzerland. However, in Switzerland before the Bachelor’s course there is a one-year foundation course grouping together all future UAS health professionals that covers the prerequisites for the training course. The title awarded at the end of the training is the same in both countries, a Bachelor’s in Nursing Studies.

**COURSE FRAMEWORK**

In India the nursing curriculum is set by the Indian Nursing Council. The normative framework is very restrictive since all syllabuses specifying the contents of the training course are present in this framework. All the teaching strategies to be adopted are also clearly prescribed in the syllabus including the practical skills to be developed. However within the framework each institution can give the best possible experience to the students and develop their own facilities.

In French-speaking Switzerland the programmes are governed by a Study Plan Framework (PEC) resulting from an agreement between the Schools training administrators. It specifies the skills to be developed (national consensus), the programme format (modular programmes), the contents themes and the related ECTS (European Credit Transfer System) credits and the duration of work experience placements. This framework gives a lot of freedom to the various schools to develop their own training programme.

**PRESENTATION OF THE CURRICULA**

Training in India is organised as follows: three and a half years of theoretical (10 hours per week) and practical training (30 hours per week) and a six-month internship programme during the fourth year.
Table 1: Comparison of the Curricula

<table>
<thead>
<tr>
<th></th>
<th>PSG College of Nursing</th>
<th>HEdS La Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course duration</td>
<td>4 years</td>
<td>1 year Preparatory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 years Bachelor</td>
</tr>
<tr>
<td>Academic year duration</td>
<td>37-40 weeks</td>
<td>32 weeks</td>
</tr>
<tr>
<td>Examination (including preparation)</td>
<td>4 -5 weeks</td>
<td>3 to 5 weeks</td>
</tr>
<tr>
<td>Practical Internship</td>
<td>Practical hours per subject and 30 weeks internship</td>
<td>40 weeks (full-time)</td>
</tr>
<tr>
<td>Hours available per academic year</td>
<td>1480 (37 weeks x 40 hours)</td>
<td>1800 (60 ECTS x 30h/week)</td>
</tr>
<tr>
<td>On-site study requirement</td>
<td>40 hours per week</td>
<td>20 hours per week (mean)</td>
</tr>
</tbody>
</table>

In Switzerland, each semester includes a training period at the College (theoretical and practical) and a practical work experience training period in a clinical setting. Work experience placements in a clinical setting last 6 to 8 weeks per semester. The ratio college/work experience is 2/3-1/3.

The contents of the training courses are quite similar. Some of the contents in the first year at PSG College are considered as a prerequisite at La Source (biochemistry, English, IT).

In India, the main part of the curriculum contents is covered during on-site study; private student work is estimated at 50 hours per year (library etc).

The Swiss model is based on European Credit Transfer System (ECTS). A credit requires an average of 30 hours of work for the student. These 30 hours include roughly 10 hours on-site study; 5 hours supervised work and 15 hours personal study.

EXAMS

In India each subject is assessed by two exams; one internal exam and one external university exam. The external exam comprises 75% of the final mark, whereas for practical exams in the external exam is just as important as the internal exam. In each nursing subject both theory and practical must be passed by the candidate.

It is the same in Switzerland; each module (theoretical and practical) is assessed and must be passed. The student must attain between 5 and 10 credits for each validated module and 180 credits must be attained (60 per year) to earn a Bachelor’s degree.

TEACHING METHODS

At PSG College of Nursing

The methods of teaching mostly used are lectures and small-group teaching (for practical). Simulation lab is used for developing clinical skills; the development of role-play practices is planned. Teaching strategies adopted are demonstrations, case discussions, clinical presentation, field trips, observation visits and clinical teaching methods like bedside clinics, nursing rounds. Learning through problem solving as nursing process is the widely adopted clinical learning method.

AT LA SOURCE

The favoured teaching methods are those derived from active pedagogy: learning through problem solving, role-play, simulation, situation analysis or reading seminars, among others. Lectures are used, but to a lesser extent.

Students’ personal and independent work is very important. This involves preparation work before or in-depth study after the lesson. This work could also be undertaken in a group, as requested by the teacher or organised by the students.
Internship:

The Indian curriculum offers clinical experience for each subject year wise and integrated practical during the final year to ensure comprehensive practical experience in each nursing subject which is taught to them and ensures after successful completion of internship programme only the final year examination will be conducted. The requirements in each area should be fulfilled by the students as prescribed.

