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Occupational Stress among Nurses: Government Versus Private Sector

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ABSTRACT

A descriptive study was conducted to assess the occupational stress among nurses working in Government and private sector in Kottayam District, Kerala. The research study was undertaken in one government medical college hospital and two private hospitals of Kottayam district,Kerala, India. Sample consists of 400 nurses selected by simple random sampling technique, 200 each from the government and private sector. The Tools used for the study were socio-personal data sheet and a stress assessment rating scale. The maximum score of the stress assessment rating scale was 448 which is categorized as mild stress (1-149), moderate stress (150-299) and severe stress (300-448). All the staff nurses in the present study experienced stress ranging from mild to severe.The findings showed that the mean stress score of the nurses working in government sector was significantly higher than that of the nurses working in private sector ($t=2.52$, $p<0.05$). Present study findings revealed a significant association between occupational stress of nurses and the presence of elderly at home.

Keywords: Nurse,occupational stress, government sector, private sector.

INTRODUCTION

Nurses make up the largest group of health care providers in all the countries. Their services are considered as essential to provide safe and effective care to the clients. By virtue of the nature of their work, nurses are at risk for physical injury and mental stress in the occupational setting. These front line care givers represent a critical and costly resource; maximizing the efficiency and effectiveness of nurses is essential to the integrity of hospital function and promotion of safe patient care.[1]

Professional nurses in the twenty-first century are faced with many challenges within the dynamic state of health care. Nurses have identified numerous areas of concern, including insufficient staffing, inadequate salaries, over work, lack of participation in decision making and dissatisfaction with the quality of their own nursing care.[2]

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Stress in the work place is often referred to as 'occupational stress'. The basic rationale underpinning the concept is that the work situation has certain demands and those problems in meeting these can lead to illness or psychological distress.[3]A hospital is one of the most stressful work environments. Nurses face stress with life and death situations. Heavy work load involving physical and mental strain, inadequate knowledge on operation of different types of equipment, communication problems among team members and family problems are factors leading to stress.[4]

A study was conducted to examine why registered nurses leave or change employment status. The most common reason given by respondents was long working hours. Working in long shifts, weekends, nights and holidays prompted nurses to look for another job. Thirty seven percent of the respondents were unhappy with staffing pattern and commented that the work load was too heavy, with no relief. Forty six percent of the nurses were frustrated with low quality of care they deliver because of poor staffing and increased health care demands.[5]

It is a reality that even though nursing has advanced a lot compared to the 1950's status, the nursing service sector remains the same, exposing the patients and the nursing personnel at great risk. The investigators during their clinical experience observed that nurses are working in stressful situations. They face various kinds of threats. It can be in the form of various kinds of injury, verbal/physical abuse from the part of patients or relatives. Moreover nurses are always exposed to infection in their work setting.During the nipah outbreak in Kerala in May 2018 a nurse lost her life while caring a patient.

A study was carried out on 87 randomly selected staff nurses working in two tertiary care teaching hospitals of Delhi and the findings revealed that majority (87.4%) of nurses reported that their job is stressful. Stress in nurses is an endemic problem. It contributes to health problems in nurses and decreases their efficiency. Documenting the causes and extent of stress in any healthcare unit is essential for successful interventions.[6]

Reforms of health systems are often an essential component of improving efficiency, access and outcomes from health service delivery.Nurses and others working in dysfunctional or failing health systems have to develop various coping strategies to survive.[7]

The researchers during the interaction with the nurses realized that nurses really feel apprehensive and depressed regarding nursing service situation because of inadequacy of nursing manpower, decreased standard of care and lack of recognition. Hence the investigators felt the need to assess the occupational stress among nurses working in Government and private sector.

Statement of the problem

A study to assess the occupational stress among nurses working in Government and private sector in Kottayam District, Kerala.

Objectives

1. To assess the occupational stress among nurses working ingovernment and private sector.

2. To compare the occupational stress of nurses working in government and private sector

3. To find out the association between occupational stress of nurses and selected variables

Operational definitions

Occupational stress – In this study occupational stress refers to the subjective feeling of tension experienced by the nurses with regard to their work situation which   is assessed by the stress assessment rating scale.

Nurse- In this study, nurse refers to registered staff nurse working in government and private sector for more than one year.

Selected variables – in this study selected variables refers to age, gender, qualification, area of work, years of experience, distance from residence to hospital, presence of physical illness, presence of under five children and elderly at home.

Hypotheses

H1 There is a significant difference between the occupational stress of nurses working in government and private sector.

H2 There is a significant association between the occupational stress of nurses and selected variables.

MATERIALS AND METHOD

The aim of the present study was to assess the occupational stress among nurses working in government and private sector. Hence a descriptive survey design was adopted for the study. The research study was undertaken in one government medical college hospital and two private hospitals of Kottayam district,Kerala,India. Government Medical College Hospital, Kottayam is a tertiary level teaching hospital with 1794 bed strength. There were 543 staff nurses working in the hospital on shift basis. Two hundred nurses from the medical college were included for the present study.The two private hospitals selected for the study had 300 bed strength each with150 nurses working in three shifts. Hundred nurses each from the two private hospitals were also included in the present study. Sample consists of 400 nurses selected by simple random sampling technique,200 each from the government and private sector. Nurses working under various departments with minimum one year experience were included in the study.

The Tools used for the study were

Tool 1- Socio-personal data sheet-This includes age, gender, qualification, area of work, years of experience, distance from residence to hospital, presence of physical

illness, presence of under five children and elderly at home.

Tool 2- Stress assessment rating scale- It is a rating scale to assess the degree of stress faced by nurses in their occupational setting under seven sub headings which includes work load, physical facilities, teamwork, supervision, safety and security, salary /welfare facilities and personal factors. The maximum score was 448 which is categorized as mild stress (1-149), moderate stress (150-299) and severe stress (300-448).

Data collection was started after obtaining permission from the Institutional Ethics Committee, Medical College, Kottayam. After obtaining informed consent, data were collected from 400 nurses from January to April 2017. Basic information was collected using socio-personal data sheet. The level of occupational stress was assessed by a stress assessment rating scale. The obtained data wereanalyzed using SPPSS. Unpaired t test was used to compare the occupational stress of nurses between private and government sector.Chi-square test was used to find the association between occupational stress of nurses and selected variables.

FINDINGS

Sample characteristics

Among the nurses, majorityof the nurses (92,2%) were females and 62.2% were between the age of 20-30 years and only 2.2% were above 50 years.

Regarding education 51.5 % of nurses were with general nursing and midwifery, 43.8% nurses were either with B.Sc or post basic B.Sc qualification and 3.5% with M.Sc nursing qualification.

Among the nurses, 49.9% were working in wards, 26% were in intensive care units, 5.8% in labour room and 6.5% were working in other areas like casualty, dialysis etc.

With respect to work experience, 52% nurses were with less than 5 years experience and only 5.8% nurses had more than 15 years experience.

Among the nurses, 22.8% nurses had to travel more than 20 kilometers while only 18.8% nurses were residing in the hospital campus.

Regarding physical illness, majority of the nurses under study did not report any physical illness whereas 4.5% were suffering from hypertension and 2% with heart disease.

Among the nurses, 73.8 % of the nurses had no under five children at home and only 26.2% were with under five children.

Among the subjects 71.8% of the nurses had no dependent elderly where as 28.2% of the nurses had to look after elderly at home.

Table 1: Frequency distribution and percentage of staff nurses based on occupational stress (n=400)

Occupational stress	f	%
Mild (1-149)	201	50.2
Moderate(150-299)	184	46
Severe(300-448)	15	3.8

Table 1 depicts that out of the 400 nurses under study, 46% experienced moderate stress, 50.2% experienced mild stress and 3.8 % reported of having severe stress.

Table 2: Mean, standard deviation and t value of occupational stress score of staff nurses working in Government and private sector (n=400)

Mode of Employment	Occupational stress score		t
	Mean	**SD**	
Government	169.18	71.42	2.52*
Private	149.85	81.62	

*Significant at 0.05 level

Table 2 shows that the mean stress score of the nurses working in government sector was significantly higher than that of the nurses working in private sector (t=2.52, p<0.05).

Table 3: Mean, standard deviation and t value of stress scores on sub domains among nurses working in government and private hospitals   (n=400)

Occupational stress sub domains	Group	n	Mean	Standard deviation	Df	t
Work load	Government	200	21.74	11.08	398	4.19**
	Private	200	17.35	11.28		
Physical facilities	Government	200	31.44	17.04	398	7.76**
	Private	200	18.71	15.68		
Team work	Government	200	20.09	12.35	398	4.70**
	Private	200	14.25	12.51		
Training and supervision	Government	200	25.90	13.28	398	4.64**
	Private	200	19.58	13.90		
Safety and security	Government	200	19.41	11.19	398	1.42
	Private	200	17.72	12.59		
Salary and welfare	Government	200	33.5	20.48	398	3.36**
	Private	200	42.35	23.96		
Personal factors	Government	200	17.76	10.98	398	2.29*
	Private	200	20.48	12.68		

*Significant at 0.05 level   **Significant at 0.01 level

The table 3 reveals that the mean stress score wassignificantly higher among nurses working in government sector in the sub domains like work load, physical facilities, team work,training and supervision. But in the sub domains of salary/welfare and personal factors, the mean stress score was higher among nurses working in private sector compared to those working in government sector showing a significant difference.

Table 4: Chi-square value of occupational stress scores of nurses based on socio-personal variables

(n=400)

Socio-personal variables	df	χ^2
Place of work	8	13.08
Distance from residence to hospital	6	7.19
Presence of physical illness	8	8.02
Presence of under five children at home	2	1.91
Presence of elderly at home	2	6.05*

*Significant at0.05 Level

Table 4 shows that the obtained chi-square value for the presence of elderly at home (1.91) is significant at 0.05 level. Hence it is inferred that there is a significant association between the occupational stress of nurses and the presence of elderly at home. It is also seen that there is no significant association between the occupational stress of nurses and other socio-personal variables such as place of work, distance from residence to hospital, presence of physical illness, presence of under-five children at home.

DISCUSSION

All the staff nurses in the present study experienced stress ranging from mild to severe. Among them,50.2% experienced mild stress while 46% experienced moderate stress and 3.8% reported of having severe stress. The mean stress score of the nurses working in government sector was significantly higher than that of the nurses working in private sector (t=2.52, p<0.05). Present study findings reveal a significant association between occupational stress of nurses and the presence of elderly at home.

The present study findings are discussed with the findings of related studies. In the present study (49.8%) of the nurses experienced moderate to severe stress which is consistent with the findings of a study carried out on 87 randomly selected staff nurses working in two tertiary care teaching hospitals of Delhi where it was revealed that majority (87.4%) of nurses reported that their job is stressful.[6] Findings of the current study is also congruent with the results of another study carried out Sharma etal in Meerut in which 42% of nurses were suffering from moderate to severe stress.[8]

CONCLUSION

All the staff nurses in the present study experienced stress ranging from mild to severe. The present study showed that the occupational stress of nurses working in government sector is significantly higher than that of nurses working in private sector. Present study findings revealed a significant association between occupational stress of nurses and the presence of elderly at home.

Appropriate strategies need to be implemented to reduce the occupational stress among nurses in order to render quality patient care.

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A Study to Assess the Effectiveness of Structured Teaching Programme Regarding Human Papilloma Virus Infection and Cervical Cancer on Knowledge, Perceptions and Preventive Behaviors among College Girls in Selected Colleges of District, Patiala, Punjab

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ABSTRACT

Introduction: Cervical cancer is the second most common cancer in women worldwide and the most common in women of under-developed and developing countries.

Aim: This paper is aims to assess the effectiveness of structured teaching programme about Human Papilloma Virus infection and Cervical Cancer on the knowledge, perceptions and preventive behaviors of college girls.

Material & method: A quasi-experimental non randomized control group research design is used in the present study. The sample size was 40 college girls who were selected through purposive sampling technique from colleges of district Patiala and 20 samples each were kept in experimental and control groups. Demographic, self structured knowledge questionnaire and check list for assessing perceptions and preventive behaviors instruments were used to collect the data for study.

Results: In control group, mean pretest knowledge score was 2.8±1.20 and mean post test knowledge score was 3.65±1.81. In experimental group, mean pretest knowledge score was 3.45±1.93 and mean post test knowledge score was 17.15±2.76. So, there is statically significant difference in the mean pre and post test knowledge scores of college girls at 0.05 level of significance in experimental group. The results of the study also show that there is statically significant difference in the mean pre and post experimental perception and preventive behaviour score of college girls at 0.05 level of significance in experimental group. Only source of information shows significant association (F=19.142, df=2.17) with pretest knowledge regarding human papilloma virus infection and cervical cancer in control group at 0.05 level of significance.

Conclusion: This study can further be used as a preventive measure for creating awareness and maintaining healthy behavior patterns in different settings among students.

Keywords: Structured Teaching Programme, Human Papilloma Virus infection, Cervical Cancer, Knowledge, Perceptions, Preventive Behaviors, College Girls, Patiala, Punjab.

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INTRODUCTION AND BACKGROUND OF THE STUDY

Cervical cancer is the second most common cancer in women and very serious public health problem, which cause death to almost 274,000 out of around 500,000 women every year having cervical cancer[1]. The problem

of cervical cancer in India is the single largest killer of middle-aged women and it bears about one fifth of the world's disease burden in the country[2]. As per the available data, more than 100,000 new cases are detected every year in India and causes almost 20% of all female deaths[3]. The data also indicates that about 75-80% of the cases are reported in advanced stage[4]. This problem is still haunting India, inspite of this being a preventable disease[5]. The early stages of cervical cancer may be completely asymptomatic and indications of presence of malignancy are vaginal bleeding, contact bleeding or (rarely) a vaginal mass[6]. The early detection and treatment of cervical precancerous lesions are important to reducing cervical cancer morbidity and mortality[7,8]. Screening test for cervical infection of HPV, the primary cause of cervix cancer, has proved to be more effective[9]. The best ways to prevent the development of cervical cancer are practicing safe sex, regular screening tests, and vaccination[10]. The incidence and mortality related to cervical cancer and other cancers can be reduced by acquiring knowledge about HPV and its role after an abnormal screening test[11].

LITERATURE REVIEW

In a more recent American study (2009) in which knowledge about HPV and HPV vaccine was assessed in 4 different states among 202 adults in the general population, the majority (93%) had heard of HPV and 84% knew it caused cervical cancer. Eighty-seven percent had heard of HPV vaccine but only 18% knew the vaccine was used to protect against cervical cancer[12]. In a 2009 South African study, in Cape Town, 100 women attending an anti-retroviral clinic were randomly selected and interviewed about their knowledge of cervical cancer and Pap smears. 78% of them had never heard about cervical cancer, 59% reported having had a pap smear and about 40% did not know what the pap smear was used for[13]. In 2010, attitudes, knowledge and beliefs about HPV and cervical cancer among 86 females aged 18-44 years attending an ante-natal clinic in Johannesburg, South Africa were examined. 61% of the participants had heard of cervical cancer, and only 29% had heard of HPV[14].

OBJECTIVES

To assess the pretest knowledge, perceptions and preventive behaviors on human papilloma virus infection and cervical cancer among college girls in experimental & control group.

1. To assess the baseline knowledge, perceptions and preventive behaviors on Human Papilloma Virus infection and Cervical Cancer among the experimental & control group.

2. To develop and implement the structured teaching programme regarding Human Papilloma Virus infection & cervical cancer.

3. To assess the post test knowledge, perceptions and preventive behaviors regarding Human Papilloma Virus Infection and Cervical Cancer among the experimental group and control group.

4. To find out the effectiveness of structured teaching programme regarding Human Papilloma Virus infection & cervical cancer on knowledge, perception and preventive behavior among college girls.

5. To find out the relationship between the knowledge, perception & preventive behavior regarding Human Papilloma Virus Infection and Cervical Cancer between the experimental & control group.

6. To find out the association between demographic variables and the outcome variables of the subjects under study.

METHODOLOGY

RESEARCH APPROACH

Quantitative Approach was used for the present study.

RESEARCH DESIGN

Quasi Experimental Non-Randomized Control Group Design was used to accomplish the objectives of the study.

O1   x   O2

O1   O2

SELECTION & DESCRIPTION OF FIELD FOR THE STUDY

The study was conducted in selected colleges of district Patiala, Punjab.

SAMPLE SIZE AND SAMPLING TECHNIQUE

40 college girls were selected as study subjects who are pursuing graduation degree programme (Non-medical) in the selected colleges of district Patiala, based

upon the inclusion and exclusion criteria. The proposed sample was selected by purposive sampling technique as they were agreed to participate in the study.

TOOLS OF STUDY

Sample Size (40)

Experimental Group (n = 20)   Control Group (n =20)
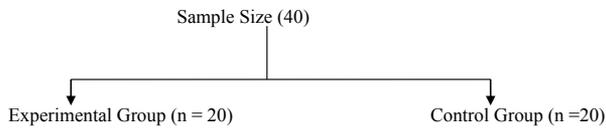
After a comprehensive review literature, expert's opinion & researcher's own experience, the researcher developed an instrument to assess knowledge, perceptions and preventive behaviors regarding Human Papilloma Virus infection and cervical cancer.

For Assessing Perceptions & Preventive behaviors - A check list based on the construct of Health Belief Model are used which is perceived threat (perceived seriousness & perceived susceptibility) towards Human Papilloma Virus infection & cervical cancer & also on their health behavior patterns for prevention against The researcher developed a Structured Teaching Programme on Human Papilloma Virus Infection and the Cervical Cancer.

The researcher developed a Structured Teaching Programme on Human Papilloma Virus Infection and the Cervical Cancer.

DATA COLLECTION PROCEDURE

The formal written permission was obtained from the Principals of the selected colleges. The data collection was done during January 2016. The study was conducted on college girls pursuing graduation degree programme. Total 40 college girls were selected based on inclusion and exclusion criteria through purposive sampling technique. Informed written consent was obtained. Group was divided into experimental and control group. Pretest was conducted on both in experimental and control group. Structured teaching programme was given to experimental group only. After 15 days, post test was conducted on both groups.

DATA ANALYSIS

The data analysis work was done by using descriptive and inferential statistics such as mean, percentage, standard deviation, paired and unpaired t test and ANOVA test. The results of the study were interpreted accordingly.

RESULTS

Table 1: Demographic variables of subjects in experimental & control group. N=40

Demographic variables	Categories	Experiment group n = 20 Frequency Percentage (%)		Control group n = 20 Frequency Percentage(%)	
Age (in years)	1	9	45	9	45
	2	8	40	7	35
	3	3	15	4	20
Stream of graduation	1	9	45	9	45
	2	7	35	6	30
	3	4	20	5	25
Religion	1	6	30	5	25
	2	0	0	4	20
	3	2	10	0	0
	4	12	60	11	55
Family income	1	6	30	6	30
	2	10	50	8	40
	3	4	20	6	30

***Cont..* Table 1: Demographic variables of subjects in experimental & control group. N=40**

Type of family	1	9	45	9	45
	2	9	45	9	45
	3	2	10	2	10
Place of residence	1	11	55	10	50
	2	2	10	4	20
	3	7	35	6	30
Source of information	1	10	50	10	50
	2	6	30	5	25
	3	4	20	5	25
No of sexual partner	1	0	0	0	0
	2	0	0	0	0
	3	20	100	20	100

Table 1 shows that out of 40 girls, in control group 45% were in age group of 17-18 years followed by 35% in 19-20 years and remaining 20% in 21-22 years of age group and similarly in experimental group, majority of sample 45% were in age group of 17-18 years followed by 40% in 19-20 years and remaining 15% in 21-22 years of age group. Table shows that in control group 45% were in arts, 30% commerce and remaining 25% in non-medical streams. In experimental group, 45% were in arts, 35% commerce and 20% were in non-medical streams. In case of religion wise distribution of data in control group, 55% were Sikh, 25% were Hindu, 20% were from Muslim religion. In experimental group, 60% belongs to Sikh, 30% Hindu and only 10% were belongs to Christian community. As far as the family income is concern, 40% were falls in 15000-30000 range of income, 30% of has more than 30000 and equal proportion were having less than 15000 annual income. Similarly, in experimental group, 50% were in 15000-30000, 30% in 15000 and 20% have family income more than 30000. In case of type of family, data shows that in both control and experimental groups, 45% have nuclear family, same proportion 45% have joint family, and only 10% have extended family type. In case of place of residence, in control group50% belongs to rural, 30% urban and 20% to semi-rural. Similarly, in experimental group, 55% belongs to rural, 35% to urban and 10% to semi-urban. In accordance to source of information, in control group 50% use mass media, 25% from family members/relatives/friends and equal proportion 25% from health care professionals. While in experimental group, 50% use mass media, 30% from family members/ relatives/friend, and remaining 20% from health care professionals.

Table 2: Pre and post test knowledge on human papilloma virus infection and cervical cancer among college girls in experimental & control group.   N = 40

Level of knowledge	Score	Experimental group (n=20)				Control group (n=20)			
		Pre test		Post test		Pre test		Post test	
		F	%	f	%	F	%	f	%
Good		0	0	16	80	0	0	0	0
Average		0	0	4	20	0	0	0	0
Poor		20	100	0	0	20	100	20	100

Table 2 shows that, in pretest all the respondents of both experimental and control group had poor level of knowledge. In post test of experimental group 80% have good knowledge and 20% average. While in control group, all the respondents have poor knowledge. Thus, it shows that structured teaching programme was effective; it helped the respondents to increase their knowledge about subject matter.

Table 3: Perceptions and preventive behaviors on human papilloma virus infectionb and cervical cancer among college girls in experimental & control group.   N=40

Perception and preventive behavior	Experimental group (n=20)				Control group (n=20)			
	Pre test		Post test		Pre test		Post test	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Perceived susceptibility	0.3	0.45	3	0	0.25	0.42	0.3	0.44
Perceived severity	0	0	0.5	0.5	0.65	0.46	0.65	0.46
Perceived barrier	0.45	.48	2.55	.48	0.25	0.52	0.25	0.52
Self efficacy	0.4	0.48	0	0	0.35	0.46	0.45	0.48
Preventive behaviour	0.5	0.74	5.4	.48	0.6	0.48	0.55	0.48
Grand total	1.6	.8	12.35	2.36	2.15	.85	2.2	.92

In experimental group, mean pre-experimental perception and preventive behaviour score was 1.6±0.8 and mean post experimental perception and preventive behaviour score was 12.35±2.36. In control group, mean pre-control perception and preventive behaviour score was 2.15±0.85 and mean post control perception and preventive behaviour score was 2.2±0.92.

Table 4: Relationship of knowledge regarding human papilloma virus infection and cervical cancer between the experimental & control group.   N=40

Observation Group	Pretest		Post –test		Paired 't' test
	Mean	SD	Mean	SD	
Experimental group (n=20)	3.45	1.93	2.8	1.20	't' = 26.97* df=19
Control group (n=20)	2. 8	1.20	3.65	1.81	't' = 0.55[NS] df=19
Unpaired 't' test	't'= 1.28[NS] df = 38		't' = 15.64* df = 38		

While comparing the pre and post test knowledge score in experimental group, paired t test value was 26.97, df=19, which is found significant at 0.05 level of significance and while comparing post test knowledge score in experimental and control group, unpaired t test value was 15.64, df=38, which is also found significant at 0.05 level of significance. There was no statistically significant difference in pre and post test knowledge score of control group and pre test knowledge of both experiment and control group.

Table 5: Relationship of perception & preventive behavior regarding human papilloma virus infection and cervical cancer between the experimental & control group. N=40

Observation Group	Scale score				Paired 't' test
	Pretest		Post –test		
	Mean	SD	Mean	SD	
Experimental group (n=20)	1.6	0 .8	12.35	2.36	't' = 56.57* df=19
Control group (n=20)	2. 15	0.85	2.2	0.92	't' = 0.13[NS] df=19
Unpaired 't' test	't'= 2.29 * df = 38		't' = 18.45* df = 38		

While comparing the pre and post test perception & preventive behavior score in experimental group, paired t test value was 56.57, df=19, which is found significant at 0.05 level of significance and while comparing post test perception & preventive behavior score in experimental and control group, unpaired t test value was 18.45, df=38, which is also found significant at 0.05 level of significance. There was no statistically significant difference in pre and post test perception & preventive behavior score of control group but there was statistically significant difference found in pre test perception & preventive behavior score of both experiment and control group.

DISCUSSION

The results of the study shows that the most of the respondents fall in the age group of 17-18 as mentioned in the table 1 of the study. The education wise-distribution of respondents shows that most of the i.e. 45% were doing graduation in arts stream. The table 1 also shows that majority of the respondents belongs to rural areas with 50% responses. In accordance to source of information, majority of the respondents indicated mass media as their source of information with 50% responses. Similar study conducted on the subject support the results [14]. The results indicate that, in pretest all the respondents of both experimental and control group had poor level of knowledge. Some studies support the results of this study as although awareness of Human Papilloma Virus vaccine was high among the population, the benefit of the vaccine was not clear to them [12, 13].

CONCLUSION

The structured teaching programme regarding human papilloma virus infection and the cervical cancer was instructionally effective, appropriate and feasible for improving knowledge, perceptions and preventive behaviors of college girls. It can further be used as a preventive measure for creating awareness and maintaining healthy behavior patterns in different settings among students.

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Clinical Application of Nightingale's Theory

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ABSTRACT

This Paper is based on the Florence Nightingale theory and application of her theory on clinical grounds for the improvement of nursing practice. A careful step by step approach is being adopted to discuss case scenario, main concepts of theory, analysis, hypothesis and conclusion.

Since, DM is become a major cause of morbidity and mortality throughout the world. Unavailability of better nursing services, petty management, poor personal cleanliness and congested environment is one of the reasons of compromised care of diabetic patients. Therefore, the paper focusing on a lot of things which could be better while providing care to a diabetic patient to modify the environment and to make the patient feel better by implementing Florence nightingale theory principles.

This paper would enable the readers to identify all environmental factors which can exaggerate any patient's health conditions and propose different strategies and ways to correct them in order to gain level of recovery and satisfaction among patients.

Keywords: *Nightingale's theory, Theory Analysis, Clinical Application of Theory.*

INTRODUCTION

Florence nightingale (1820-1910), is considered as first nurse theorist. Her theory of nursing focused on the environment and she gave a detailed portrayal of each feature of environment in her theory. Nightingale's concepts of theory are brief, simple and easy to understand. It is still applicable to practice today. It makes the nurses to work more efficiently by using their own intuition about patient care and modification of environment.

Nightingale wrote about many of the essential beliefs of the natural hygiene movement. She referred to these hygienic beliefs as the ***"laws of life"***. In Nightingale theory the person himself is responsible for his health but collaboration with nurse and environmental factors.

According to Florence nightingale many of the problems faced by the patients are not directly related to their ailment but the environment in which they are living.

Over view of Theory

Four major concept meta-paradigms of Florence nightingale theory are the following

Human

In Florence Nightingale's theory, "A person is one of the elements in the four metaparadigms in the individual receiving care" [7].

Environment

The environment plays a very vital role in maintaining health and wellbeing and promoting recovery. And environment of patient is a changeable thing. It could change according to the person's need and health by nurses. "An environment that promotes health allows the patient to retain their energy, or vital powers for use towards self-healing [6].

Nursing

Nursing is basically the modification of patient

environment to provide him comfort during disease period. Florence nightingale describes "I use the word nursing for want of a better. It has been limited to signify little more than the administration of medicines and the application of poultices"[6]. Nursing aids in the ability of a person to maintain health and to heal, by managing the environment.

