Community and Public Health Nursing

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Community and Public Health Nursing (CPHN) focuses on health care issues relevant to all aspects of community practice - schools, homes, visiting nursing services, clinics, hospices, education, and public health administration. Well-researched articles provide practical and up-to-date information to aid the nurse who must frequently make decisions and solve problems without the back-up support systems available in the hospital. The journal is a forum for community and Public health professionals to share their experience and expertise with others in the field. CPHN aims to provide worldwide access to timely research and practice features of use to public health nurses, administrators, and educators in the field of public health nursing. Its scope is the range of population-based concerns and interventions in which nurses are involved. The journal emphasizes scholarship on vulnerable populations. Articles include research studies, program evaluations, practice concepts, and educational features published with the goal of replication and development, and theory, education, methods, policy, and ethical and legal papers that stimulate discussion and public debate. Authors from all disciplines are invited to submit manuscripts relevant to Community and public health nursing. Authors who have questions about the appropriateness of a manuscript for publication in this journal are encouraged to communicate with the Editors prior to submission.

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Content

Review Article

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Editorial

Dear Readers,

It gives me immense pleasure to write first editorial note, for journal of community and public health nursing. The publishing world is in constant flux and new practices evolve all the time. Many of these practices are contributing in making knowledge more accessible in a more timely fashion.

Community health nursing is a specialized branch in nursing as it holds major responsibilities of health sector. The CPHN seeks to engage a broad range of scholars in ongoing information through scholarly articles including original research, research reviews, evidenced based innovation in community and public health. We believe in the fact that to achieve excellence in practice, nurse must embrace evidence based practice as the norm.

The journal has goal to help nurses, to publish research based evidences to appreciate holistic lifestyle of individual, families, groups and to develop skills to function as specialist and practitioners. We hope that this journal will provide good quality of data based information to improve nursing community clinically and intellectually.

I would like to express my sincere appreciation to the scholars on the editorial board and to those in the editorial office for their contribution and dedication to bring out the first issue of the journal.

It will be my pleasure to receive suggestion and review input from readers about the quality of article in journal.

Let's all enjoy the read.

Pascaline Vilash Richard Martis,

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A Study to Develop and Evaluate the Effectiveness of Information Booklet on Emergency Contraception in Terms of Knowledge of Undergraduate College Girls and to Seek its Relationship with Selected Factors in a Selected College of Kashmir

Zamrooda Mushtaq*, Manju Chhugani, Veena Sharma*****

Abstract

The Maternal Mortality Rate (MMR) is substantially high in India. One of the major reasons for MMR is unsafe abortion. The people are not well aware about the emergency contraception especially the college girls. They usually get married at an age of 18 to 20 years and continue their education at in-laws house. There is a real need to impart information on emergency contraception among college girls so that they can decide when to have a child and how to plan pregnancy. The objectives of the study were to develop an information booklet on emergency contraception for under graduate college girls, to asses the knowledge of college girls before and after the administration of information booklet, to seek relationship between post test knowledge scores of college girls and selected variables like subject, background subjects, educational status of parents and previous exposure to any educational program and to determine the utility and acceptability of the information booklet by the college girls. An evaluative research approach with one group pretest and post test design was used in the study. The population comprised of under graduate college girls studying at Govt. Degree College Handwara, Kashmir University. Purposive sampling technique was used to select a sample of 100 under graduate college girls.The findings of the study revealed that Mean post-test knowledge scores (38.58) of college girls were found to be significantly higher than their mean pre-test knowledge scores (14.1).The information booklet was found to be effective in enhancing the knowledge of college girls on emergency contraception.The information booklet had high acceptability and utility among college girls.

Keywords: Emergency Contraception; Information Booklet; Knowledge; Undergraduate College Girls.

Introduction

Adolescent pregnancy is a serious public health issue for India. It is estimated that 17% of TFR (Total Fertility Rate) is contributed by adolescent pregnancy. Pregnancy below the age of 20 and especially below the age of 15, leads to increased maternal mortality, morbidity and increased incidence of low birth weight babies and increased infant mortality rate (IMR). The Indian Medical Association (IMA) is strongly committed to reduce the incidence of adolescent pregnancy. Many of these pregnancies are unplanned and unwanted leading to higher incidence of unsafe abortions. Lack of contraceptive or condom use, characterize the vast majority of sexual encounters among adolescents and youth, and consequently rates of unplanned pregnancy are high. The main reasons reported for the irregular, infrequent and no use of condoms is the spontaneity of sex, lack of awareness of the function, usage and procurement of the condom and the perception that use of condom reduces pleasure [1].

Lindberg C.E. [2] stated that emergency contraception, which refers to methods of pregnancy

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prevention used after unprotected intercourse, has the potential to prevent most unplanned adolescent pregnancies. Emergency contraceptive pills (ECP) containing estrogen and progestin or progestin alone are more than 75% effective when the first dose is taken within 72 hours after unprotected sex and the second dose is taken 12 hours later. However ECP's include lack of knowledge of the method, fear of loss of privacy, difficulties in finding a provider and cost. As a result, some nurses are not comfortable with suggesting emergency contraception to their patients. Nurses can play a critical role in providing ECPs to adolescents by developing programs to streamline distribution of ECPs, while maintaining adolescent privacy. Other essential roles for nurses include providing education about ECPs to parents, other healthcare providers and community members and also advocating for political and legal changes that will ease restrictions on ECP distribution. Nurses who are personally uncomfortable discussing emergency contraception can refer their patients to other providers for information and access to this method.

Sunita Mittal [3] stated that a woman faced with the prospect of an unplanned and unwanted pregnancy can, in many cases, avoid the pregnancy by using emergency contraception. Several scientific methods are available for emergency contraception now and most of these are safe and effective to prevent pregnancy occurring after unprotected intercourse or contraceptive failure. Emergency contraception should be regarded not only as a second chance of family planning but also as a means to emphasize the need for a regular contraception method and reduce maternal morbidity and mortality arising out of unsafe abortions and unwanted pregnancies. In India both women and health care providers are uniformed about these methods. As awareness is limited, women as well as healthcare providers are unable to gain any benefit. Today, India has the right policy environment to improve the quality of reproductive healthcare and expand the contraceptive options for individuals and couples.

Dr. Anjali Nayyar [4] emphasized the need for media advocacy for emergency contraception as opposed to a traditional information campaign as it is a sensitive subject. Using emergency contraception within the specified time period, which is soon after unprotected intercourse, remains critical to its effectiveness. Therefore, women need to have the knowledge about the method and the regimen in advance and must be able to access it either in advance of the need for use or upon identification of need. This may prove to be difficult in many service delivery settings. Increasingly, organizations and government are realizing that providing information to people in a way that they can understand and act upon is an essential part of service.

According to Rupsa Mallik, Emergency Contraception (EC) can play a unique role in providing women in India with a second chance to prevent an unintended pregnancy. In turn, Emergency Department (ED) can also be part of an effective strategy to reduce persistently high rates of death and illness from complication of pregnancy and childbirth in India. Finally, EC can also help reduce heavy reliance on unsafe abortion, complications of which alone account for 13 per cent of all maternal deaths nationwide [5].

The researcher knows that the MMR is very high in India especially at Kashmir. The main cause is unsafe abortion. The people are not well aware about the emergency contraception especially the college girls. They usually get married at an age of 18 to 20 years and continue their education at their in-laws house.

So the researcher found that there is a need to impart information on emergency contraception among college girls so that they can decide when to have a child and how to plan pregnancy. The researcher, by virtue of her experience by working with college girls during workshop and during carrier counseling session, found that there is a need for the present study. As young adolescents are the shining stars of our country and we can make them more influential by providing them with the power of knowledge. Hence, this study has been selected.

Objectives

The objectives of the study were to develop an information booklet on emergency contraception for undergraduate college girls, to assess their knowledge regarding emergency contraception before and after administration of Information Booklet, to seek relationship between post-test knowledge scores and selected variables and to determine the utility and acceptability of the information booklet among the under graduate college girls.

Materials and Methods

The research approach used for this study was Evaluative Research Approach to accomplish the objectives of the present study. The research design

selected for this study was One Group Pre-test and Post-test Design because the present study intended to ascertain the gain in knowledge by under graduate college girls after using the Information Booklet onEmergency contraception.

Table 1: Schematic representation of the Study Design

	Day 1st		Day 6th
	Pre-test	**Treatment**	**Post-test**
College Girls	Knowledge Test	Introduction of Information Booklet	Knowledge Test and Opinionnaire

A formal administrative permission was obtained from the administrative authority of Govt. Degree College, Handwara, Kashmir.

The present study was undertaken at the Govt. Degree College, Handwara, Kashmir. The population in the present study comprised of under graduate college girls studying in this college. In the present study, a total sample of 100 under graduate college girls studying at Govt. Degree College, Handwara, Kashmir were selected using Convenient Sampling Technique.

The tools used to collect the data from the samples were Structured Knowledge Questionnaire and Structured Opinionnaire. The Structured Knowledge Questionnaire was prepared to assess the knowledge of undergraduate college girls before and after the administration of an Information Booklet on Emergency Contraception. The Structured Opinionnaire was prepared to determine the opinion of undergraduate college girls about the acceptability and utility of the Information Booklet.

The final study was conducted from 15th to 22nd June 2010. On Day 1, Pretest to assess the knowledge of undergraduate college girls on emergency contraception was conducted and after which they were given the Information Booklet. The group's doubts were cleared on day 5. On Day 6, Post-test to assess knowledge of under graduate college was conducted following which the assessment of opinion about the acceptability and utility of the Information Booklet was done using the Structured Opinionnaire.

All the data were entered in the master sheet in Microsoft Excel. The data were analyzed using descriptive and inferential statistical methods. The demographic variables of the samples were described using frequencies and percentages. The Mean Median and Standard Deviation of Pre-test and Post-test knowledge scores were computed. The't' value to test the significance of the difference between 'Mean (pre-test and post- test) knowledge score of the group was computed. Chi-square values were calculated to find a relationship between the gain in knowledge scores of the group and selected factors. Data related to the acceptability and utility of information booklet was analyzed – using descriptive statistics, i.e., frequencies and percentages.

Results

At the conclusion of the predetermined study, the data revealed the following results.

Section 1

Demographic Data like age, stream of education, educational status and occupation of parents, previous knowledge on Emergency Contraception and source of previous knowledge were collected, (Table 2).

Section 2

The Mean, Median and Standard Deviation of the Pre-test and Post-test Knowledge Scores were computed. Further, area wise mean, mean difference, median, standard deviation of difference and "t" value of pre-test and post-test knowledge scores were computed. The mean post-test knowledge scores (38.62) of the undergraduate college girls were higher than the mean pre-test knowledge scores (14.1) suggesting gain in knowledge of the subject. The't' value was computed, it was 90.81, which indicated a significance difference mean pre-test knowledge scores and the post-test knowledge scores, (Table 3). This indicated that the information booklet was effective in enhancing the knowledge of undergraduate college girls.

Table 2: Demographic Profile of the Sample **n=100**

S. No	Characteristics	Frequency	Percentage
1.	*Age*		
	• Below 20	100	100%
2.	*Stream of Education*	0	0
	• Arts	40	40%
	• Science	60	60%
	• Commerce	0	0
3.	*Father's Education*	0	0
	• Illiterate	0	0
	• Primary	0	0
	• Secondary	0	0
	• 10th	4	4%
	• 12th	66	66%
	• Graduation	30	30%
	• Post-graduation	0	0
	• PhD	0	0
	• Professional	0	0
	Mother's Education		
	• Illiterate	0	0
	• Primary	0	0
	• Secondary	8	8%
	• 10th	26	26%
	• 12th	56	56%
	• Graduation	10	10%
	• Post-graduation	0	0
	• PhD	0	0
	• Professional	0	0
4.	*Father's Occupation*		
	• Unemployed	0	0
	• Self Employed	38	38%
	• Private Employee	0	0
	• Govt. Employee	62	62%
	• Retired	0	0
	Mother's Occupation		
	• Unemployed	0	0
	• Self Employed	36	36%
	• Private Employee	0	0
	• Govt. Employee	64	64%
	• Retired	0	0
5	*Studied science at 10+2 level*		
	• Yes	60	60%
	• No	40	40%
6	*Previous knowledge about Emergency Contraception*		
	• Yes	44	44%
	• No	56	56%
	Source of Previous Knowledge		
7	• Newspaper/magazines/books	30	68.18%
	• Friends	14	31.82%

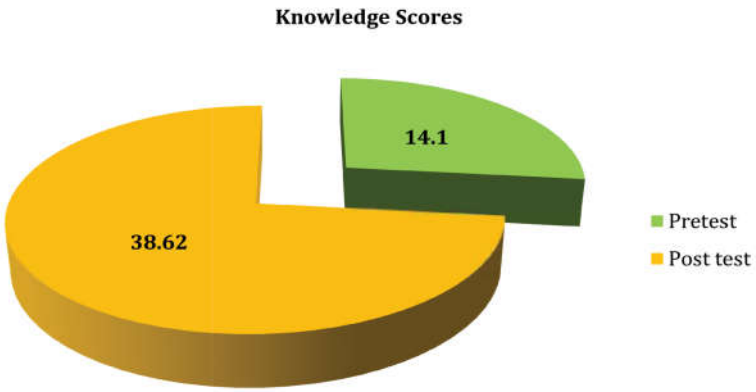

Fig. 1: A Pie Diagram Illustrating the Pre-test and Post-Test Knowledge Scores of Undergraduate College Girls on Emergency Contraception

Table 3: Mean, Median, Mode and Standard Deviation of Pre-test and Post-test Knowledge Scores **n=100**

Knowledge test	Mean	Median	Mode	Standard Deviation	't' value
Pretest	14.1	14	14	6.67	90.81
Post test	38.62	39	38	1.85	

Section 3

The area wise mean, mean percentage of Pre-test and Post-test knowledge scores of undergraduate college girls were computed. The data presented in table 4 shows the comparison between Pre-Test and Post-Test knowledge scores obtained by undergraduate college girls on Emergency Contraception in all the five areas of the Structured Knowledge Questionnaire.

Data revealed that the lowest mean percentage of pretest score (0.4) was in the area of important points to remember, followed by side effects and management, (1.08) and the highest pre-test knowledge scores was in the area of General Information about Contraception at (7.54).

This indicated knowledge deficit in all the areas suggesting inadequate knowledge of college girls regarding emergency contraception.

The data further indicated that the Post Test mean percentage knowledge scores in all the content areas were higher than the Pre Test mean percentage knowledge scores, the maximum mean percentage gain was in the area of Important Points to Remember at (74.57) followed by Side Effects and Management at (65.57) and the least mean % gain was in the area of General Information about Contraception at (26.77).

Thus, there was gain in knowledge in all the areas indicating the effectiveness of Information Booklet, (Table 4).

Table 4: Area wise Mean, Mean Percentage of Pre-test and Post-test Knowledge Scores of Undergraduate College Girls **n=100**

	Knowledge	Maximum Possible Score	Pre-test		Post-test		Mean %age gain
			Mean Score	Mean %age Score	Mean Score	Mean %age Score	
1.	General information about Reproduction	13	7.54	58	11.02	84.77	26.77
2.	General information about EC	10	3.66	36.6	7.86	78.6	42.00
3.	Methods of EC	10	1.42	14.2	7.78	77.8	63.60
4.	Side effects and management	8	1.08	13.5	6.34	79.25	65.75
5.	Important points to remember	7	0.4	5.71	5.62	80.29	74.57

Section 4

Relationship between Post-test Knowledge Scores of Undergraduate College Girls regarding Emergency Contraception and Selected Factors (Stream of Education, Science Background, Educational Status of Parents and Previous Knowledge on Emergency Contraception) were computed using Chi Square values.

Table 5: Chi-square value showing Relationship between Post-test Knowledge Scores and Selected Factors of Undergraduate College Girls on Emergency Contraception **n=100**

S.No.	Selected variables	Knowledge scores Below Median	Knowledge scores Above Median	Chi square	df	Significant/not Significant at 0.05 level
1.	Science Background	14	16	0.013	1	NS
	• Yes	9	11			
	• No					
2.	Study Subjects	14	16	0.013	1	NS
	• Science	9	11			
	• Arts					
3.	Parent's Education (Mother)			1.27	3	NS
	• 10^{th}					
	• 12^{th}	3	1			
	• Graduation	6	7			
	• Post Graduation	14	14			
		2	3			
4.	Parent's Education (Father)			0.15	2	NS
	• 10^{th}					
	• 12^{th}	0	0			
	• Graduation	1	1			
	• Post Graduation	15	18			
		6	9			
5.	Heard about EC			0.002	1	NS
	• Yes	10	11			
	• No	14	15			

The computed Chi square values (0.013, 0.013,1.27,0.15,0.002) to establish the relationship between the selected variables of the college girls and the post-test knowledge was not found to be statistically significant at 0.05 level of significance for degree of freedom 1,1,3,2,1 respectively, (Table 5). Hence, there was no significant relationship between the post-test knowledge scores of undergraduate college girls regarding emergency contraception and the selected factors.

Section 5

The data for assessing the acceptability and utility of the information booklet on emergency contraception was collected using the Structured Opinionnaire, (Table 6). The mean score of college girls, i.e. 19.72 was close to the maximum score of 20. This indicated a high level of acceptance of the information booklet by the girls. Moreover, the S.D was 0.92 showed that there was not much of variation of opinion among college girls about acceptability and utility of the information booklet.

Table 6: Mean and Standard Deviation of Acceptability and Utility Scores of Undergraduate College Girls about Information Booklet on Emergency Contraception **n=100**

Group	Range of Scores	Mean	S.D
Undergraduate College girls	16-20	19.72	0.92

Discussion and Conclusion

The study demonstrated a marked difference in the knowledge scores before and after administration of the information booklet on emergency contraception, thereby indicating effectiveness of the information booklet. The study also revealed a high level of acceptance and utility of the information booklet. In the present study, the mean post-test knowledge scores (38.62) of the undergraduate college girls were higher than the mean pre-test knowledge scores (14.1) suggesting gain in knowledge of the subject. The't' value was computed, it was 90.81, which indicated a significance difference mean pre-test knowledge scores and the post-test knowledge scores. There was no significant relationship between the post-test knowledge scores of undergraduate college girls regarding emergency contraception and the selected factors. A high level of acceptance of the information booklet by the girls was indicated using a Structured Opinionnaire.

The study was found to be effective in changing the knowledge of Undergraduate college girls regarding emergency contraception.

Findings of the study revealed that the undergraduate college girls had low level of knowledge about emergency contraception before administration of information booklet. Findings of the present study also revealed that there was a significant gain in knowledge of the undergraduate college girls after the information booklet which showed the effectiveness of information booklet in increasing the knowledge. The findings of the study are consistent with that of a study conducted by Jyothi Prince who developed and evaluated the effectiveness of an information booklet on emergency contraception for college girls. The booklet was found to be effective in increasing the knowledge of college girls [6].

The findings of the present study have implications for nursing education, nursing practice, nursing administration, nursing research and general education.

In the present trend of health care delivery system, the emphasis is shifted from cure to care oriented services. Also, there is an increased awareness about quality assurance in today's consumers. Only through standard education can there be standard practice. Hence, there is a need for integrating and updating new trends in nursing education.