The La Source curriculum includes an internship program per semester, totaling 40 weeks. This vocational training internship provides all the conditions for the integration of theoretical and practical dimensions, and allows students to become familiar with various areas of practice: caring for adults, children, the elderly, physical and mental health care, hospital acute, chronic, rehabilitation, medico-social institution, community health. Each internship gives rise to an assessment based on common skills repository to the whole sector and allows the acquisition of 10ECTS credits. Contrary to the practice in PSG College, there is no more final clinical exam.

Differences and Similarities in Pedagogical Approaches

Above we looked at the context in which both institutions are evolving, highlighting some of the important elements effecting teaching strategy, for example the possibility for teachers to have more or less choice in how their teaching matter is organised.

If we go back to the aim of this article, a comparison of two ways of devising and organising a curriculum and more precisely of pedagogical approaches and teaching methods, we can attempt to highlight differences and similarities between our two systems and to grasp their meaning and impact.

If we look at the similarities between our two programmes we notice that they refer on one hand to underlying pedagogical principles, and on the other hand to shared concerns about teaching methods:

- **Pedagogical principles:** socio-constructivism is the starting block of the programmes’ conception, as well as being at the source of teaching practices.
- **Teaching methods:** we share similar practices such as large group teaching, skills’ lab and role-play.
- The emphasis is put on the development of a reflexive practice: role-playing of professional situations using clinical and representative situations as well as a problem-solving approach outline a good part of students work and contribute to their professionalization.
- **Exam format:** All exam formats being used in higher education are found, that is to say written and oral formats, as well as role-playing of professional situations, in the laboratory and on work experience placements.

Research into our respective practices has shown that our visions were very close regarding training and challenges to be faced. This would seem to reinforce the fact that our references with regards the nursing discipline, as well as with regards training in nursing care, are in part similar. The visit of the Library at PSG College gave the opportunity to verify this observation.

We are both without doubt concerned with the quality and good practices regarding our teaching methods. Conscious of the more or less restrictive aspects of the contexts that we are evolving in, it is nonetheless true that the improvement of our respective practices signifies a strong point of mutual interest. Moreover, from which, it becomes possible to imagine the results of this visit. We will look over this more beforehand.

Exchanging with each other has enabled us to highlight some differences between our two programmes, of which the main elements have been outlined below, organised into three factors:

- The curriculum and its organisation
- Teaching strategies: in which way do we teach?
- Planned organisation of student work time
Table 2: Main Differences between the two Systems

<table>
<thead>
<tr>
<th></th>
<th>PSG College – Coimbatore</th>
<th>HEdS La Source - Lausanne</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Curriculum</strong></td>
<td>Study Programme:▪ National, comprehensive (principles, contents, hours, objectives, methods)</td>
<td>Study Programme:▪ Regional (French-speaking Switzerland) slightly restrictive (principles, skills, general topics)</td>
</tr>
<tr>
<td></td>
<td>Flexibility: Weak</td>
<td>Flexibility: Average to great</td>
</tr>
<tr>
<td></td>
<td>Training Aim:▪ Objectives and competencies</td>
<td>Training Aim:▪ Roles and competencies</td>
</tr>
<tr>
<td><strong>Teaching Strategies</strong></td>
<td>Favoured:▪ teaching in large groups (lecture cum discussion)</td>
<td>Favoured:▪ teaching in small groups</td>
</tr>
<tr>
<td></td>
<td>Secondary:▪ laboratory (skills)</td>
<td>Secondary:▪ conference</td>
</tr>
<tr>
<td></td>
<td>▪ seminar</td>
<td>▪ laboratory</td>
</tr>
<tr>
<td></td>
<td>▪ supervised clinical practice</td>
<td>▪ seminar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ problem-solving tutorials</td>
</tr>
<tr>
<td><strong>Organisation of Student Work</strong></td>
<td>On-site Study:▪ &gt; 40hrs/week ▪ lessons and work experience on same day/separate ▪ lessons and work experience: compulsory attendance</td>
<td>On-Site Study:▪ 20/week (average) ▪ work experience and lesson time separated ▪ skills, seminars and problem-solving tutorials: compulsory attendance ▪ conference: non-compulsory attendance</td>
</tr>
<tr>
<td>Basis HEdS La Source :</td>
<td>Supervised Work:▪ little or circumstantial</td>
<td>Supervised Work:▪ 5-10% personal work</td>
</tr>
<tr>
<td>1 credit = 30 hours of student work (1/3 in classroom)</td>
<td>Personal Work:▪ included in classroom; very little</td>
<td>Personal Work:▪ 15hrs/credit</td>
</tr>
<tr>
<td>Basis PSG College :</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hour based</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theory practical ratio of 1:3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The comprehensiveness of the subjects taught in the study programme at PSG College is striking, and actually limits the possibility for time planning within the curriculum.