Health

Health is a dynamic process according to nightingale "Health is not only to be well, but to be able to use well every power we have"[7].

Nightingale relates the health with 6 essential elements in order to secure an individual's health. "These include fresh air, pure water, well-organized drainage, cleanliness as well as proper light" [3].

Florence nightingale main concepts of environment described in 6 D's	
elements	comments
Dirt & Dust	personal hygiene as well as sanitation of houses
Drinking water	Pure Drinking water
Dietary habits	must take healthy fresh and balanced diet
Damping	dried out and a little warm environment
Draughts	Air ventilations
Drainage system	proper drainage and sewer systems

(Google images, 2013)

Sub concepts of nightingale theory

* Ventilation and warming

* Variety

* Light

* Chattering hopes and advices

* Noise

* Taking food - What food?

* Cleanliness of rooms

* Petty management

* Health of houses

* Observation of the sick

* Bed and bedding

* Personal cleanliness

These are referred to as Nightingale's 13 Canons [6].

Assumptions

There are seven assumptions of Nightingale's theory. According to Selanders, Nightingale philosophical assumptions are identified and serve as the basis for the model development.

These assumptions are following

Natural laws

Human beings are able to can gain perfection.

Nursing is a calling as well as it is an art and a science.

Nursing can be attaining by environmental changes.

Nursing requires a definite didactic support; and nursing is distinct and separate from medicine

Clinical scenario

A couple of years back, I come across the most despondent situation of my practical life in nursing profession. I was sent by my chief nursing superintendent to a surgical unit of one of the tertiary care hospital of Lahore for the duty as a head nurse. When I entered the ward, I feel a very bad smell. I take a round of ward for the sake of searching out the smell origin. Because it was annoying all the patients present in the ward I feel everyone was disturb due to that.

when I entered the 2nd portion of ward the intensity of smell got increased and what I have seen there was a middle aged poor man lying on dirty hospital bed sheet which was stained with urine, under his bed there was a bed pan and a urinal as well as a dust bin full of dirty swabs and dressing material. His daughter was standing beside him. The smell was arousing from this poor old man. After inquiry from her daughter I came to know that he was admitted 15 days back with the history of diabetic foot in this surgical ward. According to a report of international diabetes federation there were over 7 million cases of diabetes in Pakistan in 2015[1,3].DM is become a major cause of morbidity and

mortality throughout the world.The patient was admitted for wound debridement but now he is suffering from fever malaise and shivering also. Reason of fever was unknown. Baseline investigations were sent to lab to find out the reason of fever. His daughter was with him from the time of admission to until now. And she was the only person who was caring this poor man because she was his only offspring.

Near to the patient bed side trolley there was a lot of eatable openly placed in which fruits and other things were placed. There were 2 windows in ICU area of that surgical ward and both were closed due to AC. Therefore there was no outlet for smell to out and to ventilate the area of ward.

I asked to a staff nurse who was giving medicine to the patients that why this patient and the area surrounding him is being so dirty? Why she is not giving much attention to this patient? Then she said that she is only one nurse in this 50 bedded ward due to severe shortage of nurses and she have to perform so many tasks so she is unable to give equal attention to all patients. After more inquiry she told that she has ordered the sweeper so many times to empty the dustbin and make this patient area clean as well as to change the bed sheet but the sweeper refused to do it because this poor patient was unable to give him money so he will not do anything for the sake of this patient.

At that time what I could do for this patient is that I advised his daughter to cover all eatables as it could contaminate by germs and can be a health hazard for her father and herself. I advised to old man that he need to go to washroom with the help of wheelchair so that his blood circulation could improve in different parts of body including limbs. "One of the nurses' duties is helping patients with diabetic foot ulcers to have the movement of limbs" [1]. He should not use bed pan and urinals to avoid from many other health problems for this purpose.

Analysis

When I look back towards my case scenario to keep Florence theory in mind, I came to know that there were a lot of things which could be better at that place to modify the environment and to make the patient feel better by implementing Florence nightingale theory principles if I could have a better understanding of her theory at that time.

My patient was a poor diabetic and being neglected in terms of environmental factors. According to a statistics "Pakistan is a poor country, having very little quota for health budget.24$ per person cost of diabetes in Pakistan[3]. As the disease burden of diabetes is already very high in Pakistan. So by providing them a better environment as well as better nursing care, mortality and morbidity rate could be minimize and could increase the life expectancy among diabetic patients. As in my scenario the patient was not availing even the basic nursing care. According to nightingale theory one of her canon was chattering hopes and provides advises to patient make them feel better and it create a sense of security among patient.

Unavailability of better nursing services and good environment was one of the reason of his poor exaggerating condition as well as petty management ,personal cleanliness and bed and bedding were also needs to addressed at that time . Here I will not blame only a nurse to responsible for that but also the poor cooperation of janitorial staff with nurse and the patient. According to Florence "Bad sanitary, bad architectural and bad administrative arrangements often make it impossible to nurse to provide a better environment to patient [6]

The windows of ward in my scenario were closed due to AC and that's why the ward was so stinking. At that time I too thinks like the windows should need to be closed so that cooling could preserve but Florence nightingale argued in her theory that" I have known in one summer three cases of hospital pyaemia, one of phlebitis, two of consumptive cough all the immediate products of foul air." It showed that opening of windows is necessary to allow fresh air to get in rooms and foul smelly air to go out. So I conclude that my patient's fever was might due to this stingy environment because there was no any other known reason of fever.

Another issue in my scenario is that I observe that all eatables were uncovered placed on bed side trolley of my patient. As in Florence nightingale theory she described that "'the use of any chamber utensil without a lid should be utterly abolished, whether among sick well" [6] so it could be harmful not only for the patient but also for a healthy person.

Another issue which really makes feel sad about the situation is that shortage of nurses in Pakistan which leads to poor nursing care ". The existing nurse-

patient ratio in Pakistan is approximately 1:50 whereas the ratio prescribed by the Pakistan Nursing Council (PNC) is 1:10 in general areas and 2:1 in specialized areas"[1,4]. This is the main issue which should solved by administration and government step and initiatives.

That area of hospital was at risk of many ailments so by using nightingale's principles and observations about the environment I develop a plan in my mind to improve that situation.

Hypothesis

(A)-If patient will be provided a hygienically good environment in the health care setting then there is probability of having occurrence of complication will be reduced.

(B)- If policy makers and stakeholders focus to increases the number of the nurses in the hospitals it decrease nurse patient ratio as well as the shortage of nurses will decrease in order to maintain community health status which ultimately leads to achieve health outcomes.

(C)-Health education and counselling play a major role in self-care among patients. So, if diabetic patients are being taught about self-care and foot care during hospitalization and on follow ups then the probability of having amputation will be reduced.

(D)- The government needs to initiate the department that focus on quality assurance, need assessment and management of the hospitals and its staff, it will help to better manage the ward condition which ultimately increase the quality of care.

CONCLUSION

Florence nightingale theory is based on her personal experiences which she faces during providing care to sick and injured soldiers. In her theory she described that there is very strong relationship of a person with his/her environment, health and nurse. Being a nurse I need to know the ways by which I can provide better health to my patients as in my scenario I failed to take care of my patient in such way. After this assignment I am able to identify the all environmental factors which can exaggerate of any patient health and ways to correct them in order to gain level of recovery and satisfaction among patients.

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A Quasi Experimental Study to Assess the Effectiveness of Structured Teaching Program on Biomedical Waste Management in Terms of Knowledge among B.Sc. Nursing 1st Year Students of Ved Nursing College, Baroli, Panipat

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ABSTRACT

Medical as well as paramedical students are going to be one of the important components of health care system, they should have proper and sufficient knowledge on biomedical waste management. This study was conducted, to assess the effectiveness of structured teaching program on biomedical waste management in terms of knowledge among B.Sc. Nursing 1st year students. A quasi experimental research design was used for the study. A total of 49 B.Sc. Nursing 1st year students of Ved Nursing College, Baroli, Panipat were selected. The instrument use for the data collection was self-structured knowledge questionnaire. Descriptive and preferential statistics were used to analysis the data. The study findings reveals that majority of the samples 53.07% in the pre-test had adequate level of knowledge, whereas majority of sample 95.92% in post-test had adequate level of knowledge. The mean pre-test knowledge scores of the B.Sc. nursing 1st year students regarding biomedical waste management was 997, which increase in post-test to 1151 for knowledge scores. From the above findings, it can be concluded that structured teaching program was effective in improving knowledge of B.Sc. Nursing 1st Year students regarding biomedical waste management.

Keywords: *Effectiveness, structured teaching program, biomedical waste management.*

INTRODUCTION

The pioneer of modern Nursing, Ms. Florence Nightingale considers health is linked with environment factors like pure or fresh air, pure water, efficient drainage, cleanliness and light especially direct sunlight. Ms. Nightingale notes published in 1860 admonished nurses to "put the client in best condition for nature to act upon him" giving importance to environment.

Hospital is a place of almighty a place to serve the patient, hospitals and other health care facilities generates lots of waste which can transmit infections, particularly HIV, Tetanus, Hepatitis B and C, to the people who handle it or come in contact with it[1].

Since beginning the hospital are known for the treatment of sick persons but we are unaware about the environment. Not it is well established fact that there are many adverse and harmful effects to the environment include human beings which are caused by the biomedical waste generated during patient care[2].

Advances in medical facilities with the introduction of sophisticated instruments have increased the waste generation per patient in health care units[3].

"Biomedical Waste" is any waste, which is generated during diagnosis, treatment or immunization of human beings. This waste is also generated during research activities or in the production or testing of biological material. Infectious waste risks the health of not only the hospitals staffs, patients and their relatives who are visiting or attending them but also the health of general public also[4].

Biomedical waste consists of solids, liquids sharps and laboratory waste that are potentially infectious or dangerous and are considered bio-waste It must be properly managed to protect the general public, especially healthcare and sanitation workers who are regularly exposed to biomedical waste as an occupational hazard. Proper handling, treatment and disposal of biomedical waste are the important elements of healthcare infection

control programme[5]. Health care workers need to understand the difference between biomedical waste and other waste connected with the hospital. Hospital waste refers to all waste, biological or non-biological that is discarded.

According to WHO (Word Health Organization) report 2013, around 85% of hospital waste is noninfectious, 10% is infective and remaining 5% is not infectious but hazardous. Biomedical waste should be managed through a pathway that includes point of generation, storage and segregation, collection, processing, transportation, treatment and disposal[6].

Appropriate waste management system have been developed and installed globally to handle both hazardous and non-hazardous biomedical waste. Biomedical waste management has got popularity in recent days due to its importance in hospital administration. It involves proper planning and effective implementation of various practices that are necessary for different categories of employees working in the hospitals. Knowing the importance of bio medical waste management and to regulate it, the **Ministry of Environment and forests under government of India (MEFGI)** has made the environment protection act in 1986[7].

The BMW rule applies to all those who generate, collect, receive, store, transport, treat, dispose or handle BMW in any manner and also to every institution that generate BMW. The bio medical waste should be segregated at source into:

Color codes bags or containers:

Red bag: Infected plastics like infusion set, tubing's, catheters and microbiological waste.

Black Bag: All sorts of non-infected general waste in which food waste from wards, canteens and dining halls.

Whit/Blue bag: Glasses.

Yellow bag: Soiled waste items contaminated with blood, and body fluids, animal waste (animal tissues, organs, bleeding parts, fluids), microbiology & biotechnology waste[8]**.**

Among all workers nurses spending more and long time in hospitals. It has been proved that the nurses are more victims of hepatitis B and HIV infection because not handling biomedical waste properly. For the prevention of infections, nurses should take precautions according to the center for Disease Control and Prevention and Occupational Safety and Health administration. Universal precautions refer to an infection control system which assumes that any direct contact with patients particularly their body fluids have the potential for transmitting the diseases[9].

Average composition of biomedical waste in hospital:

The data below are average values obtained from 10 large hospitals in Bombay, Calcutta, Delhi & Nagpur.

Table No-1: Average composition of biomedical waste

Sr. No.	Material	Percentage
		(Weight basis)
1	Paper	15.00
2	Plastics	10.00
3	Rags	15.00
4	Metal(Sharps Act)	01.00
5	Infectious Waste	01.50
6	Glass	04.00
7	General Waste(food waste, sweepings from hospital premises etc).	53.50

Sources: National Environmental Engineering Research Institution (Personal Communication, 1997)[1]

OBJECTIVES

1. To assess the pre-test knowledge regarding biomedical waste management among B.Sc. Nursing 1st year students.

2. To assess effectiveness of structured teaching program on biomedical waste management among B.Sc. Nursing 1st year students

3. To determine the level of association between pre-test knowledge scores with selected sociodemographic variables.

MATERIALS AND METHOD

In this study, quasi experimental one group pre-test post-test design was used to carry out the study. The sample size considered for the present student was 49 B.Sc. Nursing-1ˢᵗ year students of Ved Nursing College by using consecutive sampling technique. Pre-test was conducted on 49 B.Sc. Nursing-1ˢᵗ year students then structured teaching program was given and then post-test was taken. The tool used in the study to assess the knowledge regarding biomedical waste management is divided into two section. **Tool 1: Socio-demographic profile; Tool 2: Self structured knowledge questionnaire.**

RESULTS

SECTION –I: DESCRIPTION OF STUDY PARTICIPANTS

Socio-demographic profile reveals regarding age (in years), majority of B.Sc. Nursing-1ˢᵗ year students 83.67% were ranged in 18-19 years. None of the sample belongs to age above 23 years. Majority of B.Sc. Nursing-1ˢᵗ year students 83.68% were females and rest were males. Regarding their father's occupation, majority of samples 40.82% were government employees. According to mother occupation majority of samples 45 (91.83%) were housewives. Family income (per month) reveals that, one third 30.63% having Rs20,000/- month, sample in above Rs. 40,000/-month category was 12(24.49%), while only 22.44% having Rs.30,001-Rs.40,000/-month.

SECTION-II: PRESENTATION OF DATA ANALYSIS AS PER OBJECTIVES

1: To assess the pre-test knowledge regarding biomedical waste management among B.Sc. Nursing 1ˢᵗ year students.

Table No.2: Pre-test level of knowledge and scores in percentage regarding biomedical

Waste management. **(N=49)**

Levels (In Percentage)	Knowledge Level	
	Frequency	Percentage (%)
Inadequate	0	0
Average	23	47
Adequate	26	53
Total	**49**	**100**

Table No. 2, depicts the frequency and percentage of level of knowledge of B.Sc. Nursing 1ˢᵗyear students regarding biomedical waste management. More than one half of the samples 53% had adequate level of knowledge. A little less than one half of the samples 47% had average level of knowledge.

2: To assess effectiveness of structured teaching program on biomedical waste management among B.Sc. Nursing 1ˢᵗ year students.

Table No. 3: Mean, Mean difference, Standard Deviation and t value of deviation

Test	Mean	Mean Difference	S.D.	t-value
Pre-test	997	154	1.66	13.65
Post-test	1167			

Table No.-3, reveals the pre-test & post-test mean, mean difference, standard deviation and t value.

The mean pre-test knowledge score was 997 and post-test knowledge score was 1151. The mean difference was 154, standard deviation was 1.66 and t value freedom was equals to 48.

DISCUSSION

The results of this study indicated that knowledge after structured teaching program had a significant positive effect. Mano Rajini J (2015), conducted a descriptive study to analysis the knowledge level of the Group D health workers in the biomedical waste practice in Sri Ramakrishna Hospital, Coimbatore. The sample size was 40, Group D health workers in morning and evening shifts in Sri Rama Krishna Hospital. The samples were selected using the purposive sampling technique. The data was collected through the semi structured interview and self-administered questionnaire. The obtain result concluded that the Group D health workers have adequate knowledge on biomedical waste disposal[10].

The findings of the study is supported by Devi Vatchala, Rai Indira Kala (2013) conducted a pre experimental study to evaluate the effectiveness of planned teaching program of knowledge regarding biomedical waste management among 60 students nurses. A self-administered questionnaire was used to collect data. It consists of 35 multiple choice questions.

The mean post-test knowledge score 17.82, which is statically significant at p<0.05. Hence, it could be concluded that there is significant increases in the knowledge level of student nurses after attending planned teaching program[11].

CONCLUSION

The finding of the study revealed that the structured teaching program was more effective in improving the knowledge of B.Sc. nursing 1st year students regarding biomedical waste management. There was only one association between pre-test knowledge scores with selected socio-demographic variables. Biomedical waste management was effective for hospital use as well as for students. As a health care professional, we are in position to educate the B.Sc. Nursing 1st year students and thereby to adopt good and healthy practices.

RECOMMENDATIONS

A comparative study can be done among GNM and B.Sc. Nursing students in different setting.

A similar study was being conducted with an experimental research approach and pre-test and post-test control group design.

A longitudinal study can be conducted to see the impact of structured teaching program on biomedical waste management.

A study can be done to assess the acceptability of nursing staff regarding the structured teaching program on bio medical waste management.

A cross sectional study to assess the effectiveness of structure teaching program on biomedical waste management among the interns.

Ethical Clearance- Taken from Ved Nursing College, Baroli, Panipat (Haryana)

Source of Funding- Self

Conflict of Interest- Nil

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Quality of Life of Patients with Haemophilia

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ABSTRACT

Objectives: The aim of this study was to assess the quality of life of patients with haemophilia attending Government Medical College Hospital, Kottayam and to find out the association between quality of life of patients with haemophilia and selected variables.

Materials and Method: A quantitative research approach was used for the study. The research design selected for the study was non experimental descriptive design. A total of 80 patients, attending haemophilia clinic in Medical College Hospital, Kottayam were selected for the study by using non probability purposive sampling technique. The data collection instruments for the study included socio personal and clinical data sheet for collecting basic information and Hemofilia QOL questionnaire for assessing quality of life. The data was analyzed by using descriptive and inferential statistics.

Results: Majority of patients (68.8%) had moderately good quality of life. There was no association between quality of life of patients with selected variables like age, education, occupation, marital status, monthly family income, type and severity of haemophilia and comorbidities.

Keywords: Haemophilia; Quality of life.

BACKGROUND

Haemophilia is a hereditary bleeding disorder caused by deficiency of either coagulation factor VIII, haemophilia A or coagulation factor IX, haemophilia B and classified as severe, moderate or mild depending upon the plasma level of the coagulation factor. Due to the sex linkage of the disorder, there is a greater prominence in males than in females. It appears worldwide and occurs in all racial groups. The number of affected persons worldwide is estimated to be about 400,000. Haemophilia A is more common than haemophilia B, representing 80-85% of the total .[1]

An observational cross sectional study carried out at the Regional Blood Center of Juiz de Fora , Minas Gerais , aimed to measure health related quality of life in adults with haemophilia and also aimed to describe

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socioeconomic aspects and health conditions of these individuals in the context of health related quality of life. The study evaluated 39 patients, ages ranged from 18 to 79 years, in which 33 had haemophilia A and six had haemophilia B. In eight cases haemophilia was classified as mild, in 16 as moderate haemophilia and in 15 cases as severe haemophilia. Comorbidities reported by the patients were asthma, arthritis, cancer, heart disease, depression, hypertension, chronic low back pain and smoking, 66.7% considered themselves sedentary and 15.4% had a body mass index greater than 25 kg/m^2. Records of four patients showed sero positivity for anti HIV and 2 for anti HCV. The average Haem A QOL total score was 35.33, ranging from 0 to 79.54. The dimensions 'Sports and Leisure' and 'Physical Health' had the highest averages (49.89 and 43.30, respectively) indicating poorer quality of life and the dimension 'Relationships and Partners' was the least impaired dimension among the participants (mean 17.52). The result highlights the impact of haemophilia on quality of life of patients.[2]

Complications such as recurrent bleeding, affect the productivity of people with haemophilia and their caregivers in terms of absenteeism from work and / or

school. Those patients with inhibitors are at increased risk for bleeding and associated complications. These bleeding episodes also affect the quality of patients with haemophilia. So the investigator identified a felt need to conduct a study regarding the quality of life of patients with haemophilia.

MATERIAL AND METHOD

A quantitative research approach was used for the study. The research design selected for the study was non experimental descriptive design. A total of 80 patients, attending haemophilia clinic in Medical College Hospital, Kottayam were selected for the study by using non probability purposive sampling technique. The data collection instruments for the study included socio personal and clinical data sheet for collecting basic information and A36 Hemofilia QOL Quality of life questionnaire.

Socio personal data sheet consisted of 7 items which include age, education, occupation, marital status, religion and native district of patients with haemophilia. It was filled by the investigator. Clinical data sheet consisted of 8 items which includes type of haemophilia, severity, comorbidities, frequency of hospitalization, family history, presence of siblings affected with haemophilia, history of death of relatives due to haemophilia and parental consanguinity. It was filled by the investigator. . A36 Hemofilia QOL Quality of life questionnaire is a standardized disease specific questionnaire for the assessment of the health related quality of life of people living with haemophilia. The domains are physical health, daily activities, treatment satisfaction, mental aspects, relationships and social activities. There are 36 items, each question has five options. There are four reversely scored questions. Subscales (domains) items in the questionnaire include

Physical health   : 1, 2, 3, 4, 5, 6, 7, 8 13, 14, 15 16, 17

Daily activities   : 9, 10, 11, 12

Treatment satisfaction   : 18*, 19*, 20, 21, 22*, 23

Mental health   : 24, 25, 26, 27, 28*, 29, 30, 31

Relationships and social activities : 32, 33, 34, 35, 36

   *   Score should be reversed for the items 0=4, 1=3, 2=2, 3=1 and 4=0.

Maximum score of each question is 4 and minimum score is 0. Total score of questionnaire is 144.Tools were given along with the evaluation criteria to 9 nursing experts in nursing, haematology and medicine for ensuring content validity. The reliability of A36 Hemofilia QOL - Quality of life questionnaire was done by test retest method using Karl Pearson correlation coefficient and it was 0.92, thus the tool was found to be reliable.

FINDINGS

- Results of the study were discussed under the following headings:

- Socio personal data of patients with haemophilia

- Clinical data of patients with haemophilia

- Quality of life of patients with haemophilia

- Association between quality of life of patients with haemophilia and selected variables

- Socio personal data of patients with haemophilia

- Majority of the patients (43.75%) belonged to the age group of 13-22 years and majority of patients (58.80%) were studied up to high school. Most of the patients (38.75%) were students, 12.50% were government employee, 30% were private employee or self employed and 18.75% of patients were unemployed. Most of them (67.50%) were single and belonged to Hindu religion(58.75%). Majority of patients (47.50%) were from Kottayam district.

- Clinical data of patients with haemophilia

- Majority of patients (71.20%) had haemophilia A and had severe haemophilia(65%) .Most of the patients (78.75%) were free from Comorbidities. Majority of patients (46.25%) were not hospitalized, 20% admitted once, 15% twice and 18.75% were more than three times admitted during the previous year. More than half of the patients (52.50%) had family history of haemophilia Majority (68.80%) had no hemophilia affected siblings and 31.20% had siblings with haemophilia. Most of the patients (72.50%) had no relatives who died due to haemophilia. Majority of patients (95%) had no parental consanguinity.
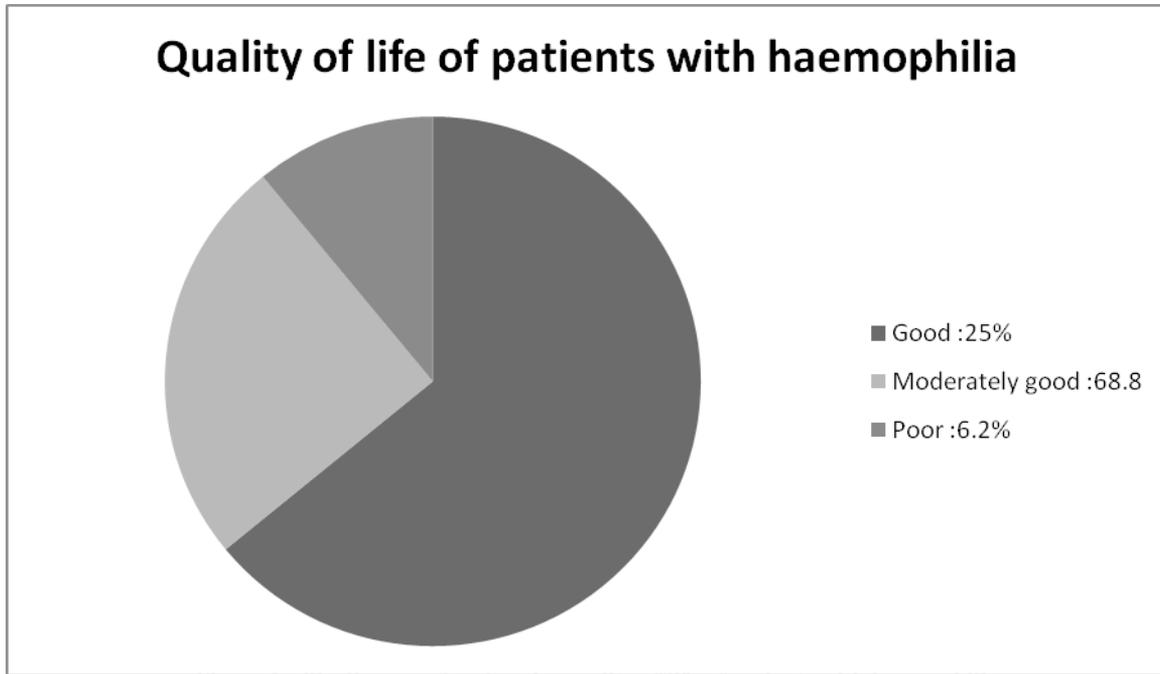
Figure 1 : Pie diagram showing the quality of life of patients with haemophilia

Pie diagram depicts the quality of life of patients with haemophilia. Majority of patients (68.8%) had moderately good quality of life, 25% had good quality of life and only 6.2% had poor quality of life.

Table 1: Frequency distribution and percentage of patients with haemophilia based on domains of quality of life   (n=80)

Domains of quality of life	Good		Moderately good		Poor	
	f	%	f	%	f	%
Physical health	17	21.25	53	66.25	10	12.50
Daily activities	11	13.75	42	52.50	27	33.75
Treatment satisfaction	40	50.00	39	48.80	1	1.20
Mental health	19	23.80	40	50.00	21	26.20
Relationship and social activities	28	35.00	34	42.50	18	22.50

Table 1 reveals that majority of patients (66.25%) had moderately good physical health and 33.75% were poor. More than half of the patients (52.50%) were moderately good in daily activities and half of the patients (50%) had good treatment satisfaction. Half of the patients (50%) had moderately good mental health and 42.50% were moderately good in relationships and social activities.

Association between quality of life of patients with haemophilia and selected variables

The null hypothesis was stated as follows:

H_{01}: There is no significant association between quality of life of patients with haemophilia and selected variables.