Nursing curriculum should include more content on emergency contraception. It will equip the nursing students with adequate knowledge on the topic, to plan and conduct education sessions for general public.

An understanding of the special psycho-social needs of college girls is essential for nursing personnel to understand them better, to motivate them, to upgrade their knowledge regarding emergency contraception.

Emergency contraception plays an important role in preventing unwanted pregnancies and illegal abortions. The need of the hour is to equip the young women with information on the available methods of contraception. With the correct knowledge they will be able to take appropriate decisions.

Nurses with their unique role as health educator, can empower young women by providing them with information on emergency contraception so as to enable them to take the correct decision, later in life.

Nurses during their practice come in contact with women of all age groups. They can play an important role in dissemination information about emergency contraception. This can create awareness among the target group and will bring down the incidence of unwanted pregnancies and abortion rates.

It is the responsibility of Nursing Administration to provide for the necessary facilities and opportunities for nursing staff to keep themselves abreast with the latest information. Nurses should be encouraged to increase their knowledge about emergency contraception, its methods and usage. This will help them in conducting health education sessions with women of all age groups.

Research studies are needed to identify the various learning needs of teenagers, the socio-cultural variations and some of the common problems faced by them. This will help in the development of educational program which are relevant to this particular age group.

Now-a-days, reproductive (sex) education is being taught at school level. Still, there is a need to include topics like contraception, especially emergency contraception at under graduate level. It will provide the much needed information to the young adults.

References

1. Mondal Ashok, Knowledge, Attitude and Practices of Emergency Contraception among Beneficiaries and Providers. Journal of the Indian Medical Association. 2006; 104(10): 551-553.
2. Lindberg C E, Emergency Contraception for Prevention of Adolescent Pregnancy. The American Journal of Maternal Child. 2003 May-Jun; 28(3): 199-204.
3. Mittal S. Emergency Contraception with Update on Regular Contraception, W.H.O. Collaborative Centre for Research in Human Reproduction. New Delhi: 2002.
4. Nayyar Anjali. Increasing access to Emergency Contraception in India. Health and Population – Perspectives and Issues. 2000; 23 (3): 123-133.
5. MallikRupsa. Emergency Contraceptives in India: Beyond the Magic Bullet. Women's Health Activist Newsletter. January/February 2004.
6. Jyothi Prince. A study to develop and evaluate the Effectiveness of Information Booklet on Contraception in terms of Knowledge of Women and to seek its relationship with selected factors in selected Residential apartments in Andhra Pradesh'. Unpublished Master's Dissertation, University of Delhi, 2004.

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Knowledge on Legal and Ethical Issues in Nursing among B.Sc. (Nursing) III Year Students

S. Poonguzhali*, S. Rajamani, Rajarajendran P.S.***, T. Elakiya***, Ajitharani A.***, V. Yaminidevi*****

Abstract

Introduction: A study to assess the knowledge on legal and ethical issues in nursing among B.Sc. (Nursing) III year students, College of nursing, Madurai medical college, Madurai**.** *Objectives:* (1)To assess the knowledge on legal and ethical issues in nursing among B.Sc. (N) III year students, (2) To find out the association of knowledge on legal and ethical issues in nursing among B.Sc (N) III-year students with selected demographic variable. *Design:* The design used for the study was descriptive study design. *Subjects*: Third year B.Sc. nursing students studying in college of nursing, Madurai medical college, Madurai and who fulfills the inclusion criteria. *Sample size***:** The total sample size is 42 Third year B.Sc. nursing students of college of nursing, Madurai medical college, Madurai. *Data collection tool:* The tool used to measure the knowledge level was knowledge structured questionnaire. *Conceptual framework:* **T**he conceptual frame work for this study based on modified health belief model by Rosen Stock and Kegels in 1950. *Results:* The knowledge on legal and ethical issues in nursing among B.Sc. (Nursing) III-year students shows that out of 42 students, 71% had moderate knowledge and 29% had adequate knowledge. *Conclusion:* There is a significant association($p>0.05$) between the religion, students education, education of father, occupation of the mother, family income, source of information about legal and ethical issues, reason for doing B.Sc. (N) and the knowledge on Legal and ethical issues in nursing among B.sc(Nursing)-III year students.

Keywords: Not Provided

Introduction

Medicine rests upon four pillars – philosophy, astronomy, alchemy and ethics. Paracelsus

Ethics, which is taken from the Greek word "ethos", meaning character, most relevant to responsibility and community and deals with words like right, wrong, good, bad, ought and duty. Nursing profession requires knowledge of ethics to guide performance. Nursing ethics is professional ethics of care. The nature of this profession necessitates ethical care more than routine care. Ethical concepts are one of the basic elements in this profession and the important indicator of its progress. Ethical performance is critical aspects of nursing care and development of moral competence, is essential for nursing practice in present and future. Promote the principles of professional practice by emphasizing ethical foundations are the only way to strengthen trusting on medical group. Today, worldwide definition of professional ethic codes has been done based on human and ethical issues in the communication between nurse and society.

International Council of Nurses began compilation of ethic codes in 2000 and it has been proposed as an indicator of professional nursing. In this regard, professional and international organizations, have written codes despite some apparent differences, their goal is accreditation of the nursing profession by providing good quality care to patients.

Nursing is an integral part of the health care system

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and nurses direct their energies towards the prevention, promotion, maintenance & restoration of health. The role of nurses has expanded rapidly within the past two decades to include expertise specialization, autonomy & accountability. The patient is considered the consumer of nursing & health care. With the advent of the Consumer protection Act of 1986, which has been drastically widened by the amendment of 1993 all professionals i.e. medical, architects, solicitors, chartered accountants etc. have come within the purview of the Act. Nursing also being a profession has come under the Act. The nurse must also be familiar with laws as: (I) IPC Sect 269- Negligent Act likely to spread infectious disease dangerous to life. II) Sect 284- Negligent conduct with respect to poisonous substances. It is stated that changes have occurred over the past decade in legal responsibilities of nurses.

Need for the Study

Leaders in the nursing profession know that we are legally responsible for what we do but there have been very little specifically stated by the profession to serve as a guide. This was due to the fact that citizens of India were not aware of their rights of protection from harmful or careless professional practice. But with the growing awareness of the law by the public, an understanding of the legal responsibilities is becoming more important.

Though the legal aspects of nursing are included early in the syllabus very little emphasis is given on its use. Nurses must know the law that governs her profession to avoid lawsuits against her. Legal issues confronting nurses today are many but the nurse should view the law not with apprehension but as a helpful adjunct to define nursing practice. Nurses who are aware of legal rights & obligations will be better prepared to care for clients. Knowledge of the law is essential for all nurses in the present health care market.

In a study to assess the impact of malpractice litigation on physicians' personal and professional lives although both sued and non-sued physicians reported changes in professional behavior. Sued physicians reported significantly more changes than non-sued physicians. It has been found, however, the learning that results in increased self-awareness, changed behavior, and the acquisition of new skills must actively engage the individual in the learning process. Most adults spend a considerable time acquiring information and learning new skills. The rapidity of change, the continuous creation of new knowledge, and an ever-widening access to information make such acquisitions necessary. Much of this learning takes place at the learner's initiative, even if available through formal settings.

Based on the International Association of Nurses' Codes and also Codes in other countries the first professional responsibility of nurses emphasizes patients' needs and to provide an environment in which the values, beliefs, human rights and dignity are respected. To improve all dimensions of nursing, we need to respect ethic codes. Furthermore, nurses must understand and apply ethic codes in every dimension of nursing practice.

Hence there is a need to investigate the knowledge on legal and ethical issues in nursing among nursing students.

Statement of the Problem

A study to assess the knowledge on legal and ethical issues in nursing among III year B.Sc. nursing students, college of nursing, Madurai Medical college, Madurai.

Objectives

1. To assess the knowledge on legal and ethical issues in nursing among III year B.Sc. nursing students at college of nursing, Madurai medical college, Madurai.
2. To associate the knowledge on legal and ethical issues in nursing among III year B.Sc. nursing students with their selected demographic variables.

Hypotheses

H_1: There is a significant association between the knowledge score on legal and ethical issues in nursing among III year B.Sc. nursing students with their selected demographic variables.

Conceptual Frame Work

The present study is aimed at assessing the knowledge on legal and ethical issues in nursing among III year B.Sc. Nursing Students in College of Nursing, Madurai Medical College Madurai. The conceptual frame work selected for the study is based on the Health belief model Health awareness in modified through education as it help the individual to perceive the threat of an legal issues and increased awareness towards legal and ethical issues in nursing. The conceptual framework of the study is based on Rosen Stock's health belief model. The model addresses the relationship between students' belief and behavior.

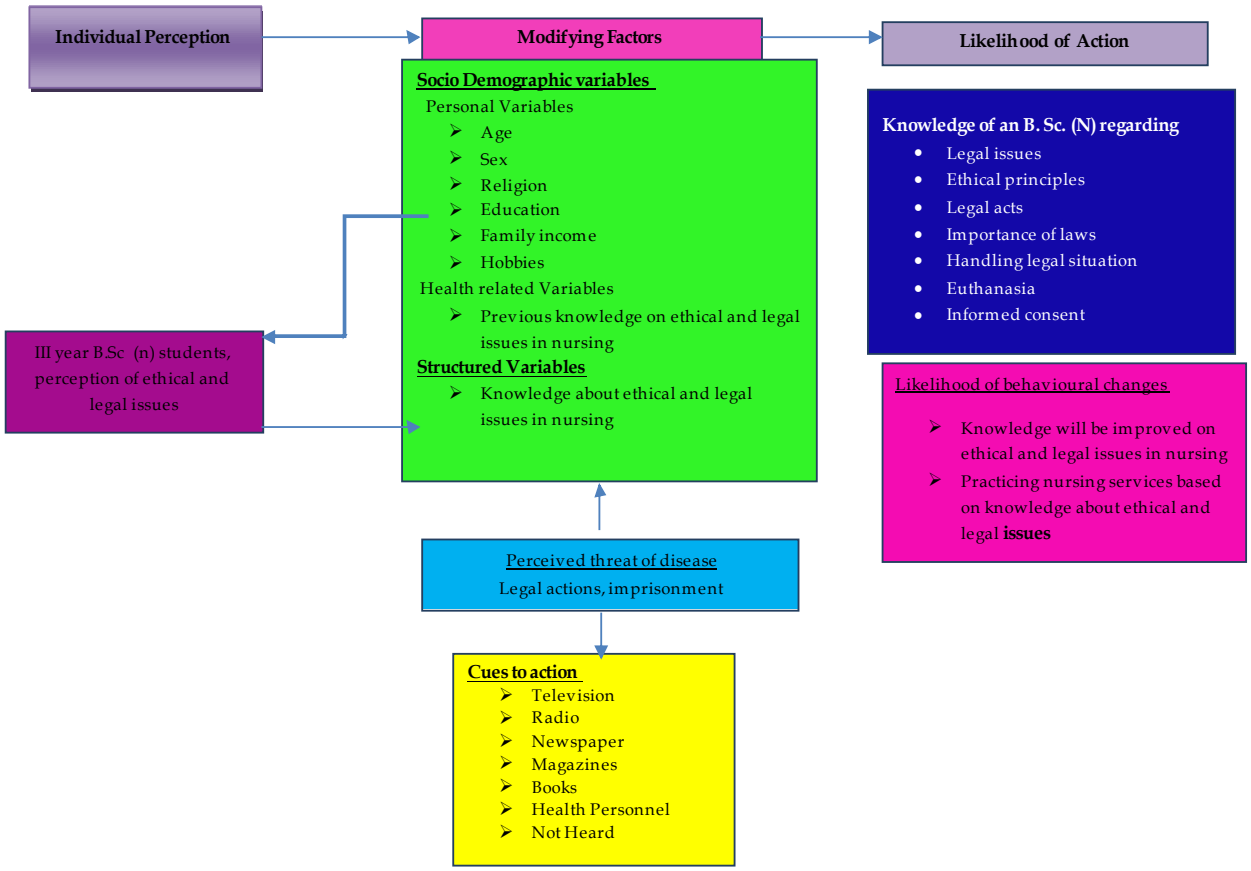

Fig. 1: Modified health belief model (Rosenstocsk and Kegels in 1950)

Research Methodology

Research Approach

A Quantitative Approach selected to present the study.

Research Design

The research design selected to the present study is Non-experimental descriptive design.

Settings of the Study

The project was conducted in the College of Nursing, Madurai Medical College, Maduari.

Population of the Study

The population includes III year B.sc Nursing Students.

Target Population

III-year B.Sc. nursing students, college of nursing.

Accessible Population

III-year B.Sc. nursing students studying in college of nursing, Madurai medical college, Madurai.

Sample Size

The total sample size is 42 Third year B.sc nursing students of college of nursing, Madurai medical college, Madurai.

Sampling Technique

Subjects are selected through non-probability purposive sampling technique.

Criteria for Sample Selection

Inclusion Criteria

- ❖ Third year B.sc nursing students irrespective of sex.
- ❖ Students who are willing to participate in this study.

Exclusion Criteria

- The students who are studying, B.Sc.(n) First, second, fourth year, and M.Sc. (n)
- The students are not available at the time of data collection.

Data Collection Method

- Self- Administered -Structured questionnaire method

Description of Tool

Part-A: Socio Demographic data

Part-B: Self-administered questionnaire

Scoring

Self-administered questionnaire contains 30 questions

Level of Knowledge

Score	Knowledge Level
1-10	Inadequate
11-20	Moderate
21-30	Adequate

Table 1: Frequency and Percentage Distribution of Demographic Variable **n=42**

S. NO	Socio-demographic Variables	f	%
1	Age		
	a) 18 - 19 years	38	90%
	b) 20 - 21 years	4	10%
2.	Sex		
	a) Male	5	12%
	b) Female	37	88%
3.	Religion		
	a) Hindu	32	76%
	b) Christian	6	14%
	c) Muslim	4	10%
	d) Others	-	-
4.	Students Education		
	a) Higher secondary	42	100%
	b) Graduation	-	
	c) Other course (if any specify.	-	-
			-
5.	Education of father		
	a) No formal education	-	-
	b) Primary education	25	59%
	c) Secondary education	9	22%
	d) Graduate	8	19%
	e) Post graduate	-	-
6.	Education of mother		
	a) No formal education	4	10%
	b) Primary education	26	62%
	c) Secondary education	10	24%
	d) Graduate	2	4%
	e) Post graduate	-	-
7.	Occupation of father		
	a) Government employee	2	4%
	b) Private employee	11	26%
	c) Self employee	20	48%
	d) Coolie	9	22%
		-	-
8.	Occupation of mother		
	a) Government employee	-	-
	b) Private employee	2	4%
	c) Self employee	15	36%
	d) Home maker	25	59%
9.	Family income (per month)		
	a) Below Rs. 5000	9	22%
	b) Rs. 5001 - 10,000	22	42%
	c) Rs. 10,001- 15,000	10	24%
	d) Above Rs.15000	1	2%

10.	Type of family		
	a) Nuclear family	32	76%
	b) Joint family	8	19%
	c) Extended family	2	4%
	d) Separated family	-	-
11	Locality		
	a) Rural	15	36%
	b) Urban	27	64%
12.	Source of information about legal and ethical issues		
	a) Health professionals	42	100%
	b) Friends	-	-
	c) Mass media	-	-
	d) Magazine, Newspapers, Books.	-	-
13.	Reason for doing B.Sc.(N)		
	a) By family force	15	36%
	b) To get higher job	15	36%
	c) To earn money	10	24%
	d) To acquire knowledge	2	4%

Section-B

Frequency Distribution of Knowledge Regarding Legal and Ethical Issues in Nursing

The above table reveals that knowledge on legal and ethical issues in nursing, 30 (71%) were having moderate knowledge, 12 (29%) were having adequate knowledge and no one have inadequate knowledge.

Table 2: Not Provided

S.NO	Knowledge Level	f	%
1	Inadequate	0	-
2	Moderate	30	71%
3	Adequate	12	29%

Table 3: Association of knowledge on legal and ethical issues in nursing among B.Sc. (N) III year students **n = 42**

S.no	Demographic Variable	Level of Knowledge						χ^2	't' Value
		Adequate		Moderate		Inadequate			
		f	%	f	%	f	%		
1.	Age in years								
	a) 18 - 19 years	10	24%	28	68%	-	-	3.96	4.30
	b) 20 - 21 years	2	4%	2	4%	-	-		
2.	**Sex**								
	a) Male	2	4%	3	7%	-	-	2.36	4.30
	b) Female	30	71%	7	18%	-	-		
3.	**Religion**								
	a) Hindu	18	43%	14	34%	-	-		
	b) Christian	2	4%	4	10%	-	-	4.63	2.45*
	c) Muslim	3	7%	1	2%	-	-		
	d) Others	-	-	-	-	-	-		
4.	**Students Education**								
	a) Higher secondary	14	34%	28	66%	-	-	8.05	2.78*
	b) Graduation	-	-	-	-	-	-		
	c) Other course	-	-	-	-	-	-		
5.	**Education of father**								
	a) No formal education	-	-	-	-	-	-		
	b) Primary education	10	24%	15	35%	-	-		
	c) Secondary education	5	12%	4	10%	-	-	6.47	2.31
	d) Graduate	4	10%	4	10%	-	-		
	e) Post graduate								
6.	**Education of mother**								
	a) No formal education	2		2	4%	-	-		
	b) Primary education	10	4%	16	40%	-	-		
	c) Secondary education	6	24%	4	10%	-	-	0.29	2.31
	d) Graduate	2	14%	-	-	-	-		
	e) Post graduate	-	4%	-	-	-	-		
			-						
7.	**Occupation of father**								
	a) Government employee	2	4%	-	-	-	-		

	b) Private employee	6	14%	5	12%	-	-	0.28	2.45
	c) Self employee	10	24%	10	24%	-	-		
	d) Coolie	4	10%	5	12%	-	-		
8.	**Occupation of mother**								
	a) Government employee	-	-	-	-	-	-		
	b) Private employee	2	4%	-	-	-	-	8.67	2.45*
	c) Self employee	10	24%	5	12%	-	-		
	d) Coolie	15	36%	10	24%	-	-		
9.	**Family income (per month)**								
	a)								
	elow Rs. 5000	5	12%	4	10%	-	-		
	b)	10	24%	12	28%	-	-	2.75	2.45*
	s. 5001 - 10,000	6	14%	4	10	-	-		
	c)	1	2%	-	-	-	-		
	s. 10,001- 15,000								
	d)								
	bove Rs.15000								
10.	**Type of family**								
	a) Nuclear family	12	28%	20	46%	-	-		
	b) Joint family	5	12%	4	10%	-	-		
	c) Extended family	2	4%	-	-	-	-	2.09	2.45*
	d) Separated family	-	-	-	-	-	-		
11.	**Locality**								
	a) Rural	10	24%	5	12%	-	-	3.5	4.30
	b) Urban	15	36%	12	28%	-	-		
12.	**Source of information about legal and ethical issues**								
	a) Health professionals	20	48%	22	52%	-	-		
	b) Friends	-	-	-	-	-	-	4.2	2.45*
	c) Mass media	-	-	-	-	-	-		
	d) Magazine, Newspapers, Book	-	-	-	-	-	-		
13.	Reason for doing B.Sc.(N)								
	a)By family force	10	24%	5	12%	-	-		
	b)To get higher job	5	12%	10	24%	-	-	2.8	2.45*
	c)To earn money	5	12%	5	12%	-	-		
	d)To acquire knowledge	2	4%	-	-	-	-		

*: significant at P=0.05 level.