One significant difference relates to the allocation of student work time. In India students spend most of their time on-site and on work experience placements, their personal work time remains insignificant, not to mention time intended for supervised work, which remains very circumstantial.

On the other hand at ELS there is a fairly clear allocation of time, as this issue was specifically dealt with during the implementation of the Bologna Agreement (Table 3). In this context it is obligatory to allocate a minimum of 40% of time to student personal work (theoretical part of training). There is no obligation of this type in the Indian programme.

Table 3: The Bologna Accords

The Bologna Process was a major reform created with the claimed goal of providing responses to issues such as the public responsibility for higher education and research, higher education governance, the social dimension of higher education and research, and the values and roles of higher education and research in modern, globalized, and increasingly complex societies with the most demanding qualification needs.

- 2nd cycle: typically 90–120 ECTS credits (a minimum of 60 on 2nd-cycle level). Usually awarding a master’s degree.


Another significant difference is the very high proportion of lessons in conference format (ex
cathedra) in the Indian training programme; teaching in small groups is reserved for just a few subjects, whereas in the Swiss context the allocation of large group / small group is more balanced. How can these differences be explained?

It seems that at least two, if not three, aspects must be taken into consideration: the first goes back to the start of university training in nursing care which each of the programmes come from. Beyond the purely institutional framework we are lead to identify and question the elements of the more general context in which the training is found and developed: in India, a national authority, the Indian Nursing Council, establishes the Study Programmes and formulates the training standards; as already mentioned, the Study Programme is particularly comprehensive in the contents to be taught, going as far as pre-defining the teaching formats to be put in place.

French-speaking Switzerland the regulating authority, the HES-SO, participates simply by enacting the guidelines for the training course; it is within the framework of Nursing Studies that the Study Programme is developed by setting out certain general principles and giving guidance on the major themes. There is therefore a margin of freedom that differs greatly during the development of the Study Programmes and in how student work is organised.

The second aspect goes back to the question of encouraging student independence during training. Observations made in both training contexts seem to show that Swiss students are, in general, less dependent on their teachers and quickly develop their own independence in their studies, which is moreover one of the distinguishing features of a university higher education. How is it possible in the Indian context to reconcile the dense contents to be covered, compulsory attendance at all lessons and encouraging student independence? The question remains open to this day.

But beyond the pedagogical and educational reasons which push this or that teaching method to be chosen, there is, according to us, a third element to be considered: the cultural factor. As an example it is likely that in India community removes a more individual approach such as is experienced in Switzerland and in more general in the western world. Consequently it is right to put forward the question of such an influence’s impact on some of the differences observed between the two institutions.

CONCLUSION

Learning is mutual. Exchange of ideas on the curriculum and reflecting on various pedagogical approaches adopted in India and Swiss was a mutually beneficial experience. The exchange enhanced to identify the similarities and differences between diverse cultures which serve as a guide for future programmes with different educational context and to build competencies in various domains of the learner.

Acknowledgement: The authors would like to thank the HOD’s and senior faculty of PSG college of Nursing and faculty of Lasource Nursing Institute for their group discussions and interviews.

Conflicts of Interests: Nil

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Ethical Clearance: PSG IMS&R (PSG institute of Medical Science & Research)

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3. Reference should be in Vancouver style. Send in MS WORD format. Maximum 3000 words.
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