Table 2: Frequency distribution and chi square value of quality of life patients with haemophilia and age (n=80)

Age in years	Quality of life			df	χ^2
	Good	Moderate	Poor		
	f	f	f		
13-22	7	25	3		
23-32	8	14	1		
33-42	2	9	0	8	6.37
43-52	2	2	1		
≥53	1	5	0		

Table 3: Frequency distribution and chi square value of quality of life of patients with haemophilia and education   (n=80)

Education	Quality of life			df	χ^2
	Good	Moderate	Poor		
	f	f	f		
Primary	1	3	0		
High school	9	34	4		
Graduation	7	17	1	6	7.05
Post graduation or above	3	1	0		

Table 4: Frequency distribution and chi square value of quality of life of patients with haemophilia and marital status   (n=80)

Marital status	Quality of life			df	χ^2
	Good	Moderate	Poor		
	f	f	f		
Single	16	34	4		
Married	4	21	1	2	2.29

Table 5: Frequency distribution and chi square value of quality of life of patients with haemophilia and type of haemophilia   (n=80)

Type of haemophilia	Quality of life			df	χ^2
	Good	Moderate	Poor		
	f	f	f		
Hemophilia A	13	40	4		
Hemophilia B	7	15	1	2	0.63

Table 6: Frequency distribution and chi square value of quality of life of patients with haemophilia and severity of haemophilia   (n=80)

Severity of haemophilia	Quality of life			df	χ^2
	Good	Moderate	Poor		
	f	f	f		
Severe	13	36	3		
Moderate	2	13	0	4	6.12
Mild	5	6	2		

Tables show that the obtained chi-square values are statistically not significant. Hence there is no association between quality of life of patients with haemophilia with selected variables.

DISCUSSION

The present study was aimed to evaluate the quality of life of patients with haemophilia at Government Medical College Hospital, Kottayam. The findings of the study were discussed in terms of its objectives and hypotheses. In the present study data regarding the quality of life were collected from patients with haemophilia. The data were analyzed by descriptive and inferential statistics.

Description of sample characteristics

In the present study the sample characteristics show that majority of patients (43.75%) belonged to the age group of 13-22 years, 28.75% belonged to the age group of 23-32 years. Majority of patients (58.80%) were studied up to high school. While considering occupation, most of the patients (38.75%) were students. The study findings were consistent with the findings of a cross sectional descriptive survey design which was done in Manipal Haemophilia Society, Kasturba Hospital Manipal. The data collected from 49 patients who were attended the haemophilia summer camp in that most of the subjects (45%) were belonged to 20 to 30 years of age group. Most of them were studying in higher secondary.[3]

The present study identified that majority of patients (71.20%) had haemophilia A and 28.80% had haemophilia B. Majority (65%) had severe haemophilia, 18.75% had moderate and 16.25% had moderate haemophilia. These findings were congruent with the findings reported by Parthiban et al in which both

haemophilia A and B showed 66% of cases with severe factor deficiency, 26% with moderate, and 8% with mild deficiency.[4] According to the present study most of the patients (78.75%) were free from comorbidities and 10% had hypertension, 3.75% had diabetes mellitus, 1.25% had dyslipidemia and 6.25% had other diseases like renal calculi and HCV. A retrospective observational study identified patients diagnosed with haemophilia A and B using medical and pharmacy electronic medical records and data from Centro Hospitalar Sao Joao is consistent with these findings. A cohort of 103 patients were identified in which a small number of patients (n=8; 7.8 %) were HIV-positive and 22 patients were HCV-positive (21.4%).[5] The family history was present among more than half of the patients (52.50%) in present study. Similar percentage was reported by Parthiban et al in which 52.2% of the patients had family history of haemophilia.[4]

Quality of life of patients with haemophilia

In the present study majority of patients (68.8%) had moderately good quality of life, 25% had good quality of life and only 6.2% had poor quality of life. These findings were congruent with an observational cross sectional study to describe the clinical profile of haemophiliac patients and their quality of life in Western Uttar Pradesh. The mean total HAEMO QOL scores were 39.6 ± 15.0 for the children and 47.4 ± 14.1 for the adult patients respectively. This implies that the patients of hemophilia had low QOL. In addition, patients with severe haemophilia had lower QOL than mild and moderate patients.[6] The present study assessed the domains of quality of life. Majority of patients (66.25%) had moderately good physical health, more than half of the patients (52.50%) were moderately good in daily activities and half of the patients (50%) had

good treatment satisfaction. Half of the patients (50%) had moderately good mental health and 42.50% were moderately good in relationships and social activities. Similar findings were reported by a study which assessed the quality of life in patients with haemophilia. The mean score of quality of life in all patients was 71.88 (26.89 SD), which is in the moderate to poor group. According to the results obtained in each subscale associated with defined domains, patients were examined separately and in terms of physical health (51.15%) and treatment satisfaction (67.37%), patients were in moderate to good range and in daily activities (45%), mental health (48.41%) and relationships and social activities (47.9), patients were in moderate to poor range. [7]

CONCLUSION

Haemophilia is a congenital bleeding disorder characterized by spontaneous and potentially life threatening bleeding episodes. Haemophilia incurs tremendous intangible costs including reduced quality of life, pain and suffering and the emotional and physical toll on the patient and caregivers

Conflict of Interest : There is no economical burden to the subjects

Source of Funding: Self

Ethical Clearance: Ethical clearance obtained and informed consent were obtained.

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Self Esteem and Emotional Maturity among Adolescents

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ABSTRACT

Adolescence is a period of rapid growth, development and maturation from childhood to adulthood. During this transition period, dramatic changes happen in them physically, psychologically which can leads to alteration in emotional maturity and self esteem. This descriptive study was conducted to assess the emotional maturity and self esteem among 510 adolescent boys and girls aged between thirteen to nineteen years from Government Boys and Girls Higher Secondary School at Trivandrum, Kerala. Subjects were recruited by convenient sampling method and data were collected using pretested validated and reliable standardized scales on emotional maturity and self esteem. The results showed that nearly half of the subjects (43%) had moderately stable and 38 % had unstable emotional maturity. There was a significant difference in emotional maturity domains between boys and girls in emotional instability (19.7±2 vs15.3±2.6; p=0.000), social conflict (20.3±2.3 vs 21.5±5.5; p=0.004) and personality breakdown (19.3±2.1 vs 21.3±6.8; p=0.000). Nearly centum of the total subjects (99%) had good self esteem and only 1 % had poor self esteem. There was a significant difference in self esteem between male and female adolescents (25.67±5.65vs 23.92±4.81; p=0.000). The study concluded that a very few adolescents had moderately stable emotional maturity and most of them had good self esteem.

Keywords: *emotional maturity; self esteem; adolescents; 13 to19 years*

INTRODUCTION

Adolescence is a unique phase of life, during which a child goes through tremendous physical, emotional, and social changes. The exceptional growth in this stage is characterized by enormous individual variations that posses difficulty in defining normality.[1] Adolescence is an age of emotional instability, being a transition period from childhood to adulthood. The beginning of biological growth and development during adolescence is signified by the onset of puberty[2]. Adolescent stage is a crucial stage for developing personality. The health promotion policies are seriously emphasizing on the development of healthy behaviors of the youth as well as support promotion throughout the life[3].

Emotional maturity is defined as the strength to actualize individual abilities within the frame of social demands. Emotional maturity is an essential condition for the development of every individual. This will also contribute to a stronger and more stable personality structure in the adult, who can communicate well with others and achieve the maximum from his capabilities and strengths[4]. Arya A conducted a study on emotional maturity and value of superior children in family and she found that boys and girls of superior intelligence have better emotional maturity. Superior intelligence boys do well on the emotional maturity than girls of superior intelligence. Residence urban, semi-urban and rural does not link with emotional maturity. Emotionally immature individuals may not be able to control the situation[5].

Self esteem or self concept is a concept that a person has regarding his own self which consists of any evaluation that makes of him or whatever feelings he has about himself[6]. Low self esteem has been viewed as the root cause of societal problems ranging from drug abuse to teenage pregnancy to poor school performance[7]. A study conducted by Mohammad Aryana on relationship between self esteem and academic achievement among pre university students using self esteem and academic achievement scales. The results suggested that there

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was a positive relationship between students self esteem and academic achievement. High self esteem was an important factor and strengthens the prediction of academic achievement in students. [8]

n=510

Figure 1: Bar diagram depicting percentage distribution of the subjects according to emotional maturity

Figure 2: Bar diagram depicting percentage distribution of subjects according to self esteem.

METHODOLOGY

Using a descriptive research design, present was conducted among 510 adolescent boys and girls aged between thirteen to nineteen years from Government Girls Higher Secondary School and Government Boys Higher Secondary School, Trivandrum, Kerala, by using convenience sampling technique. Data was obtained after getting approval from institutional research committee, school authority and consent from the students. To assess the Emotional maturity among adolescents, Emotional maturity scale was used, which was a standardized self report tool developed by Dr. Yashvir Singh and Dr. Mahesh Bhargav (1997) which has 5 domains including emotional instability, emotional regression, emotional maladjustment, personality disintegration and lack of independence. To assess the self esteem among adolescents, Rosenberg self esteem scale was used which has ten items answered on a four point scale from strongly agrees to strongly disagree. Descriptive (frequency and percentage) and inferential statistics (Chi square test) was used to analysis the collected data.

RESULT

Regarding the demographic parameters, more than half of the subjects were aged between 13 to 19 years, More than half (51%) of the subjects were females and 22.9% of the subjects were studying in 12 [th] standard. More than three fourth (81.2%) of the subjects belonged to Hindu religion and resided in panchayath (78.6%). More than three fourth (81.5%) of the subjects were first born in the family and a large majority (77.2%) of the subjects were from nuclear family. Nearly half the subjects (43%) had moderately stable, 38 % had unstable emotional maturity. More than half (57.6%) of adolescent girls had moderately stable emotional maturity and nearly half of the boys (49.6%) had unstable emotional maturity. Nearly centum of the total subjects (99%) had good self esteem and only 1 % had poor self esteem.
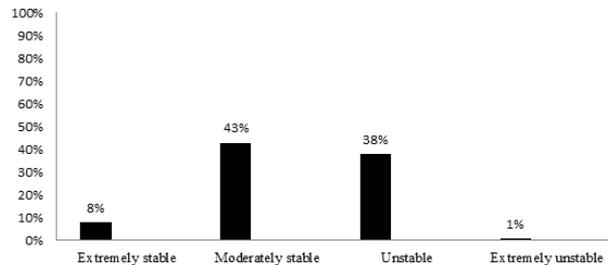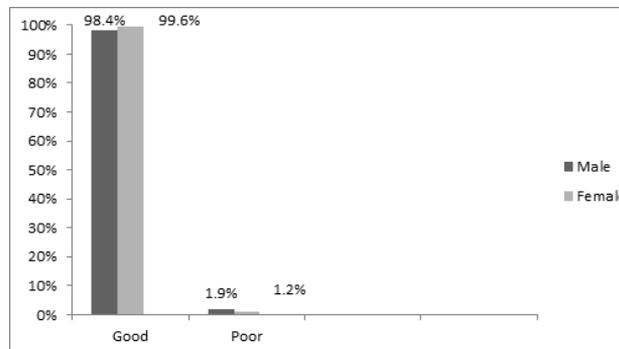
Table 1: Association between socio personal variables and emotional maturity among adolescents

Socio demographic variables	df	Chi square	p value
Age	6	**49.34***	**0.000**
Gender	3	**80.42***	**0.000**
Class	12	**97.85***	**0.000**
Birth order	6	11.48	0.075
Religion	6	4.12	0.12
Parenting status	6	15.08	0.42
Family size	6	12.05	0.210
Socio economic status	12	15.88	0.19
Presence of close friends	3	1.49	0.68
Use of social media	15	**33.53***	**0.04**
Use of traditional media	9	9.33	0.407

*** Significance at p< 0.001 level   * significance at p< 0.05 level

Table 1 shows that there was a significant association between age ($\chi2$=49.34; p=0.000), gender ($\chi2$=80.42; p=0.000), class ($\chi2$=97.85; p=0.000), use of social media ($\chi2$=9.33; p=0.04) with emotional maturity among adolescents.

DISCUSSION

It showed that 11% of the subjects had extremely unstable emotion, 43 % of subjects had moderately stable, 38 % had unstable emotion and 5 % had extremely stable emotion. This finding is supported by a study conducted by Subbarayan K and Visvanathan G, on emotional maturity of college students and they found that emotional maturity among college students were extremely unstable, and they found that nearly half of the subjects had moderately stable emotional maturity (48%)[9] . In the present study, a large majority of the total subjects had good self esteem (99%), males (98.4%) and females (99.6%). These findings are supported by the study by Daniel C on body image and self esteem among adolescents, and he found that 90% of them had good self esteem both boys and girls[7]

CONCLUSION

Nearly half the subjects had moderately stable emotion. More than half of the girls had moderately stable emotional maturity and nearly half of the boys had unstable emotional maturity. Nearly centum of the total subjects had good self esteem and only had poor self esteem.

Ethical Clearance- Taken from Institutional Ethical Committee, Sree Gokulam Medical College & Research Institute, Trivandrum, Kerala

Source of Funding- Self

Conflict of Interest: Nil

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Betadine Dressing Versus Surgical Spirit Dressing in Prevention of Pin Site Infection among the Patients with External Skeletal Fixators

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ABSTRACT

A quantitative approach and quasi experimental design without control group was under taken in M.K.C.G Medical College and hospital, Berhampur, Ganjam and VSS medical college and hospital, Burla, Sambalpur to compare the effectiveness of betadine dressing versus surgical spirit dressing in prevention of pin site infection among the patients with external skeletal fixators.40 numbers of patients with external skeletal fixatorfrom the orthopaedic department of both the hospitals were selected by non probability convenient sampling technique. Observation check list and Rating scale were used to collect data and collected data were analyzed by using descriptive and inferential statistics. Findings revealed that a significant difference in the level of pin site infection before and after antiseptic dressing in both the experimental group. The result showed that antiseptic pin site care of external skeletal fixator is definite role in reducing severity of pin site infection. It is also revealed that betadin wound dressing is much more effective in prevention of pin site infection among the patients with external fixator.

Keywords: *Betadine dressing, Surgical spirit dressing, pin site infection, external skeletal fixators.*

INTRODUCTION

"Constant attention by a good nurse may be just as important as a major operation by a surgeon."

Dag Hammarskjold

External fixation and limb reconstruction procedure play a vital role inmanagement of fracture and orthopaedic treatment and care, and have a massive physical and psychological impact on the patients. There is a pressing hardin need for research which can drive future practice in this area.

Complementary strategies based on sound research findings are needed to be supplement pin tract care of patient with external fixation pin or wire of external skeletal fixator that causes a breach in the continuity of normal physical barrier against infection and pin tract itself become potential source of harbouring various micro organism. There are many studies on pin tract care have been done earlier on different anti bacterial preparations but yet no definite consensus have been drawn on effectivenessof antiseptic preparation to prevent the pin tract infection. Hence it is intended to undergo study on commonly available antiseptic preparation which are very often used for cleansing of skin prior to any surgical procedure.[1]

Fracture is defined as any break in the bone resulting in loss of its continuity. For proper management of fractures, it is important to diagnose the fracture, its site, whether fresh or old, open or closed, traumatic or pathological and associated with any complications. The management included reduction of fracture, immobilization by plaster application, internal and external fixation.[2]

Pin site infection is a major concern for the orthopaedic nurse managing the patient with a skeletal traction pin or external fixator. Prevention of pin site infection is an important nursing responsibility and pin site care is very much essential to avoid infection.[1-2]

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The main causes of fracture are road traffic accidents, fall, prolonged standing as in policeman, nurse, disease process like tumor, infection etc. Fracture management has received increasing interest over the last 30 years due to availabilityof wide variety of fixator frames, larger and stronger pins, better metals and increased knowledge of techniques.[3]

External fixation is a surgical treatment used to set bone fracturesin alignment which a cast would not allow proper alignment of the fracture. In this kind of reduction, holes are drilled into uninjured areas of bones around the fracture and special bolts or wires are screwed into the holes. Outside the body, a rod or a curved piece of metal with special ball-and-socket joints joins the bolts to make a rigid support. Since the bolts pierce the skin, proper cleaning to prevent infection at the site of surgery must be performed.[4]

The pin reactions are categorized into two groups, major and minor reaction. A major pin reaction is characterized by redness, swelling, tenderness, or purulent drainage that does not improve with lancing of the skin and requires removal of pin for skin improvement where as A minor reaction is characterized by redness, swelling, tenderness or clear drainage that improves with lancing of the skin.[5]

Pinsite care has been defined as any treatment or dressing applied at least once a day to skeletal pins, either skeletal traction or external fixator pins, by nursing personnel.[5]

A cleansing solution is necessary to remove drainage around pinsite, Keeping pinsites free of infection &drainage and clean allows for easy monitoring. A cleaning solution is necessary for the removal of crusting to allow for adequate drainage. Loosely wrapping a gauze bandage around pinsite daily will provide a protective barrier without blocking the flow of drainage and blood supply. The cleaning solutions used for cleaning skeletal pinsites includes surgical spirit, povidone iodine solution, normal saline, soap and water, sterile water and chlorhexidine gluconate.[6]

The problem of deaths and injury, as a result of road traffic accidents, is now acknowledged to be a global phenomenon with authorities.Virtually all developing countries of the world are concerned about the growth in the number of people killed or seriously injured on the roads.[7-9]

The development and severity of pinsite infections probably associated more with the breech in mechanical integrity of the bone interface or pin stability than with the techniques of caring for the pinsite. Diane R Eckhouse- Ekeberget al., (2005) mentioned that providine solutionhas also been used for pin site care.[10]

Today, a standard for pin site care that has been proven to be effective in preventing infection has yet to be identified. There is very little evidence to say that which pinsite care regimen is best to reduce the infection rates. So an attempt is made to findout that which existing practices are better for prophylaxis of pinsite infection cases. Preventing infection of skeletal pinsites of patients with skeletal traction pins or external fixator pins is oneof them in nursing priority. Being nursing personnel, it is a need to find out the most effective protocol to reduce the number of pinsite infection cases. This motivated the researcher to do study on this topic. This study is undertaken to high-lighten the effective protocol in preventing of pin site infection.

Statement of problem

A study to compare the effectiveness of betadine dressing versus surgical spirit dressing in prevention of pin site infection among the patients with external skeletal fixators in selected medical college hospital, odisha.

OBJECTIVES

- To assess the severity of pin site infection before and after the application of betadinedressing on the8[th] day of intervention.

- To assess the severity of pin site infection before and after the application of surgical spirit dressing on the 8th day of intervention.

- To compare the effectiveness of surgical spirit dressing and betadine dressing in terms of prevention of pinsite infection among patients with external skeletal fixators on the 8th day

HYPOTHESIS

H1: There will be a significant difference between betadine dressing and surgical spirit dressing score 8[th]day of the intervention.

H2: There will be a significant association between pinsite infection assessment scores with their selected

Fig.1:-Conceptual Framework Based On Modified Daniel Stuffle Beams CIPP Model (1971)
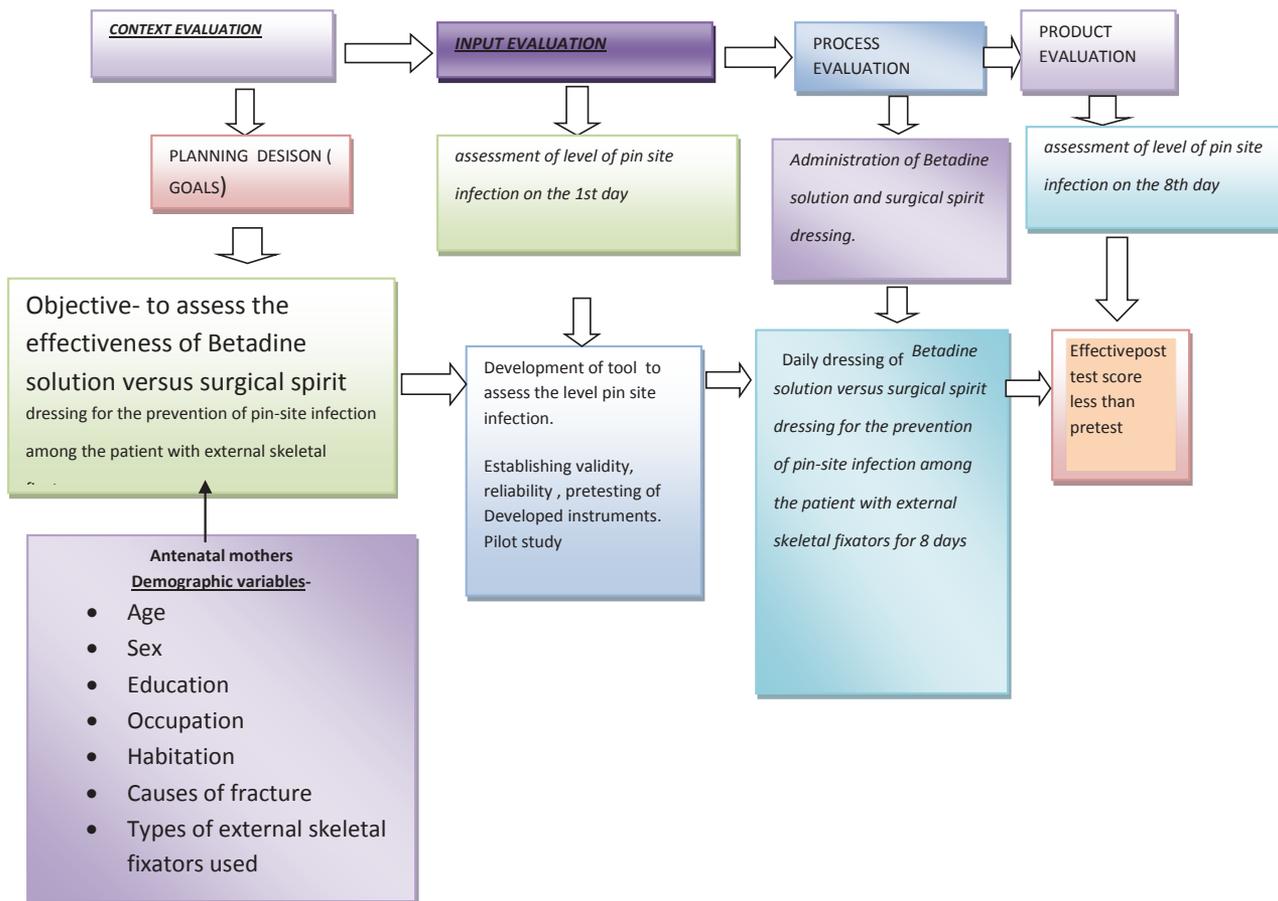
(*conceptual framework on level of stress of Antenatal mother based on Modified Stufflebeams CIPP Model 2003*).

demographic variable.

ASSUMPTION

This study assumes that: -

Nurses have got an important role in providing pinsite care.

Pinsite infection can be detected by frequent observation

MATERIALS AND METHOD

Research design :

Evaluative research approach with quasi-experimental research design was used to conduct the study.

Group	Pre-test assessment of pin site infection on 1st day	Manipulation of independent variables	post-test assessment of pin site infection on 8st day
Experimental group I	**O$_1$**	X$_1$	O$_8$
Experimental group II	O$_1$	X$_2$	O$_8$

KEY

X$_1$ = Cleaning the pinsite with betadine dressing

X$_2$ = Cleaning the pinsite with surgical spirit dressing

O$_1$= pre - assessment of the pin site infection on the 1st day.

O$_8$= Post assessment of the pinsite infection on the 8th day.

Setting of the study:

The study was conducted in M.K.C.G Medical College and hospital, Berhampur, Ganjam and VSS medical college and hospital, Burla, Sambalpur

Population: All the patients undergone external Sskeletal fixation for various types of fracture requiring pinsite cleaning and dressing were the population for the study.

Sample sizeand Sampling technique: 40 numbers of patients with external skeletal fixator from the orthopaedic department of both the hospitals were selected by non probability convenient sampling technique.Out of which 20 patients were in the experimental group I, and 20 patients were in the experimental group II .

Tool for data collection: Observation checklist and rating scale were used to collect the data.

Content Validity and Reliability of the tool: After having an extensive literature review, a consultation with medical and nursing experts, based on the specific purpose, tool was developed and validated by the experts of various fields.

Inter rater method was used to calculate the reliability of the tool where spearman brown prophecy formula was used and found to be reliable (r=0.8).

Ethical consideration: Prior to data collection permission was obtained from thesuperintendent of M.K.C.G Medical College and hospital, Berhampur, Ganjam and VSS medical college and hospital, Burla, Sambalpur and informed consent was taken from the respondent.

Data collection procedure: The pin site of external fixator was dressed once daily after 48-72 hours of theatre dressing for 7 consecutive day with Betadine solution to experiment group-I and with surgical spirit to experiment group-II and on 8th day pin site was assessed for pin site infection by using observational check list.

Planned for data analysis: Collected data was organized and analyzed by using descriptive and inferential statistics.
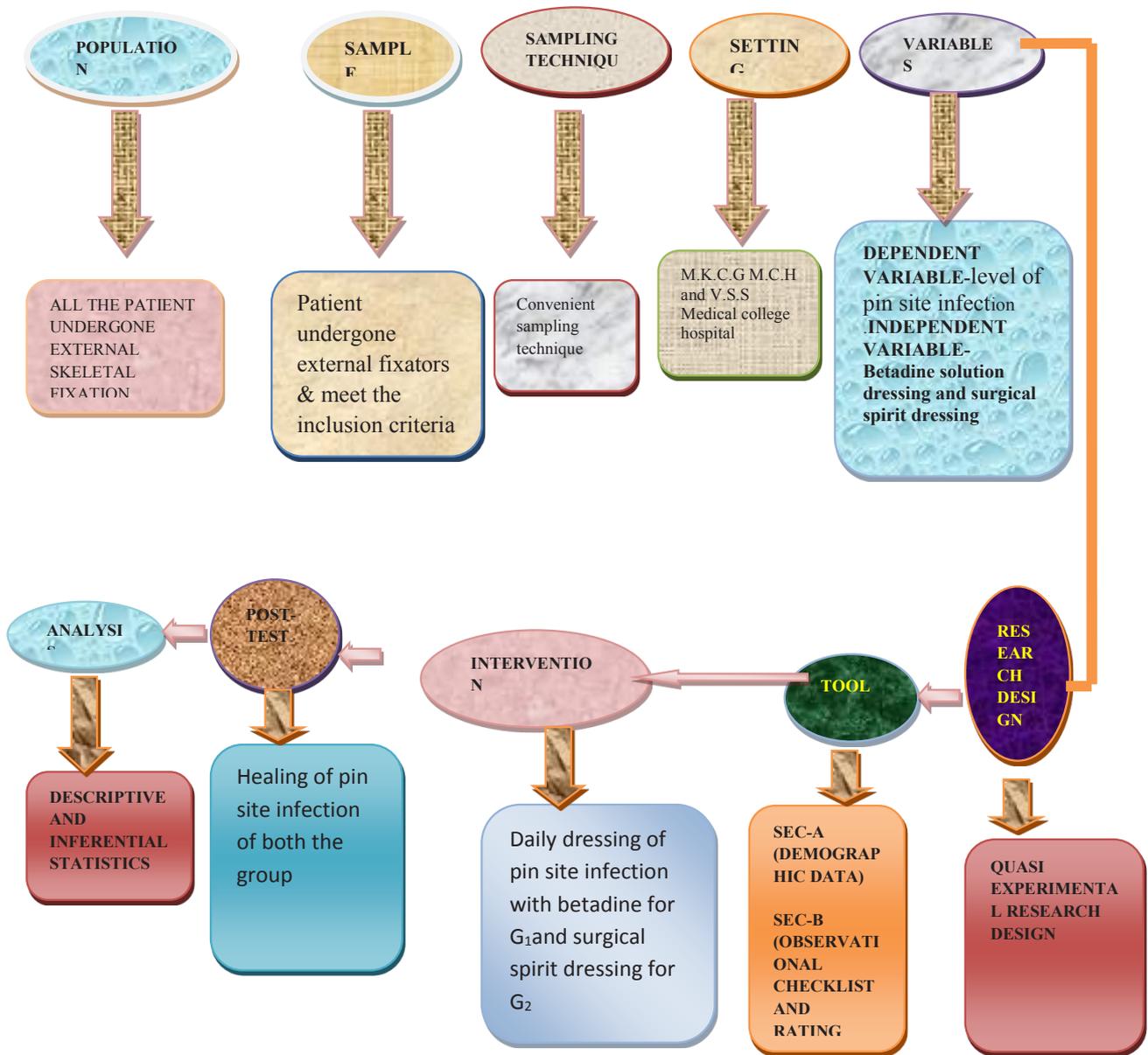
FIG-2: SCHEMATIC PRESENTATION OF RESEARCH DESIGN FOR PRESENT STUDY

FINDINGS

Table:1: Frequency & percentage distribution among patients with external fixators of both the experimental group I & II.