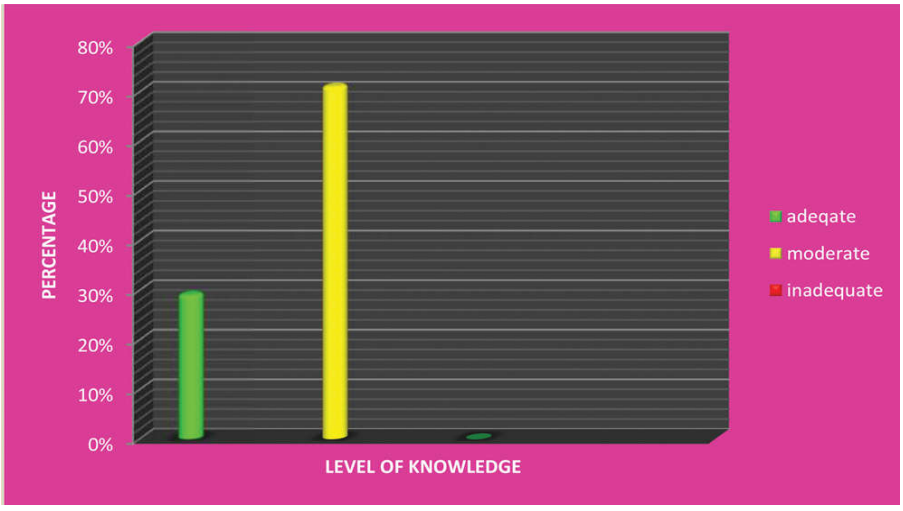

Fig. 1: Knowledge on legal and ethical issues in nursing among B.Sc. (N) III year students

The above figure reveals that knowledge on legal and ethical issues in nursing, 30 (71%) were having moderate knowledge, 12 (29%) were having adequate knowledge and no one have inadequate knowledge.

Discussion

The study was conducted to assess the knowledge on Legal and ethical issues in nursing among B.Sc.

(Nursing) III year students at College of nursing, Madurai medical college, Madurai.

Totally 42 samples were included in the study. Prior permission obtained and data were collected based on two sections. Section 1 deals with the demographic data assessment and section 11 deals with the structured questionnaire to assess the knowledge legal and ethical issues in nursing among B.Sc. (Nursing) III year students at college of nursing, Madurai medical college, Madurai. 13 question in demographic session and 30 question in knowledge assessment session.

The collected data were analyzed by using descriptive statistics. The analysis of the collected data brought out many interesting and useful aspects, which were discussed below. The study findings are discussed with objectives.

The findings of the study are discussed below under sections

Section I: Discussion regarding demographic data.

Section II: Discussion regarding knowledge on Legal and ethical issues in nursing among B.Sc. (Nursing) III year students.

Section III: Discussion regarding association of knowledge on Legal and ethical issues in nursing among B.Sc. (Nursing) III year students with their selected demographic variable.

Section I: Discussion Regarding Demographic Data

- Majority of the subjects 38 (90%) belongs to age group between 18 - 19 years of age and 4 (10%) belongs to the age group between 20-21 years of age.
- According to the sex, majority 37 (88%) were female, 5(12%) were male.
- The aspect of the religion the majority 32 (76%) were Hindu, 6 (14%) were Christian, 10 (4%) were Muslim and no one were other group.
- With regard to the education level of students 42 (100%) have completed higher secondary education. No one had graduate degree or other courses.
- According to the education of father 25 (59%) were had primary education, 9 (22%) had secondary education, 8 (19%) had graduate degree.
- In relation to education of mother 4 (10%) were no formal education, 26 (62%) were had primary education, 10 (24%) had secondary education, 2 (4%) had graduate degree and no one were post graduate.
- According to the occupation of father 2 (4%) were government employee, 20 (48%) were self-employee, 11 (26%) were private employee, 9 (22%) of them were coolie.
- In concept of occupation of mother 25 (59%) were home maker, 15 (36%) were self-employee and 2 (4%) of them were private employee and no one were government employee.
- According to the income of family per month the majority 22 (42%) were belongs to Rs.5001-10000, 9 (22%) were belongs to below Rs.5000, 10 (24%) were belongs to Rs.10001-15000 and 1 (2%) belongs to above Rs.15000.
- On the basis of family type 32 (76%) were living in a nuclear family, 8 (19%) were living in joint family and 2 (4%) were living in an extended family and no one were separated.
- The study explains that the locality of students 27 (64%) were living in urban and 15 (36%) were living in rural.
- With regard to source of information all the students 42 (100%) knows the source of information about legal and ethical issues.
- Aspect of reason for doing B.Sc., Nursing 15 (36%) were by family force, 15 (36%) were doing to get higher job, 10 (24%) to earn money and 2 (4%) to acquire knowledge.

The First Objective was to Assess the Knowledge on Legal and Ethical Issues in Nursing among B.Sc. (Nursing) III Year Students

The knowledge on legal and ethical issues in nursing among B.Sc. (Nursing) III year students at college of nursing, Madurai medical college, Madurai, shows that out of 42 students 30 students that is 71% had moderate knowledge regarding legal and ethical issues in nursing and rest 12 students about 29% had adequate knowledge regarding legal and ethical issues in nursing and no one had a inadequate knowledge.

The Second Objective was to Associate the Knowledge on Legal and Ethical Issues in Nursing among B.Sc. (Nursing) III Year Students

The study findings reveals that there is a significant association between the religion, students education, education of father, occupation of the mother, family income, source of information about legal and ethical issues, reason for doing B.Sc. (N) and the knowledge on Legal and ethical issues in nursing among B.Sc. (Nursing) III year students.

Findings of the Study

The study shows that majority of the students have moderate knowledge on legal and ethical issues in nursing.

Findings Related to Assess the Knowledge on Legal and Ethical Issues in Nursing among B.Sc. (Nursing) III Year Students

- Majority of the subjects 38 (90%) belongs to age group between 18 - 19 years of age and 4 (10%) belongs to the age group between 20-21 years of age.
- According to the sex, majority 37 (88%) were female, 5 (12%) were male.
- The aspect of the religion the majority 32 (76%) were Hindu, 6 (14%) were Christian, 10 (4%) were Muslim and no one were other group.
- With regard to the education level of students 42 (100%) have completed higher secondary education. No one had graduate degree or other courses.
- According to the education of father 25 (59%) were had primary education, 9 (22%) had secondary education, 8 (19%) had graduate degree.
- In relation to education of mother 4 (10%) were no formal education, 26 (62%) were had primary education, 10 (24%) had secondary education, 2 (4%) had graduate degree and no one were post graduate.
- According to the occupation of father 2 (4%) were government employee, 20 (48%) were self-employee, 11 (26%) were private employee, 9 (22%) of them were coolie.
- In concept of occupation of mother 25 (59%) were home maker, 15 (36%) were self-employee and 2 (4%) of them were private employee and no one were government employee.
- According to the income of family per month the majority 22 (42%) were belongs to Rs.5001-10000, 9 (22%) were belongs to below Rs.5000, 10 (24%) were belongs to Rs.10001-15000 and 1 (2%) belongs to above Rs.15000.
- In type of family the 32 (76%) were living in a nuclear family, 8 (19%) were living in joint family and 2 (4%) were living in an extended family and no one were separated.
- The study explains that the locality of students 27 (64%) were living in urban and 15 (36%) were living in rural.
- With regard to source of information all the students 42 (100%) knows the source of information about legal and ethical issues.
- Aspect of reason for doing B.Sc. Nursing 15 (36%) were by family force, 15 (36%) were doing to get higher job, 10 (24%) to earn money and 2 (4%) to acquire knowledge.

Findings Related to Association of Knowledge on Legal and Ethical Issues in Nursing among B.Sc. (Nursing) III Year Students

1. The obtained c^2 value is 3.96. The table value is 4.30. Calculated value is less than table value. So null hypotheses accepted. There is no significant association between students' age and level of knowledge.
2. With the respect of sex c^2 values is 2.36. The table value is 4.30.Calculated value is less than table value. So null hypotheses accepted. There is no significant association between students' sex and level of knowledge.
3. With regard to religionc^2 value is 4.63. The table value is 2.45.Calculated value is greater than table value. So null hypotheses rejected. There is a significant association between students' religion and level of knowledge.
4. The aspect of c^2 value is 8.05. The table value is 2.78.Calculated value is greater than table value. So null hypotheses rejected. There is a significant association between student's education and level of knowledge.
5. The study reveals that c^2 value is 6.47. The table value is 2.31. Calculated value is greater than table value. So null hypotheses rejected. There is a significant association between education of the father and level of knowledge.
6. The study explains that in religion c^2 values are 2.36. The table value is 2.31.Calculated value is greater than table value. So null hypotheses accepted. There is no significant between education of mother and level of knowledge.
7. The obtained c^2value is 8.67. The table value is 2.45.Calculated value is greater than table value. So null hypotheses accepted. There is no significant between occupation of father and level of knowledge.
8. The c^2 value is 8.67. The table value is 2.45. Calculated value is greater than table value. So null hypotheses rejected. There is a significant association between occupation of mother and level of knowledge.

9. With the respect of c^2 values are 2.75. The table value is 2.45.Calculated value is greater than table value. So null hypotheses accepted. There is a significant association between family income and level of knowledge.
10. The c^2 value is 2.09. The table value is 2.45. Calculated value is less than table value. So null hypotheses accepted. There is no significant between type of family and level of knowledge.
11. The c^2 value is 3.5. The table value is 4.30. Calculated value is less than table value. So null hypotheses accepted. There is no significant between locality and level of knowledge.
12. The c^2 value is 4.2. The table value is 2.45.Calculated value is greater than table value. So null hypotheses rejected. There is a significant association between source of information about legal and ethical issues and level of knowledge.
13. The c^2 value is 2.8. The table value is 2.45.Calculated value is greater than table value. So null hypotheses rejected. There is a significant association between reason for doing B.Sc. (N) and level of knowledge.

Conclusion

The following conclusion were drawn from the study.

- Majority of the students had moderate knowledge on legal and ethical issues in nursing.
- Majority of the students are belongs to the age group between 18-19 years of age.
- Majority of the students belongs to Hindu.
- Majority of the students are got the information from health professionals.
- Majority of the students were had higher secondary education.

Implication Nursing Practice

The students who are going to work in the hospital need to have adequate knowledge regarding the legal and ethical issues in nursing. The nurse assist with the physician in nursing practice, this knowledge plays a vital role to avoid legal issues and ethical also.

Nursing Education

The students should be adequately taught regarding the knowledge on legal and ethical issues in nursing, as the students are ready to step into nursing practice areas the basics are trained where nursing education needs to be given knowledge regarding legal and ethical issues in nursing.

Nursing Research

More and more nursing research should be conducted regarding the legal and ethical issues in nursing to prevent legal complications. The findings of the study help the students to conduct further studies regarding the legal and ethical issues.

Nursing Administration

Nurse should be given continuing nursing education regarding legal and ethical issues in nursing. As a nurse whenever needed and wherever need emerges like in the hospital setting and in the community. Administration should provide necessary facilities to provide education related to legal and ethical issues in nursing.

Recommendations

The project recommends the following for further research.

1. The study can be replicated with larger samples
2. An experimental study can be done to assess the effectiveness of structured teaching programme improve the knowledge on legal and ethical issues in nursing.

Limitations

- The study was limited to 42 samples to generalize the findings.

References

1. Barbara K.Timby Nancy E-Smith, 2006, "*Introduction of Medical and Surgical Nursing*",lIppincott, New York, 9th edition.
2. Brunner and Suddarth's,(2000), "T*ext book of Medical and Surgical Nursing*", Lippincott, Phildelphia, 9th Edition.
3. B.T.basavanthappa,(2010), "Nursing research", 2nd edition, Jaypee brothers medical publishers(p)ltd.
4. Basavanthappa.B.T.(2006). *Nursing administration.* 2nd (ed.). Bangalore: Emmess publication.
5. D.C.Dutta.(2005) "Text Book of Gynaecology". Fourth edition, New Publisher (P) ltd,. Calcutta (India).
6. Geri Lobiondo- Wood, (2002), "Nursing research methods and critical appraisal for evidence based practice", 6th edition, Elsevier publication, New Delhi.

7. Harrison's (, 2005), "*Principles of Internal medicine*", volume II, McGraw Hill, Medical publishing Division, 16th Edition.
8. Joyce Black, Janattekanson Hawks (2005), "*MedicalSurgicalNursing*"*Seventh edition,* New Jercy, Pearson education Inc.
9. Nancy Burns and Susan.k. Grove, (2007), "Understanding Nursing Research", 4th edition, Elsevier Publication, New Delhi.
10. Ruth Mccorkle, Marcia Grant. (1996). "A comprehensive Text book of Cancer Nursing". 2th edition, Philadelpia; W.B. Saunder Company.
11. Suresh.K.Sharma, (2011)," Nursing Research and Statistics", 1st Edition, Elsevier publication, New Delhi.

Journal Reference

1. Barnabas. S, 'Study to assess knowledge of legal responsibilities in patient care among Nursing Graduates'. NJI, 2004; 95(4): 90-91.
2. Paul P., 'An exploratory study to assess knowledge about legal aspects among nurses in selected hospitals of Pune"– Implications on Nursing Practice'. The Nursing journal of India, 2007 Sep; p 6-8.
3. Kanase B.Vijay, 'Nurses Dilemma- Ethical issues'. The Nursing Journal of India, May 2002; 93(5): 103-104.
4. Blegen MA, Vaughn T, Pepper G, et al. 'RNs May Under report Adverse Safety Incidents Patient and staff safety: voluntary reporting'. American Journal of Medical Quality. 2004: 19: 67-74.
5. Power KJ, 'The legal and ethical implications of consent to nursing procedures. Online Journal of Issues in Nursing. September 30, 2001; 6.
6. Heinemann A&Puschel K, 'Medico-legal aspects of pressure sore'. Legal Medicine (Tokyo). 2003 March; 5(Suppl. 1): 263-6.
7. Mock.D.Kathleen, 'Keeping lawsuits at bay withcompassionate care'. RN, 2008; 64(5): 83-86.
8. Charles SC & Wilbert JR et al, 'Sued and nonsuedphysicians' self-reported reactions to malpracticelitigation'. American Journal of Psychiatry. 1985 Apr; 142(4): 437-40.
9. Weisman CS & MorlockLl et al, 'Practice changes inresponse to the malpractice litigation climate. Results of a Maryland physician survey'. www. pubmed.com.
10. Tingle J. 'Clinical negligence and the need to keep professionally updated.' British Journal of Nursing.2002 Nov 14-27; 11(20): 1304-1306. Johnson JE. 'Bridging the accountability gap'. Journalof Social Health System. 1991; 2(3): 52-8.
11. Eileen M. Croke et al, 'Nurses, Negligence, and Malpractice'. AJN, American Journal of Nursing, September 2003; 103(9): 54.

Net Reference

1. http//www.goole.com.
2. http// www.ncci.org.an.
3. http//www.Health.M.D.com.
4. www.cehat.org/publications

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Effectiveness of Education Session on Knowledge about Premenstrual Syndrome

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Abstract

Quasi-Experimental study was carried out to evaluate the effectiveness of educational session on premenstrual syndrome among reproductive age women in selected rural areas, Tirupati, Andhra Pradesh. Data was collected from 50 women living in Peruru Village, Tirupati. Significance findings in the pretest revealed that a majority (84%) has inadequate knowledge and (10%) has moderate knowledge and (6%) had adequate knowledge on various aspects of PMS. After providing education significant knowledge was gained which reveals 82% of women gained adequate knowledge while 14% of women gained moderate knowledge and 4% of women gained inadequate knowledge on PMS. The t-value is 28.706, which is statistically significant at 0.01 levels. The conclusion suggests that the education when imparted to women on premenstrual syndrome can bring improvement in their knowledge and lead to the adoption of preventive practices against premenstrual syndrome.

Keywords: Premenstrual Syndrome; Educational Session; Reproductive Age Women.

Introduction

Premenstrual syndrome is one of the most common disorders in women at reproductive age that could significantly interfere with activities of daily life. PMS is a set of physical and psychological symptoms that arises about a week to 10 days before menstruation. Premenstrual symptoms usually relieve of ease once menstruation starts. But they may continue for the few days of the period and it will be relieved and appear in the next cycle [1].

Singh Harinader [2] study reported appearance of marked behavioral changes like depression, aggression, irritability, and mood swings etc., during PMS. These behavioral changes affect some females to such an extent that they act uncharacteristically and commit miner and major crimes which can turn to unlawful activity. Maximum behavioral symptoms were noticed on females within the age group of 35-45 years. Daltan [3] suggested more incidence of PMS in women >30 years of age in comparison to younger women.

For many women the signs and symptoms of premenstrual syndrome are uncomfortable and unwelcome part of their monthly cycle, many of the women do not notice it as a disorder. The precise cause is not known, but theories suggest that hormone imbalance with changes in endocrine levels, abnormal prostaglandin metabolism, thyroid function and aldosterone secretion as possibilities. External stress and the dietary habits may also play a vital role in it.

About 85% of child bearing women experience premenstrual syndrome during their lifetime. About 40% of the women experience much intensified symptoms. But the prevalence of premenstrual symptoms vary from 1 to 90% due to variation in sample size and varying criteria to assess symptoms (Monica Malhotra, 2003) [4].

Janice E Daughtary, M.D; [5] conducted a study on premenstrual syndrome and their associated socio-demographic variables in fertile woman between ages 15 and 45 years. The results were about 6.1% had severe premenstrual symptoms, (72.2%) have dysfunction and the most common symptoms were feeling of irritability and restlessness (72%) anxiety (67%) discomfort or pain (66.6%) and he concluded that the prevalence is very high and is increasing day by day.

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Premenstrual syndrome may affect 30-40% of the female population and has been implication in the work absenteeism, criminal behavior, marital discord and billions of dollars worth a business less. Now-a-days the problem of premenstrual syndrome is an increasing entity. It disturbs the women socially, psychologically and family relations tend to become risky, so there is a need to create awareness about premenstrual syndrome among women and evaluate the effectiveness of educational session on PMS.

Objectives of the Study

- To evaluate the effectiveness of educational session regarding premenstrual syndrome.
- To find out association between post test knowledge with selected demographic variables.

Methodology

The research design adopted for the study to achieve the objectives by the study was pre experimental, one group pretest, and post test design. Multi stage probability method of sampling was adopted to select the study sample. The study was conducted in Peruru Village, Tirupati Rural which is situated in Rural Tirupati at a distance of about 20 km from the College of Nursing, SVIMS and SVIMS University, Tirupati, A.P. The sample comprised of 50 reproductive aged women who fulfill the inclusive criteria, living in Peruru Village, Tirupati. The research topic was approved by research Committee College of nursing. The sample of this study includes all women in the age group from 15-45 years living in Peruru, Tirupati rural who fulfill the criteria. Formal permission was obtained from the village Surpamch and Village Secretary, Peruru Village, Tirupati for conducting the study.