Demographic Variables	Frequency	Percentage
Age		
15-24	3	7.5
25-34	8	20

***Cont...* Table:1: Frequency & percentage distribution among patients with external fixators of both the experimental group I & II.**

34-44	8	20
45-54	8	20
55 and above	13	3.5
Sex		
Male	33	82.5
Female	7	17.5
Education		
Illiterate	14	35
Primary education	12	30
Sec. education	13	32.5
Graduate & above	1	2.5
Occupation		
Un employed	4	10
Govt. service	17	42.5
Private service	12	30
Daily wages	7	17.5
Habitation		
Urbans	12	30
Rural	28	70
Causes of fracture		
Road traffic accident	27	67.5
Fall	9	22.5
Violence and others	4	10
Types of external Skeletal Fixators used		
Llizarov external fixator	22	55
LRS external fixator	11	27.5
Mono lateral fixator	7	17.5
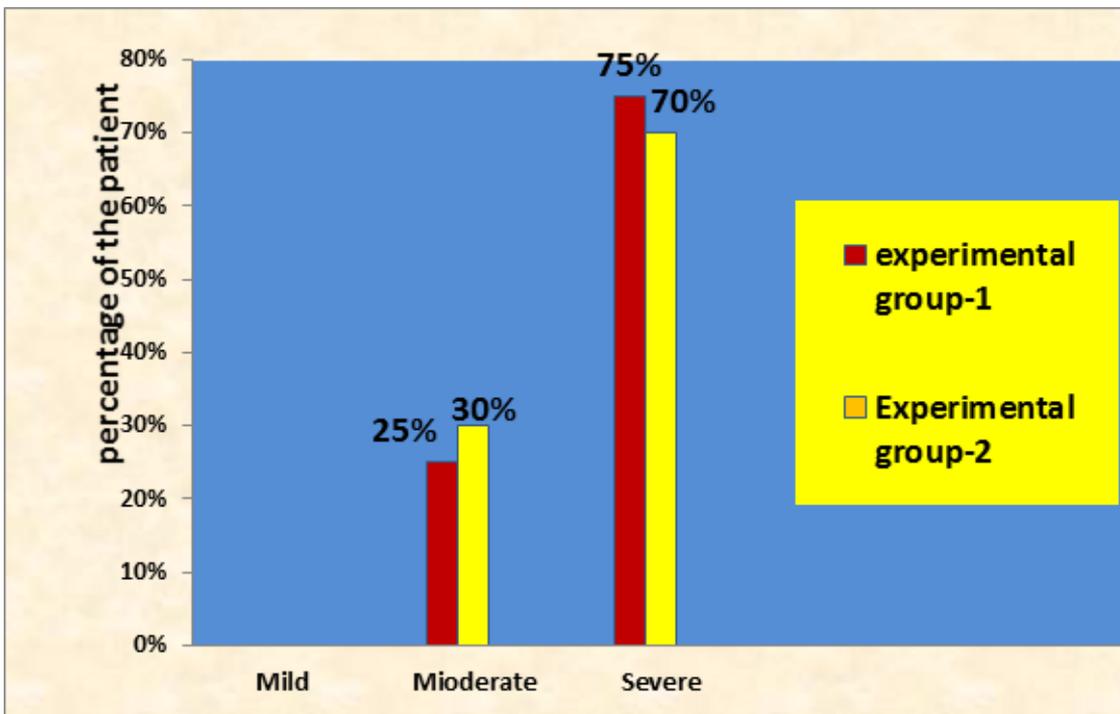
Fig-3: Showing the Severity Of Pin Site Wound Before Antiseptic Dressing
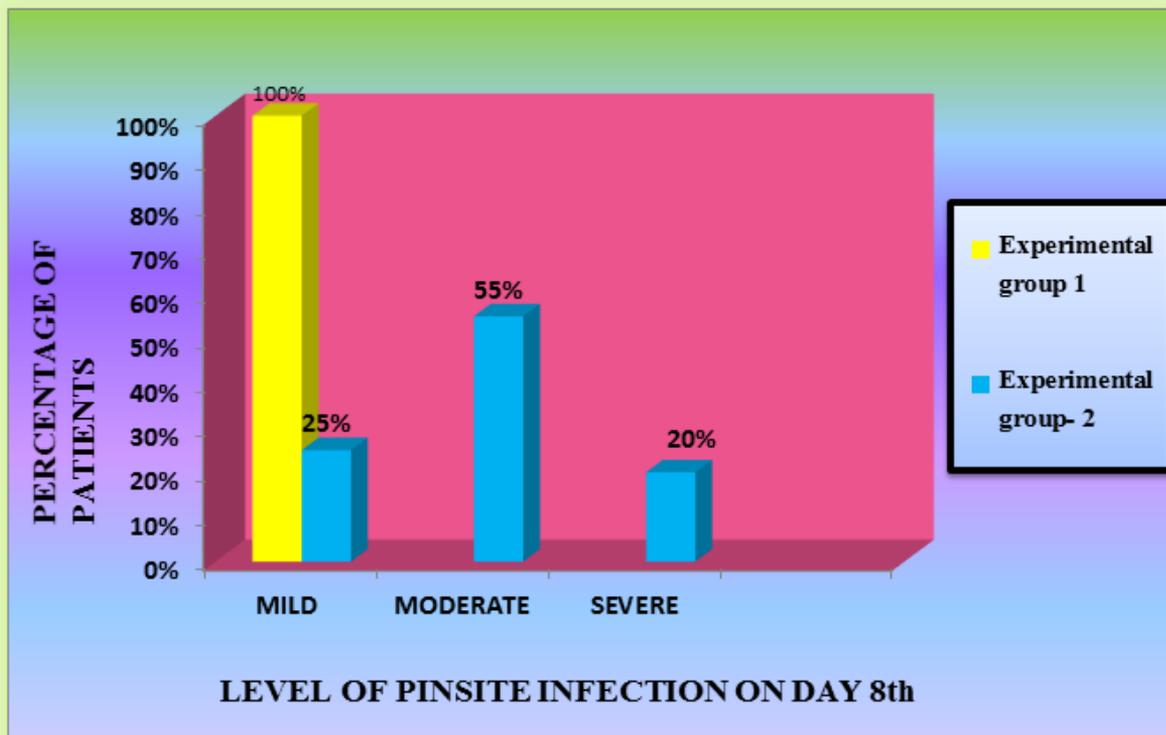
Fig-4: Showing the Severity Of Pin Site Wound after Antiseptic Dressing

Table -2: Comparison of pin site infection score between group I and II after 7 days of daily dressing.

Objective assessment of pin sit infection	After 7 days of dressing	Mean	SD	t- value
Experimental group-1	O_1-O_8	2.4	0.8	13.65
Experimental group-2	O_1-O_8	7.7	2.53	6.45

Unpaired 't'test was calculated to assess the significant difference between pre and post test level of pin site infection which shows highly significant difference of pre test and post test pin site infection in both the betadin dressing and surgical spirit dressing. Hence, the null hypothesis was rejected **(P≤ 0.05)** and statistical hypothesis was accepted in both the Experimental group-1 and experimental group-II.

SUMMARY AND CONCLUSION

From the findings of the present study it was concluded that antiseptic solution dressing is helpful procedure to reduce the severity and complication of infection. Antiseptic dressing like 10% Betadine solution and surgical spirit that are universal and easily available in all hospital setting and is effective in reducing pin site infection of external skeletal fixture which is effective, simple, non-invasive, cost effective method that can be used easily without sophisticated instrument and equipment and side effects as well as extra efforts from the part of any care givers.

The literature is limited with regard to prevention of pin site infection. A small number of studies have been published that guide the orthopaedic surgeon to choosing strategies to reduce the risk of pin site infection.There is no strong evidence to guide choice of dressing type, cleansing regimen, or other aspects of pin site care. There is suggestion that Betadine solution may be superior to saline as a pin site cleansing solution and that daily cleansing with saline is not superior to weekly cleansing. Clinicians should use personal judgement and experience until better evidence is available and, especially in the light of weak evidence, should consider the cost–benefit ratio of any pin site care regimen .[11-12]

Surgeons and nursing staff should adopt a uniform pin care protocol that works for their patients and that can be taught to everyone involved in that patient's care. Using a consistent protocol will help to ensure that the patient is not getting different information from different members of the healthcare team, a common problem that can lead to confusion and loss of confidence. Providing patients with a handout describing the pin site care protocol is an effective way to communicate to home nursing and family members that are involved in the pin site care. Audits of the protocol with a review of the latest studies on pin infection and prevention will allow for updating the protocol and delivering high-quality care.[13-14]

RECOMMENDATIONS

A similar study can be conducted with a very large sample size for wide generalization.

A similar more studiesare needed to be conducted for longer duration to find out the effectivenessof these antiseptic solution.

A similar study can be replicated in any other minor surgical wound as regards to its efficacy in prevention of infection.

Conflict of Interest: None

Source of Funding : Self

Ethical Clearance: Permission was obtained from the ethical committe of the parent institution and Prior to data collection permission was taken from the superintendent of M.K.C.G Medical College and hospital, Berhampur, Ganjam and VSS medical college and hospital, Burla, Sambalpur and informed consent was taken from the respondent.

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To Evaluate the Effectiveness of Structured Teaching Programme Regarding Knowledge on Health Promotion Strategies among Elderly Care Giver at Selected Old Age Home of Mysore District

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ABSTRACT

Background of the Study: Care giver has knowledge on health promotion of the elderly, but knowledge level can be increased through structured teaching program.

Aim: The main objectives of the study were to determine the level of knowledge on health promotion of the elderly among the care givers and to improve the knowledge level of health promotion of elderly, which will be helpful in their future.

Method: One group Pre-test, Post-test designs without a control group with evaluative research approach was used. A study was conducted at "the little sister of the poor. Mysore." 30 care giver was selected by using Convenient Sampling Technique. The pre-test assessment of knowledge of the caregivers was carried out using a structured knowledge questionnaire followed by structured teaching programme sessions regarding knowledge of health promotion on elderly care. After a lapse of 7 days, post-test was conducted using the same structured knowledge questionnaire. The collected data was analyzed by using descriptive and inferential statistics.

Results: The mean percentage of knowledge in the pre-test was 35.52% with mean and SD of 3.98 and 1.838. However, after the administration of structured teaching programme, the mean percentage had increased to 47.06%, with mean and SD of 2.79 and 1.601, respectively. The study findings revealed there was no association between pre-test knowledge score of the caregivers of elderly in family setting and selected demographic variables. The obtained 't'value [43.29, P<0.05] was higher than the table value indicating the effectiveness of structured teaching programme.

Interpretation and Conclusions: The study findings revealed that there was deficient knowledge among caregivers. The Structured Teaching Programme was effective in enhancing the knowledge regarding health promotion of elderly care. The study findings implied that teaching program had a vital role in improving the knowledge of the caregivers.

Keywords: Health promotion strategies, Structured Teaching Programme, Care Giver, Hold age Home.

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INTRODUCTION OR BACK GROUND

Ageing is an inescapable reality of the human existence on the planet earth and plays a crucial role in the global demographic transition. Normal ageing changes reduce the functional ability and mobility of senior citizen   functional ability includes activity of

daily livings (ADL) instrumental activities of daily living (IADL) ADL refers to daily self-care activities of the individual either in his / her resistance or in outdoor environment. ADLS include bathing, dressing, toileting transferring eating and other functions of the body. [1]

Elders are like children with their mood swings, sometimes too quickly not allowing us enough time to grasp. Elders need attention at homes and if they don't get it, they start demanding it. When the elders begin to feel they are neglected, they adopt ways to attract attention from us and one times irritating. Mental agitation, restlessness, Falling sick often, nausea, vomiting and even suicide attempts could be just reactions to this neglect by family members. Older people are, need of vital support that they will keep important aspects of their life-styles intact while identity and in turn it leads to low moral, decreased level of satisfaction, depression and feeling of loneliness and helplessness. [2]

In India the population of older persons (60+) in the total population of India was around 5.5% which increased to nearly 6% in 1971 and above 7.5% in 2001 in absolute terms the magnitude of such population has increased from nearly 2 cores in 1951 and 7.2 cores in 2001 and expected to be 8% in the next decade. [3]

According to recent statistic related to elderly people in India (2001 census) it was observed that as many as 75% of elderly persons were living in rural areas about 48.2% of elderly persons were women out of whom 55% were widows, a total of 73% of elderly persons were illiterate and dependent on physical labor, $1/3^{rd}$ was reported to be living below the poverty line that is 66% of older persons were in a vulnerable situation without adequate food, clothing or shelter. [4]

In the light of the above facts and from the experience of the researcher, it is observed a lot of short comings in the care of elderly. The caregivers grumble to take care of the elderly in their family. Many of the times they fail to understand the feelings of elderly. Hence there is a feeling of worthlessness, loneliness and negligence expressed by elderly. The caregivers find difficult to cope with this situation. Improving the knowledge, skill and attitude of caregivers may help elderly to receive better care. At the same time making caregivers aware about the functional inabilities of their elderly is also very important. With these views the investigators wish to conduct this study.

MATERIAL AND METHOD

STATEMENT OF THE PROBLEM

"To Evaluate the Effectiveness of Structured Teaching Programme Regarding Knowledge on Health Promotion Strategies among Elderly Care Givers at Selected Old Age Home of Mysore District"

Aim: To Improve Knowledge of elderly care givers regarding health promotion strategies.

OBJECTIVES OF THE STUDY

1. To assess the Knowledge on Health Promotion among Elderly Care Givers at selected Old Age Home.

2. To evaluate the effectiveness of structured teaching programme on Knowledge on Health Promotion among Elderly Care Givers at selected Old Age Home.

3. To find the association between pre-test Knowledge scores on Health Promotion among Elderly Care Givers and selected demographic variables.

HYPOTHESES

H_1: The mean post-test knowledge score regarding health promotion strategies will be significantly higher than the mean pre-test knowledge scores.

H_2: There will be significant association between mean pre-test knowledge score regarding health promotion strategies among caregivers in old age home and selected demographic variables.

RESEARCH APPROACH:

Evaluative quasi-experimental approach was adopted.

RESEARCH DESIGN:

Quasi-experimental with one group pre-test and post-test design, in which pre-test is conducted followed by structured teaching programme and then conducting post-test for the same group after 7 days on 40 subjects.

Pre Test	Treatment	Post Test
Assessment of Knowledge	Structured Teaching Programme	Assessment of Knowledge
O_1	X	O_2

O_1 Pre-test the Knowledge regarding health Promotion strategies.

X Structured Teaching Programme regarding Health Promotion Strategies.

O_2 Post-test Knowledge regarding Health Promotion Strategies.

SETTING: This study was conducted in the Little Sisters old age Home, Mysore

TARGET POPULATION: Target population in the present study was elderly care.

SAMPLING TECHNIQUE: convenient sampling technique was adapted to select sample for the study.

SAMPLE AND SAMPLE SIZE: The sample of this study comprised of 40 elderly care givers

CRITERIA FOR SELECTION OF SAMPLE

Care givers of elderly people.

Who are present during the time of data collection .

Those willing to participate

b) Exclusion Criteria:

Not willing to participate

Not available during data collection

Development of the Structured Teaching Programme

Structured teaching plan was developed based on Objectives, Review of Literature and consulting with experts. The steps adopted in the development of structured teaching programme were:

Preparation of First Draft

Structured teaching plan was prepared on the basis of review of literature, which was pertaining to the development of structured teaching programme on knowledge regarding health promotion strategies.

Development of Criteria Checklist to evaluate the structured teaching programme

Identification and Stating of Objectives in Behavioural Terms

Selection of the Content

The content of health promotion strategies was selected through literature search and in consultation with the guides.

CONTENT VALIDITY OF THE STRUCTURED TEACHING PROGRAMME.

The initial draft of structured teaching plan was given to 10 experts in the field along with the tool. The necessary modifications were incorporated in the structured teaching plan based on suggestions of experts.

Reliability of the tool: Reliability of the tool: The reliability co-efficient of knowledge questionnaire found to be *0.97*, it revealing the tool is feasible for administration for the main study. Since the knowledge co-efficient for the scale r > 0.70, the tool was found to be reliable and feasible. (r=2r/1+r) Brown's prophecy formula is used.

DATA COLLECTION AND PROCEDURE

(a) Permission from the Concerned Authority: Formal administrative permission was obtained from concerned authority, Little Sister Old Age Home, Mysore.

(b) Period of Data collection: The main study was conducted for a period of 4 weeks between 11-10-2018 to 08-11-2018 at Little Sister Old Age Home, Mysore.

(c) Pre-test (O_1) : The investigator collected data from 40 care givers at Little Sister Old Age Home, Mysore.

(d) Administration of Structured Teaching Programme

After pre-testing, the structured teaching programme was administered on the same day.

(e) Post-test (O_2): Post test was conducted on 8th day to find out the effectiveness of structure teaching programme in terms of increase in their knowledge. All the participants co-operated well with the investigator in both pre-test and post-test.

DESCRIPTION OF DEMOGRAPHIC VARIABLES

Table 1:   Frequency and percentage distribution of demographic variables

Sl. No.	Demographic variables	Frequency (f)	Percentage (%)
1.	**Age in years** a. 6-12 b. 13-18 c. 19-26 d. 27 and above	22 9 7 2	55.0 22.5 17.5 5.0
2.	**Religion** a. Hindu b.Christian c. Muslim	23 7 10	57.5 17.5 25.0
3.	**Caregivers Qualification** a. Primary b. Secondary c. Higher Secondary d. Degree	24 3 11 2	60.0 7.5 27.5 5.0
4.	**Caregivers occupation** a. Agriculture b. Government service c. Private Service d. Business	30 1 5 4	75.0 2.5 12.5 10.0
5.	**Caregivers relationship with elderly** a. Children b. Grand Children c. Neighbour d. Daughter or Son in law	9 9 7 15	22.5 22.5 17.5 37.5

MAJOR FINDINGS OF THE STUDY

I: Findings related to the subjects personal characteristics:

- Majority of respondents were age groups 55.0% of below 6 to 12 years.

- Majority of the respondents 57.5% were Hindus.

- Majority of respondents 60% with primary school Educational Qualification.

- Majority of respondents 75.0% occupation was agriculture.

- Majority of respondents relationship with elderly 37.5 0% was daughter or son in laws.

FINDINGS RELATED TO EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME

- The pretest knowledge of majority 80.0% (32) of the subjects regarding health promotion strategies among elderly car givers was poor, whereas the posttest level of knowledge of 87.5% (35) of subjects was adequate and 28.3% (17) of subjects was good

- Computed 't' value (t_{59}=43.29) is greater than the table value (P<0.05), which represents the significant gain of knowledge through structured teaching programme. Hence the research hypothesis H_1 was accepted. Thus it suggests that the structured teaching programme has been effective in increasing the knowledge of elderly care givers at litter sister old age home.

TABLE-2: OVERALL AND ASPECT WISE PRE-TEST MEAN KNOWLEDGE SCORES OF RESPONDENTS

Slno	Knowledge Level	Category	Respondents	
			Number	Percent
1	Poor	≤ 40	32.0	80.0
2	Average	41 -60	08.0	20.0
3	Good	61 -80	0.0	0.0
4	Very good	81 -100	0.0	0.0
	Total		40	100.0

The data in Table 2 shows that majority of the respondents, 32 (80%) had poor knowledge followed by 8 (20%) respondents who had average knowledge, while none of them had good and very good knowledge regarding geriatric care.

Table-3: CLASSIFICATION OF RESPONDENTS ON POST TEST MEAN KNOWLEDGE SCORES OF RESPONDENTS

Level of knowledge	Percentage of range of score	Frequency (f)	Percentage (%)
Poor	≤ 40	0	0.0
Average	41 -60	0	0.0
Good	61 -80	35	87.5
Very good	81 -100	5	12.5
	Total	40	100

The data in table 2 shows that 35 (87.5%) respondents had good knowledge regarding health promotion strategies among elderly care givers, followed by 5 (12.5%) respondents who had very good knowledge.

TESTING OF HYPOTHESES

Table 4: Mean, Mean difference, Standard deviation, 't' value of pre-test and post-test knowledge scores

Group	Mean knowledge score		Mean difference	SD of difference	t' value
	Pre-test	Post-test			
Caregivers	9.58	19.48	9.90	1.45	43.29

One tail t_{49} = 1.68, P< 0.05 df = 39

The data presented in Table 3 and Fig-1 reveals that the mean post-test knowledge score (35.52%) which was higher than the mean pre-test knowledge score (47.06%). The obtained 't' value, indicating significant difference in the knowledge level before and after the structured teaching programme. Hence, the research hypothesis H_1 was accepted.
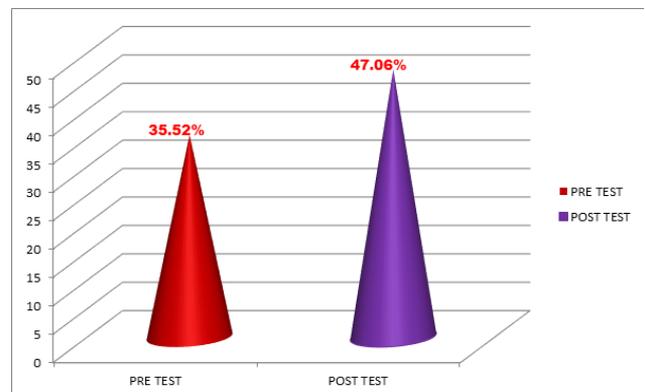
Fig-1: Pre-test and Post-test Knowledge Scores
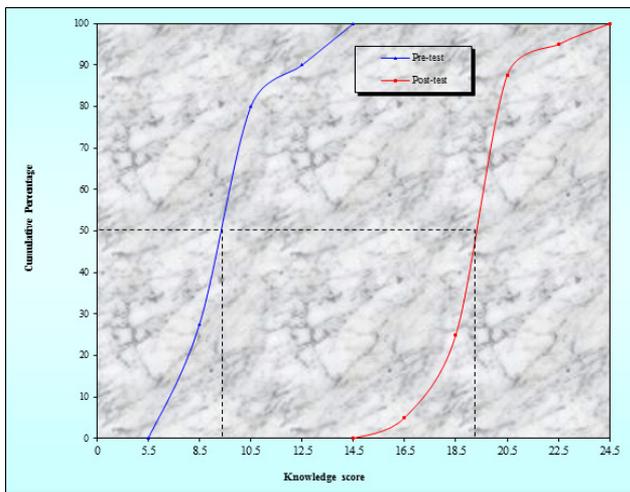
Figure 2: Less than Ogives of pre-test and post-test knowledge scores

The data of cumulative frequency distribution of pre-test and post-test knowledge scores are shown in Figure 8. The data presented in Ogives shows significant difference between the pre-test and post-test knowledge scores. The pre-test median score was 9.50 whereas post-test median was 20 showing a difference of 10.5. The Ogive curves plotted shows that the post-test score is higher than of pre-test. This indicates that there was a significant increase in the knowledge of elderly care givers regarding health promotion strategies among elderly care givers.

Table 5: Chi square value showing association of pre-test knowledge scores of elderly care-givers and selected demographic variables

Sl. No.	Demographic variable	Knowledge scores		df	χ² value
		< median	≥ median		
1.	Age in years				
	6-12	12	10		1.616
	13-18	4	5	3	
	19-25	4	3		NS
	26 and above	1	1		
2.	Religion				
	Hindu	14	9	2	2.558
	Christian	1	6		NS
	Muslim	5	5		
3.	Caregivers Qualification				
	Primary	11	13		
	Secondary	2	1	3	0.417
	Higher Secondary	7	4		NS
	Degree	0	2		
4.	Caregivers occupation				
	Agriculture	16	14		
	Government service	0	1	3	0.133
	Private Service	1	4		NS
	Business	3	1		
5.	Caregivers relationship with elderly				
	Children				
	Grand Children	5	4		
	Neighbour	5	4	3	0.960
	Daughter or Son in law	3	4		NS
		6	9		

Table χ² value = 3.84, P < 0.05 NS= Not Significant

The obtained Chi square values of the variables age, religion, caregivers qualification, caregivers occupation, caregivers relationship with elderly, (values 1.616, , 2.558, 0.417, 0.133, 0.960) were lower than the table values, indicating no significant relationship between the above variables and pre-test knowledge .Hence, the researcher failed to reject the null hypotheses with regard to the above variables.

CONCLUSION

The aim of this study was to assess the knowledge on health promotion strategies among elderly care givers at little sister old age home Mysore, as well as to provide information to them about health promotion strategies through STP.

Conflict of Interest: Nil

Source of Funding- Self Or Other Source – Self

Ethical Clearance – Obtained

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Relationship of Family Support and Coping Strategies with Anxiety in Cancer Patients Undergoing Chemotherapy

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ABSTRACT

Cancer patients undergoing chemotherapy generally have many side effects that cause physiological coping strategies to be able to adapt and psychological side effects such as anxiety. Social interaction in the form of social support obtained from family plays a role in adaptation to cancer patients. This study aims to examine the relationship of family support and coping strategies with anxiety. The samples were 102 cancer patients undergoing chemotherapy at the Hospital Dr. Pirngadi Medan. (1) The family support received cancer patients, more than half receive family support were medium as many as 54 people (53.0%). Coping strategies that use strategies Problem Focused Coping (PFC), more than half strategy PFC were medium as many as 56 people (54.9%). Anxiety experienced cancer patients, more than half anxiety was medium as many as 53 people (51.9%), (2) There is a negative relationship between support families received with experienced anxiety (r = -0.646; *p*<0.05), meaning that the higher the family support received by the diminishing anxiety experienced by cancer patients who are chemotherapy, there is a negative relationship with the strategic PFC use of anxiety experienced by cancer patients which chemotherapy (r = -0.545; *p*<0.05), meaning that the higher use of PFC strategy then decreased anxiety experienced by patients with cancer chemotherapy. Based on the results of this study concluded that there is a relationship of family support received and the use of PFC strategy with anxiety in cancer patients whose chemotherapy. The results of this study can be input to health care to help improve family support received and the use of strategy PFC with decreased anxiety in cancer patients undergoing chemotherapy treatment.