Data was collected with structured interview scheduled which was developed with extensive review of literature and it consists of 33 items of multiple choice questions with a score of right answer 0 wrong answer 1. Educational session was developed and validated with experts. Mothers were made to sit comfortably and Pre test knowledge was measured by interview schedule, educational session was organized on PMS in groups of 10 in 5 sessions after giving education on PMS and management. After implementation of educational session employing the same tool for pre test, data was collected after seven days.

Results

Data collected from 50 samples was analyzed and presented. Majority (46%) of the women are in the age group of 20 to 30 years, educated (88%). Most (46%) of them were home makers and half of them are living in joint families.

Table 1: Mean, standard deviation and't' value of pre test and post test knowledge score on premenstrual syndrome

Knowledge	Mean	S.D.	't' value	
Pre test	14.84	9.259	28.706	0.01 level of significance
Post test	43.9	7.744		

P<0.01

Table 1 represents pre test mean score 14.84 and S.D. 9.259, the post test mean 43.9 and S.D. 7.744, the paired 't' test value 28.706 shows that there was a significant improvement in the knowledge of women on premenstrual syndrome at P<0.01 level. The major difference in mean was due to effectiveness of education session.

Table 2: Area wise association between per test and post test knowledge scores of women on premenstrual syndrome

S. No.	Knowledge variables	Pre test		Post test		't' value	Inference
		Mean	S.D.	Mean	S.D.		
1.	Concept pf PMS	2.9	1.99	5.86	0.56	10.82	S
	Signs &	6.08	5.30	24.06	5.3	22.411	S
2.	Symptoms	5.78	5.61	13.98	2.88	10.84	S
3	Management	14.84	9.25	43.90	7.74	28.70	S

The table 2 represents pretest and post test knowledge on sub session premenstrual syndrome. Knowledge regarding concept of PMS was 2.9. It was increased to 5.86 which was significant (t value) knowledge and signs symptoms was 6.8 before education session. It was increased to 24.06 after an education which was significant (t value 22.41). In the sub domain of management of PMS pre test mean

score was 14.84. Which was increased significantly (43.90) after educational session (t value 28.70).

Significant Association was found between education (Chi-square value 34.756 significant at 1%), marital status (Chi-square 16.935, significant at 1%) and post test knowledge of mothers.

Discussion

Pre test knowledge on PMS was found to be inadequate. These findings of the study correlate with findings of Horester K.D. et al., (2003) [5], who stated that Indian women has leaser scores of knowledge on preparedness to menarche and menstruation compared to the American Women. The findings of the study correlates with the findings of Janita P.C. Chav [6] et al., conducted a similar study on effects of educational program on adolescents with premenstrual syndrome at secondary schools in Hongkong. The study results were there was a significant increase in post test knowledge scores of experimental group whereas there was no significant difference found in post test knowledge scores of the control group. Habib F et al., also reported significant improvement or subject knowledge regarding PMS after educational session [P=0.000]. This included definition, time and symptoms a PMS [7].

Conclusion

Premenstrual syndrome is not just a bio-medical disease. It has socio-cultural and economic implications.

Educational session on premenstrual syndrome was found to be affective in increasing the knowledge of the women on identification of symptoms and management of symptoms their by women can improved their quality of life.

References

1. Edward Seedham et al. Life style Factors Associated with premenstrual syndrome among EL-Minia University students, Egypt.2013. http//dx.doi.org/10.1155/2013/617123.
2. Singh Harinder et.al. Premenstrual syndrome the malady and the law. JI AFM. 2004; 26(4): 129-131.
3. Dalton K. The premenstrual syndrome springfield III Charlesc. Thomas 1964.
4. Monika Malhotra. Premenstrual syndrome. Obs and Gynae. 2003; 7(3): 125-128.
5. Janice E. Daugherty. Treatment strategies for premenstrual syndrome. Am Fam physician, 1998; 58(1): 183-192.
6. Janita P.C. Chav and Anne M. Chang. Effects of educational program on adolescents with premenstrual syndrome. Health education research. 1999; 14(6); 817-830. Doi:10/1093/her/14.6.817.
7. Habib. F et al. Impact of an Educational Session about Premenstrual Syndrome Management Using Complementary and Alternative Medicine on Young Adult females Knowledge and Practice, IOSR-JNHS, 2014; 3(2): 63-69.

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A Study to Evaluate the Effectiveness of Structured Teaching Program Regarding Knowledge on Disaster Preparedness at Household Level among the Housewives

Sakshi Taneja

Abstract

Disaster Preparedness, whether it's in anticipation of potential weather-related incidents or terrorist incidents requires a skill for that someone has to be trained for. It is almost impossible to prevent the occurrence of natural disasters and their damage. However, it is possible to reduce the impact of disasters by adopting suitable disaster mitigation strategies and disaster preparedness. A study was conducted to evaluate the effectiveness of Structured Teaching Programme (STP) regarding knowledge on disaster preparedness at household level among the housewives in Sonipat City of Haryana. A sample of 80 housewives was selected using simple random sampling technique. The tools used for the data collection was structured interview Schedule to assess the knowledge regarding knowledge on disaster preparedness at household level in context of earthquake, flood , bomb blast, fire incidental measures and risk reduction strategy and disaster preparedness kit. The finding of the study indicated that the mean post test knowledge score was higher than the mean pre test knowledge score respectively. The chi square values calculated indicated that there was significant association of the knowledge score with the educational status, previous experience of disaster, family income and source of knowledge. finally the study has revealed that the structured teaching programme (STP) was effective in enhancing the knowledge of housewives regarding disaster preparedness at household level.

"Disaster preparedness, whether it's in anticipation of potential weather-related incidents or terrorist incidents requires a skill set that in my mind someone has to be trained for"- Bennie Thompson

Operational Definitions

Knowledge

Knowledge refers to the response of housewives to the question stated in the questionnaire. Knowledge is measured in terms of knowledge score.

Evaluate

In this study evaluate refers to the outcome of learning package in terms of knowledge score among housewives.

Structured Teaching Program

It is systematically prepared teaching program for housewives. Teaching program is planned on the topic like flood, earthquake, fire, bomb blast, disaster kit. Appropriate use of AV aids is emphasized in this program.

Disaster

Disaster has been defined as an occurrence disrupting the normal conditions of existence and causing a level of suffering that exceeds the capacity of adjustment of the affected community.

Disaster Preparedness

Disaster Preparedness is a continuous cycle of planning, organizing, training, equipping, exercising, evaluation and improvement activities to ensure effective coordination and the enhancement of capabilities to prevent, protect against, respond to,

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recover from, and mitigate the effects of natural disasters, acts of terrorism, and other man-made disasters.

Disaster Preparedness at Household Level

Disaster preparedness at household level refers to measure taken by family members to face effect and after effect of any natural or manmade disastrous condition.

Housewives

It refers to all females who are not in job and responsible for health and safety of their family members.

Disasters in modern times have transcended borders of nations and class and have a devastating impact in terms of human and material losses. Indian Government has planned disaster program in 2002-2007 which was basically on risk reduction strategy by awareness and technical enhancement strategy in the whole country and especially in 12 risk states which also include north eastern states. Haryana had adopted disaster management scheme to face drought, flood. Various cities of Haryana had developed their action program to face above said dangers. A risk reduction strategy is always beneficial to decrease the after effect of disasters. This strategy is defined as disaster preparedness whether hospital or house hold level preparedness in community based disaster management strategy. So objective of this study was to create awareness among housewives of Sonipat, (Haryana).

Objectives

1. To assess the knowledge among housewives regarding disaster preparedness at house- hold level before and after structured teaching program.
2. To determine the effectiveness of structured teaching program on disaster preparedness at house hold level among housewives.
3. To find out association between the knowledge on disaster preparedness at household level and selected demographic variables.

Hypothesis

H_1: There will be a significant difference between the knowledge score obtained by those who received structured teaching program and those who did not receive structured teaching program.

H_0: There will be not a significant difference between the knowledge score obtained by those who received structured teaching program and those who did not receive structured teaching program.

Research Methodology

Experimental design, before- and- after with control design judges the treatment by the difference between the pre-test and post-test scores comparing with a control group. The research design adopted for the present study.

Setting of the Study

District Sonipat (Haryana)

Variables under the Study

Variable: The dependent Variable is Knowledge of housewives on disaster preparedness at house hold level and independent variable-structured teaching program.

Demographic Variables: Age, Education, Religion, Family Income/Month, Type of Family, Previous Experience of Disaster and Source of Information about Disaster.

Population

The target population comprises of the approximate of urban slum population of 88000 of housewives in Sonipat district in the age group of 21-60 years.

Sampling Design

Stratified sampling technique was found to be appropriate for the present study.

Sample and Sample size

In the present study, samples comprise of housewives between 21-60 years of age residing in urban slum area of Sonipat and were willing to participate.

A total of 80 females (housewives), 40 for experimental group and 40 for control group were taken.

Data Collection Technique

Self structured interview schedule is utilized consisting of 7 items of demographic variable and to assess the knowledge on incidental measures and risk reduction strategy consisting of 18 items. Tool was based on earthquake, fire accidents, bomb blasts, flood causes, effect, risk reduction strategy at household level and preparation of disaster kit.

Data collection Procedure

On 02/4/2011 the house wives were assessed of their knowledge on disaster preparedness through a structured interview schedule in anganwadi centre and at home. Average 25-30 min time is taken for the completion of the interview schedule. The structured teaching program was conducted. The duration of session was 1 hour and 45 minutes the group constituted of 40 housewives. Experimental group was made for teaching in morning in nearby school building. Lecture cum discussion and role play was the method of teaching adopted. Teaching session include type of disaster, various disaster preventive measures and preparation of disaster kit at home for household disaster preparedness, visual aids like flash cards, flip charts and real objects were used. Then a post- test was conducted using the same structured interview schedule to evaluate the effectiveness of the structured teaching program. The investigator found no difficulties during the data collection because of co-operation by school staff.

Results

- In pre test out of 80 housewives, 14 (17.5 per cent) had moderate knowledge, and remaining 66 (82.5per cent) had inadequate knowledge and no one was having adequate knowledge. In pre test, the area wise mean knowledge was 31.662, mean percentage of the score was 12.4 per cent, and Standard deviation was 14.62 of the total score.
- In post test out of 80 housewives 6 (7.5%) had adequate knowledge, 25 (31.25%) had moderate knowledge and remaining 49 (60 per cent) had inadequate in post- test. The mean was 42; mean percentage of the score was 12.5 per cent and with 18.208 standard deviation of the total score.

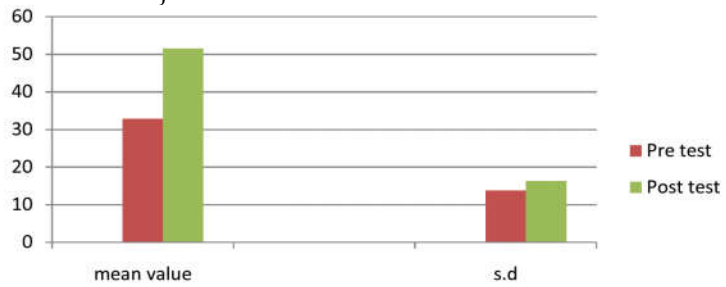

Fig. 1: Pre Test and Post Test Knowledge Level of Respondents on Disaster Preparedness

Table 1: Relationship between knowledge and structured teaching program **N=80**

No. of Respondents	Pre test		Post test		
	E	C	E	C	
Inadequate knowledge	32 (80%)	34 (85%)	16(40%)	33(83.5%)	$\chi 2$=16.738 at df=2, p=5.991
Moderately adequate knowledge	8 (20%)	6 (15%)	18(45%)	7(17.5%)	
Adequate knowledge	0	0	6(15%)	0	

Table 2: Aspect wise pre and post test knowledge on disaster preparedness

Aspect	Statement	Pretest Mean	S.D	Post Test Mean	S.D	nhancement	test value
Knowledge on Disaster Preparedness	As per tool	3.013	1.436	5.025	1.470	2.012	13.125
Earthquake incidental measures and risk reduction strategy	As per tool	6.925	3.645	12.105	3.760	5.180	12.895
Flood incidental measures and risk reduction strategy	As per tool	9.675	4.807	14.225	4.500	4.550	13.0013
Bomb blast incidental measures and risk reduction strategy	As per tool	2.713	2.445	6.210	2.365	3.497	16.18
Fire incidental measures and risk reduction strategy	As per tool	9.278	4.745	13.005	3.290	3.727	12.139
Disaster preparedness kit	As per tool	0.0025	0.157	1.105	1.170	1.1025	4.18

The mean difference between pre test and post test knowledge reveals significant increase in knowledge after the intervention of structured teaching program.

The Chi-square value stated above clearly. Reject null hypothesis so the researcher concludes that STP was beneficial for increasing the knowledge level of experimental group.

- Among demographic variables, previous experience of disaster, source of information about disasters, family income, and educational level shows clear significant association with knowledge related to disaster preparedness.

The data presented in table shows that there is a significant increase in knowledge level after S.T.P. in all the assessment variables. As regards to earthquake and flood the mean score in pre test, there is tremendous increase in scores under section. The paired 't' test is statistically significant at 0.05 per cent level.

Implication

On the basis of above findings of the study it can be concluded that risk reduction strategy for prevention and after effect of disaster can be significantly achieved at household level by structured teaching program and preparation of disaster kit at home.

- Present study will help public health personals to promote safety among community, families especially in disaster prone states.
- Present study also helps the administrative cell of disaster management to develop action plan and to gain participation of local public to face and prevent disaster together.
- Teaching program will bring cost effective intervention to protect community from disasters.
- Teaching program for disaster preparedness can be involved in field activity for student nurses.
- Every college and institute can plan a disaster preparedness program, can develop evacuation map, disaster kit preparation etc.
- Community leaders can be trained to participate in disaster risk reduction strategy starting from home.

This study actually was done to help the most inaccessible but vital element i.e., housewives of urban slum Sonipat city which was on alert for flood at that time.

Reference

1. Gebbie K.M. & Qureshi K. Emergency and disaster preparedness: core competencies for nurses. What every nurse should know but may not know. American Journal of Nursing, 2002; 102(91): 46-51.
2. International Council of Nurses (2006) Position Statement: Nurses and Disaster Preparedness. Retrieved from http://www.icn.ch/ psdiasterprep 01.htm on 1 March 2007.
3. International Nursing Coalition for Mass Casualty (2003). Educational Competencies for Registered Nurses Responding to Mass Casualty incidents. Retrieved from http://www.nursing.vanderbilt. On January 2008.
4. Suserud B. &Halijamae H. Acting at a disaster site: experiences expressed by Swedish nurses. Journal of Advanced Nursing, 1997; 25(1): 155-162.
5. United Nations (2004) Resolution 49/22A of December 1994, International Decade for Natural Disaster Reduction. Retrieved from http://www.unisar. Org on 1 October 2007.
6. Veenema T.G. (Ed). Disaster Nursing and Emergency Preparedness for Chemical, Biological, and Radiological Terrorism and Other Hazards. Springer Publishing Company, New York, 2003.
7. World Health Organization, Expert Consultation Report, Emergency preparedness for the health sector and communities – challenges and the way forward. Pre-hospital and Disaster Medicine. 2006; 21(Suppl. 4): s97–s109.
8. Jeannette Sutton and Kathleen Tierney Disaster Preparedness: Concepts, Guidance, and Researchhttp://www.colorado.edu/ hazards.
9. Government of India. Draft study on corporate involvement in disaster management [Online]. 2010 [Cited 2009 Nov 10]; Available from: URL: http://www.wc.dr.gfdr.org/imgs/pdfs/ drafstudyof corporate.
10. Rao DP. Disaster Management [Online] [Cited on 2006 Nov 10];
11. Available from: URL: http://www. director @nrsa.gov.in

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Assess the Level of Knowledge on Biomedical Waste Management among IV Year B.Sc. Nursing Students

S. Poonghuzhali

Abstract

Introduction: A study to assess the level of knowledge on Biomedical waste management among IV Year B.Sc .Nursing Students, studying in College of Nursing, Madurai Medical College, Madurai. *Objectives:* To assess the level of knowledge on Biomedical waste management among IV Year B.Sc. Nursing Students, studying in College of Nursing, Madurai Medical College, Madurai. To associate the level of knowledge on Biomedical waste management among IV Year B.Sc. nursing students with their selected demographic variables. *Conceptual framework:* The conceptual framework based on Health Belief Model, this model was created by Becker**.** *Research approach:* Quantitative approach. *Design:* Descriptive study design was adopted. *Setting of the study:* The study was conducted College of nursing, Madurai Medical College Madurai. *Subjects:* There were 45 subjects included in the study. *Sampling technique:* Purposive sampling technique was used. *Findings:* This study revealed that there is significant association between Residence, Education of the students, Education of the father, Education of the Mother, Occupation of the father and the level of knowledge among IV Year B.Sc. nursing students regarding biomedical waste management with their selected demographic variables. *Conclusion:* The study shows that the IV Year B.Sc. nursing students had adequate knowledge regarding Bio-medical waste management.

Keywords: Biomedical Waste Management; Conceptual Framework; Nosocomial Infection.

Introduction

Let the wastes of the sick not contaminate the lives of the health.

All human activities produce waste. We all know that such waste may be dangerous and needs safe disposal. Industrial waste, sewage and agriculture waste pollute water, soil and air. It can be dangerous to human beings and environment as well. Similarly hospitals and other health care facilities generates lots of waste which can transmit infections, particularly HIV, Hepatitis B and C and tetanus, to the people who handle it or come in contact with it.

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Health care personnel including doctors, nurses and paramedical staffs are the guardians of the community. It is the duty of the entire health care establishment to ensure speedy recovery of their patients by maintaining clean and infection free surroundings.

The quantity of biomedical waste generated will vary depending on the hospitals, colleges and practices and the type of care being provided. According to WHO, 85 per cent of the hospital waste are actually non hazardous, 10 per cent are non infectious and the remaining 5 per cent are non infectious but hazardous consisting of chemical, pharmaceutical, radioactive materials. In India 0.5-2 kg per patient per day waste is generated and the percentage of infectious waste is much higher. This is because of improper segregation methods resulting in collection of biomedical waste in a mixed form.

The Ministry of Environment & Forests notified the Biomedical (management & handling) Rules, (BMW Mgt.) in July 1998. In accordance with the rules, every hospital generating BMW needs to set up requisite BMW treatment facilities on site or ensure requisite treatment of waste at common treatment facility. No untreated BMW shall be kept stored beyond a period of 48 hours.

Nurses are the largest occupational group in any health care agency. By virtue of their jobs responsibility they are frequently exposed to biomedical waste. The nurses' risk of exposure to health hazard is quite high. It is clear that without their active participation waste management would be a dream. Nurses at the start of their profession, that is, while they are at the level of students, should be made aware of the health hazard of biomedical waste and the scientific ways of handling it. This could be done best by a structured teaching program.

Need for the Study

Biomedical waste such as pathological waste, tissues, blood and blood products, surgical dressing, disposable gloves, cotton swabs, soiled dressings from treatment area and waste from operation theaters dumped without proper safety measures, is posing a threat not only to hospital employees but also to the general public and the surrounding environment.

The survey was carried out in a 15 private hospitals of Iran in order to determine the amount of different kinds of waste product and the present situation of waste management. The results indicate that the waste generation rate is 4.45 Kg/bed/day. Segregation of the different type of waste is not carried out perfectly.

Global figures based on statistical data of environment Protection Agency of America and Japan. Ministry of Health suggested a volume of 1 to 1.5kg/day/bed biomedical waste for hospitals. However, waste produce has been quoted up to 5.24kg/day/bed in developed countries. The average quantity of hospital solid waste produced in India ranges from 1.5 to 2.2kg/day//bed.

The waste generation rate ranges between 0.5 and 2.5kg/bed. It is estimated that annually about 0.33 million tons of wastes are generated in India. The solid waste from the hospitals consists of bandages linen and other infections waste (30-35%) plastics (7.10%), disposable syringes (0.3-0.5%), glass (3.5%) and other general waste including food (40-45%). In general, the wastes are collected in a mixed form, transported and disposed along with municipal solid wastes.

The rules for management and handling biomedical wastes summarized giving the categories of different wastes, suggested storage containers including color coding and treatment options. Existing and proposed systems of health care waste management are described. A waste management plan for health care establishment is also proposed, which includes institutional arrangements, appropriate technologies, operational plans, financial management and the drawing up of appropriate staff training programs.

Hence, there is a need to investigate the knowledge on biomedical waste management among Nursing Students.

Statement of the Problem

A study to assess the level of knowledge on Biomedical waste management among IV Year B.Sc. Nursing Students, studying in College of Nursing, Madurai Medical College, Madurai.

Objectives of the Study

1. To assess the level of knowledge on Biomedical waste management among IV Year B.Sc. nursing students, studying in College of Nursing, Madurai Medical College, Madurai.
2. To associate the level of knowledge among IV Year B.Sc. nursing students regarding biomedical wastes management with their selected demographic variables.

Hypotheses

H_1: There will be a significant association between the levels of knowledge on biomedical waste management among IV Year B.Sc. nursing students with their selected demographic variables.

Conceptual Framework

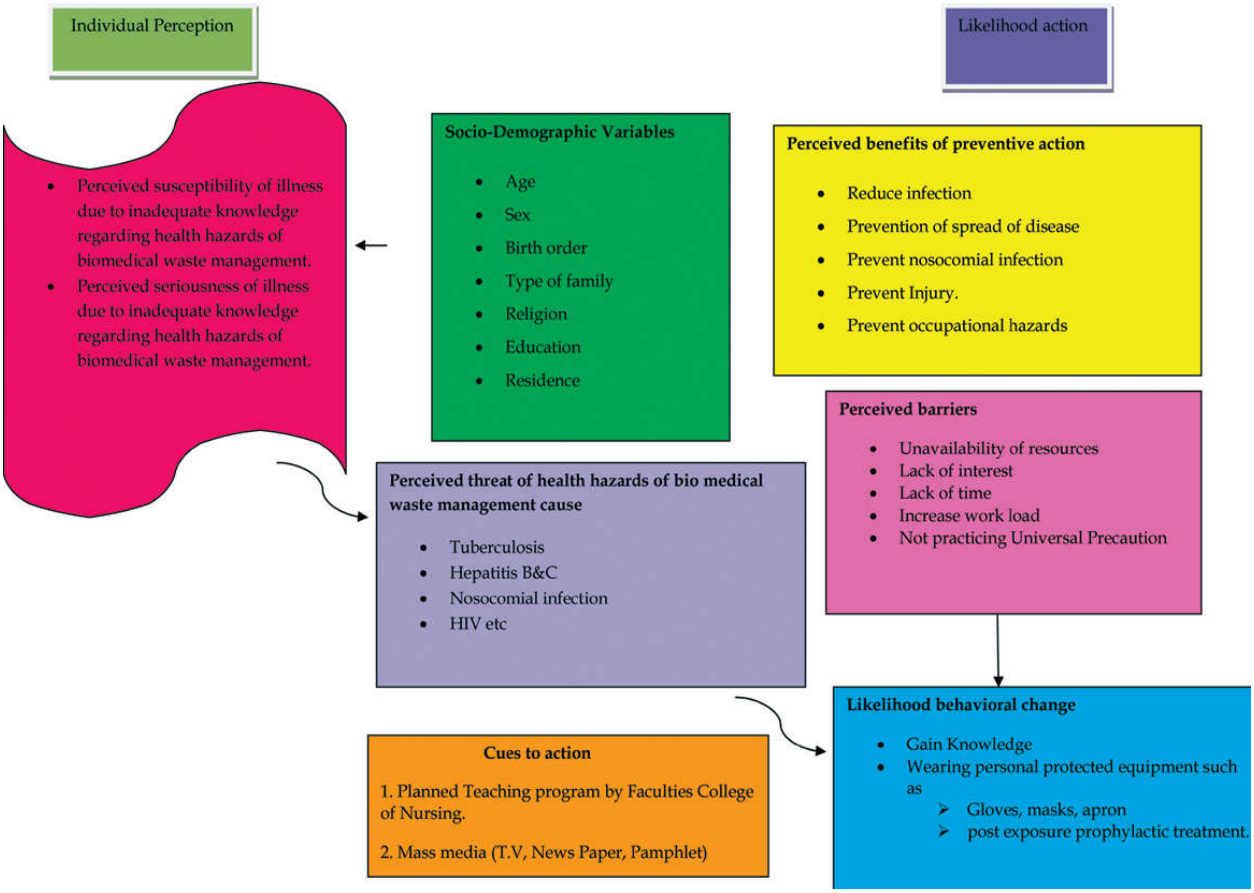
The present study is aimed at assessing the knowledge on Biomedical waste management among IV year B.Sc. nursing students in College of Nursing, Madurai Medical College Madurai. The conceptual framework selected for the study is based on the Health belief model Health awareness in modified through education as it help the individual to perceive the threat of an bio hazards practices and increased awareness towards bio-hazards practices and increased awareness towards bio hazards. This model was first developed in the early 1950 by Becker.

Research Methodology

Research Approach

A quantitative approach selected to present the study.

Conceptual Framework: Modified Health Belief Model by Becker, Drachman



Research Design

The research design selected to the present study is non-experimental descriptive study design.

Setting of the Study

The project was conducted in the College of Nursing, Madurai Medical College, Maduari.

Population of the Study

The population includes IV year B.Sc. Nursing Students.

Target Population

IV year B.Sc. Nursing Students in College of Nursing.

Accessible Population

IV year B.Sc. nursing students in College of Nursing, Madurai Medical College, Maduari.

Sample Size

The subject comprised of 45 IV year B.Sc. nursing students who fulfill the inclusion and exclusion criteria.

Sampling Technique

Subjects are selected through non-probability purposive sampling technique.

Criteria for Subject Selection

Inclusion Criteria

1. Students who were studying IV year B.Sc. nursing.
2. Students who were willing to participate in the study.

Exclusion Criteria

1. Students who were studying I year, II year, III year.

2. Students those who are not available at the time of data collection.

Data Collection Method

Self-administered -structured questionnaire method.

Description of Tool

The tool consists of two sections:

Section-A: Socio-Demographic data includes Age, Sex, Religion, Residence, Type of Family, Birth order, Education of the Students, Education of the Father, Education of the Mother, Occupation of the Father, and Occupation of the Mother.

Section-B: Assessing the knowledge of Biomedical waste Management. It consists of 30 items. Questions were selected based on knowledge information. For this study each correct answer were given maximum of 1 mark and for wrong answer 0 mark. Thus, the total maximum score possible is 30 and the minimum is 0. The questions are objective type. It contains multiple choice questions.

Scoring Method

20-30	Adequate
10-19	Moderate
<10	Inadequate

Table 1: Frequency and percentage distribution of demographic variable **n = 45**

S. No.	Socio-Demographic Variable	Description	f	%
1.	Age	18-20	36	80%
		21-22	6	13%
		Above 22	3	7%
2.	Sex	Male	4	9%
		Female	41	91%
3.	Religion	Hindu	34	75%
		Muslim	4	9%
		Christian	7	16%
		Others	0	0%
4.	Residence	Rural	30	67%
		Urban	8	17%
		Sub Urban	7	16%
5.	Type of family	Nuclear	30	67%
		Joint	9	20%
		Extended	6	13%
6.	Birth order	First	28	62%
		Second	10	22%
		Third	7	16%
7.	Education of the student	H. Secondary	40	88%
		Degree	5	12%
		Professional	0	0%
8.	Education of Father	Primary	25	55%
		Secondary	15	35%
		H. Secondary	2	4%
		Graduate	3	6%
9.	Education of Mother	Primary	34	75%
		Secondary	4	9%
		H. Secondary	7	16%
		Graduate	0	0%
10.	Occupation of Father	Professional	9	20%
		Government employee	4	9%
		Business owner	2	4%
		Farmer	30	67%
11.	Occupation of Mother	Sedentary worker	30	67%
		Moderate worker	9	20%
		Heavy worker	6	13%

Table 2: Frequency and percentage distribution of Knowledge level

S. No.	Level of Knowledge	F	(%)
1.	Adequate	30	66%
2.	Moderately Adequate	15	34%
3.	Inadequate	0	0%

The above table shows that the knowledge level among 45 samples of IV year B.Sc. (N) students majority of subjects, 30 subjects were about 66% have adequate knowledge regarding Biomedical Waste Management, 15 subjects about 34% have moderate knowledge regarding Biomedical Waste Management, there is no inadequate knowledge regarding Biomedical Waste Management.

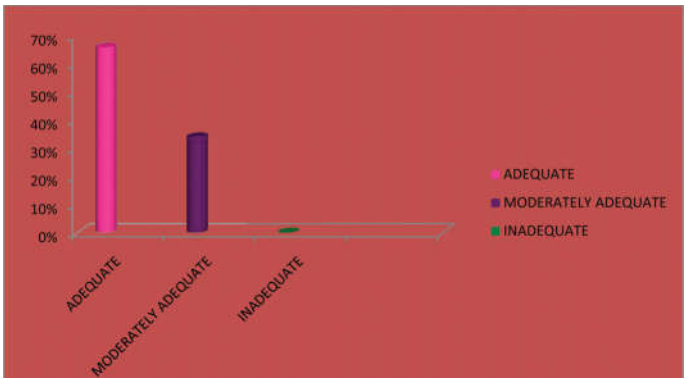


Fig.1: Distribution of knowledge level

Fig. 1 shows that the knowledge level among 45 samples of IV year B.Sc. (N) students majority of subjects, 30 subjects were about 66% have adequate knowledge regarding Biomedical Waste Management, 15 subjects about 34% have Moderate Knowledge regarding Biomedical Waste Management, there is no Inadequate Knowledge regarding Biomedical Waste Management.

Table 3: Frequency and percentage distribution of Association of knowledge level with demographic variables

S. No.	Demographic variables	Level of knowledge						χ_2	t value
		Adequate		Moderate		Inadequate			
		f	%	f	%	f	%		
1.	**Age**								
	(a) 18-20 years	6	20%	7	24%	0	0	2.5123	9.49
	(b)20-22 years	9	30%	6	20%	0	0		
	(c)Above 22 years	0	0	4	6%	0	0		
2.	**Sex**								
	(a) Male	2	4%	2	4%	0	0	2.9023	5.99
	(b) Female	25	56%	16	36%	0	0		
3.	**Religion**								
	(a) Hindu	23	52%	7	16%	0	0	3.3081	9.49
	(a) Christian	5	12%	3	7%	0	0		
	(c) Muslim	3	6%	3	7%	0	0		
	(d) Others								
4	**Residence**								
	(a) Rural	26	41%	8	28%	0	0	18.062	16.92*
	(b) Urban	5	12%	5	16%	0	0		
	(c) Suburban	1	3%	0	0	0	0		
5.	**Type of Family**								
	(a) Nuclear	1	3%	9	30%	0	0		
	(b) Joint	24	37%	4	14%	0	0	3.4067	9.49
	(c) Extended	4	6%	3	10%	0	0		
6.	**Birth order**								
	(a) First	25	40%	4	14%	0	0	3.2643	9.49
	(b) Second	6	13%	9	30%	0	0		
	(c) Third	0	0	1	3%	0	0		
7.	**Education of the Students**								
	(a) H. Secondary	24	37%	4	14%	0	0	13.79	9.49*
	(b) Degree	6	13	9	30%	0	0		
	(c) Professional	1	3%	1	3%	0	0		
8.	**Education of father**								
	(a) Primary	24	36%	9	30%	0	0		
	(b) Secondary	1	3%	3	10%	0	0	10.24	9.49*
	(c) H. Secondary	0	0	3	10%	0	0		
	(d) Graduate	4	9%	1	2%	0	0		
9.	**Education of Mother**								
	(a) Primary	24	36%	9	30%	0	0	12.52	9.49*
	(b) Secondary	1	3%	3	10%	0	0		
	(c) H. Secondary	1	2%	3	10%	0	0		

	(d) Graduate	0	0	4	9%	0	0		
10.	**Occupation of Father**								
	(a) Professional	3	10%	5	17%	0	0		
	(b) Government employee	1	3%	8	19%	0	0	10.24	9.49*
	(c) Business owner	1	3%	1	3%	0	0		
	(d) Farmer	12	20%	14	25%	0	0		
11.	**Occupation of mother**								
	(a) Sedentary worker	1	3%	9	30%	0	0		
	(b) Moderate worker	24	37%	4	14%	0	0	3.4067	9.49
	(c)Heavy worker	4	6%	3	10%	0	0		

There is a significant association between Residence, Education of the students, Education of the father, Education of the Mother, Occupation of the father.

Discussion

The discussion deals with sample characteristic and objectives of the study. The aim of this present study was to assess the knowledge regarding biomedical waste management among IV year B.Sc. nursing students, College of Nursing, Madurai Medical College Madurai.

Totally 45 subjects were included in the study. Prior permission obtained and data were collected. Section-I deals with the demographic data assessment and Section-II deals with the Structured Questionnaire to assess the knowledge on Biomedical Waste Management among IV year B.Sc. nursing students, College of Nursing, Madurai Medical College Madurai.10 Questions in Demographic Section and 30 Questions in Knowledge assessment question.

The Collected Data was analyzed by using descriptive and inferential statistics. The analysis of the collected data brought out many interesting and useful aspects, which were discussed below. The study findings are discussed with objectives and hypotheses.

Discussion Related to Demographic Variables

The above tables shows that, majority of the students 36 (80%) were belongs to the age group between 18-20 years, 6 (13%) were in the age group of 20-22 years and 3(7%) were belong to the age group above 22 years.

According to their sex, the majority 40 (91%) were females and 4 (9%) were males.

According to their Religion, majority of the students 34 (75%) were Hindu, 4 (9%) were Muslim and 7(16%) were Christian.

According to their Residence, majority 30 (67%) were from Rural, 8(17%) from Urban and 7(16%) from Sub-urban.

With respect to type of family, majority 30 (67%) were from nuclear family and 9(20%) were from joint family, (13%) were from Extended family.

According to Birth order, majority 28(62%) born first, 10 (22%) born second and 7 (16%) born third.

Considering the Educational status, majority of the students 40(88%) have studied up to Higher secondary, 5 (12%) have studied up to Degree, none of them were professionals.

According to the Education of the father, majority 25 (55%) have studied up to primary, 15(35%) have studied up to secondary, 2(4%) have studied up to Higher secondary, 3(6%) have studied up to graduate.

In Education of the Mother, majority 34 (75%) have studied up to primary, 4(19%) have studied up to secondary, 7(16%) have studied up to Higher secondary, and none of them were graduate.

Regarding Occupation of the Father, majority 30 (67%) were farmers. 9 (20%) were professionals, 4 (9%) were government employees and 2 (4%) were business owners.

Considering the Occupation of Mother, majority 30 (67%) were sedentary worker, 9 (20%) were moderate worker, 6 (13%) were heavy workers.

The first objective was to assess the level of knowledge regarding biomedical waste management among IV Year B.Sc. nursing students, studying in College of Nursing, Madurai Medical College, Madurai.

The knowledge of Biomedical waste Management among IV year B.Sc. (N) students at College of Nursing, Madurai Medical College, Madurai, shows that out of 45 subjects, 30 subjects were about 66% have adequate Knowledge regarding Biomedical Waste Management, 15 subjects about 34% have Moderate Knowledge regarding Biomedical Waste Management, there is no Inadequate Knowledge regarding Biomedical Waste Management.

The second objective was to associate the level of knowledge among IV Year B.Sc. nursing students regarding biomedical waste management with their selected demographic variables.

According to the Age, χ^2 value is 2.51. The table value is 9.49. So null hypothesis is accepted. There is no significance between age and level of knowledge.

Here, χ^2 value is 2.90. The table value is 5.99. So null hypothesis is accepted. There is no significance between sex and level of knowledge.

With their respect to the Religion, χ^2 value is 3.30. The table value is 9.49. So null hypothesis is accepted. There is no significance between Religion and level of knowledge.

According to the Residence, χ^2 value is 18.06. The table value is 16.92. So null hypothesis is rejected. There is significance between Residence and level of knowledge.

Here, χ^2 value is 3.40. The table value is 9.49. So null hypotheses is accepted. There is no significance between Type of Family and level of knowledge.

With their respect to the Birth order, χ^2 value is 3.26. The table value is 9.49. So null hypotheses is accepted. There is no significance between Birth order and level of knowledge.

According to the Education of the Students, χ^2 value is 13.79. The table value is 16.92. So null hypotheses is rejected. There is significance between Education of the Students and level of knowledge.

Here, χ^2 value is 10.24. The table value is 9.49. So null hypotheses is rejected. There is significance between Education of the Father and level of knowledge.

With respect to their, Education of the Mother, χ^2 value is 12.52. The table value is 9.49. So null hypotheses is rejected. There is significance between Education of the Mother and level of knowledge.

According to the Occupation of Father, χ^2 value is 10.24. The table value is 9.49. So null hypotheses is rejected. There is significance between Occupation of Father and level of knowledge.

Among the Occupation of Mother, χ^2 value is 3.40. The table value is 9.49. So null hypotheses is accepted. There is no significance between Occupation of Mother and level of knowledge.

Findings of the Study

Part A

Findings related to assessment of the level of knowledge on Biomedical Waste Management among IV Year B. Sc. Nursing Students, studying in College of Nursing, Madurai Medical College, Madurai.

The knowledge of Bio-Medical waste Management among IV year B.Sc. (N) students at College of Nursing, Madurai Medical College, Madurai, shows that out of 45 subjects, 30 subjects were about 66% have adequate Knowledge regarding Biomedical Waste Management, 15 subjects about 34% have Moderate Knowledge regarding Biomedical Waste Management, there is no Inadequate Knowledge regarding Biomedical Waste Management.

Part B

Findings related to associate the level of knowledge on Biomedical Waste Management among IV Year B. Sc. Nursing Students with their selected demographic variables.

According to the Age, χ^2 value is 2.51. The table value is 9.49. So null hypotheses is accepted. There is no significance between age and level of knowledge.

Here, χ^2 value is 2.90. The table value is 5.99. So null hypotheses is accepted. There is no significance between sex and level of knowledge.

With their respect to the Religion, χ^2 value is 3.30. The table value is 9.49. So null hypothesis is accepted. There is no significance between Religion and level of knowledge.

According to the Residence, χ^2 value is 18.06. The table value is 16.92. So null hypothesis is rejected. There is significance between Residence and level of knowledge.

Here, χ^2 value is 3.40. The table value is 9.49. So null hypothesis is accepted. There is no significance between Type of Family and level of knowledge.