Keywords: *family support, cancer, coping strategies, anxiety*

BACKGROUND

More than half of cancer patients treated with chemotherapy, where the chemotherapy is a cancer treatment with chemicals that can be used in cancer that has metastasized or are still localized and generally in combination with surgery or radiotherapy. Chemotherapy before surgery to reduce the size of the cancer undergo surgery or after surgery to clean the remnants of cancer cells.[2]

Chemotherapy has many side effects of physiological and psychological. Psychological side effects that can occur such as: stress, anxiety and depression. This stress will cause a person coping strategies to prevent further psychological disorders.[3]

Social support, especially the support of close family members will affect the effectiveness of coping strategies.[4] Coping strategies used in cancer patients, where with the support of family members generally will reduce the level of anxiety and improve the quality of life of cancer patients.[5] Coping strategies used an individual is said to be effective, if it produces a good adaptation and produce a new pattern of life while ineffective coping strategies can lead to physical and psychological health problems.[6]

Mohammed research et al, stated that the support of all members of the family, especially the couple was instrumental in the decision-making and strategy of survival.[7] Research Kim and Morrow, states that family support has influence and role in anxiety levels and the prevention of nausea and vomiting or the

severity of nausea and vomiting in cancer patients after chemotherapy treatment.[8]

Based on the results of interviews conducted with five patients with cancer who are undergoing chemotherapy treatment in the chemo room General Hospital Dr. Pirngadi Terrain result that three of the five patients delivered by family and two of them said that the next of kin was very helpful and patient with always pay attention to the situation, help with the costs of care and transport each be chemotherapy, giving a boost to keep the spirit and do not forget to keep a routine undergoing chemotherapy to cure disease. Patients keep the spirit of routine following a schedule of chemotherapy and the patients appear calm during the interview and said no experience sleep disturbances, while two other patients who escorted the family said the family did not always deliver to the hospital for chemotherapy and may not always wish / dependence with family yes because family got nothing. Patients say it's not unusual to go the chemotherapy-alone and resigned to the conditions that must be endured. Patients are seen not excited at the interview and said constipation / can be up to three days, no appetite, stomach pain, often experience sleep disturbances and feelings of sadness when alone.

RESEARCH METHODOLOGY

The purpose of this study to examine the relationship of family support and coping strategies with anxiety in cancer patients undergoing chemotherapy at the General Hospital Dr. Pirngadi Medan. This research is a quantitative correlation with the design using any observation approach *(cross-sectional)*. Design correlation is a relationship between two or more variables that aims to examine the relationship between these variables.[9] The population is all cancer patients undergoing chemotherapy by using *purposive sampling* of 102 people.

Data is collected directly from respondents based research instruments using questionnaires given on family support, coping strategy, and anxiety. Analysis of data using univariate, bivariate analysis using correlation *Pearson product moment* test.

RESULTS

Characteristics of Respondents

Table 1. Characteristics of the Cancer Patients Undergoing Chemotherapy Medications Moderate General Hospital Dr. Pirngadi Medan Year 2017 (n = 102)

No.	Characteristic	f	(%)
1	**Age (years)**		
	26-45 (Adulthood)	32	31.3
	46-65 (Future Elderly)	58	56.9
	65 (Future Elderly)	12	11 , 8
2	**Gender**		
	Male	39	38.2
	Female	63	61.8
3	**Marital Status**		
	Married	75	73.5
	Not married/widow/ widower	27	26.5
4	**Education**		
	Elementary	26	25.5
	Junior	22	21.5
	high school	47	46 , 1
	PT	7	6.9
5	**Works**		
	Working	48	47.1
	Does not work	54	52.9
6	**History Chemotherapy**		
	1-3>	65	63.7
	3-6	37	36.3
7	**Types of Cancer**		
	Breast cancer	45	44.1
	Colorectal Cancer	27	26.5
	Ovarian Cancer	15	14.7
	Nasopharyngeal Cancer (NPC)	13	12.7
	Prostate Cancer	2	2.0
	Total	**102**	**100**

Table 2. Frequency Distribution of Family Support in the General Hospital Dr. Pirngadi Medan Year 2017 (n = 102)

Family Support	f	(%)
Low	24	23.5
Medium	54	53.0
High	24	23.5
Total	102	100

Table 2. shows that of 102 cancer patients who are undergoing chemotherapy treatment for more than half receive family support were as many as 54 people (53.0%) and nearly a quarter of family support low and high respectively of 24 (23.5%).

Table 3. Frequency Distribution Strategies *Problem Focused Coping* (PFC) at the General Hospital Dr. Pirngadi Medan Year 2017 (n = 102)

Strategies *Problem Focused Coping* (PFC)	f	(%)
Low	19	18,6
Medium	56	54,9
High	27	26,5
Total	102	100

Table 3. shows that of 102 cancer patients who are undergoing more than half of chemotherapy treatment using strategies PFC were as many as 56 people (54.9%) and almost a quarter using strategies PFC is low as many as 19 people (18.6%).

Table 4. Frequency Distribution in the Hospital Anxiety General Dr. Pirngadi Medan Year 2017 (n = 102)

Anxiety	f	(%)
Light	47	46,1
Medium	53	52,0
Weight	2	2,0
Total	102	100

Table 4. shows that of 102 cancer patients who are undergoing chemotherapy treatment for more than half experienced anxiety were as many as 53 people (52.0%) and least experienced severe anxiety as much as 2 (2.0%).

Table 5. Pearson Test Results *Correlation Support Families and Strategies *Problem Focused Coping* (PFC) with anxiety at the General Hospital Dr. Pirngadi Medan Year 2017 (n = 102)

Variable	Ansietas	
	r	p
Family Support	-0,646	0,001
Strategies *Problem Focused Coping* (PFC)	-0,545	0,001

Table 5. shows the results of a value *p*= 0.001, which means there is a significant relationship between family support and PFC with anxiety *(P* <0.05). The results obtained by analysis of the value of *correlation coefficient* (r) = -0.646 and (r) = -0,545 indicating a strong relationship and a negative pattern which means the family support received and PFC by the respondent then experienced anxiety decreases.

DISCUSSION

The Relationship Family Support with Anxiety in Cancer Patients Undergoing Chemotherapy

Based on bivariate analysis test, *p* = 0.001, which means there is a significant relationship between family support with decreased anxiety in the General Hospital Dr. Pirngadi Medan, besides the value of correlation r = -0.646 showed a strong relationship and a negative pattern means the better support families who received the lower the anxiety experienced by respondents.

The findings are consistent with studies Lekka et al, stating that there is a relationship that is negative, butsequence being between family support with anxiety shows that the better support for families accepted the respondent the anxiety level decreased in patients with lung cancer,[10] while According to research Sadeghi et al, found that there is a relationship that is both negative and sequence being between social support (emotional support, instrumental support, information support) with anxiety in patients undergoing hemodialysis.[11] The research result Guan Ng et al, states that social

support is an important factor for cancer patients who are undergoing treatment to lower the anxiety level so as to improve the quality of life.[12]

Based on the results of this study concluded, a good family support to family members suffering from cancer with chemotherapy should be intense, cyclical, time long treatment and hospitalization repeated by having the side effects of physiological and psychological form of anxiety level was going to affect a decrease in the level of anxiety that can help improve the quality and survival of cancer patients.

Relations Strategy *Problem Focused Coping* (PFC) with Anxiety in Patients with Cancer While Undergoing Chemotherapy

Based on the test bivariate analysis, $p = 0.001$, which means having a significant relationship between the use of strategy PFC with anxiety experienced by cancer patients who are undergoing chemotherapy at the General Hospital Dr. Pirngadi Medan, besides the value of correlation r = -0.545 showed a strong relationship and a negative patterned means higher family support received by the respondent then decreases anxiety.

The findings are consistent with studies Yahaya et al, stating that the use of strategy PFC will decrease the symptoms of physical and psychological distress, while the use of strategy emotion focused coping (EFC) high will increase the symptoms the symptoms of physical and psychological distress in cancer patients undergoing chemotherapy.[13] In line with the research Saniah and Zainal, found that breast cancer patients who undergoing chemotherapy strategy EFC of highwill experience psychological distress.[14]

According to Lazarus in Potter and Perry, states that the individual coping strategies are determined by the type of stress experienced by the individual, the individual life goals, beliefs about yourself and the world, and the personal resources of the individual.[15] Individuals tend to use strategies PFC when they believe that the demands of the situation or stressor can be changed, while the use of strategies EFC when they believe it is only a little or not able to make changes of pressure situation, although the situation is full pressure, generally people use a strategy combination of PFC and EFC.[16]

According to Page in Manurung, states that one of the factors that influence anxiety is trauma or conflicts that would give the experiences of emotional or mental conflicts that occur in individuals that will facilitate the emergence of symptoms of anxiety.[17] If a cancer patient undergoing chemotherapy treatment that previously experienced a pressure situation and do not use coping strategies are not effective, then the high will likely increase anxiety.[18]

Based on the results of this study concluded, the higher the use of strategies PFC in cancer patients undergoing chemotherapy should be intense, cyclical, time long treatment and hospitalization repeated by having the side effects of physiological and psychological to decrease the level of anxiety affect patient compliance in regular chemotherapy and healthy lifestyles that have an impact on improving the quality and survival of cancer patients.

CONCLUSIONS

Family support received 102 patients with cancer who are undergoing chemotherapy which consists of a low family support as many as 24 people (23.5%), family support were as many as 54 people (53.0%), and high family support as many as 24 people (23.5%).

Coping strategies PFC 102 cancer patients who are undergoing chemotherapy which consists of strategies PFC low many as 19 people (18.6%), strategies PFC were as many as 56 people (54, 9%), and strategies PFC as many as 27 people (26.5%).

Anxiety experienced by 102 patients with cancer who are undergoing chemotherapy were divided into mild anxiety as many as 47 people (41.0%), anxiety was as many as 53 people (51.9%), and severe anxiety as much as 2 (2.0%) ,

There is a negative relationship between family support received by the anxiety experienced by cancer patients who are undergoing chemotherapy (r = -0.646; $p < 0.05$), meaning that the higher the support the family received the anxiety experienced decreases, and vice versa more low family support received by the increased anxiety experienced by cancer patients undergoing chemotherapy.

There is negative relationship strategy use PFC with anxiety experienced by cancer patients who are undergoing chemotherapy (r = -0.545; $p < 0.05$), meaning

that the higher use strategies PFC then the decreased anxiety experienced and vice versa, the lower the use of strategies PFC, the increased anxiety experienced by cancer patients undergoing chemotherapy.

Suggestions

Health Care, The results of this research can be used as input to the family about the importance of family support for cancer patients who are undergoing chemotherapy in the use of effective coping strategies and reduce the level of anxiety that can improve the quality of life of cancer patients undergoing chemotherapy.

Nursing Education, results of this study can be used as additional information relating to the use of coping strategies PFC and EFC and the level of anxiety in cancer patients undergoing chemotherapy.

For researchers, expected that further research can be done by using qualitative research methods to explore the family support, coping strategies, anxiety in cancer patients undergoing chemotherapy, so as to complement the existing research results.

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Effectiveness of Planned Teaching Program on Knowledge Level among General Nursing and Midwifery Students Regarding Developmental Milestone of Children (0-5) Years

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ABSTRACT

Background: Student Nurses' knowledge on child's growth and development has been associated with more effective nursing care strategies and better child care outcome. A study was conducted to assess the knowledge level regarding developmental milestone of children upto 5 years among nursing students. Aim: To assess the pre and posttest knowledge level of GNM students regarding developmental milestones of children up to 5 years before and after planned teaching program and to find out association between the posttest knowledge level with the selected demographic variables. Design: one group pre- post test quasi experimental research design was adopted in this study. Setting: Kalinga Institute of Nursing Sciences, Bhubaneswar, Odisha. Sample: 40 G.N.M students, who meet the inclusion criteria were selected as study objects using Convenient Purposive sampling technique. Tool: structured closed ended questionnaire. Result: There was significant difference between pre and posttest knowledge score at (0.05) level of significance. The post mean score percentage(45) were higher than the pretest mean score percentage(30) and it has increased to 15%. The study revealed that the post test score increased significantly. In posttest 100% of the subjects attained most satisfactory scores (11-23) in the knowledge regarding developmental milestone of children up to 5 years. Only gender of the students was associated with posttest knowledge score. Conclusion: The study revealed that the posttest knowledge score among nursing students were increased significantly after administering planned teaching program.

Keywords: *Planned Teaching Program, Knowledge, Milestone, Effectiveness*

INTRODUCTION

Student nurse's knowledge of child development has been associated with more effective nursing care strategies and better child outcomes. However, little is known about what adults who interact with children under the age of 14 years know about child development. WHO is coordinating an international effort to develop child growth standards that will replace the National Center for Health Statistics (NCHS)/WHO reference for infants and young children (age 0-5 years). Child (1 year to 5 years) growth and development knowledge is an essential part of Pediatric Nursing and it is also part of the nine essentials in Nursing Education. Although students find challenge to master this knowledge, limited literatures documented the knowledge deficit regarding child growth and development among nursing students.

The purpose of this study was to assess senior nursing students' knowledge about normal child growth and development before and after Pediatric Nursing and clinical course.

NEED OF THE STUDY

Ali, Balaji, Dhaded, Goudar (2011) conducted a study to assess growth and global developmental delay among young children in a rural community of India. The sample comprised of 530 children of age 3 year. The study result revealed that children displayed delay in personal-social (42.5%), gross motor (38.1%) and problem-solving skills (34.9%). Maternal educational level was positively associated with communication and problem-solving skills (P=0.000) while monthly household income was positively associated with

communication, gross motor and problemsolving skills (p=0.000). The study concluded that suggest a high prevalence of developmental delay and poor child health in this rural population.

Carolina et al., (2010) conducted a study to assess the motor performance and the gross and fine motor skills of infants attending two public child care centres full-time. The sample comprised of 30 infants assessed at 12 and 17 months of age with the Motor Scale of the Bayley Scales of Infant and Toddler Development.

OBJECTIVES

To assess the pre test-post test knowledge level of GNM students regarding developmental milestones of children up to 5 years before and after planned teaching program

To find out association between the post test knowledge level with the selected demographic variables.

Hypothesis

H1: There will be significant difference between pre test knowledge score and post test knowledge score of GNM students regarding developmental milestones of children up to 5 years after planned teaching programme.

MATERIALS & METHOD

RESEARCH APPORACH-The research approach for this study is quantitative research approach.

RESEARCH DESIGN-The research design adopted for this study was pre-experimental research design.

RESEARCH SETTING-This study was conducted in Kalinga Institute of nursing Sciences at Bhubaneswar.

POPULATION-Population in this study included GNM 3rd year students studying in school of nursing at Bhubaneswar.

SAMPLE SIZE-Total sample of the study consists of 40 nursing students (GNM 3rd year)

SAMPLING TECHNIQUE-The sampling technique adopted for this study was convenient purposive sampling method.

INCLUSION CRITERIA-

-Students who are willing to participate in the study.

-Students who are available during the study.

-Students who are studying GNM, 3rd year in school of nursing at KINS, Bhubaneswar.

EXCLUSION CRITERIA

-1st year and 2nd year G.N.M students, KINS.

DATA COLLECTION-TOOL-This consists of two parts;

SECTION-A: It consists of socio-demographic variables such as age, sex,education, marital status and areas of experience.

SECTION - B

Questionnaire to assess the knowledge of students regarding developmental milestones of children up to 5 years.

SCORING PROCEDURE:

For knowledge assessment total score is -25 ,correct score is -1 andwrong score is -0

SCORING INTERPITATION: Good : 16 to 25 Marks, Average :10 to 15 Marks and Poor: Below 10 Marks

FINDINGS

Table 1: **The distribution of Frequency and Percentage samples according to their Demographic variables**.

SL.No	Demographic variables	frequency	percentage
1	**Age of the students** 20—25 25-30	39 1	97.5 2.5
2	**Sex** Male female	2 38	5 95
3	**Marital status** Married Unmarried	5 35	12.5 87.5
4	**Previous knowledge** Books Seminar	36 4	90 10

Data presented in table 1 shows regarding age of the students that 39 students (97.5%) were in the age group of 20-25 years and1 student (2.5%) were in the age group of 25-30 years, regarding sex 2 students (5%) were male and 38 students (95%) were female.

regarding marital status 5 students (12.5%) were married and 35 students (87.5%) were unmarried. and regarding previous knowledge 4 students (10%) were using seminar, and 36 students (90%) were using books as a source of knowledge .

Table-2 : Range, mean, standard deviation and mean percentage on the level of knowledge regarding developmental milestone of children among selected nursing student in pre test and post test.

TEST	N(sample no.)	Maximum Score	Range	Mean	Standard deviation	Mean percentage
Pre test	40	20	6-20	12	2.9	30%
Post test	40	23	11	18	2.8	45%

TABLE3: COMPARITION OF PRE TEST AND POST TEST KNOWLEDGE SCORE.

Test	N (sample no.)	Mean	Standard deviation	difference of pre and post test mean	difference of pre and post test Standard deviation
Pre test	40	12	2.9	6	0.1
Post test	40	18	2.8		

Test	Mean Knowledge Score	t value (calculated)	T value (tabulated)	Level of significance	Degree of freedom
Pre test	12	13.36	2.02	0.05(5%)	39
Post test	18				

According to the findings of the present study the table depict that post test knowledge of GNM students on developmental milestone of children up to 5yrs was significantly difference than pre-test knowledge after intervention of structured teaching program.

ASSOCIATION BETWEEN POST TEST SCORE AND SELECTED DEMOGRAPHIC VARIABLE:-

AGE-Calculated t value is 0.37 and tabulated t value 2.02. as calculated t value is less than tabulated t value, so there is no significant association between age of students and post test knowledge score.

SEX-Calculated t value is 7.51 and tabulated t value

2.02. as calculated t value is greater than tabulated t value, so there is significant association between sex of students and post test knowledge score.

MARITAL STATUS-Calculated t value is 0.028 and tabulated t value 2.02. as calculated t value is less than tabulated t value, so there is no significant association between marital of students and post test knowledge score.

PREVIOUS KNOWLEDGE-Calculated t value is 0.37 and tabulated t value 2.02. as calculated t value is less than tabulated t value, so there is no significant association between previous knowledge of students and post test knowledge score.

DISCUSSION

In this study it was found that post test mean of knowledge was improved 15% which is similar to the study result, conducted by Ahmed A H, Richardson C. They found that there was a significant difference in the mean scores between the Pre and post test.

IMPLICATION: The nursing profession exists in response to need of society and holds idea related to man's health throughout his lifespan. Nurses direct their energies towards the promotion, maintenance and restoration of health, prevention of illness, to alleviate suffering and the assurance of peaceful death when life can no longer be sustained. The study findings have thrown new light on the implications of the future of profession in relation to nursing education, nursing practice and research.

CONCLUSION

On the basis of the findings it can be stated that the knowledge among nursing student regarding growth and development milestone in them mean percentage improvement was 15%. The comparison of pre-test and post-test regarding knowledge of developmental milestone shows that students had gained some knowledge after administering structure teaching program me, mean percent of post test was 45%.

Ethical Clearance: Ethical clearance obtained from DRC of KINS.

Permission will be obtained from the Nursing school authority for conducting the study

Source of Funding-Self

Conflict of Interst-None

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A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge Regarding Palliative Care among Staff Nurses

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ABSTRACT

The study was carried out to assess effectiveness of planned teaching programme on knowledge regarding palliative care among staff nurses. Convenient sampling was used to select 150 staff nurses from selected hospitals, Anand. The questionnaire consisted of demographic data of the participants and knowledge questionnaire on palliative care. Lesson plan was developed with the help of subject experts. Pre-test was administered on the first day and planned teaching programme was executed on the same day. The post-test had been taken after 7 days of pre-test. Results: Data was analyzed using IBM SPSS Statistics 20. The findings of the study revealed that there was a significant difference found between pre and post test knowledge score t-29.5(p 0.00), hence the planned teaching programme was effective in improving nurse's knowledge. Conclusions: As palliative care is an important aspect of nursing care, nurses need to be educated on palliative care and informed about changes that are happening in this area.

Key-words: Planned teaching programme, Palliative care

INTRODUCTION

Palliative care is a health care specialty that is both a philosophy of care and an organized, highly structured system for delivering care to persons with life-threatening or debilitating illness from diagnosis till death and then into bereavement care for the family[1]. Palliative care improves health care quality in three domains: the relief of physical and emotional suffering, improvement and strengthening of the process of patient–physician communication and decision-making, and assurance of coordinated continuity of care across multiple healthcare settings such as hospital, home, hospice, and long-term care[5].

Palliative care focuses primarily on anticipating, preventing, diagnosing and treating symptoms experienced by patients with a serious or life threatening illness & helping patients & their families make medically important decisions[5].

Palliative care does not depend only on prognosis as the ultimate goal of palliative care is to improve quality of life or both the patient and family, regardless of diagnosis. As the end of life approaches, the role of palliative care intensifies and focus is on aggressive symptoms management and psychosocial support to the patient and family[3].

According to Worldwide Palliative Care Alliance (WBPC) although more that 100 million people across the world benefited from hospice and palliative care, annually less than 8% of those in need access it[6]. Although India ranks at the bottom of the quality of the death index in overall score, it is estimated that in India around 7 million people are diagnosed with cancer every year, around 80% of all cancer are diagnosed in the advanced stage when treatment is less effective and palliative care become absolutely essential. Every hour more than 60 patients die in India from cancer and in pain. In India the total number who needs palliative care

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is likely to be 6 million people, but less than 1% has access to it[1,2].

Nurses play a significant role in the care of the dying, critically ill as well as the terminally ill clients. Lack of knowledge about palliative care is an obstacle to nurses as conventional training in nursing does not provide specialized and unique training in palliative care as it is not part of their curriculum. **Sorifa B** et all (2015) conducted a descriptive study to assess the knowledge & practice of staff nurses on palliative care in selected hospital of Guwahati city, Assam. Self administered structured questionnaire was used to collect data from100 staff nurse. It was found that maximum 79% had inadequate knowledge, 21% had moderately adequate knowledge & no one had adequate knowledge on palliative care. According to the levels of practice maximum 48% practice adequately where as 43% practice moderately adequate and only 9% practice inadequately. The correlation (r= 0.30) indicates that there is a positive correlation between knowledge and practice scores of palliative care by the staff nurses. The study concluded that the nurses had poor knowledge & practice regarding palliative care[7].

Palliative care is important for patients who are suffering from life threatening condition and nurses play vital role in giving care to that patient so, it is necessary to assess knowledge of nurses regarding palliative care and improve their knowledge regarding palliative care. Nurses will be able to render effective palliative care when they are knowledgeable about the concept of palliative care, able to identify the symptoms and the needs of the patient.

SUBJECTS AND METHOD

A pre experimental, one group pre test- post test design adopted for the study. 150 staff nurses were selected using convenient sampling using the inclusion criteria. Questionnaire consisted of demographic data of the participants and knowledge questionnaire on palliative care. Lesson plan on palliative care was developed with the help of subject experts. The participant information sheet containing details of purpose, participant selection, voluntary participation, procedure and protocol, risk, benefits, confidentiality was distributed to the participants and informed consent was obtained. Pre-test on 1st day and then planned teaching programme was executed on the same day. The post-test had been taken after 7 days of pre-test.

RESULTS

The demographic characteristics of the samples (Table-1) shows that majority (66.67%) of the staff nurses were in the age group 20 to 30 years and 84% were females. Majority (96.0%) of them were GNM. (71.33%) of participants had experience of 2 to 10 years. Majority (70%) of participants had not attended any palliative class and (26%) of participants were working in medical ward. In pre test only two participants had good knowledge where as in post test 141 participants had good knowledge.

The obtained pre-test mean score (Table-2) was 13.193 (SD- 3.2017) and obtained post-test mean score was 22.240 (SD- 1.8123). The findings of the study revealed that there was a significant difference found between pre and post test knowledge score (Table-3) t-29.5(p = 0.00), hence the planned teaching programme was effective in improving nurse's knowledge.

Table 1: Frequency and percentage distribution of staff nurses according to their demographic variables

Background variables	Frequency	Percentage
Age		
20-30	94	62.67
31-40	20	13.33
41-50	24	16.00
51-60	12	8.00

Cont... **Table 1: Frequency and percentage distribution of staff nurses according to their demographic variables**

Gender		
Male	24	16.00
Female	126	84.00
Area of working		
Medical ward	39	26.00
Surgical ward	21	14.00
ICU	33	22.00
OPD	14	9.33
Emergency	3	2.00
Oncology	14	9.33
Orthopedic	7	4.67
Year of experience		
2-10yr	107	71.33
11-20yr	13	8.67
21-30yr	28	18.67
31-40yr	2	1.33

Education			
GNM		144	96.00
Basic Bsc		5	3.33
Post basic Bsc		1	0.66
Any class on palliative care			
Yes		45	30
No	45	105	70
	105		

Table 2 : Pre and post test knowledge of staff nurses regarding palliative care.

Sr.No.	Category	Pre test		Post test	
		Frequency	Percentage	Frequency	Percentage
1	Adequate	2	1.33%	141	94%
2	Moderate	70	46.66%	9	6%
3	Poor	78	52%	0	0%

Table 3: comparison between pre and post test knowledge score of nurses regarding palliative care.

Variables	Number	Mean	SD	SE Mean	T value	P value
Pre-test	150	13.193	32017	0.26142	29.579	0.000
Post-test	150	22.240	1.8123	0.14797		

DISCUSSION

From the present study findings, it is revealed that more than half of the participants (52%) had poor knowledge, (47%) had moderate knowledge and (1%) had adequate knowledge regarding palliative care. The study findings are in consistent with the study findings of Das AG (2015) on knowledge and attitude of staff nurses regarding palliative care. More than half of the subjects (69%) had moderate knowledge, (20%) had adequate and only (11%) have poor knowledge regarding palliative care[8].

The mean post test knowledge score (22.24) of the present study was higher than mean pre test knowledge score(13.19) with the mean difference of(9.047). Difference between pre test and post test knowledge was statistically tested and it was found significant. The results were consistent with the findings of the study conducted by David A (2010) to assess the effectiveness of information booklet regarding palliative care among the nurses. The Mean pre test score was 12.71, and mean post test score was 21.78, which showed that the information booklet was effective in improving the nurses' knowledge regarding palliative care[4].

CONCLUSION

The planned teaching Programme was found to be effective in enhancing nurses' knowledge. Participants gained significant knowledge after exposed to the Planned Teaching Programme. There should be regular in-service training for the nurses so they can be up-to-date with the changing trends which in turn improve the patient outcome. As palliative care is an emerging concept in India, Nurses need to be trained and educated on the various dimensions of palliative care and the concept need to be incorporated in the nursing curriculum so that the nurses can be molded according to the changing trends.

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Assessment of the Self Esteem, Communal Mastery and Disaster Preparedness among People Residing Near to Selected Factory

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ABSTRACT

A disaster is a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources. [1] Disaster preparedness can prevent a bad situation from becoming worse. Disaster preparedness reduces the feelings and helps communities and families know where to take refuge and how to care for basic medical issues[2]. It can also help alleviate some of the devastation by reducing the impact of a disaster. It has been reported that communities which are well prepared to meet disasters will have better chances of mitigation.[4] Disasters can happen anytime and anywhere, so it is important to be prepared before disaster strikes. This study focused on identifying whether the public is mentally and physically prepared to face a disaster

Keywords*: Disaster, environmental losses, devastation*

BACKGROUND AND OBJECTIVES

A study was done to examine whether self-esteem and sense of mastery influence preparedness behaviour. Data were collected from 300 people each of flood prone and heat wave affected areas in Orissa. Results revealed that when the confounding effects of age and family type were controlled, people having high self-esteem and sense of mastery were more prepared for flood and heat wave[3]. The results confirm the assumptions of 'resource conservation' theory that the important psychological resources like sense of mastery and self-esteem facilitate disaster preparedness. Hence, government officials and agencies responsible for community preparedness may take additional effort to enhance self-esteem and mastery of the people.[5]

MATERIALS AND METHOD

A quantitative approach was used to assess the Self esteem, Individual mastery and Disaster preparedness among 60 households purposively selected in Ernakulam. Self esteem, Individual mastery and Disaster preparedness were measured using Global **self-esteem scale.** (Rosenberg's (1989), **Individual Mastery Scale(** Pearlin and Schooler's (1978)[5] and Diaster Preparedness Questions (Alberni-Clayoquot regional district) respectively. Socio-demographic characteristics were determined by a structured questionnaire. Self esteem, Individual mastery and Disaster preparedness scores were computed by frequency, percentage, mean, median, range and standard deviation.