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With respect to their, Education of the Mother, χ^2 value is 12.52. The table value is 9.49. So null hypothesis is rejected. There is significance between Education of the Mother and level of knowledge.

According to the Occupation of Father, χ^2 value is 10.24. The table value is 9.49. So null hypothesis is

rejected. There is significance between Occupation of Father and level of knowledge.

Among the Occupation of Mother, χ^2 value is 3.40. The table value is 9.49. So null hypothesis is accepted. There is no significance between Occupation of Mother and level of knowledge.

Conclusion

On the basis of findings of the study below set conclusions were drawn. It also brings about the limitations of study into practice. The implications are given on the various aspects like Nursing Education, Nursing Practice, Nursing Administration and it also gives insight into the future studies.

Implications of the Study

The findings of the study can be used in the following areas of profession.

Nursing Practice

All the nurses, nursing students and all health care provides have a vital role to play in effective infection control, proper disposal and segregation of biomedical waste requires adequate knowledge on various type of biomedical waste.

Nursing Education

Biomedical waste management should be included in the nursing curriculum and must be taught about awareness of biomedical waste management, segregation, storage disposal of biomedical waste in that education period, as they are the first line person who play a vital role in awareness of biomedical waste.

Nursing Administration

Nursing administrations should take part in the Health Policy Making, developing protocols sending orders related to designing the health education program and strategies on bio medical waste management. The nurse administers need to plan, organize and conduct health awareness program, by considering cost effectiveness and carry out successful education program.

The nurse administer should explore their potential and encourage innovative ideas in preparation of appropriate teaching materials and usage of man power.

Nursing Research

Further research based on this study can be performed with a larger population to assess the effectiveness of various information related to biomedical waste management.

Recommendations

- Similar study on a larger sample can be done.
- Similar study can be done in different setting.
- More demographic variables can be included.

Limitation

Better generalizations would have been possible if larger and equal number of samples were selected.

- Better generalizations would have been possible if the study assesses both knowledge and practice.

References

Books

1. Alexander. F. Margaret et al. *Nursing Practice – Hospital and Home*, Newyork, Churchill Livingstone, 1994.
2. Black. M. Joyce, *Medical Surgical Nursing – Clinical Management for Continuity Care*, Philadelphia, W. B Saunders Company, 1997.
3. Braunward, Issel, *Principles of Internal Medicine*, Newyork, Mcgrawwill Book Company, 1987.
4. Ducas, Beverly Witter et al, *Introduction To Patient Care- A Comprehensive Approach to Nursing*, Philadelphia, W. B Saunders Company, 2001.
5. Ellis. R. Jannie & Nowlis, *Nursing Human Needs Approach, Philadelphia, Lippincott Company Publishers*, 2004.
6. Hinchliff, Norman Susan et al, *Nursing Practice and Health Care- A Foundation Text*, London, Arnold publisher, 1998.
7. Philips. J.Wilma et al, *Medical Surgical Nursing- Concepts and Clinical Practice*, Newyork, Mosby publications, 1995.
8. Smelter C. Suzanne et al, *Textbook of Medical Surgical Nursing*, Philadelphia, Lippincott Company publishers, 1995.
9. Potter A. Patrica, *Basic Nursing Essential for Practice*, Newyork, Mosby publications, 2003.
10. World health organization, *A Manual on Infection Control in Health Facilities*, New Delhi, SEARCO Regional Health Papers, 1998.

Journals

1. Amar Subburaj, Quantum of Hospital Waste Indian

Journal of Hospital Management, 2004; 17(10): 8-12.

2. Ashlesta, Subdividing Hazards Health Action, 2004; 17(10): 10.
3. Boat Right Daniel, Biomedical Waste Survey Journal of Environmental Heath, 1995; 10(4): 44-46.
4. Cheirimson Paul, Medical Waste Management, Pollution Engineering, 2000; 8(4): 18-19.
5. Danus Jacobs, Pollution Control, Page Tools, 2004; 6(900): 48-52.
6. Hunter Amita, Nurse Practioner, The American Journal of Primary Health Care, 2006; 32(2): 197.
7. Needle Man, Efficient Nurses Better Prevention, The American Journal of Nursing, 2002; 102(8): 230.

Electronic Media Reference

1. http://www. Seatle-bmw.com
2. http://www.e.source.com
3. http://www.california stateuniv.co.uni
4. http://www.mainegov.com
5. http://www.uniottawa.co.uni.
6. http://www.onlinetool.com
7. http://www.pagetool-journal.co.uk

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A Descriptive Study to Identify the High Risk Families in Terms of Health and Assess their Coping Strategies in a Selected Community of Kashmir

Bhardwaj Urmila*, Masoodi Shahin**

Abstract

It is well known that the course of family life is not always smooth. The present study is a descriptive study to identify the high risk families in terms of health and assess their coping strategies in a selected community of Kashmir. *Objectives*: To identify the high risk families in terms of health in a selected community, to assess the coping strategies of the families and to establish relationship between coping strategies and risk status of families. *Methods:* Descriptive cross sectional survey design was adopted with a sample of 100 families. The data was collected through systematic random sampling. A structured interview schedule on internal and external environment for identifying high risk families, Aggarwal, O.P. et al, a standardized tool for identifying socio-economic status of the families, Rating scale for assessing coping strategies of families and Pro forma for Anthropometric observation and haemoglobin estimation for identifying obesity, malnutrition and anaemia was used. *Result:* The findings revealed that 38% of the families were high risk and 62% were in the category of low risk. Majority of the families i.e., 83% had adequate coping strategies and 17% of families had inadequate coping strategies. There was a significant relationship between risk status of families and their coping strategies as obtained by Chi-square at 0.05 level of significance.

Keywords: Malnutrition; Anaemia; Haemoglobin Estimation; Obesity.

Introduction

Success in family life comes from avoiding difficulties or problems, but rather facing them squarely and coping with them effectively.

According to Pedro [1] "Opportunity is embedded in the potential for the growth and positive changes that promote resilience and healthy outcomes for the family members. Family structure, functions and values are experiencing unprecedented changes throughout the world. The impact of globalization, urbanization, migration and social transformation are among the contributing factors for these changes.

As discussed by Carson and Chowdhary [2] Indian families need become better informed on how they can be more effective in handling internal problems and confronting external demands or changes.

Hence, families need to have a new deal that ensures their economic and social security, general health and wellbeing.

World Health Organization [3] reported that low income populations are most affected by risks associated with poverty, such as under nutrition, unsafe sex, unsafe water, poor sanitation and hygiene and indoor smoke from solid fuels; these are the so called "traditional risks". As life expectancies increase and the major causes of death and disability shift to the chronic and non-communicable, populations are increasingly facing modern risks due to physical inactivity; overweight and obesity and other diet related factors; and tobacco and alcohol related risks. As a result, many low and middle income countries now face a growing burden from the modern risks to health, while still fighting an

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unfinished battle with the traditional risks to health and impact of these modern risks varies at different levels of socio economic development.

Understanding the role of these risk factors is important for developing clear and effective strategies for improving global health.

According to WHO [4] violence against women is present in every country, cutting across boundaries of culture, class, education, income, ethnicity and age. Studies estimate that worldwide between 20 and 50% of women have experienced physical violence at the hands of an intimate partner or family members.

Domestic violence is a complex problem and there is no one strategy that will work in all situations. To begin with, violence may take place within very different societal contexts and the degree to which it is sanctioned by a community will naturally influence the kind of strategy needed. Considering the interconnections between the factors responsible for domestic violence, gender dynamics of power, culture and economics strategies and interventions should be designed within a comprehensive and integrated framework.

According to Park [5], poverty is the most obvious problem in India. There is almost one third of population below poverty line which is at highest risk of communicable and non communicable diseases resulting in heavy mortality. The foremost reasons for poverty in India are perceived as lack of employment schemes, lack of land possession, undernourishment, lack of housing and lack of education.

Park [5] stated that malnutrition is the most widespread condition affecting the health of children. Scarcity of suitable foods, lack of purchasing power of family as well as traditional beliefs and taboos about what the baby should eat, often lead to an insufficient balanced diet, resulting in malnutrition. At present in India 65% children less than 5 years of age are under weight.

Stanhope and Lanacaster [6] stated that alcohol is the oldest and most widely used psychoactive drug in the world. Alcohol abuse ranks third following coronary diseases and cancer as the major cause of death in the United States.

According to World Health Organisation [7], Iron is critically important in muscle, brain and red blood cells. Iron deficiency may occur at any age if diets are based on staple foods with little meat, or people are exposed to infections that cause blood loss; young children and women of child bearing age are most commonly and severely affected. An estimated 41% of pregnant women and 27% of preschool children worldwide have anaemia caused by iron deficiency.

Thus keeping this in mind the present study was designed with the following objectives:

- To identify the high risk families in terms of health in a selected community.
- To assess the coping strategies of the families.
- To establish relationship between coping strategies and risk status of families.

Materials and Method

Research design adopted for the study was crosssectional survey research design.

Variables of the study are:

1. Socio-economic status
2. Family organisation
3. Family environment
4. Child health status
5. Adult health status
6. External environment, socio political environment
7. Anthropometric measurement
8. Hb estimation
9. Coping strategies within the families.

Setting of the Study

The present study was conducted in H- 16, Sangam vihar (Pilot study) and families residing in the urban resettlement, Boat colony of Bemina, Kashmir (Final study).

Population

In the present study, population comprised of families residing in the urban resettlement, Boat colony of Bemina, Kashmir.

Sample Size

Total sample size was 100.

Sampling Technique

In the present study the sampling technique adopted was Systematic Random sampling technique.

Data Collection Tools and Techniques

In the present study, the researcher developed and used a structured interview schedule.

Structured Interview Schedule

It was divided into four parts:

Part-I consisted of 22 items related to the Socio economic status for the family.

Part-II consisted of 40 items related to External and Internal Environmental risk assessment scale.

Part-III consists of 3 items related to Anthropometric observation and haemoglobin estimation.

Part-IV is related to Rating scale to assess their coping strategies.

The structured interview schedule was translated into Kashmiri language.

Ethical Considerations

Ethical permission to conduct the study was taken from Institution Review Board Jamia Hamdard.

Analysis of the Data

The data was tabulated in Microsoft Excel Spread sheet and the analysis was done using descriptive and inferential statistics and Chi-square test. The level of significance was kept at 0.05 level.

Results

The findings were organized under the following sections:

Section-I: Findings Related to Frequency and Percentage Distribution of Subjects by their Socio-Economic Status.

Majority of the families i.e. 91% of families had poor social status. None of them belonged to upper high, high, upper middle and below poverty line (Table-1).

Table1: Frequency and Percentage Distribution of Socio Economic Status among Families **n = 100**

Socio- economic status	Frequency / Percentage
Lower middle	9
Poor	91

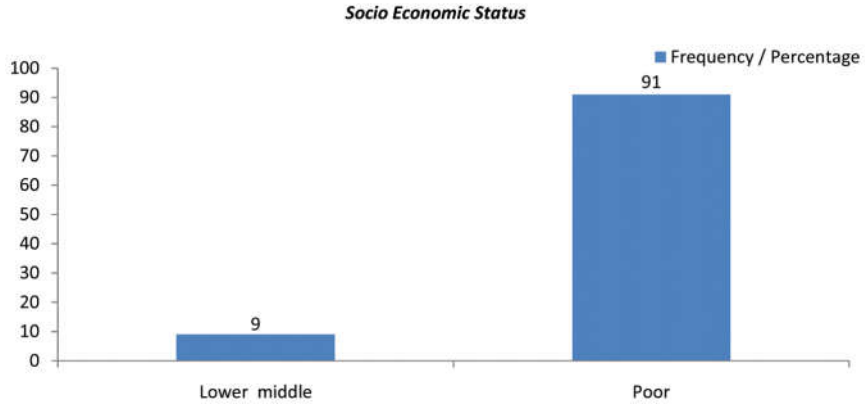

Fig. 1: A Bar diagram showing the percentage distribution of families by their socio economic status

Section-II: This Section Describes the Findings Related to Internal and External Family Environment.

Majority of the families i.e. 76% had occasional fights within their families, 13% had congenial relationship and 11% had fights that resolved easily. Majority of women i.e. 76% had congenial relationship with their in laws, 23% with occasional fights and 1% had fights that resolved easily. All families had only one working spouse. Majority of the families i.e. 77% responded that they sometimes spend free time with each other, 21% said most of the times and 2% very rarely. Data also reveals that 48% had very rare punitive discipline, 48% families sometimes used punitive discipline and 4% families had no punitive discipline within their families.Maximium number of families i.e. 62% sometimes had meal together, 36% very rarely and 2% had most of the times. Majority of the family heads i.e. 70% did not involve family members in decision making, 26% involved them rarely and only 4% involved them sometimes in decision making. 93% of the family members were not abused physically, 3% were abused rarely and 4% were abused only sometimes (Table 2a).

Table 2a: Frequency and percentage distribution of the families according to their family environment

S. No	Items on family environment	Frequency/ Percentage
1.	Relationship with family	
	a) Congenial	13
	b) With occasional fights	76
	c) At times fights but resolves easily	11
2.	Relationship with in laws	
	a) Congenial	76
	b) With occasional fights	23
	c) At times fights but resolves easily	01
3.	Working status of the spouses	
	a) Only one working parent	100
4.	Family members spending free time with each other	
	a) Most of the times	21
	b) Sometimes	77
	c) Rarely	02
5.	Punitive discipline in the family	
	a) Never	04
	b) Rare	48
	c) Sometimes	48
	d) Most of the times	-
6.	Having meals together	
	a) Most of the times	02
	b) Sometimes	62
	c) Rarely	36
7.	Head of the family involves other family members in decision making	
	a) Sometimes	04
	b) Rarely	26
	c) Never	70
8.	Family members being abused physically	
	a) Never	93
	b) Rarely	03
	c) Sometimes	04

Table 2b: Frequency and distribution of the families according to their external environment

S. No	Items of External Environment	Frequency / Percentage
1.	Type of house	
	a) Pucca with 2 rooms or more, kitchen & bathroom	85
	b) Semi pucca with 2 rooms, kitchen & bathroom	02
	c) Pucca with 2 rooms, no kitchen, no bathroom	10
	d) Kacha with one room, no kitchen, no bathroom	03
2.	Kind of ventilation in the house	
	a) Two windows in room	06
	b) One window in a room	93
	c) No window, only a door	01
3.	Kind of drinking water in family	
	a) Boiled/ chlorinated water	18
	b) Untreated tap water	82
4.	Kind of latrine in the house	
	Service type	100
5.	Disposal of refuse	
	Open space	100
6.	Kind of drainage system in the house	
	Closed inside and open outside	100
7.	Having rodents and arthropods in the house	
	a) none of the above	03
	b) One of them is present	43
	c) Two of them is present	54

Among 100 families, 85% had pucca house with 2 rooms or more, kitchen and bathroom, 2% semi pucca with 2 rooms, kitchen and bathroom, 10% pucca with 2 rooms, no kitchen, no bathroom and 3% had kacha with one room, no kitchen and no bathroom. 6% families had 2 windows in a room, 93% had one window in a room and 1% had no window, only a door. Majority of families i.e. 82% were drinking tap

water directly and 18% boiled water. All these families were disposing the wastes in an open space. All the families (100%) had closed inside and open outside drainage system. Majority of the families i.e. 54% had rodents and arthropods in their houses, 43% had only arthropods in their houses and 3% only had none of them present (Table 2b).

Section-III: This Section Describes the Sample Characteristics in Terms of Malnutrition, Obesity and Anaemia of the Family Members.

Among the population of 614, 1.46% of the children are malnourished, 4.56% are obsessed and 18.72% are anaemic (Table 3).

Table 3: Frequency and percentage distribution of anthropometric observation and haemoglobin estimation of the total population

S. No	Nutritional Status	Frequency	Percentage
1.	Malnutrition among children	09	1.46
2.	Obesity among adults	28	4.56
3.	Anaemia with Hb≤ 8 gm	115	18.72

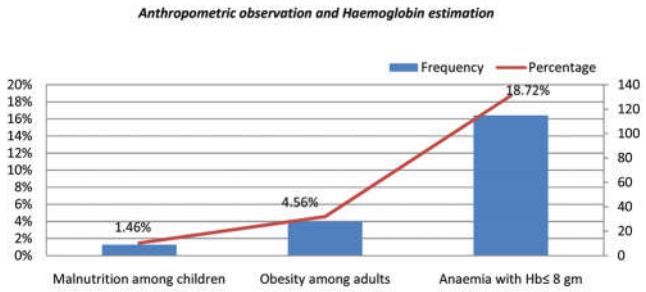

Fig. 3: A cylindrical diagram shows the frequency and percentage distribution of anthropometric observation and haemoglobin estimation of the total population

Table 4: Mean median and standard deviation of coping strategies scores of families

Variable	Minimum possible scores	Maximum possible scores	Range of obtained scores	Mean	Median	Standard deviation
Coping strategies	0	40	29-37	32.44	33	2.124

Table 5: Relationship between risk status of the families and their coping strategies by Chi-square

Selected variable	High risk	Low risk	X^2
Adequate coping	26	57	9.23
Inadequate coping	12	5	

X^2 (1) = 3.84, p d" 0.05, significant at 0.05 level.

Section- IV: This section describes the families according to their coping strategies, mean, median and standard deviation of coping strategies scores of families were computed for describing coping strategies of families.

This shows that the mean score of the coping strategies of high risk was found to be 32.44; median was 33 with the standard deviation 2.124. The close value of the mean and median indicates the distribution to be normal (Table-4).

Section-V: This section describes the findings related to relationship between risk status of families and their coping strategies

This shows that the Chi-square value is significant at 0.05 level. Therefore, it indicates a significant relationship between the risk status of families and coping strategies (Table 5).

Discussion

The present study dealt with the high risk families and their coping strategies in terms of health and findings revealed that only 38% of the families were high risk though their socio economic status was poor.

The findings revealed that the adult population was smokers. Individuals with no education are 2.69 times more likely to smoke and chew tobacco than those with post graduate education.

The external environment of the families was very poor. These families had outside open drainage system with service type of latrines. Therefore people living in this locality are more vulnerable to diseases. Hygiene practices were found to be bad in terms of water collection and storage. Sanitation facilities and practices were also poor with 88.3% of the population still relying on unimproved pit latrines and children less than 5 years defecating outside the latrines, whilst 10.7% of the population still uses the bush. Poor waste management was also found to be a recurring problem.

The study findings indicated that the majority of the families i.e. 63% were known cases of hypertension including adult females.

It was also found that the majority of the female adolescent girls were anaemic and also the female adults were obese. Obesity was not found in children.

The population among 100 families comprised of 614 which indicates family size of 6.1 which is much above the national average i.e. 2.6 according to the 2008.