FINDINGS

Results showed that the mean score of subjects in disaster preparedness questions were 1.85 (Total score 17) and the subject had very little scores on disaster preparedness. In the global self esteem scale the mean score was 27.01(Total Score 40), the subjects had a good self esteem. The mastery scale the mean score is 19.03(Total Score 28) and indicated a higher level of mastery. Although the subjects scores where very high in global self esteem and individual mastery scale they had poor disaster preparedness.

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DISCUSSION/CONCLUSON

Disaster preparedness can prevent a bad situation from becoming worse. Disaster preparedness reduces the feelings and helps communities and families know where to take refuge and how to care for basic medical issues. It can also help alleviate some of the devastation by reducing the impact of a disaster. It has been reported that communities which are well prepared to meet disasters will have better chances of mitigation. Disasters can happen anytime and anywhere, so it is important to be prepared before disaster strikes. This study focused on identifying if the public were mentally and physically prepared to face a disaster

Source of Support: Nil

Ethical Clearance: Waiver of IEC obtained from IEC M.O.S.C Medical College Hospital

Conflict of Interest: None declared

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A Pre-Experimental Study to Assess the Knowledge Regarding Venous Blood Specimen Collection among Student Nurses

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ABSTRACT

Introduction: Blood analysis is one of the most important tool available to clinicians with in health care. Many people consider having blood test a simple procedure, but don't understand what take place behind it, when the blood is drawn and when the doctor makes a diagnosis[1].

Blood test is a vital part of diagnostic process, helping physician to make the correct diagnosis and determine appropriate course of treatment. So it's very important to have adequate knowledge, and correct practice of specimen collection, as it is the prior step undertaken to make the diagnosis for further treatment[2].

Accuracy of diagnosis is essential for safe patient care. Providing for the safety of the healthcare worker may also hinge upon accurate diagnosis and rapid response. So it is very important to collect, handle and transport the collected specimen correctly and thus it depends upon the knowledge regarding blood specimen collection accurately[3].

Method: Quantitative research approach was adopted to assess the knowledge regarding venous blood specimen collection among student nurses studying in B.Sc. Nursing 2nd yr at Army College Of Nursing Jalandhar Cantt

Sample size: 40.

Sampling technique: Convenient sampling technique was used to collect the sample.

Results: Total 40 samples were taken for the study, out of which 15% were had good knowledge, whereas 85% had above average knowledge,while none had fall in below average knowledge.

Conclusion: The study showed that the students had gained knowledge from self structured teaching program related to venous blood specimen collection and the knowledge level was raised.

Keywords: Knowledge, Venous blood specimen, Nursing students

INTRODUCTION

Blood analysis is one of the most important tool available to clinicians with in health care. Many people consider having blood test a simple procedure, but don't understand what take place behind it, when the blood is drawn and when the doctor makes a diagnosis[1].

Blood test is a vital part of diagnostic process, helping physician to make the correct diagnosis and determine appropriate course of treatment. So it's very important to have adequate knowledge, and correct practice of specimen collection, as it is the prior step undertaken to make the diagnosis for further treatment[2].

Accuracy of diagnosis is essential for safe patient care. Providing for the safety of the healthcare worker may also hinge upon accurate diagnosis and rapid response. So it is very important to collect, handle and transport the collected specimen correctly and thus it depends upon the knowledge regarding blood specimen collection accurately[3].

Need Of Study

Using blood and blood components is a common therapeutic procedure in hospitals. Nurses have an important role in safe and accurate method of blood specimen collection therefore it is crucial for nurses to have sufficient knowledge of the situations, amount of blood required and methods used for collecting the sample, and necessary care and safety measures in sample collection[5].

A study ie A study on "evaluation of knowledge of health care worker in 2009" revealed that 26.2% health care worker had low level knowledge, 22.1% had moderate level and 51.6% had acceptable knowledge. The study concluded that the health workers need to have more knowledge regarding blood collection. Another study i.e. A study on "Nursing blood specimen collection techniques and hemolysis rates in an emergency department" revealed that recollection of haemolysed blood specimens delays patient care in emergency departments. A prospective, cross-over study of blood collection techniques in a 64,000 annual visit, community teaching hospital emergency department was conducted. Retraining session was given for the nurse from emergency department, after this session nurses were randomly assigned to collect samples via intravenously. Blood samples were processed and assed for hemolysis, of these only 0.3% was found to be haemolysed.

Hence it was concluded that, trained nurses can reduce the number of haemolysed specimens by proper venipuncture technique[7].

So in reference to the above conducted studies the need arouse to assess the knowledge of future nurses regarding blood specimen collection. Thus to minimize errors assessment is primarily important.

Problem statement

"A pre-experimental study to assess the knowledge regarding venous blood specimen collection among student nurses studying at Army College Of Nursing Jalandhar Cantt."

Objective

• To provide information to the student nurses (B.Sc. nursing 2nd year) regarding venous blood specimen collection.

• To assess the level of knowledge regarding venous blood collection through post test.

Hypothesis

• **H1: After the post test the knowledge of students will be above average.**

Aim of the study

The aim of the study is to provide information and assess the level of knowledge of student nurses.

Delimitations

The present study is delimited to

• **Student of BSC Nursing 2nd year.**

• **Cognitive assessment**

Research approach

• **Quantitative research approach was adopted to assess the knowledge regarding venous blood specimen collection among student nurses studying at Army College Of Nursing Jalandhar Cantt.**

Research design

• **Pre-experimental (post-test) research design was used to achieve the stated goals in the present study.**

Research setting: Army College Of Nursing Jalandhar Cantt.

Sample: Students of B.Sc. Nursing 2nd yr studying in Army College Of Nursing Jalandhar Cantt.

Sample size: 40.

Sampling technique

▪ **Convenient sampling technique was used to collect the sample.**

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria:-

▪ **2nd yr students studying in Army College Of Nursing.**

▪ **2nd yr students practicing in Blood Collection Centre.**

Exclusion Criteria:-

Students who are on vacations and medical leave at the time of data collection.

Data collection tools

Section 1: demographic variables

This part consist of items for obtaining personal information about subjects such as age, seminar attended related to blood collection (no. of seminar attended) , exposure to blood collection centre(no. of weeks posting in BCC).

Section 2:-

- **A tool that is self structured questionnaire will be used.**

- **It consists of 40 questions (MCQ).**

Interpretation

Table no.: 1 knowledge assessment score 0-40

SUB SCORE	LEVEL OF KNOWLEDGE
0-10	Poor
11-20	≤ Average
21-30	≥ Average
31-40	Good

Content validity

The content validity of the tool was confirmed by experts opinion regarding relevance of the items. Experts were selected from various fields of specialization such as medical, nursing and pathology.

Reliability of the tool

Reliability of tool was computed by split half method. The reliability of tool was 0.85

Ethical considerations

Formal permission was taken from the Principal of the Army College Of Nursing Jalandhar Cantt. The proposal was put forward for consideration by the ethical committee of the college. Once approved the data was collected. Consent was taken from the students before data collection.

Plan and procedure for data collection procedure

The data collection for study was carried out in the month of march and april by using self structured questionnaire and convenient sampling technique from the students of B.Sc. Nursing 2nd Year who fulfil the inclusion criteria.

Plan and analysis of data

After the data collection data was organized, tabulated, summarized and analyzed using descriptive and inferential statistics according to the objective as follows-

Computation of frequencies and percentage for demographic data.

Analysis of data was planned according to objectives. Analysis and interpretation of data was done by using descriptive statistics such as percentage, mean, standard deviation.

Organization of analysis and interpretation is based upon two sections:

The analyzed data was organized according to objectives and presented under following sections:-

Section 1- Demographic characteristics of study samples.

Section 2- Assessment of level of knowledge after post test.

Section -A

Sociodemographic characteristics of the study sample of the following data depict the classification of the study sample by age, exposure and no. Of posting in blood collection centre:

Table 2:- Sociodemographic Distribution, frequency and percentage   N=40

SOCIODEMOGRAPHIC VARIABLES	FREQUENCY	PERCENTAGE (%) DISTRIBUTION OF SAMPLE CHARACTERSTICS
AGE		
20 YEARS	27	67.5%
19 YEARS	8	20%
18 YEARS	5	12.5%
EXPOSURE		
SEMINAR	16	40%
PREVIOUS PERSONAL EXPOSURE	12	30%
CLASSROOM TEACHING	12	30%
POSTING		
NOT POSTED	3	7.5%
1-2 WEEKS	29	72.5%
3-4 WEEKS	8	20%

Section-B

Objectives:

To assess the level of knowledge regarding venous blood collection through post test

Table no.3 Percentage Distribution of level of knowledge regarding blood sample collection   N=40

S.NO	EVALUATION CRIERIA (MARKS)	REMARKS	FREQUENCY	PERCENTAGE
1.	31-40	GOOD	6	15%
2.	21-30	Above average	34	85%

DESCRIPTION: Total 40 samples were taken for the study, out of which 15% were had good knowledge, whereas 85% had above average knowledge, while none had fall in below average knowledge.

Major findings

Total 40 samples were taken and the major findings were:

According to age distribution, the age group of 20 have good knowledge which shows that knowledge increases as per age.

According to previous exposure the majority students gained knowledge from seminar.

According to posting blood collection center majority of students gained knowledge via maximum posting ie,3-4 weeks.

DISCUSSION

Major findings

Total 40 samples were taken and the major findings were:

- According to age distribution, the age group of 20 have good knowledge which shows that knowledge increases as per age.

- According to previous exposure the majority students gained knowledge from seminar.

- According to posting blood collection center majority of students gained knowledge via maximum posting ie, 3-4 weeks.

Studies supporting this study are

K.D.Barua (Punjab University, (2012) conducted a study to assess the knowledge of medical professionals regarding blood collection in Patiyala. Data was collected from 240 professionals using cross sectional study. A semi structured K.D.Barua (Punjab University, (2012) conducted interview and questionnaire was used to collect information. The study revealed that only 43.4%of professionals having good knowledge regarding blood collection. This study concluded that improving knowledge of professionals would have direct impact on improving techniques of blood collection.

W.L. (2012) Conducted a pre-experimental study to assess the effectiveness of planned teaching program on knowledge regarding sample collection in selected institute, Krishna hospital Mathura of nursing services on 60 professionals. Non probability purposive sampling tool used for data collection was a structured knowledge questionnaire.The result of the study revealed that the pre and post test data analysis revealed that mean post score (28.766+) was higher than mean pre test score (8.183+).The study concluded that planned teaching program regarding knowledge of sample collection was as effective method for providing adequate knowledge and help professionals to enhance their knowledge.

SUMMARY

The present study was undertaken with the objectives to provide knowledge and to assess the knowledge with post test regarding venous blood specimen collection. The study was conducted on Bsc. Nursing 2nd year at Army college of nursing, Jalandhar cantt.

The research design was pre-experimental in nature and 40 samples were studied.

Non-randomized, convenient sampling technique was used to select the sample. The tool used for the study was self structured questionnaire consisting 40 multiple choice questions. The tool was given to seven experts for the content validation.

CONCLUSION

The study showed that the students had gained knowledge from self structured teaching program related to venous blood specimen collection and the knowledge level was raised.

Implication

Nursing education: The result of the present study can be utilize as information and illustration for the nurses and the student.

Nursing practice: The present study can be utilize as a tool to assess the knowledge of future nurses regarding venous blood specimen collection and to reduce the chances of sampling error.

Nursing research: it will provide the baseline data for further clinical study in the same field.

Nursing administration: A nursing curriculum is the blue print to the student nurses carrier destiny. Drawing blood is one of the skills required of a registered nurse.

Nursing administrators can conduct seminars, lectures, demonstration on venous blood specimen collection.

Recommendation

- By keeping in view the study findings following recommendations were made:

- A similar study can be replicated in a large sample using other designs.

- Similar study can be conducted to evaluate the effectiveness of the teaching program on venous blood specimen collection.

- Same study can be conducted in different settings and population.

Limitation

1. The response time exceeded upto 30 minutes for each sample which was initially planned for 20 minutes.

2. The researcher was able to collect more number of overseas literatures than the Indian literatures.

Conflict of Interest: Nill

Source of Funding: Self

Ethical Clearance: Taken from ethical committee of Army College of nursing, Jalandhar Cantt, Punjab.

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The Effectiveness of a Breastfeeding Self-Efficacy Programme on Breastfeeding Self-Efficacy and Breastfeeding Practice among Primigravida Mothers

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ABSTRACT

INTRODUCTION: Breastfeeding self-efficacy is a potentially modifiable variable that predict the longer duration and increased exclusivity of breastfeeding. It is defined as a mother's confidence in her ability to breastfeed her child. So improving mother's confidence of breastfeeding by antenatal preparation can improve mothers breastfeeding confidence and thereby breastfeeding outcomes. The aim of the study is to assess the effectiveness of breastfeeding self-efficacy programme on breastfeeding self-efficacy and breastfeeding practice among prim gravida mothers.

MATERIAL & METHOD: An experimental approach with pre-test post-test control group design was used for the study. The study was conducted among a consecutive sample of 60 primigravid mothers (first 30 in control group and next 30 in experimental group) attending Kamla Nehru Hospital, Shimla, (H.P). The mothers were recruited for the study on completion of 37 weeks of gestation. After collecting background information, pre-test pre-test breastfeeding self-efficacy was measured using Breastfeeding self-efficacy scale and then breastfeeding self-efficacy programme was delivered to the mothers in the experimental group. The post-test breastfeeding self-efficacy and breastfeeding practice was measured three days postpartum. Briston Breastfeeding Assessment tool was used to measure breastfeeding practice.

RESULT: The breastfeeding self-efficacy measured before the intervention shows that 7% of mothers had low self-efficacy and 93% had medium self-efficacy (n=60) and the mean self-efficacy score was 24.8+/-4.8 (max score - 70). There was no significant difference in breastfeeding self-efficacy between experimental (24.53±4.6) and control group (25.06± 4.7) in the pre-test (0.677). In the post-test, the the breastfeeding self-efficacy of the experimental group (63.96±2.5) was significantly higher than the control group (43.90±5.0) at p <0.001. The breastfeeding practice (max score - 8) measured measured on the third day postpartum was also significantly higher in experimental group (6.66±.80) than the control group (2.23±.97) at p<0.001. A positive correlation observed between breastfeeding self-efficacy and breastfeeding practice (r=0.8, p<0.001).

CONCLUSION: The results of the study suggested that breastfeeding self-efficacy can be improved through proper education and support during antenatal period. Improving breastfeeding self-efficacy helps to improve breastfeeding practice and thereby breastfeeding outcomes.

KEYWORDS: *Breast feeding, Breastfeeding self-efficacy, breastfeeding programme, Breastfeeding practice*

INTRODUCTION

Breastfeeding is one of the most cherishing experience related to birth of child and the most effective way to provide a baby with a caring environment and complete food which meets the nutritional as well as emotional and psychological need of the infant [1]. Breastfeeding self-efficacy is a potentially modifiable variable that has been shown to predict longer breastfeeding duration and increased exclusivity of breastfeeding. The concept of breastfeeding self-efficacy was introduced by Dr. Cindy

– Lee Dennis. It is a concept based on Bandura's (1997) social cognitive theory[2]. It is defined as a mother's confidence in her ability to breastfeed her child[3]. Maternal breastfeeding self-efficacy is a mother's perceived ability to breastfeed her infant and has been shown to predict breastfeeding duration and exclusivity rates among women in the immediate postpartum period[4]. The first feed is a profoundly important experience for the mother and her baby. Unless an individual circumstance indicates otherwise, the mother should have her baby with her immediately after delivery and breastfeeding should begin as soon as possible. The time of first feed, depend largely on the needs of the baby. Some babies demonstrate a need to feed almost as soon as they are born. Other babies show no interest until they are an hour or so old. Whenever the first feed takes place, the quality of that experience is of utmost importance for the mother and baby. The early feedings might best consist of approximately 5 to 10 minutes sucking on each breast while the nipples are accustomed to it. This frequent sucking stimulates the production and let-down of lactation and reduces the potential severity of engorgement. Therefore, it is essential that there be no missed feeling, including those at night[5].

In Himachal Pradesh, 69 % of women had initiated breastfeeding within one hour of the birth of the child. However, 90 % of women initiated breastfeeding within 24 hours of birth of their children, ranging from 77.5 % in Kinnaur district to 96.3 % in Lahul & Spiti. The proportion of women who initiated breastfeeding within one hour, within 24 hours and after 24 hours of birth are 68.7, 90 and 5.6 % respectively. Duration of exclusive breast feeding practiced is high (among infant under 2 to 5 months old) and is ranged from 66 to 56% [6]. UNICEF report 2016 on infant and young child feeding in India shows that only 46% of infants less than six months are exclusively breastfed. The proportion of children under six months who are exclusively breastfed decreases with age, from 69 % in the first and second months to 28 % in the fifth and sixth months of life[7]. Interventions to promote breastfeeding self-efficacy has shown to improve breast feeding initiation, exclusivity, and duration [8---26].

The present study intends to develop a Breastfeeding Self-Efficacy Programme (BSEP) based on the concepts of breast-feeding self-efficacy theory and to evaluate its effectiveness on breastfeeding self-efficacy and breast-feeding practice among primi-gravid mothers. The breastfeeding self-efficacy programme uses vicarious experience through teaching, video, demonstration and breastfeeding support to improve breastfeeding self-efficacy and thereby improving the breast feeding practice.

MATERIALS AND METHOD

The study used an experimental approach with pre-test post-test control group design. A consecutive sample of 60 primi-gravid mothers between the age of 18-35 years, and who have completed 37 weeks of gestation admitted in Kamala Nehru Hospital Shimla (H.P.) was recruited for the study. Mothers who are HIV positive, mothers with multiple pregnancy, and foetal congenital anomalies were excluded. First 30 mothers were recruited to control group and next 30 to experimental group to avoid contamination.

The Breastfeeding Self-Efficacy Programme is a breastfeeding support intervention developed by the investigators based on the breastfeeding self-efficacy theory of Dr. Cindy – Lee Dennis. According to this theory, person's self-efficacy may be influenced by four factors; personal accomplishment, vicarious experiences, verbal persuasion and physiological and affective states. The breastfeeding self-efficacy programme is prepared by incorporating these four factors. Teaching on various aspects of breastfeeding, videos on latching techniques, demonstration of positions provided vicarious experience while return demonstration of positions facilitated performance accomplishment. Involving a family member in teaching and breastfeeding support, and breast feeding assistance by nurse provided for verbal persuasion. The program involved a 45 minutes' session in the antenatal period and a follow up session in the immediate postnatal period, which included breast feeding assistance and clarification of doubts and concerns.

Breastfeeding self-efficacy scale-short form(BFSE-SF) and Briston Breastfeeding Assessment tool (BBAT) were the tools used to measure breastfeeding self-efficacy and breastfeeding practice respectively. BFSE-SF a 14 item 5 point scale developed by Dr. Cindy – Lee Dennis to assess breast feeding self-efficacy. Not at all confident, not very confident, sometimes confident, confident and very confident are given a score of 1, 2, 3, 4 and five respectively. A score above 52 was considered as high

self-efficacy, score below 32 was considered as low self-efficacy and score between 33 and 51 is considered as medium self-efficacy. Briston Breastfeeding Assessment tool (BBAT) was developed by Jenny Ingram to measure the breastfeeding practice. It measures breastfeeding practice under four domains; positioning, attachment, sucking and swallowing. All the domains are scored from 0, 1 and 2 as poor, moderate and good.

A detailed explanation was given to eligible participants including the nature of intervention and nature and frequency of data to be collected. Participation was based on their willingness and written informed consent was obtained from each participant prior to data collection. They were allowed to withdraw from the study at any time during data collection. On recruitment, background information was obtained with the help of a semi-structured interview schedule followed by measurement of breastfeeding self-efficacy using Breastfeeding self-efficacy scale-short form(BFSE-SF). The mothers in the experimental group then received breastfeeding self-efficacy programme along with

routine care, while control group received routine care only. Routine care does not involve antenatal teaching on breastfeeding. The mothers may get assistance from nurses, doctors or paediatrician as they have some problems with breastfeeding. Post-test on breastfeeding self-efficacy and breastfeeding practice was done on third postnatal day in both groups. The data was analysed using appropriate descriptive and inferential methods.

Findings

Background information

Majority of mothers in experimental group and control group were in the age group of 20 to 30 years. Most of them had primary or secondary education and majority of them were home makers. Both groups were homogenous with respect to age, education, occupation, income, type of family and place of residence. None of them in both groups received any teaching or formal information on breastfeeding.

Fig. 1 Distribution of primigravid mothers based on breastfeeding self-efficay (n=60)
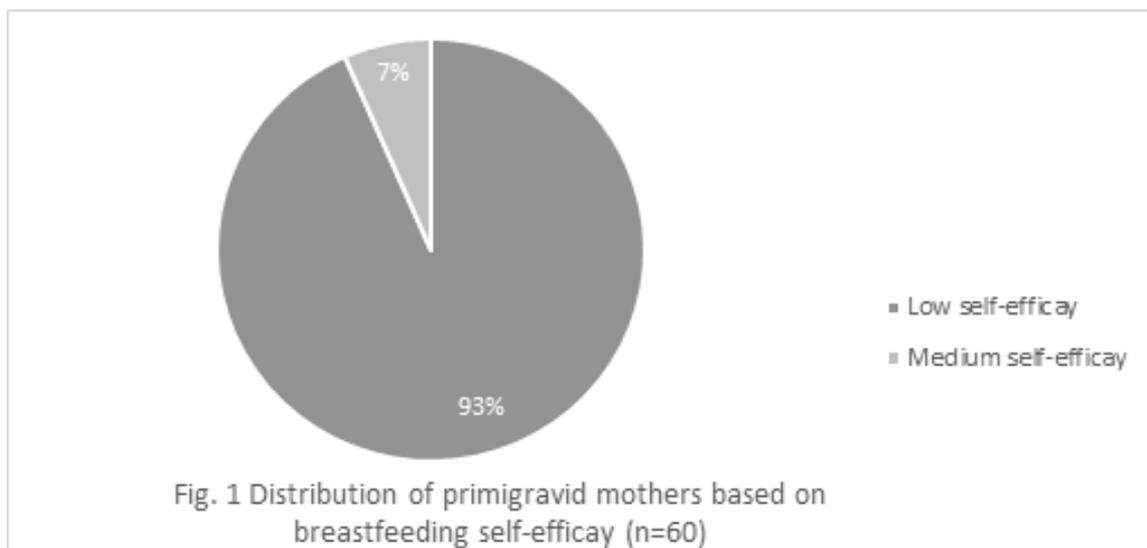
Breastfeeding self-efficacy

The breastfeeding self-efficay of both groups measured before the intervention in the antenatal period shows that majority of them has low self-efficacy (fig 1) and none of them had high self-efficacy. The mean self-efficacy score was 24.8+/-4.8 (n=60).

Effect of BSEP on Breastfeeding Self-Efficacy

The mean post-test breastfeeding self-efficacy score of the experimental group was significantly higher than the control group, which was not significant in the pre-test (table 1).

Table -1 Comparison of Breastfeeding Self-Efficacy between control group and experimental group

	Mean ± SD		t- value	df	p-value
	Control Group (N =30)	**Experimental Group (N =30)**			
Pre test	25.06± 4.7	24.53±4.6	.419		.677
Post test	43.90±5.0	63.96±2.5	-20.9	58	<0.001**
Mean pre-test and post-test difference	18.86±6.4	39.43± 7.1	-11.7		< 0.001**

Effect of BSEP on Breastfeeding practice

The breastfeeding practice score of the experimental group was significantly higher than the control group (Table 2). Significant difference was observed in all the domains of breastfeeding; positioning, attachment, sucking and swallowing.

Table -2 Comparison of breastfeeding practice between control group and experimental group

	Mean ± SD		t-value	df	p-value
	Control Group N=30	**Experimental Group N=30**			
Positioning	.70±.46	1.5±.50	-6.915		<0.001**
Attachment	.53±.50	1.7±.46	-9.275		<0.001**
Sucking	.40±.49	1.7±.44	-10.880	58	<0.001**
Swallowing	.60±.49	1.66±.47	-8.449		<0.001**
Total score	2.23±.97	6.66±.80	-19.273		<0.001**

Correlation between breastfeeding self-efficacy and breastfeeding practice

A positive correlation observed between breastfeeding self-efficacy and breastfeeding practice in the post test (r=0.8, p<0.001).

CONCLUSION

The results of the study show that the breastfeeding self-efficacy is inadequate in majority of the primi gravid mothers, which highlights the need for breast-feeding preparation among antenatal mothers.

The Breastfeeding self-efficacy programme is found to be effective in improving the breastfeeding self-efficacy and breastfeeding practice. Research studies conducted on effectiveness of interventions focusing on breast feeding self-efficacy has shown to improve breastfeeding self-efficacy and breastfeeding practice. A study was conducted on the effect of antenatal education on breastfeeding self-efficacy among 90 primiparous women in Turkey. Findings of the study shows that there were no significant differences between the groups in the mean antenatal BSES-SF scores (p =0.506); however, the participants in the intervention group

had significantly higher mean BSES-SF scores at one (p<0.001), four (p<0.001) and eight (p<0.001) weeks postpartum and interventional group had a significantly higher rate of breastfeeding success than the control group (p<0.001)[9]. Another study conducted on the effectiveness of intervention based on breastfeeding self-efficacy theory on 74 primi mothers in china also shown to improve breastfeeding self-efficacy, exclusivity and duration of breastfeeding[10]. The score of breastfeeding self-efficacy is found to be a statistically significant predictor of breastfeeding length[11].The findings of the present study highlights that antenatal interventions centring on maternal self-efficacy improve confidence with breastfeeding and breastfeeding practice.

A positive correlation is observed between breastfeeding self-efficacy and breastfeeding practice. So the concept of breastfeeding self-efficacy can be made as a focus of breastfeeding education programmes to improve breast-feeding practice and thereby improving breastfeeding outcomes.

Conflict of Interest: The investigator has no conflict of interest.

Source of Funding: The study is funded by self.

Ethical Clearance : Ethical clearance was obtained from the Institutional Ethics Committee of Akal College of Nursing. Participation was based on willingness and written informed consent was obtained from all participants.

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Compulsive Buying Behavior and Online Shopping Addiction among Health Science Teachers

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ABSTRACT

BACKGROUND: Online shopping is a form of electronic commerce which allows consumers to directly purchase the product or services from seller over the internet using web browser. some are suffer from oniomania **AIM:** This study is aimed to assess the compulsive buying behavior and online shopping addiction among health sciences teachers working in selected colleges at Punjab. **METHOD:** Quantitative, descriptive, cross-sectional survey approach was used to assess compulsive buying behavior and online shopping addiction among conveniently selected 200 health science teachers by using socio demographic data sheet, online shopping behavior questionnaire, compulsive buying measurement scale, and bergen shopping addiction scale. **RESULTS:** One third (31.5%) of the teachers were unable to resist the sales and 40.5% of the teachers purchase something instead of saving. A 21.5% of the teachers continued to shop despite having debts. Teachers preferred to shop from Amazon site once a month, spend average 500-1000/-Rs per month and mostly preferred things related to fashion (men/ women) for purchase online. Majority of the teachers were shopping from 1-2 years due to availability of wide variety of products. Two third of the (31.5%) teachers had high compulsive buying behavior. There is moderate positive correlation between compulsive and online shopping addiction. **CONCLUSION:** It can be concluded that there was significant positive relationship of compulsive buying behavior with online shopping addiction. Health care professional should take early initiative to avoid possible psychological and physical problems among online shoppers.