References

1. Pedro C J.2001. The promotion of wellness in children and families: challenges and opportunities. *Am Psychol*, 2001; 56(5): 993- 1004. http:// www.ncbi.nim.nih.gov/pubmed db = *Am Psychol*, 2001. 56(5): 993-1004.
2. Carson D K, Chowdhary A. Family therapy in India: A new profession in an ancient land. *Comparative Family Therapy*. 2000 Nov. 4; 22(4): 387-406. http:// www.ingentaconnect.com/content/klu/coft/2000/ 00000022/00000004.
3. WHO report on the global tobacco epidemic, Geneva, World Health Organisation, 2008.
4. WHO 'Putting Women's Safety First: Ethical and Safety Recommendations for Research on Domestic Violence against Women'. Geneva. World Health Organisation, 1999.
5. Park K Preventive and Social Medicine. 20th ed. Banarsidas Bhanet: Jabalpur; 2010.
6. Hanson Shirley May Harmon, Gedaly- Duff Vivian, Rowe Kaakinen Joanna "Family Health Care Nursing, Theory, Practice and Research" 3rd edition. F.A. Davis. Philadelphia (2001).
7. World Health Organisation, Centres for Disease Control and Prevention. De Benoist B, McLean E, Egli I, Cogswell M, eds. *Worldwide prevalence of anaemia 1993-2005*. Geneva: World Health Organisation 2008.
8. Sharma SK.Nursing Research and Statistics. Elesevier 2011.
9. Aggarwal OP, Bhasin SK, Sharma AK, Chhabra P, Aggarwal K, Rajoura OP. Socio economic status scale. Indian Journal of Community Medicin. 2005 Oct- Dec; 30(4).
10. Das SK, Sanyal K, Basu A. Study of urban community survey in India: growing trend of high prevalence of hypertension in a developing country. *Int J Med Sci* 2005; 2(2): 70-78. http:// www.ncbi.nim.nih.gov/ pubmed/ db= Int J Med Sci.2005; 2(2):70-78. Epub 2005 Apr 1.

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Male Food Handlers Knowledge on Hygienic Practices

Sumith Sonny*, Dhanesh Ayyappan, Sarin P.***, Ashley J. John******

Abstract

The aim of the study was to assess the knowledge regarding personal hygiene, environmental hygiene and food hygiene of male food handlers in selected restaurants at Ernakulam and to find the association between knowledge among male food handlers and selected variables such as age, experience and education. 98% of participants had average and 2% had below average knowledge score on personal hygiene. 37% of the participants had a score below average, 43% of the participant had an average and 20% of the participants had an above average score on environmental hygiene. All participants had average knowledge scores on food hygiene. Only the age of the participants is found to be associated with environmental hygiene.

Keywords: Personal Hygiene; Consumption; Food Poisoning.

Introduction

Through centuries, food has been recognized as important for human beings in health and disease. The history of man to a large extent has been a struggle to obtain food. Man eats or drinks food to maintain life and growth. The food can be of animal and vegetable origin, and nutrients are organic and inorganic complexes contained in food. Food surveillance is essential for the protection and maintenance of community health. Broadly it implies the monitoring of food safety or food hygiene. The WHO has defined Food Safety and Food Hygiene as *"all conditions and measures that are necessary during the production, processing, storage, distribution, and preparation of food to ensure that it is safe, sound, wholesome, and fit for human consumption"*. The declaration by Alma Ata conference of 1978 considered food safety as an essential component of primary health care.

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Food is the potential source of infection and is liable for contamination by microorganisms at any point during its journey from the producer to the consumer. Food hygiene in its widest sense implies hygiene in the production, handling, distribution, and serving of all types of food. The primary aim of food hygiene is to prevent food poisoning and other food borne diseases.

Now-a-days there is an increase in the number of restaurants especially small restaurants and fast food centers. Many of these restaurants are not following the standards suggested for restaurants and eating houses in India under the Model Public Health Act 174 (1955).

A large number of people depend on the hotel and restaurant industry for their livelihood. Many of these persons are from poor economic and socio cultural backgrounds. Their knowledge regarding food hygiene may be very poor. So it is important to teach or inform them about the practice of food hygiene. Most of us have consumed hotel food for several times in our life time. Most of us also have several experience of improper hygiene of food handlers. For example- long nails, dirty clothes, habits like nail biting etc. We are also reading from newspapers about incidence of food poisoning frequently.

Problem Statement

Study to assess the knowledge regarding personal hygiene, environmental hygiene and food hygiene of male food handlers in selected restaurants at Ernakulam

Objectives

1. To assess the knowledge scores among male food handlers regarding personal hygiene, environmental hygiene and food hygiene.
2. To determine the association between knowledge among male food handlers and selected variables such as:

- Age
- Experience
- Education

Delimitations

- This study is limited to selected restaurants at Ernakulam.
- This study is limited to male food handlers.
- This study is limited to 50 male food handlers.

Research Approach and Design

The research was quantitive in its nature and the design was cross sectional descriptive design.

Research Setting

The setting is where the population or the portion of it that is being studied is located. The study will be conducted at a selected place at Ernakulam.

The reasons for selecting the setting were:

- Familiarity with the setting
- Availability of the subjects.
- Feasibility of conducting the study
- Easy access
- Economy of time
- Administrative approval and expectations of cooperation for the study from various personnel.

Population

The population of present study includes the male food handlers working in selected restaurants in at Ernakulam.

Sample

The sample of the present study comprises of 50 male food handlers working in selected restaurants at Ernakulam.

Sample size

The sample size was 50.

The Data Collection Tool

The tool comprises of the following:

Part -1

Consist of Questionnaire for baseline data. Items for obtaining information about baseline data that is age education and experience.

Part-2

It consists of three sections section 1, section 2 and section 3 with 8 questions on personal hygiene, 8 questions on food hygiene and 9 questions on environmental hygiene respectively (total 25 questions) and the responses can be either yes or no for all the questions. Correct answer gives one score and a wrong answer gives no or zero score.

Method of Data Collection

Investigators got permission from the restaurant owners for conducting the study as per the convenience of the samples. Samples were informed about the study and confidentiality of the data was assured to the samples.

Results

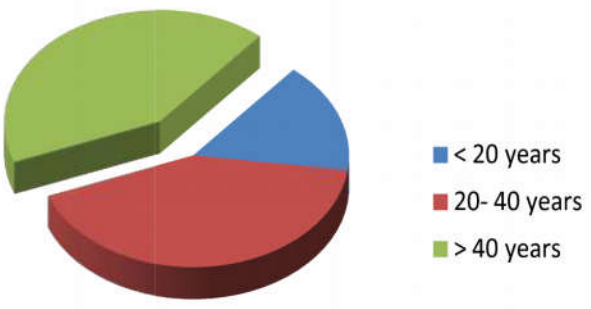

Fig. 1: Pie diagram showing the distribution of participants according to their age

Data presented in Fig. 1 shows that 42% belong to the age group of 20-40, 42% belong to the age group of more than 40 years whereas 16% were in the age group of less than 20 years.

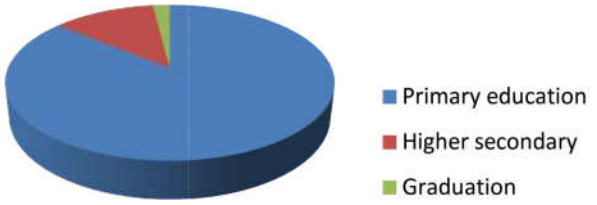

Fig. 2: Pie diagram showing the distribution of participants according to their education

Distribution of male food handlers according to their education status highlights that 86% have only primary level education 12% have higher secondary education and only 2% have degree level education.

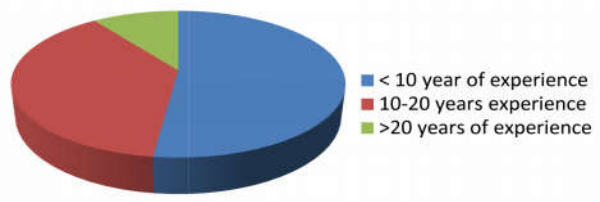

Fig. 3: Pie diagram showing the distribution of participants according to their experience

Data presented in the diagram shows that a majority of participants that is 52% had experience of <10 years. Among the sample subjects 38% had experience of 10-20 years whereas only 10% had experience of >20 years.

98% of participants had average and 2% had below average knowledge score on personal hygiene. 37% of the participants had a score below average, 43% of the participant had an average and 20% of the participants had an above average score on environmental hygiene. All participants had average knowledge scores on food hygiene.

On statistical analysis only the age of the participants is found to be associated with environmental hygiene. Environmental hygiene was not found associated with educational status and years of experience of the participants. Knowledge score on personal hygiene and food hygiene were not associated with age, education and experience.

Discussion

Community health workers can use this data for educating the food handlers regarding, personal hygiene, environmental hygiene, and food hygiene. This research is of very importance as there is a mushrooming of restaurants in India. Community health workers should also monitor the maintenance of hygiene by the food handlers.

This research gives baseline data on the knowledge of male food handlers regarding, personal hygiene, environmental hygiene, and food hygiene which can be used for further research. This research widens the scope of research in community health nursing. Further research in this area will develop more strategies for food hygiene in the community set up.

References

1. Basavanthappa, B.T. Nursing research, 1st Ed, Jaypee Brothers, NewDelhi, 2005; 295: 174-175.
2. Kothari, C.R. Research Methodology Methods and Techniques, 2nd Ed, New age international Pvt Ltd, Bangalore, 2004; Page, 31-39, 233-250.
3. Dempsey, Patricia, Ann; Dempsey, Arthur D. Nursing Research Text and work book, Little, Brown and Company, USA, 1996; Page 215-217.
4. K Park, Park's Text book of Preventive and Social Medicine, 19th Ed Banarsidas Bhanot Publishers, Prem Nagar, India, Pages 451,452.
5. Rao Sundar, Richard J, An introduction to Bio-statistics A manual for students in health sciences, 3rd Ed, Prentice Hall of India Pvt.Ltd, New Delhi, 2002; Pages 61,66,93,100.
6. Gupta, C.B; Gupta, Vijay (2004) An introduction to statistical method, 23rd edition, Vikas Publishing House Pvt.Ltd New Delhi, 2004; Pages 52-79, 108-138.

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Effectiveness of Self Instructional Module (Sim) on Knowledge of Automobile Mechanics Regarding Occupational Safety at Selected Workshops in Hubballi

Shivaraj Kumbar*, Somashekarayya Kalmath**

Abstract

A study was conducted to evaluate the effectiveness of self instructional module on knowledge of automobile mechanics regarding occupational safety at selected workshops in Hubballi. Totally 50 automobile mechanics were selected by non probability purposive sampling technique. The Knowledge was assessed by using structured knowledge questionnaire. The study results reveal that during pre test, 38(76%) mechanics had inadequate knowledge, 12 (24%) had moderate knowledge regarding occupational safety. After introduction of Self Instructional Module all automobile mechanics (100%) had adequate knowledge. The paired't' test value revealed that the gain in the knowledge is statistically significant at 5% level. The χ^2 value revealed that the gain in knowledge and socio demographic variables is independent. The study findings concluded that Self Instructional Module on occupational safety is effective in improving knowledge of automobile mechanics.

Keywords: Self Instructional Module; Occupational Safety; Automobile Mechanics; Workshops.

Introduction

India is a vast country with a huge population. As in many parts of the world, 'health' is synonymous with curative services. The majority of the working population belongs to the unorganized sector, which is not in the purview of current legislation in occupational health. Further, the working population being largely illiterate is unaware of the hazards associated with their occupation [1]. Creating awareness in prevention of industrial hazards is the need of the hour as they play an important role in their prevention. The magnitude of mortality and morbidity due to occupational disease can be prevented by imparting knowledge regarding occupational health hazards to the workers and helps them to take precautionary measures [2].

We all know mechanics have a hard job. It's loud and full of dangers. Automobile mechanics work with heavy equipment and caustic chemicals they face a number of safety hazards every time they go to work [3]. Mechanics are exposed to a wide range of chemicals that include heavy metals such as the ones contained in brake fluids, detergents, lubricants, degreasers, paints, metal cleaners, solvents and fluids. Constant exposure to these chemicals will lead to chronic poisoning [4].

According to WHO, the leading occupational causes of death among risk factors are unintentional injuries (41%) followed by COPD (40%) and cancer of the trachea, lung (13%) [4]. According to ILO in 2009 one worker dies in 15 sec. 6,300 workers dies daily, asbestos kill 1,00,000 people and other hazardous chemicals and substances kill 3,50,000 every year. Over 2.3 million deaths occur due to accidents and around 337 million workers injured in workplace accidents [5].

Proper training is one of the best ways to prevent accidents and injuries in auto shops. Every shop should have a formal safety training programme that every employee must complete. The safety programme should include information on wearing

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personal protective equipment, identifying workplace safety hazards, reducing the risk of electrocution, working with hazardous chemicals, and procedures for reporting safety hazards to management [3]. Hence study has been conducted to evaluate the effectiveness of Self Instructional Module regarding occupational safety on knowledge of automobile mechanics.

Objectives of the Study

1. To assess the knowledge of automobile mechanics regarding occupational safety.
2. To evaluate the effectiveness of Self Instructional Module on knowledge of automobile mechanics regarding occupational safety.
3. To find an association between pre test level in knowledge of automobile mechanics regarding occupational safety with their selected demographic variables.

Methodology

Research Approach

Evaluative research approach

Research Design

Pre-experimental one group pre-test post-test design

Sampling Technique

Non probability; purposive sampling technique

Sample Size: 50

Setting of the Study

Selected automobile workshops in Hubballi

Tool Used

Structured knowledge questionnaire to assess the knowledge regarding occupational safety among automobile mechanics.

Section I: Socio demographic variables

Section II: Knowledge items on occupational safety

Procedure of Data Collection

The written consent was obtained by subjects. The pre test includes structured knowledge questionnaire to assess the knowledge of subjects. Self Instructional Module was administered at the end of the pre test. The post test of the study was carried out 7 days later, using the same tool as the pre test. Data collected was then tabulated and analyzed.

Results

The Findings Related to Socio-Demographic Variables of Subjects

Majority 76% (38) of the subjects were in the age group of 20 – 30 years, Majority 84% (42) of the subjects were males, Majority 82% (41) of the subjects were pursued I.T.I, Majority 70% (35) of the subjects were married, Majority 72% (36) of the subjects were belong to Joint family, Majority 80% (40) of the subjects were belongs to Hindu religion, Majority 52% (26) of the subjects had 0 – 5 years of experience, Majority 46% (23) of subjects had monthly family income between Rs. 15,001 – 20,000, Majority 78% (39) of subjects had habit of smoking, Tobacco chewing and Majority of 56 % (28) subjects were receiving information from mass medias

Analysis and Interpretation of Knowledge Scores of Automobile Mechanics Regarding Occupational Safety

Table 1 reveals that the percentage of gain in knowledge scores in the area of General preventive measures was 35.54, prevention of mechanical injuries was 25.96, prevention of asbestos exposure was 27.02, prevention of Diesel Engine Exhaust Emissions was 44.02, prevention of Lead Exposure was 42.29 and Effects of Welding light Exposure was 43.66.

Table 1: Pre test and post test percentage of knowledge scores of subjects in different items of occupational safety n=50

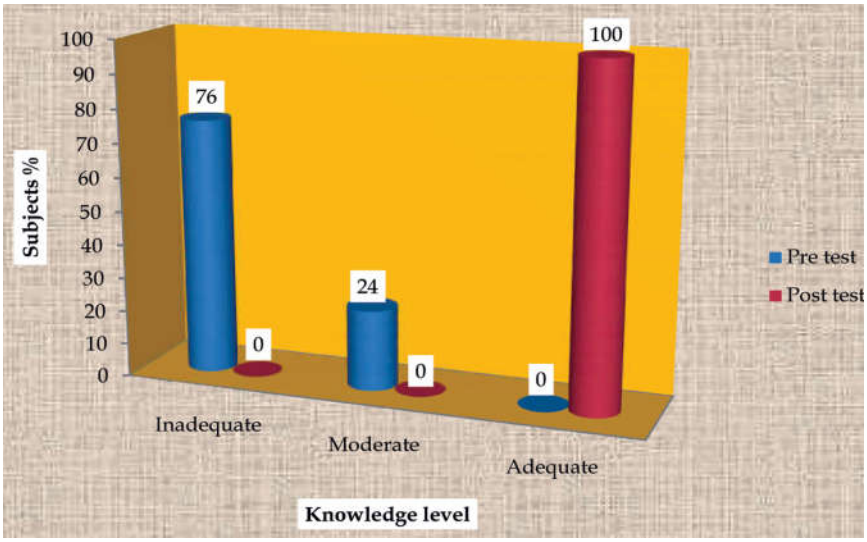
Sl. No.	Items on Occupational safety	Mean % of knowledge scores of subjects		
		Pre test (x)	Post test (y)	Gain in Knowledge
1	General preventive measures	63.24	98.78	35.54
2	Prevention of mechanical injuries	52.36	78.32	25.96
3	Prevention of a sbestos Exposure	45.63	72.65	27.02

4	Prevention of Diesel Engine Exhaust Emissions	35.23	79.25	44.02
5	Prevention of Lead Exposure	38.21	80.50	42.29
6	Effects of Welding light Exposure	48.67	92.33	43.66

Table 2: Reveals that in pre test majority of subjects 38 (76%) had inadequate knowledge; 12 (24%) had moderate knowledge, where as in post test all subjects 50 (100%) had adequate knowledge

Knowledge score	Pre test		Post test	
	Frequency	%	Frequency	%
Inadequate	38	76	00	00
Moderate	12	24	00	00
Adequate	00	00	50	100

Table 2: Reveals that in pre test majority of subjects 38 (76%) had inadequate knowledge; 12 (24%) had moderate knowledge, where as in post test all subjects 50 (100%) had adequate knowledge



Graph 1: Cylindrical graph shows the percentage distribution of knowledge scores of subjects regarding occupational safety

Analysis and Interpretation of Data to Evaluate the Effectiveness of Self Instructional Module on Knowledge of Automobile Mechanics Regarding Occupational Safety

Paired "t" $test_{(cal)}$ value 14.28 is greater than Paired "t" $test_{(tab)}$ value, hence the Self Instructional Module is more effective to increase the knowledge of automobile mechanics regarding occupational safety.

Analysis and Interpretation of Data to Find out Association between Pretest Knowledge Scores with Selected Demographic Variables

Since χ^2_{cal} value < χ^2_{tab} value. Hence, there is no association between pre test knowledge and selected demographic variables.

Conclusion

The following conclusions were drawn on the basis of the findings of the study

1. Overall pre test knowledge scores about occupational safety was inadequate
2. There was a need for Self Instructional Module for automobile mechanics on occupational safety
3. Post test results showed that there was significant gain in knowledge of automobile mechanics regarding occupational safety. Thus it can be concluded that Self Instructional Module is effective to improve the knowledge of automobile mechanics regarding occupational safety.
4. Study results revealed that there is no association between pre test knowledge and socio demographic variables.

Recommendations

1. A replication of present study can be conducted with a larger population to generalize the findings.
2. A descriptive study can be conducted to assess the knowledge, attitude and practice of automobile mechanics regarding occupational safety with larger sample.
3. Manuals and information booklets may be developed to enhance knowledge regarding occupational safety.
4. A structured teaching programme on occupational safety can be used to improve the knowledge.

References

1. Occupational Health and Services – Indian Scenario [online]. Available from: http://www.amrc.org.hk/system/files/Occupational%20status%20report%20-%20India.pdf (Occupational status).
2. Dr.Kasthurisundar Rao.An introduction to community health nursing.4th edition.B.I publication private limited.Chennai.2004.P–708.
3. A resource guide to workplace safety for mechanics [online]. Availablefrom: www.partsgreek.com/mmpart/resource_guide _to_workplace_safety. htm.
4. Marisol Concha-Barrientos et.al. Selected occupational risk factors. Available from:www.occupt.WHO.pdf.
5. International Labor Organization. Online article [2009]. Available from: www.safety-security-crazy.com.

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A Study to Assess the Knowledge and Attitude of Mothers Regarding Care of Under Five Children in Selected Area of Byahatti PHC

Meenaxi R. Devangmath

Abstract

A study was conducted to assess the knowledge and attitude of mothers regarding care of under five children in selected area of Byahatti PHC. Totally 25 mothers were selected by non probability convenient sampling technique. The knowledge was assessed by using structured interview schedule and attitude by using attitude scale. The results reveals that majority of the mothers 17 (68%) had average knowledge, 05 (20%) had good knowledge and 03 (12%) had poor knowledge. And majority of mothers 12 (48%) had negative attitude, 09 (36%) had favorable attitude and 04 (16%) had positive attitude towards care of under five children. Calculated value of Karl pearson's coefficient of correlation value r = 0.575 is greater than table value (0.396), Hence there is correlation between Knowledge and attitude of the mothers. The χ^2 value revealed that the gain in knowledge and socio demographic variables is independent. The study findings concluded that, the mothers of Byahatti village are having average knowledge (68%) and negative attitude (48%) regarding care of under- five children.

Keywords: Mothers; Care of Under Five Children.

Introduction

"Health is a state of complete harmony of the body, mind and spirit."

Children comprise one third of our population. Adequate nutrition and early feeding patterns are important determinant's of health during infancy holds a very important place in the life of every individual because the entire structure of man's life is formed during this time. Breast feeding alone is sufficient for initial six months. There after complementary foods are essential to maintain proper growth of an infant [1].

The Health of the children depends upon the health status of the mother and her awareness, education & skills. Mother looks after her children with love, affection & sense of sacrifice. She is the best person to identify minor developmental deviations & early evidence of disease process because she is constantly & closely watching her children. It's very important to know the nutritional status of the children. If it neglected in those conditions what all are the health problems children will suffer [2].

The WHO found that complementary feeding practices poor in India, especially in rural areas [3]. UNICEF, WHO and Government of India are strongly worked together for promotion of safe and suitable complementary feeding [4]. Government of India set strategy to increase complementary feeding rate up to 75% [5].

So the mother should have the proper knowledge regarding the care of children and positive attitude towards care of children. So she must show interest in providing immunization to her child. Thus the care of under five children includes many aspects such as prevention of diseases, growth and development monitoring, immunization, breast feeding and weaning.

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Objectives of the Study

1. To assess the level of knowledge of mothers

regarding care of under five children.

2. To assess the level of attitude of mothers regarding care of under five children.
3. To find out co-relation between knowledge and attitude.
4. To find out the association between knowledge and selected socio demographic variables.
5. To find out association between attitude and selected socio demographic variables.

Assumption

Socio demographic variables of the mothers influences on knowledge and attitude regarding care of under five children.

Hypothesis

H_1: There will be co-relation between knowledge and attitude scores of mothers regarding care of under-five children.

H_2: There will be an association between knowledge scores of mothers regarding care of under-five children with their socio demographic variables.

H_3: There will be an association between attitude score of mothers regarding care of under-five children with their socio demographic variables**.**

Methodology

Research Approach

Descriptive research approach

Research Design

Non experimental research design

Sampling Technique

Non probability; convenient sampling technique

Sample Size: 25

Setting of the Study

Byahatti Villege

Tool used

Structured Interview Schedule to assess the knowledge and attitude regarding care of underfive children.

Section I: Socio demographic variables

Section II: Knowledge items on care of underfive children

Section III: Attitude Scale

Procedure of Data Collection

The written consent was obtained by subjects. By using structured interview schedule and attitude scale data was collected regarding care of underfive children from the 25 mothers. Data collected was then tabulated and analyzed.

Results

The Findings Related To Socio-Demographic Variables of Subjects

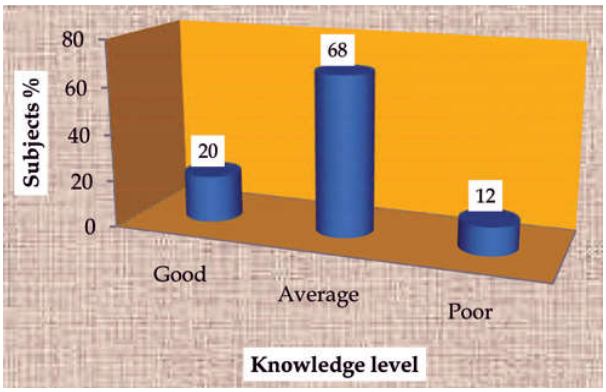
Majority 15 (60%) of the subjects were in the age group of 21 – 25 years, Majority 11 (44%) of the subjects had High School education, Majority 16 (64%) of the subjects were House wives, Majority 14 (56%) of the subjects were belong to Joint family, Majority 15 (60%) of the subjects had mixed diet, Majority 22 (88%) of the subjects were belongs to Hindu religion, Majority 11 (44%) of subjects had monthly family income between Rs. 3001 – 4000 per month, and Majority of 22 (88%) subjects have television as a mass media.

The Level of Knowledge of Mothers Regarding Care of under Five Children.

Table 1: Frequency and percentage distribution of knowledge scores of mothers regarding care of under five children

Knowledge Score	Frequency (f)	Percentage (%)
Good (> 22)	05	20
Average (10 -22)	17	68
Poor (< 10)	03	12

Table 1 reveals that majority of the mothers 17 (68%) had average knowledge, 05 (20%) had good knowledge and 03 (12%) had poor knowledge regarding care of underfive children.



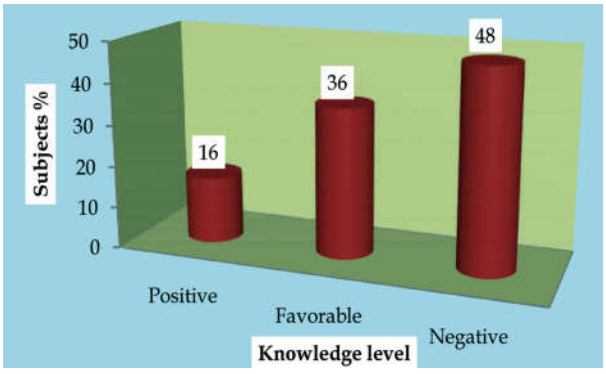
Graph 1: Cylindrical graph shows the percentage distribution of knowledge scores of subjects regarding care of underfive children

The Level of Attitude of Mothers Regarding Care of Under Five Children

Table 2: Frequency and percentage distribution of attitude scores of mothers regarding care of underfive children n=25

Knowledge score	Frequency (f)	Percentage %
Positive (8)	04	16
Favorable (5 -7)	09	36
Negative (< 7)	12	48

Table 2 reveals that in pre test majority of mothers 12 (48%) had negative attitude, 09 (36%) had favorable attitude and 04 (16%) had positive attitude towards care of underfive children



Graph 2: Cylindrical graph shows the percentage distribution attitude scores of subjects regarding care of under five children

Correlation between Knowledge and Attitude Score of Mothers Regarding under Five Children

Calculated value of Karl pearson's coefficient of correlation value r = 0.575 is greater than table value (0.396), Hence H_1 is accepted.

Association between Knowledge Scores of Mothers Regarding Care of Under-Five Children with Their Selected Socio Demographic Variables

Since χ^2_{cal} value < χ^2_{tab} value. Hence, there is no association between knowledge and selected demographic variables, Hence H_2 is rejected.

Association between Attitude Scores of Mothers Regarding Care of Under-Five Children with Their Selected Socio Demographic Variables

Since χ^2_{cal} value < χ^2_{tab} value. Hence, there is no association between knowledge and selected demographic variables, Hence H_3 is rejected.

Conclusion

The following conclusions were drawn on the basis of the findings of the study

1. The study results revealed that, the mothers of Byahatti village are having average knowledge regarding care of under- five children that is 68%.
2. The study results revealed that, the mothers of Byahatti village, are having negative attitude regarding care of under-five children that is 48%.
3. Study results revealed that there is no association between knowledge and attitude of mothers with their selected socio demographic variables.

Recommendations

1. A replication of present study can be conducted with a larger population to generalize the findings.
2. A structured knowledge programme (STP) on care of under-five children, can also be used to improve the knowledge and attitude.
3. A study can be conducted to find out the prevalence of knowledge and attitude on care of under-five children among mothers.

References

1. K Park, Preventive & Social medicine, M\s Banarsidas Bhanot publishers 22nd edition.
2. Dr. Mrs. Kasturi Sundar rao. A text book of introduction to Community Health Nursing. 4rth ed. BL publishers, 2000.
3. Subha S. Nutritional status among under-five children in urban, rural Anganwadis. Nightingale nursing time's journal; 2014: X(10): 12-13.
4. Chinnasamy A. mothers knowledge of weaning foods. Nightingale nursing times journal; 2014: 10(1): 31-32.
5. Mahalinga MH. Mothers knowledge of complementary feeding. Nightingale nursing time's journal; 2014: 10(6): 53-54.

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Child Labour

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Abstract

In India, the second largest country of Asia has the largest child labour force in the world (17.4 million). The main causes of child labour are Poverty, Parental illiteracy, ignorance, Parental unemployment, death, large family and Father's addiction as a family's causes and social causes as a Poor punitive law provisions. Child labour as a cheap commodity, Poor educational facilities. In child labour the international labour standards cite 15 years as the minimum age for employment. More female children are working vis-à-vis total female workers. Among working women, more than 9% are child workers. Rural areas had higher child labour participation rates for males and females than urban areas. As regards to sex differences, the child labour participation rate (CLPR) (0-14) for males is 1.38% and 1.21% for females. Most of the times, exploitatively low wages are paid. They are as low as Rs. 50-100 per month for an average of 10-12 hours of work per day.

Keywords: Child Labour; Poverty; Illiteracy; Punitive Law.

Introduction

The innocent children, millions in number, are exploited and abused everywhere in different walks of life. By virtue of being a child, it is quite impossible for him/her to report his/her victimization to the concerned persons. The child workers have been suffering mental harm, physical injury, verbal harassment etc., in the hands of their employers and the parents as well.

Meaning – Child Labour

The ILO convention of 1973 set out a definition of unacceptable child labour which covered:

- Dangerous work jeopardizing the health, safety and morals of children below 14 years of age;
- "Normal" work for children below 14 years age; and
- Even part-time "light" work below the age of 12 years.

Definition

it as the employment of children in gainful occupations which are dangerous to their health and denying them the opportunities of development.

(Kulshrestha)

It as "that segment of the population which participates in work either paid or unpaid. (Government of India)

What is the Difference between Child at Work and Child Labour.

The terms "child at work" and "child labour" are quite different and often confusing and thus need clarifications. Especially in the developing countries, children are involved in the house-hold work of their families as soon as they are capable and accustomed for working. This age old system is beneficial as a part of informal preparation and training for adulthood tasks. This household work is virtually free from harmful effects and may prove interesting, educational and socially useful. However, work outside the family environment involves a sharp

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change of environment, discipline and life-style. Thus, "childhood" may terminate abruptly once a child is employed for wage earning and the child is subjected to various hazards related to his mental, physical or social health and it is here that the tern "child labour" is mostly used.

A view on Child Labour in India

In India, with close to 42 percent of the population urbanized, urban child labour population urbanized, urban child labour accounts for only 5.8 per cent of the entire child labour in the country. The sectoral distribution of child labour in the countryside indicates that most of the children are engaged in agriculture, rather than in industrial sectors, which have become the focus of media attention and trade sanction initiatives. According to the census data of 2001, around 42 per cent of the child workers were engaged in their family farm in agriculture in animal husbandry and fishing respectively.

In 2012, 46 per cent of the rural child workers were engaged as agricultural labourers. Around 2.5 per cent of the officially registered working child population was engaged in household industry, usually a manufacturing unit conducted by a family member, and a further 4.7 per cent worked in other manufacturing units. Construction (0.7%) and mining (0.22%) were the other sectors where more than in agriculture, the physical and mental well being of the child may be at risk.

Causes and Determinants of Child Labour

Familial Causes

1. Poverty.
2. Parental illiteracy/ignorance.
3. Parental unemployment and death.
4. Large family.
5. Father's addiction.

Child's Causes

1. Repeated failures. In many cases, it has been observed that the child's own poor performance at education.
2. Siblings. The child may follow the path of his elder siblings who go to work.
3. Economic independency.

Social Causes

1. Poor punitive law provisions.
2. Child labour – a cheap commodity.
3. Poor educational facility.

Determinants of Child Labour

1. General fertility rate.
2. Percentage of agricultural population.
3. Percentage of houseless population and of landless households.
4. General literacy rate and school enrolment rate (age group 11-14 years).
5. Wage rate.
6. Expectation of life at birth.

Table 1

Child Labour in Different Occupations

1.	Agriculture	8.	Machine tools, repair shops and petrol pumps	12.	coir products
2.	Plantations			13.	Domestic worker
3.	Mining and quarrying			14.	Helpers in hotels,
4.	Beedi-rolling	9.	Zari and embroidery	15.	Rag picking
5.	Glass and bangles	10.	Gem cutting and weaving	16.	Construction
6.	Handloom and carpet weaving.	**11.**	Cashew processing	17.	Hawkers, vendors, newspaper sellers
7.	Match and fire works			18.	Shoe-shining and
				19.	Coolies

Health Hazards Child Labour on Children

Health Hazards can be Divided into two Groups

1. Hazards inherent to the working children themselves, and
   - Malnutrition
   - Physical health hazards
   - Communicable diseases
   - Effects on psychosocial development
2. Hazards related to their occupations.

Minimum age of employment: There is no uniformity in the matter of minimum age of employment of children. The age varies from occupation to occupation. The Indian laws provide for lower standards than those presented by the ILO conventions.

Role of the Nurse in Child Labour

1. Primary healthcare approach to provide healthcare to the children at the work place.

	Occupation	Disease / Disability
1.	Balloon factories	Pneumonia, bronchopneumonia, breathlessness and even heart failure.
2.	Match and fire works	Breathing problems, severe burn, muscle fatigue due to lifting heavy industrial loads, deformation due to long hours of work in one position.
3.	Lock industry	Tuberculosis and upper respiratory tract diseases, asthma, acute breathlessness, acid burns, acute headache.
4.	Glass industry	Silicosis, burns, reduced life span by a third due to heat and dust.
5.	Slate industry	Silicosis, tuberculosis.
6.	Power loom industry	Byssinosis, fibrosis of lung tissue.
7.	Beedi industry	Nicotine poisoning – nausea, headache, muscle fatigue, loss of eye sight.
8.	Brass industry	Acid burn, Tuberculosis.
9.	Zari industry	Eye diseases, postural deformities and spinal problem.
10.	Domestic workers shop	Over work, physical and sexual abuse, drug addiction.
11.	Carpet industry	Poisoning from colouring agents, lung diseases from fibre dust.

1. Children (Pledging of labour) Act, 1933,
2. Employment of Children Act, 1938,
3. Factories Act, 1948,
4. Mines Act, 1952,
5. Plantations Labour Act, 1951,
6. Merchant Shipping Act, 1958,
7. Apprentices Act, 1961,
8. Motor Transport Workers Act, 1961,
9. Beedi and Cigar Workers (Conditions of Employment Act, 1966),
10. The Atomic Energy Act, 1962 (Radiation Protection Rule, 1971),
11. State shops and Establishment acts,
12. Dock Worker's Regulation and Employment Act, 1948, and
13. Contract Labour (Regulation and Abolition) Act, 1970.

S. No.	Act	Indian law	ILO Recommendation
1	Factories act	14 years	15 years
2	Mines act		
	• Below ground	16 years	16 years
	• Above ground	15 years	15 years
3	Plantations Labour Act	12 years	14 years
4	Motor Transport Workers Act	15 years	15 years
5	Employment of children Act	14 years	15 years
6	Shops and other Non-industrial employment	12 years	15 years
	Light work	12 years	13 years

2. Identification for 'at risk' approach should be implemented especially if the child is exposed to high risk environment at work place.
3. *Community involvement:* Teachers, voluntary agencies, social workers, politicians, women's associations, youth clubs and religious leaders must come forward to help these children from all aspects.
4. Labour unions can be persuaded to look after all the needs of the children separately.
5. Child Workers – self appraisal and care.
6. Legislation and working children.

References

1. Habenicht H. The international programme on the elimination of child labour: An international response to child labour. International Child Health, USA, 1994, 2: 1924.
2. Batalvii IH. Childhood denied. The situation of children in Pakistan. International Children's right Monitor, 1990, 1 / 2: 14-16.
3. Banerjee SR. Child labour, Editorial, Indian Pediatr 1990, 1: 3-6.
4. Banerjee SR. Child labour in suburban Calcutta, West Bengal, Indian Pediatr, 1991, 9: 1039-1044.
5. Mehta Meenakshi N, Prabhu SV, Mistry HN, Child labour in Bombay, Child abuse and neglect 1985: 107-111.
6. Lieten CK, Child labour in India, Disentangling essence and solutions, Economic and Political Weekly, Dec. 28, 2002.
7. Piush A, Gayathri V, Child labour: A perspective of locale and context, Economic and Political Weekly, Dec. 28, 2002.
8. Wazir R, No to child labour, Yes to education, Unfolding a grassroots movement in Andhra Pradesh, Economic and Political Weekly, Dec. 28, 2002.
9. Ranjan R, Simultaneous analysis of child labours and child schooling – comprehensive evidence from Nepal and Pakistan, Economical and Political Weekly, Dec. 28, 2002.

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Standard journal article

[1] Flink H, Tegelberg Å, Thörn M, Lagerlöf F. Effect of oral iron supplementation on unstimulated salivary flow rate: A randomized, double-blind, placebo-controlled trial. J Oral Pathol Med 2006; 35: 540-7.

[2] Twetman S, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, et al. Caries-preventive effect of fluoride toothpaste: A systematic review. Acta Odontol Scand 2003; 61: 347-55.

Article in supplement or special issue

[3] Fleischer W, Reimer K. Povidone iodine antisepsis. State of the art. Dermatology 1997; 195 Suppl 2: 3-9.

Corporate (collective) author

[4] American Academy of Periodontology. Sonic and ultrasonic scalers in periodontics. J Periodontol 2000; 71: 1792-801.

Unpublished article

[5] Garoushi S, Lassila LV, Tezvergil A, Vallittu PK. Static and fatigue compression test for particulate filler composite resin with fiber-reinforced composite substructure. Dent Mater 2006.

Personal author(s)

[6] Hosmer D, Lemeshow S. Applied logistic regression, 2nd edn. New York: Wiley-Interscience; 2000.

Chapter in book

[7] Nauntofte B, Tenovuo J, Lagerlöf F. Secretion and composition of saliva. In: Fejerskov O, Kidd EAM,

editors. Dental caries: The disease and its clinical management. Oxford: Blackwell Munksgaard; 2003. p. 7-27.

No author given

[8] World Health Organization. Oral health surveys - basic methods, 4th edn. Geneva: World Health Organization; 1997.

Reference from electronic media

[9] National Statistics Online—Trends in suicide by method in England and Wales, 1979-2001. www.statistics.gov.uk/downloads/theme_health/HSQ 20.pdf (accessed Jan 24, 2005): 7-18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

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