KEY WORDS: *compulsive buying behavior, online shopping addiction, Health science teachers*

INTRODUCTION

It is unquestionable that the digital revolution exerts one of the most powerful influences on consumer behavior and the internet's impact on the now a day's society will continue to extend itself as more and more people become internet users.[1]

Liang and Lai (2000)[2] explains that both online and traditional shopping process. Online shopping just like a shop in the neighborhood, selling all type of goods but with some prominent differences. Rohm and Swaninathan[3] identified four categories and named them "convenience shoppers, variety seekers, balanced buyers, and store-oriented shoppers".

Online shopping has become much easier since fashion brands have started displaying their design on phone application. Now a day everyone like to pass their free time by surfing here and there on the online shopping sites. For many respondents, the online shopping has almost become an addiction [4]

Addictive behaviour is a term applied to excessive behaviour that has negative consequences. The word "addiction" is most often used by clinicians to refer to a condition that involves intense preoccupation with the behaviour and leads to physiological changes particularly in the brain. It is characterised by a loss of control and negative outcomes for the individual either psychologically, physically or socially[5]

Online shopping addiction characterized by anxiety, persistent need to spend excessive amount of time and money on the computer, neglecting other duties and family relationships, feeling empty or irritable when not shopping online, lying to other people about amount of time or money spent on online shopping and withdrawing from other pleasurable activities.[6]

Sometimes the person do the online shopping and visit the sites but gradually they use the shopping sites during the stress and to relieve the anxiety and spend excessive amount of time and money, often buying things which are neither wanted or used that behavior becomes the compulsive buying behavior[6]

Compulsive buying disorder (CBD), or oniomania (from Greek őnios "for sale" and manía "insanity "is characterized by an obsession with shopping and buying behavior that causes adverse consequences.[7] According to Kellett and Bolton,[7] compulsive buying "is experienced as an irresistible–uncontrollable urge, resulting in excessive, expensive and time-consuming retail activity [that is] typically prompted by negative affectivity" and results in "gross social, personal and/or financial difficulties".

Compulsive shopping behavior is often accompanied by depression, anxiety and other negative emotions. Indeed, people affected by compulsive shopping disorder often report an uncomfortable tension that is relieved, at least temporarily, by shopping.[8]

Despite this temporary relief, many people with compulsive shopping disorder feel disappointed with themselves and depressed about their apparent lack of control over their behavior.[8]

Compulsive buying behavior is important issue for health science profession research because it negatively influence society as well as individual' s psychology.[9] Affected persons exhibit increased impulsiveness, deficits in impulse control (self-control), low self-esteem, depression, social anxiety, money management difficulties, disruption of autonomy orientation, and a greater materialistic orientation[10-11] Researchers felt that compulsive spending behavior may be burden to the families so it is important to study their compulsive spending behavior and online shopping among health science teachers as it cause harm not only to the individuals but also to the society in the form of debt, bankruptcies and dysfunctional families.

MATERIALS AND METHOD

A quantitative, non-experimental, descriptive, cross sectional survey research approach was used to assess compulsive buying behavior and self efficacy towards online shopping addiction among health science teachers. The present study was conducted in 22 colleges related to health sciences in Punjab. The colleges were selected on the basis of expected availability of teachers, giving permission to conduct the study and convenience in terms of distance. The population under study was health science teachers working in selected colleges of Punjab. Sample consisted of those meeting the inclusion criteria were selected by the researcher for the study. A sample of 200 health science teachers was taken conveniently for study. Following tools were used to measure variable under study:-

Socio demographic data sheet

It is a self-administered tool prepared by the investigators and used to measure the socio demographic profile of subjects. It consists of 10 items which are age, gender, religion, marital status, type of family, area of residing, education, occupation, working specialty, monthly income. Total administration time for this tool was approximately 3-5 minutes. Content validity of the tool is determined by expert in the field of psychiatry, psychology and nursing respectively. Reliability was done by test-retest method and it was found r = 0.9

Online shopping behavior questionnaire

It is an 11 items self-administered tool prepared by the investigator and used to assess the online shopping behavior of the subjects. Tool administration time for this tool was approximately 3-5 minutes. Content validity of the tool is determined by expert in the field of psychiatry, psychology and nursing respectively. Reliability was done by test-retest method and it was found 0.76

Compulsive buying scale [12]

Compulsive buying scale is standardized and reliable scale to measure the compulsive buying behavior of the subjects. It includes 13 items and all are positive worded. All items are in question form and scored on five-point likert scale ranging from strongly agree to strongly disagree. The items were scored as 5,4,3,2 and 1 respectively. Score can range between13-65, if total score is 42.2 and higher then behavior is considered as compulsive buying behavior. Total administration time is approximately 5-10 minutes. Reliability of the scale was determined by test retest reliability which was (r =0.840)

Bergen shopping addiction scale [13]

Bergen shopping addiction scale is a 28 items,

standardized and reliable tool and used in present study to measure shopping addiction of the subjects. It has seven addiction criteria (salience, mood modification, conflict, tolerance, withdrawal, relapse, and problems). All items are scored on five-point Likert scale ranging from completely disagree to completely agree. All items are scored from 0 to 4. Score ranges 0- 112, higher score indicate that subject has higher shopping addiction. Total administration time is approximately 5-15 minutes. Reliability of the scale was determined by test retest reliability which was (r= 0.919)

Try out of the tool was done to ensure the reliability and understanding of the tool. Pilot study was conducted and the study was found to be feasible.

Prior to administration to tools, a participant information sheet explaining the purpose of the study was readout and handed over to the subject. All the questions and queries were discussed and sort out before actual data collection. An informed written consent form was signed by each subject before data collection. All the subjects were ensured that confidentiality and anonymity was maintained throughout the study. Permission was obtained from Institutional Ethical Committee to carry out the study. Written permission was also obtained from various Principle or director of the colleges before data collection.

The data was analyzed by Statistical Package for Social Sciences (SPSS) version 16. The p<0.05 level was established as a criterion of statistical significance for all the statistical procedures performed. Appropriate descriptive and inferential statistics were employed to analyze data.

RESULTS

Socio-demographic profile: Mean age of the subject was 30.07 (SD-5.54) years. Maximum of the subjects were female (87.5%), Sikh (73.5%), married (61%), and living in nuclear families (64.5%). More than half (58.5%) of the subjects educated up to bachelor degree. Majority (90%) of the subjects were doing private jobs and working in nursing sciences and earning to Rs.10,000 to 50,000/ month.

Table 1: Frequency and percentage distribution of the subjects as per their online shopping addiction behavior N = 200

Name of attribute		f	%
Unable to resist sales	Yes	63	31.5%
	No	137	68.5%
Purchase something instead of saving	Yes	81	40.5%
	No	119	59.5%
Continued to shop or spend despite having debts	Yes	43	21.5%
	No	157	78.5%
Still over-shopped or overspent again after telling to self this is my last time	Yes	74	37%
	No	126	63%

Table 1 shows that One third (31.5%) of the subjects were unable to resist the sales and more than one third (40.5%) of the subjects purchase something instead of saving Minimum (21.5%) of the subjects continued to shop or spend despite having debts whereas more than one third (37%) of the subjects were told ourselves this is my last time" and still over-shopped or overspent again. Majority of the subjects preferred amazon site.

Table 2: Frequency and percentage distribution of subjects as per their online shopping behavior (N=200)

Name of attribute	Sub attributes	f	%
Frequency of visiting online shopping sites	Once a day	46	23%
	Once a month	88	44%
	Once a 6 month	41	20.5%
	More than once a 6 month	25	12.5%
Average monthly expenditure on online shopping	Less than 500 RS	61	30.5%
	500- 1000 RS	68	34%
	1000-1500 RS	48	24%
	More than 2000 RS	23	11.5%

***Cont...* Table 2: Frequency and percentage distribution of subjects as per their online shopping behavior (N=200)**

Things preferred for purchasing online	Fashion (men/ women)	Yes	139	69.5%
		No	61	30.5%
	Mobiles & electronics	Yes	34	17%
		No	166	83%
	Home & living	Yes	30	15%
		No	170	85%
	Daily needs	Yes	42	21%
		No	158	79%

Table 2 shows that maximum (44'%) of the subjects visit online shopping sites once a month, they spend average 500-1000/- Rs per month and 69.5% of the subjects mostly preferred things fashion (men/ women) for purchase online.

Table 3 shows that One third (36%) of the subjects were shopping from 1-2 years, they choose online shopping because of availability of wide variety of products and spend 0-2 hours in a day for online shopping.

Table 3: Frequency and percentage distribution of subjects as per their online shopping behavior   N=200

Name of attribute	Sub attribute		f	%
Experience of online shopping	< 1 year		65	32.5%
	1-2 year		72	36%
	3-4 year		47	23.5%
	> 5 year		16	8%
Reason for choosing online shopping	Various mode of payment	Yes	44	22%
		No	156	78%
	Wide variety of products	Yes	92	46%
		No	108	54%
	Lower prices	Yes	38	19%
		No	162	81%
	Easy buying process	Yes	61	30.5%
		No	139	69.5%
	More discount	Yes	59	29.5%
		No	141	70.5%
Hours spend on the online shopping sites in a day	0-2		179	89.5%
	2-4		13	6.5%
	4-6		5	2.5%
	>6		3	1.5%

Table 4 reveals that mean score of the compulsive buying behavior was 34.98 ± 9.6. Hence, it can be said that subjects had moderately high compulsive buying behavior. Similarly, mean (SD) of the online shopping addiction was found to be 37.31(16.35) which is also very high.

Table 4: Mean (SD) of the compulsive buying behavior and online shopping addiction among health science teachers (N=200)

Variable	Mean± SD	Range as per the scale	Minimum obtained score	Maximum obtained score
Compulsive buying behavior	34.98 ± 9.6	13-65	13	60
Online shopping addiction	37.31±16.35	0-112	1	103

Figure 1 shows that one third of the subjects (31.5%) had high compulsive buying behavior (score >42.2) and 68.5% of the subjects had low compulsive buying behavior (score <42.2). Hence, it can be concluded that subjects had high compulsive buying behavior
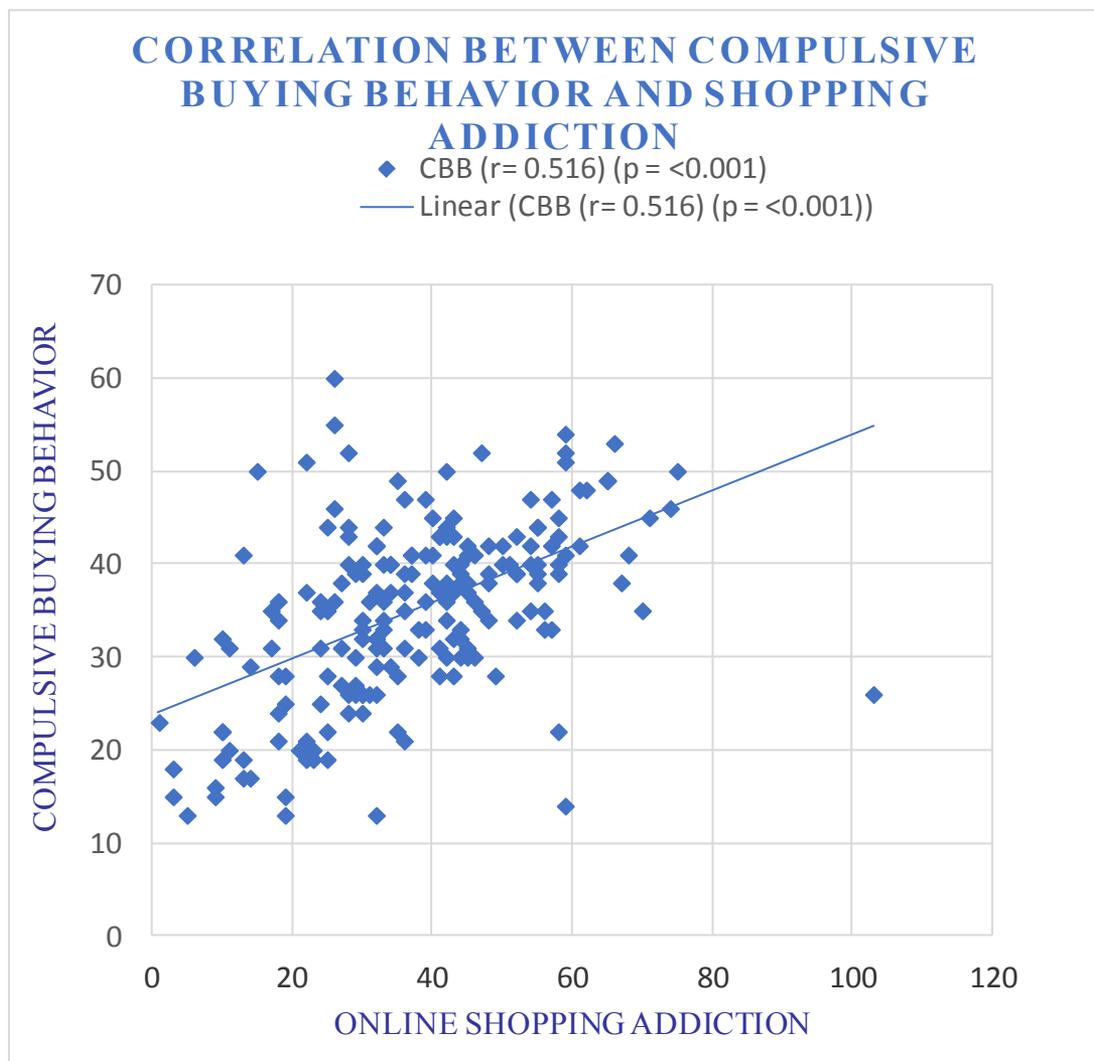
Figure 1: Distribution of subjects as per their compulsive buying behavior

Figure 2 shows a significant moderate positive correlation between compulsive buying behavior and online shopping addiction at p value <0.001 (r = 0.516).

Hence, it can be concluded that there is moderate positive correlation between compulsive and online shopping addiction. Compulsive buying can result into shopping addiction or vice versa.
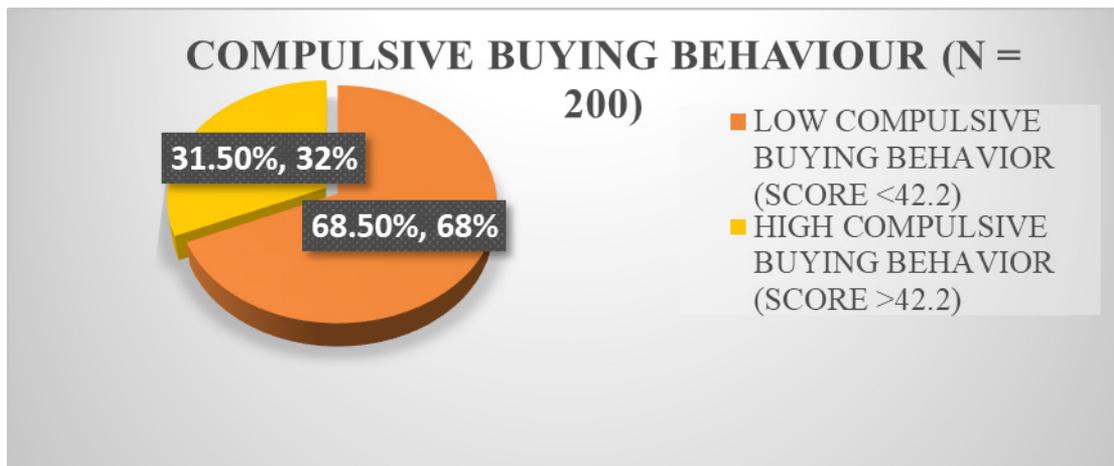
**Correlation is significant at the 0.05 level (2-tailed)

Figure 2: Relationship of compulsive buying behavior and online shopping addiction of the subjects

DISCUSSION

The present study is an attempt to assess the compulsive buying behavior and towards online shopping addiction among health science teachers. Result reveals that females (87.5%) were more shopaholic than males (12.5%). The findings of study are supported by Sharma K (2014)[4] found that female (94%) was doing more shopping as comparison to males (6%). In the present study, more than the half (58.5%) of the subjects had education up to graduation. The finding of study is supported by R Ganpathi [14] found that maximum subjects were educated up to graduation. One third (36%) of the subjects were shopping from 1-2 years, 30.5% of the subjects were shopping from 1 year, 23.5% from 3-4 years and 8% were shopping from more than 5 years. The finding are supported by Agarwal S (2015)[15] found that maximum subjects were shopping from 1-2 years followed by 1 year, 3-4 years, more than 5 years. Maximum subjects choose online shopping because of the availability of the wide variety of the products and easy buying process. This finding of the supported by Agarwal S (2015)[15] found that mostly subjects choose online shopping sites because of the wide variety of the products and easy buying process. It was found that 31.5% of the subjects had high compulsive buying behavior which is in consistent with Lee S H and Workman J E(2015)[16] who revealed that 18% of the subjects had compulsive buying behavior.

CONCLUSION

Study concluded that majority of the online shoppers were female, who residing in urban area, belonged nuclear families, educated up to bachelor degree. Majority of the subjects were married, working in nursing sciences. Nearly one third of the (31.5%) health science teachers had high compulsive buying behavior. Compulsive buying behavior can result in to shopping addiction or vice versa.

IMPLICATIONS AND RECOMMENDATIONS

Health care professionals should be taught about the oniomania, sign and symptoms of compulsive buying behavior. Psychoeducation should be provided to nurses who have engaged in online shopping activities during stress and to relieve the anxiety and depression because they more prove to occur compulsive buying behavior. Conferences and workshops should be conducted by the faculty members to create the awareness about the negative consequences of compulsive buying behaviour. This will help the public awareness and understanding of the problematic nature of this behavior.

LIMITATIONS

Present study was limited to group of health science teachers. So, studies should be conducted on large sample size with different variables on different

population and study may be conducted to assess relationship between depression and online shopping addiction. The online shoppers who may have compulsive buying behavior and addiction towards online shopping were not health science professionals could not be included in the study.

Financial and Material Support: Nil

Conflicts of Interest: Nil

Ethical Clearance: Ethical clearance was taken from Institutional Ethical Committee of BFUHS, Faridkot, Punjab to carry out the study.

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Prevalence of Refractive Errors and Its Determinants among Lower Primary School Children

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ABSTRACT

Vision plays an important role in children's physical, cognitive, and social development. The present study was intended to assess the prevalence of refractive errors and its determinants among lower primary school children. The objectives were to determine the prevalence of refractive errors among lower primary school children and to find out the determinants of refractive errors among lower primary school children. Theoretical framework adopted for the study was Betty Neuman Systems Model. The research design selected for this study was descriptive cross sectional design. Determinants of refractive errors were collected from parents using questionnaire and visual acuity was checked using Snellen chart (Malayalam alphabets, Number chart and E chart) by the researcher. The study was conducted among 508 lower primary school children studying in two schools of Alappuzha district selected by multistage sampling. The prevalence of refractive errors among lower primary school children was 16.72%. In univariate analysis refractive error was found to be significantly associated with age (6-8 years) (p =0.019, OR=0.547), male gender (p = 0.002, OR=2.103) and preterm birth (p = 0.001, OR=3.143). In multivariate analysis occurrence of refractive error was statistically associated with male gender (AOR: 1.985, 95% CI: 1.213, 3.248) and preterm birth (AOR: 2.875, 95% CI: 1.436, 5.760) adjusted for age. Preterm babies were 2.87 times risk for developing refractive error in the future than the term babies. Males were 1.98 times risk for developing refractive error than girls. Hence male gender and preterm birth were identified as determinants of refractive errors among lower primary school children. Prevalence of refractive error among lower primary school children in Alappuzha district was high.

Keywords: *Refractive errors; Prevalence; Determinants; Lower Primary School children*

INTRODUCTION

The ability to perceive with eyes is the most unique sense for a person needs to experience the wonderful world.

When a child has difficulty in focusing or cannot see things clearly their learning and attention can suffer. In fact the American Optometry Association (AOA) estimates that 60% of learning disabilities are associated with vision problems.[1]

According to WHO reports 285 million people are estimated to be visually impaired worldwide. Uncorrected refractive errors (43%), unoperated cataract (33%), glaucoma (2%), are the major causes of visual impairment globally. About 19 million children are visually impaired. Of these 12 million children are visually impaired due to refractive errors a condition that could be easily diagnosed and corrected.[2]

There is an increased incidence of refractive errors among children. Prevalence of myopia among school going children in the rural area of Kollam was found to be 51.47%.[3] A study conducted in Thiruvananthapuram revealed that refractive error is more common among children aged between 6-12 years.[4] Most childhood eye conditions can be corrected or effectively treated – especially if they are caught early. And by far the best way to identify and diagnose these problems is through a comprehensive eye exam.[1] Refractive errors account for the commonest cause of blindness after cataract. Since many vision problems begin at an early stage, it is very important that children must receive proper eye care early itself. Untreated eye problems can worsen and

lead to other problems as well as affect learning ability, personality, and adjustments at schools.[5]

From the clinical experience the investigator identified that about 20 children were attending ophthalmic OPD of T.D.M.C. Hospital Vandanam, Alappuzha every day and approximately 4 of them diagnosed to have refractive errors. Purpose of this study is to assess the prevalence and determinants of refractive errors among lower primary school children and providing preventive services, early identification of problems and referral services which can foster health and education of the children.

OBJECTIVES

1. To determine the prevalence of refractive errors among lower primary school children

2. To find out the determinants of refractive errors among lower primary school children

$$N= \frac{4pq}{d^2}$$

Where,   p = 30.57

q = 100- p = 100-30.57 = 69.43

d = 6.114 (20% of p)

d^2 =37.38

N = $\underline{4 \times 30.57 \times 69.43}$ = 227, which can be rounded off to 250 (10% attrition)

37.38

= 250×2 = 500 (to reduce the design effect)

Tools and techniques

The following tools were selected to collect the data for prevalence of refractive errors and its determinants among lower primary school children.

Tool 1- Questionnaire to identify the determinants of refractive errors among lower primary school children

Technique- Self report by parents

Tool 2- Snellen chart (Malayalam alphabets, Number chart and E chart)

Technique - Bio- physiological measurement (vision test)

MATERIALS AND METHOD

The research design adopted for this study was cross sectional design with internal comparison. The study was conducted in two schools of Alappuzha district (S.D.V.Govt.U.P. School Neerkunnam, and K.K.P.M.G.H. School Ambalappuzha.).

In the present study, the population comprised of all lower primary school children. A total of 508 lower primary school children were selected through multistage sampling who met the sampling criteria.

Sample size calculation:

The sample size was calculated by taking the prevalence rate of refractive errors as 30.57% (from previous study done in Tamil Nadu)[6] with 'd' as 20% of p

Pilot Study

The pilot study was conducted at S.D.V.Govt.U.P.School, Neerkunnam from 18/12/17 to 30/12/17 after getting approval from the concerned authority and school. It was conducted among 50 lower primary school children.

After pilot study the reliability of the tool in the present study was checked by the test retest method by Karl Pearson Correlation coefficient. The score was found to be 0.79 for the questionnaire and Snellen chart is a standardized tool with a correlation coefficient of 0.89 in the present study.

Data collection process

After getting permission from the Scientific Review Committee (SRC), ethical clearance from the Institutional Ethics Committee (IEC), permission from the Kerala University of Health Sciences (KUHS) Thrissur, District Educational Officer (DEO) and concerned authorities of the school, the data collection was done from 15/01/2018 to 24/02/2018. A total of 508 students were selected for the study through multistage sampling. The purpose of the study was explained to parents who came to the school for attending Parent Teacher Association (PTA) meeting. Informed consent was obtained from parent and assent was obtained from children. The socio-personal variables and determinants of refractive errors was collected from parents using questionnaire. Then all children in a class was screened for the presence of refractive error using Snellen chart. Those who have refractive error were taken to the Ophthalmology OPD of Govt. T.D.M.C.H. Vandanam, Alappuzha by the researcher and the diagnosis of refractive error was confirmed by an ophthalmologist. Confidentiality of the response was maintained.

Data analysis

The collected data were analysed using appropriate descriptive and inferential statistics with the help of Statistical Package for the Social Sciences (SPSS) version 23.

The baseline data were analyzed by descriptive statistics

The prevalence was obtained in percentages

Determinants of refractive errors were identified by multiple logistic regression

FINDINGS

The data collected from 508 lower primary school children were analysed using appropriate descriptive and inferential statistics.

Socio-personal variables included age, gender, religion, residence, age and educational qualification of father, occupation of father, age and educational qualification of mother, occupation of mother, monthly income, history of refractive error, heredity, reading habits, use of devices like TV, mobile phone and computer, dietary habits. Clinical variables included history of disease complicating pregnancy among mothers, preterm birth, history of neonatal jaundice, exposure to phototherapy and oxygen therapy during the neonatal period.

The results of the study were presented as follows.

Table 1: Frequency and percentage distribution of children based on socio-personal variable

(n=508)

Socio-personal variables	f	%
1. Age a. 6-8 years b. 9-11 years	307 201	60.44 39.56
2. Gender a. Male b. Female	256 252	50.40 49.60
3. Place of residence a. Municipality b. Panchayat	4 504	0.80 99.20
4. Refractive error among parents a. Present b. Absent	61 447	12 88

Among 508 lower primary school children 60.44% of the children belonged to the age group of 6-8 years and 50.40% of the children were males. Majority of children were resided in Panchayat. About 12% of the children had parent with refractive error, among that 2.80% of the children had a family history of refractive error among both parents.

(n=508)
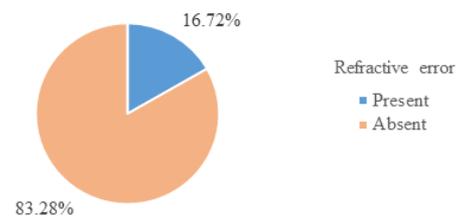
Figure 1

Prevalence of refractive errors among lower primary school children

The prevalence of refractive errors among lower primary school children was 16.72%. Among that 7.87% of them were old case of refractive error and 8.85% of them were new case of refractive error.

From the data collected from 508 lower primary school children using univariate analysis it could identify that 3 variables (age (6-8years), male gender and preterm birth) had significant association with refractive error and they were considered for multiple logistic regression.

Table 2: Multivariate analysis   **(n=508)**

Variable	χ^2	p value	OR	Adjusted OR	95% CI for adjusted OR	
					Lower limit	Upper limit
Age (6-8 years)	5.48	0.062	0.547	0.540	0.321	0.908
Male gender	9.31	0.006**	2.103	1.985	1.213	3.248
Preterm birth	11.84	0.003**	3.143	2.875	1.436	5.760

It is clear from table 2 that the adjusted odds ratio is greater than 1 with 95% CI for male gender and preterm birth. Preterm babies were 2.87 times risk for developing refractive error in the future than the term babies. Males were 1.98 times risk for developing refractive error than girls. Hence they were identified as determinants of refractive errors among lower primary school children. Age is not identified as a determinant.

CONCLUSION

The prevalence of refractive errors among lower primary school children in the present study was 16.72%. This finding was congruent with a cross sectional study conducted in Tamil Nadu which revealed 30.57% of 12 years aged children had refractive errors.[6] Similarly a higher prevalence was also obtained in a research study conducted in Rajasthan found that 24.6% of the school children were affected with refractive errors.[7] Whereas prevalence of refractive errors among 7 to 15 years aged children in Bangalore was lower (7.03%) than the present study findings.[8]

Present study findings revealed that male gender (p = 0.006) is a determinant of refractive error which is consistent with the findings of previous study conducted in Puducherry in which they found that there was a higher prevalence of refractive error among boys.[9] Different findings were also obtained in Haryana and Iran in which they found that refractive error was more among girls.[10,11] This findings was inconsistent with the present study findings.

The study findings revealed that preterm birth (p = 0.003) is a determinant of refractive error. This finding is strongly supported by a longitudinal research study conducted in Ludhiana[12] in which they found an inverse relationship between gestational age and incidence of myopia. While in United States researchers found that prevalence, magnitude, and rate of myopic progression all were significantly higher in severe retinopathy of prematurity group.[13] Both findings were congruent with the present study findings.

Prevalence of refractive errors among lower primary school children in Alappuzha district was high. It was inferred that preterm babies had 2.87 times risk for developing refractive error in the future than the term babies. Also it was found that males had 1.98 times risk for developing refractive error than girls. Experts recommend that children receive several eye exams before starting school. Infants should receive their first comprehensive eye exam around six months of age. Children should have an eye exam around age three, and again when they reach age five or six. Before reaching first grade, parents are strongly encouraged to have their children receive a full eye exam to make sure the child has no visual problems as they start elementary school.[14]

Conflict of Interest: There was no conflict of interest

Source of Funding : Self

Ethical Clearance : Ethical clearance was obtained from institutional ethics committee. Informed consent was obtained from parents and assent was obtained from lower primary school children.

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Effectiveness of Structured Teaching Programme Regarding Safety Precaution for Avoiding Home Accidents among Old Age People in Pahal, Khurda District, Odisha

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ABSTRACT

A quantitative approach and pre experimental research design was undertaken on 60 elderly persons selected by convenient sampling technique. The data was collected by using multiple choice close ended questionnaires through interview schedule. The collected data were analyzed by using descriptive and inferential statistics. Findings revealed that highest percentage of elderly 60% were in the age 60-65 years.55% belong to nuclear family and 57% old age people had previous home accidents. Area wise pretest & posttest knowledge score reveals that in post test highest mean score is 6.5±1.13 which is 65% whereas lowest mean score is 3.1±0.23 which is 76%. The highest effectiveness varies in mean percentage from 32% to 85%.The study findings reveal that there is highly significant difference in pretest and posttest knowledge scores which is obtained by paired 't' test. The chi square test was calculated and found that there is no significant association between demographic variables.

Keywords:- *Structured teaching programme(STP), Home accidents, Old age people*

INTRODUCTION

Injury among elderly people is usually associated with high morbidity and mortality, and is thus a public health concern. It requires longer hospitalization and more extensive medical attention, resulting in a greater health care burden. Lesage suggests that, in future elders' care is going to have a great impact on health care system. Nurses must give an evidence based care by process with outcome, implementation and communication of such measures will enhance nursing contributions to quality care. Safety means an action taken in advance to protect against possible danger, failure, or injury Safety is a major concern when working with or providing care to older adults[1]. Although older adults compose approximately 11% of the population, they account for approximately 23% of accidental deaths. Home injuries among people aged ≥60 years were about 8%; falls, poisoning, and choking/suffocation were the most common causes[2].

A report from the National Safety Council reveals that approximately 24,000 people older than 65 years die from accidental injuries each year, and at least 800,000 sustain injuries serious enough to disable them for at least 1 day. Falls, burns, poisoning, and automobile accidents are the most common safety problems among older adults. Falls are one of the most common geriatric syndromes threatening the independence of older persons. Between 30 and 40 percent of community-dwelling adults older than 65 years fall each year, and the rates are higher for nursing home residents[3]. Fall-related injuries are more common among older persons and are a major cause of pain, disability, loss of independence and premature death. Injuries are the sixth leading cause of death in adults of 65 years of age or more and falls are the leading cause of such injuries. Those over 65 years of age are most at risk, suffering both the highest mortality rate and the most severe injuries[4].

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With a growing number of older adults living independently, it's increasingly important to make sure that they're safe at home. Falls, burns, and poisonings are among the most common accidents involving older people[5]. According to *World Health Statistics 2011*, 83 million persons in India are 60 years of age and older, representing over 7% of the nation's total population. Over the next four decades, India's demographic structure is expected to shift dramatically from a young to an aging population resulting in 316 million elderly persons by 2050. The aging population is a sign of successful development in medical sciences and technology, living standards, and education, but the elderly also raise unique social, economic, and clinical challenges, including a growing demand for increasingly complex healthcare services[6].

An estimated 180 000 deaths every year are caused by burns – the vast majority occur in low- and middle-income countries. Non-fatal burn injuries are a leading cause of morbidity. Burns occur mainly in the home and workplace. Burns are preventable. In India, over 1 000 000 people are moderately or severely burnt every year. At age 65, people are twice as likely to be killed or injured by fires compared to the population at large. And with our numbers growing every year - in the United States and Canada, adults age 65 and older make up about 12 percent of the population - it's essential to take the necessary steps to stay safe.[7]

The incidence of domestic accidents was found to be 1.7%. The most common accident reported was fall. Occurrence of falls was found to be associated with age and overcrowding. Other accidents noted were burns, scalds, electrocution, injuries and accidental poisoning. Accidents were reported in significantly higher proportion in extreme age groups and in females. Higher proportion of accidents occurred during the morning and evening hours. About 10.1% were treated at home, 72.5% as outdoor patients and 17.4% as indoor patients. The mean duration of hospital stay was found to be 2 weeks. Full recovery was observed in 82.6% cases, whereas permanent disability was found in only 2.9% subjects, while 14.5% reported chronic pain after the accident[8].

OBJECTIVES

- To assess the level of knowledge regarding safety precaution to be followed by old age people in their home setting before intervention.

- To determine the effectiveness of structured teaching programme on knowledge regarding safety precaution to be followed by old age people in their home setting.

- To find out association between the pre-test knowledge score with selected socio demographic variables.

HYPOTHESIS:-

H1 - There would be a significant difference between pre-test and post-test knowledge scores among old age people.

H2: There would be significant association between pre test knowledge scores with selected demographic variable.

MATERIALS AND METHOD

A quantitative research approach was used for the study. Pre experimental design was adopted in the present study. In this design one group pre test post test was selected.

Level of phenomena before treatment X1= pre score	Intervention STP on safety precaution for avoiding home accidents	Level of phenomenon after treatment X2=post score

Intervention effect=X2-X1

Population & Setting: Old age people of rural community area Pahala, Khurda District, Odisha.

Sample: 60 old age people were undertaken for the study.

Sampling technique: Convinience sampling technique was used to collect the sample.

Development of research tool:

A structured knowledge questionnaire which includes close ended questionnaire in the form of multiple choice questions (MCQ) was developed in this study. The following steps were taken to develop the tools: Review of literature, opinion and suggestion from experts and the investigators own experience in the community field. The tools consist of the following:

Section- A: The first section of this tool includes questions on selected demographic data such as age, sex,

religion, educational qualification, occupation, type of family, previous knowledge regarding safety precaution for avoiding home accidents and history and type of home accidents.

Section B: It consists of structured closed ended questionnaire on knowledge regarding safety precaution for avoiding home accidents among old age people.

Table-1: Area wise distribution of multiple choice questions on safety precautions for avoiding home accidents.

Sl no.	Area	No of questions	Actual score
1	Introduction	06	06
2	Falling	10	10
3	Burn and scald injury	05	05
4	Accidental poisoning and drug overdose	05	05
5	Choking	04	04
	Total	**30**	**30**

Scoring procedure:

To assess the level of knowledge of old age people, there were four distractions given in each item, only single answer is correct and given score of 1 if correct and if wrong, score is 0.

The level of knowledge was grouped into items: Inadequate (0-10 scores), Moderately adequate(11-20 scores), Adequate(21-30 scores) based on knowledge scores.

Preparation of first draft of teaching package:

The first draft of STP was developed on the basis of information obtained during extensive literature review and objectives in blue print. The entire content was prepared as poster, flash card, flip chart and model.

Data collection procedure

The most important aspect of any investigation is collection of appropriate information which provides necessary data to answer the question raised in the study. Before collecting data administrative permission was sought from the Municipality Corporation of Pahala. With prior informed consent from each participant was obtained assuring them about the confidentiality of the information. Interview Schedule was used as method of collecting data. Using tool pre test was conducted. Same day structured teaching was given in the form of intervention. The investigator demonstrated the poster, flash card, flip chart and model. On 7th day knowledge was assessed by using the same tool. Post-test was conducted. All subject were very cooperative and the investigator expressed her gratitude for their cooperation.

RESULTS

Table 2: Distribution of subjects according to the Demographic variables   N=60

Demographic variables	Frequency (f)	Percentage(%)
Age (in years)		
60-65	36	60
66-70	16	27
71-75	8	13
Gender		
Male	36	60
Female	24	40

***Cont...* Table 2: Distribution of subjects according to the Demographic variables   N=60**

Religion		
Hindu	48	80
Muslim	7	12
Christian	5	8
Type of family		
Nuclear	33	55
Joint	27	45
Extended	0	0
Educational status		
Illiterate	12	20
Primary	24	40
Secondary	19	32
Higher Secondary & above	5	8
Occupational status		
Retired Govt.Employee	24	40
Businessman	3	5
Private sector	6	10
Unemployed	27	45
History of previous home accidents		
No	26	43
Yes	34	57
Previous Knowledge regarding safety precaution		
No	26	43
Yes	34	57

The findings revealed that the highest percentage (60%) of the elderly persons were in the age group of 60-65 years and were male. The highest percentage (45%) of the geriatric age group were unemployed. Majority (80%) among oldage people were Hindus and (40%) among them had primary level education. Majority (55%) of the old age people belongs to nuclear family. 57% old age people had previous home accidents and previous knowledge regarding safety precaution for avoiding home accidents.

Table-3: Data on frequency and percentage distribution of level of knowledge on pretest and post-test scores of old age people.   N=60

Level of knowledge	Knowledge Score(%)	Pre test		Post-test	
		Frequency	Percentage (%)	Frequency	Percentage (%)
Inadequate Knowledge	0-33	9	15	0	0
Moderately Inadequate Knowledge	34-66	51	85	9	15
Adequate knowledge	67-100	0	0	51	85

The knowledge level of old age persons shows that in pretest 15% elderly persons had inadequate knowledge, 85% had moderately adequate knowledge. In posttest majority 85% of the old age people had adequate knowledge and 15% had moderately adequate knowledge.

Table - 4: Area wise distribution of mean, standard deviation, mean percentage of pre test and post test knowledge scores of elderly persons regarding safety precaution for avoiding home accidents.

Area	Maximum score	Pre test			Post test			Difference in mean %
		Mean	Mean%	SD	Mean	Mean%	SD	
Introduction	6	3.3	55	±0.85	4.6	77	±0.52	22
Falling	10	5.8	58	±1.12	6.5	65	±1.13	7
Burn and scald injury	5	2.1	42	±0.69	3.9	78	±0.48	36
Accidental poisoning & drug overdose	5	1.6	32	±0.64	3.6	85	±0.48	53
Choking	4	1.7	43	±0.52	3.1	76	±0.23	33

Area wise distribution of mean, mean percentage and standard deviation on pre and post test knowledge score among old age people regarding safety precaution for avoiding home accidents reveals that highest effectiveness (53%) found for the area "accidental poisoning and drug overdose" due to the lowest pretest mean score (1.6±0.64) which is 32% whereas highest posttest mean score (6.5±1.13) which is 65% was for the area of "falling". The highest effectiveness varies in mean percentage from 32% to 85% for the area "accidental poisoning & drug overdose". Further, for all the other areas the difference in mean percentage reveals the effectiveness of structured teaching programme(STP).

Table 5. Comparison between difference of pre and posttest knowledge scores of the old age people.

Groups	Mean	Standard deviation	Mean difference	Paired 't' value	Table value (P≤0.05)
Pre test	14.5	± 3.82	7.2	t=17.6	2.00
Post test	21.7	± 2.84			

(df=99), (Table Value=2.00), (P< 0.05)

Paired 't' test was calculated to assess the significant difference between pre and post test knowledge scores which shows highly significant difference between score values of pre test and post test knowledge scores. Hence, the null hypothesis is rejected (P< 0.05) and the statistical hypothesis was accepted.

Table-6: Association between pretest knowledge scores of old age people regarding safety precaution for avoiding home accidents with demographic variables

Demographic variables	Chi- square value	Df	Table value	Level of significance
Age	3.73	6	12.59	Not Significant
Sex	0.18	2	5.99	Not Significant
Religion	0.82	4	9.49	Not Significant
Occupation	0.66	6	12.59	Not Significant
Educational status	0.99	6	12.59	Not Significant
Type of family	0.10	4	9.49	Not Significant
History of previous home accidents	0.06	2	5.99	Not Significant
Previous knowledge	0.09	2	5.99	Not significant

(P< 0.05)

It was found that there was no significant association between knowledge scores among old age people regarding safety precaution for avoiding home accidents in pre test when compared to age, sex, religion, occupation, educational qualification, type of family, history of previous home accidents and previous knowledge regarding safety precaution for avoiding home accidents.

DISCUSSION

The findings of the present study suggest that STP regarding safety precaution for avoiding home accidents people was effective to improve the knowledge of the old age people.

Highest percentage 60% of the old age people were in the age group 60-65 years and were male. 45% of the geriatric age group were unemployed and 40% among them had primary level education. Majority 55% of the old age people belong to nuclear family.57% old age people had previous home accidents and previous knowledge regarding safety precaution for avoiding home accidents.

In posttest majority 85% of the old age people had adequate knowledge and 15% had moderately adequate knowledge. The lowest difference in mean percentage was 7% for the area "falling" which has the highest post test mean score (6.5±1.13). The highest difference in mean percentage was 53% reveals that the STP was more effective for the area of 'accidental poisoning & drug overdose' due to the lowest pretest mean score (1.6±0.64).

In this study the findings revealed that highly significant difference between pre and post test score which shows the effectiveness of STP on knowledge regarding safety precaution for avoiding home accidents.

CONCLUSION

Environmental modifications like home modification prevents older persons from hidden fall hazards in daily activities at home.[9] As a nurse, I can encourage lifestyle and home environmental changes that older and their families can adopt. The risk of accidental injury in the home increases with age. Home accidents can lead to unnecessary pain and suffering and ultimately to increased dependency, yet so many of these accidents are preventable.[10]

IMPLICATION

Nursing Practice

- The content of the structured teaching programme will help the old age people to improve their knowledge on safety precautions.

- The teaching module can also be used in hospitals to improve the knowledge of other health personnel.

Nursing Education

- The study can stress on the significance of short term courses, workshops, seminars and inservice education to provide nurses with current knowledge.

- The nurse educators can use the STP to teach the students about home accidents and its prevention

- The findings will help the nursing faculty to give more importance for planning and organizing STP to improve the knowledge of students so that they can implement it in clinical practice.

Nursing Administration

1. With technological advances and ever growing challenges of nursing, the nurse administrators have responsibility to provide the nurses with substantive educational opportunities

2. Nursing administrator should plan and organize continuing nursing education, seminars and workshop on safety precaution for avoiding home accidents.

Nursing Research

1. The findings can be utilized as evidence based practice beneficial for community health nurses and staffs.

2. A large scale study can be done for replication to standardize the structure teaching programme

3. Use of research findings should become the part of quality assurance to enhance nursing profession as a whole.

RECOMMENDATIONS

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

- A similar study on a large sample may help to draw more definite conclusion and make generalization

- A similar study can be conducted in clinical setting.

- A comparative study can be conducted on knowledge of old age people by considering control group.

Ethical Clearance: Taken from Research Committee LJM College of Nursing.

Source of Funding: Self

Conflict of Interest Nil

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A Study to Assess the Impact of Pathological Jaundice on Development during Early Childhood at Selected Hospitals, Puducherry, India

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ABSTRACT

Infants are important vulnerable groups in the segment of population and they are the determinants of health of nation. The future of the country depends on the care given to children. Jaundice is considered pathologic if it presents within the first 24 hours after birth, the total serum bilirubin level rises by more than 5 mg per dL (86 mol per L) per day or is higher than 17 mg per dL (290 mol per L), or an infant has signs and symptoms suggestive of serious illness. The present study aimed to assess the development among infants affected with pathological jaundice at selected hospital in puducherry. A descriptive research design was used and the study was carried out, 300 infants affected with pathological jaundice during newborn life were selected as the study sample using convenient sampling technique. The tools used for the data collection included newborn assessment tool, ages and stages questionnaire. Ages and stages questionnaire is a standardized questionnaire used worldwide to assess the development of children at all level of ages. Newborns with pathological jaundice were assessed for their growth. The newborns were followed during their regular visit to well-baby clinic, there development were assessed at 1 months (early infancy)and again at 12 months(late infancy) .On association between the early and late infants development, it was found that there was improvement in development between them which stated that there was impact of pathological jaundice on the development during early infancy whereas during late infancy they caught with the normal development showing improvement in overall domains. As per the statistical result, the calculated chi-square value was significant at 0.01 level (p<0.001).

Keywords: *Infants, Pathological jaundice, development.*

INTRODUCTION

Hyperbilirubinemia is very common and usually benign in the term newborn infant and the late preterm infant at 35 and 36 completed weeks' gestation. Critical hyperbilirubinemia is uncommon but has the potential for causing long-term neurological impairment. Early discharge of the healthy newborn infant, particularly those in whom breastfeeding may not be fully established, may be associated with delayed diagnosis of significant hyperbilirubinemia. Guidelines for the prediction, prevention, identification, monitoring and treatment of severe hyperbilirubinemia are presented [1]. Kernicterus – the pathological finding of deep-yellow staining of neurons and neuronal necrosis of the basal ganglia and brainstem nuclei. Acute bilirubin encephalopathy – a clinical syndrome, in the presence of severe hyperbilirubinemia, of lethargy, hypotonia and poor suck, which may progress to hypertonia (with opisthotonos and retrocollis) with a high-pitched cry and fever, and eventually to seizures and coma. Chronic bilirubin encephalopathy – the clinical sequelae of acute encephalopathy with athetoid cerebral palsy with or without seizures, developmental delay, hearing deficit, oculomotor disturbances, dental dysplasia and mental deficiency [2]. ABO isoimmunization may cause severe hyperbilirubinemia, most commonly in blood group A or B infants born to a mother of group O **(3).** The prevention, detection and management of jaundice in term and late preterm newborn infants remains a challenge [3–5]. Sixty per cent of term newborns develop jaundice, and 2% exceed a TSB concentration of 340 μmol/L [4]. The incidence of acute encephalopathy is much lower, recent data [5] suggesting an incidence of approximately one per 10,000 live births; the incidence

of chronic encephalopathy has been estimated to be between one per 50,000 live births and one per 100,000 live births [6-7]. Acute encephalopathy does not occur in full-term infants whose peak TSB concentration remains below 340 μmol/L and is very rare unless the peak TSB concentration exceeds 425 μmol/L; above this level, the risk for toxicity progressively increases [8].

Statement of the problem

A study to assess the impact of pathological jaundice on development during early childhood.

Objectives of the Study

1. To assess the development of infants (at 1 month) affected with pathological jaundice with regard to communication development, gross motor development, fine motor development, and problem solving and personal-social development.

2. To assess the development of infants (at 12 months) affected with pathological jaundice with regard to communication development, gross motor development, fine motor development, and problem solving and personal-social development.

3. To associate the development between 1 month and 12 months infants.

METHOD AND MATERIALS

The study was conducted at selected hospitals in Pondicherry. The sample sizes for the study were 300 infants who had neonatal jaundice (pathological).

Descriptive research design was used for the study, convenient sampling technique was used. Neonates with pathological jaundice were selected and they were followed during their regular visit to well-baby clinic. The development of them were assessed at 1month and at 12 months of age using the ages and stages questionnaire the tools consists of two section

Section A: 1. Neonatal assessment tool: There were 7 variables such as gender of the baby, birth weight, length ,cause of jaundice, severity of jaundice, head circumference and exchange transfusion, among them the physical parameters such as length /height, weight and head circumference had three classifications as sub normal, normal, and above normal.

Section B. Ages and stages questionnaire: The instrument consisted of 30 items with 90 responses expected from the early and late infants. Each question item had three optional answers as yes, sometimes and not yet. Scores must be evaluated (YES = 10, SOMETIMES =5, NOT YET =0) and added and recorded in each area total. The total area scores were considered to determine the appropriate follow-up. If the infant's scores were above the cutoffs (white area in bar graph), it indicated that the child appeared to be doing well (adequate) in those areas at that time. Score in the monitoring zone (light gray shading) i.e., close to the cutoffs indicated the child appeared to be at moderate level and should be rescreened in those areas. Scores below the cutoffs (dark shading) indicated that the child appeared to be at inadequate level that may need further assessment in those areas.

Table 1: Assessment of new-born   **N=300**

Variables		No of newborns	%
Gender of the Baby	Male	140	46.7
	Female	160	53.3
Birth Weight	<2500 gm	70	23.3
	2501–3000 gm	100	33.3
3001–4000 gm >4001 gm	110	36.7	
	20	6.7	

***Cont...* Table 1: Assessment of new-born**   **N=300**

Exchange Transfusion	Not done(phototherapy given)	80	26.7
	Done once	160	53.3
Done twice	60	20.0	
Length of the Baby	Sub Normal (<45 cm)	110	36.7
Above normal (>50 cm)	Normal (45–50 cm)	90	30.0
	100	33.3	
Cause of Jaundice	Abo incompatibility	170	56.7
Unknown etiology	Rh incompatibility	70	23.3
	60	20.0	
Severity of Jaundice	Mild (15–20 mg %)	70	23.3
Severe (Above 25 mg %)	Moderate (21–25 mg %)	140	46.7
	90	30.0	
Head circumference	Sub Normal (<33 cm)	120	40.0
	Normal (33–35 cm)	100	33.3
	Above normal (>35 cm)	80	26.7

The data presented in table 1 shows that majority 160 (53.3%) were female, 110 (36.7%) newborns were between 3001–4000 gm, 160 (53.3%) received exchange transfusion once, 110 (36.7%) had subnormal length, 170 (56.7%) had ABO incompatibility, 140 (46.7%) had moderate jaundice, 120 (40%) had subnormal head circumference.

Table 2: Development of early and late infants affected with pathological jaundice.   N=300

		Early infants(1month)		Late infants(12 months)	
		Number	**Percentage**	**Number**	**Percentage**
Communication	Inadequate	40	13.3	0	0
	Moderate	110	36.7	60	20.0
	Adequate	150	50.0	240	80.0
Gross Motor	Inadequate	80	26.7	0	0
	Moderate	70	23.3	40	13.3
	Adequate	150	50.0	260	86.7

***Cont...* Table 2: Development of early and late infants affected with pathological jaundice.   N=300**

Fine motor	Inadequate	60	20.0	0	0
	Moderate	60	20.0	40	13.3
	Adequate	180	60.0	260	86.7
Problem solving	Inadequate	20	6.7	0	0
	Moderate	10 0	33.3	20	6.7
	Adequate	180	60.0	280	93.3
Personal-social	Inadequate	50	16.7	0	0
	Moderate	100	33.3	40	13.3
	Adequate	150	50.0	260	86.7

The data presented in table 2 shows 150 infants had adequate communication and gross motor development. 180 had adequate fine motor development, 180 had adequate problem solving development and 150 had adequate personal social development. With regard to development of infants at 12 months, 240 had adequate communication, 260 had adequate gross motor development 260 had adequate fine motor development. With regard to problem solving, 280 had adequate development and 260 adequate had adequate personal social development.

Table 3: Development of early and late infants showing mean value   N=300

Development of early infant Mean		Early Infant				Late Infant			
		SD	F-value	P Value	Mean	SD	F-value	P Value	
Commun-ication	Inadequate	16.25	4.20	732.858	0.001 (P<0.01)	0	0	368.237	0.001 (P<0.01)
	Moderate	31.82	3.87			27.50	3.85		
	adequate	48.00	6.02			44.79	6.70		
	Total	**37.83**	**12.38**			**41.33**	**9.32**		
Gross Motor	Inadequate	36.88	4.99	485.527	0.001 (P<0.01)	0	0	345.803	0.001 (P<0.01)
	Moderate	44.29	1.76			28.75	4.20		
	adequate	52.67	3.60			46.73	5.89		
	Total	**46.50**	**7.67**			**44.33**	**8.35**		
Fine motor	Inadequate	30.83	4.53	546.480	0.001 (P<0.01)	0	0	274.094	0.001 (P<0.01)
	Moderate	38.33	2.38			36.25	2.19		
	adequate	50.28	4.57			49.81	5.10		
	Total	**44.00**	**9.09**			**48.00**	**6.67**		

***Cont...* Table 3: Development of early and late infants showing mean value   N=300**

Problem solving	Inadequate	20.00	0.00	272.977	0.001 (P<0.01)	0	0	87.452	0.001 (P<0.01)
	Moderate	33.50	3.92			35.00	0.00		
	adequate	46.11	7.00			48.21	6.31		
	Total	**40.17**	**9.89**			**47.33**	**6.93**		
Person-al-social	Inadequate	30.00	0.00	419.472	0.001 (P<0.01)	0	0	235.953	0.001 (P<0.01)
	Moderate	39.50	2.71			30.00	0.00		
	adequate	49.00	5.56			47.31	7.12		
	Total	**42.67**	**8.25**			**45.00**	**8.87**		

P<0.01 Significant

P>0.01 Not Significant

The data presented in table 3 shows, in communication the mean score was 37.83 with standard deviation 12.38, gross motor showed mean value 46.50 with standard deviation 7.67, fine motor showed mean value 44.00 with standard deviation 9.09, problem solving showed mean value 40.17 with standard deviation 9.89 and the personal-social development showed mean value 42.67 with standard deviation 8.25.Regarding development among late infants, in communication, the mean was 41.33 with standard deviation 9.32 ,gross motor showed mean value 44.33 with standard deviation 8.35,,fine motor showed mean value 48.00 with standard deviation 6.67,,problem solving showed mean value 47.33 with standard deviation 6.93 ,,Personal-social showed mean value 45.00 with standard deviation 8.87.

CONCLUSION

The study found that on association of development among early and late infants, the difference was found to be statistically significant, which made the group comparable. This showed that pathological jaundice had affected the development of early infants, which showed significant difference in the development among the early infants. On association between the early and late infants development, it was found that there was improvement in development between them which stated that there was impact of pathological jaundice on the development during early infancy whereas during late infancy they caught with the normal development showing improvement in overall domains. As per the statistical result, the calculated chi-square value was significant at 0.01 level (p<0.001).

Conflict of Interest: Nurse need to obe attentive to children's growth and development because children .

In this context, the nurses need to play a vital role to promote optimum growth and development. As nurses play a role of teacher, facilitator, counselor and guide in providing health services in the hospital and community, she is the key person to promote child health.

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