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Indian Journal of Anatomy	Quarterly	8500	8000	664	625
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Indian Journal of Cancer Education and Research	Semiannual	9000	8500	703	664
Indian Journal of Communicable Diseases	Semiannual	8500	8000	664	625
Indian Journal of Dental Education	Quarterly	5500	5000	430	391
Indian Journal of Diabetes and Endocrinology	Semiannual	8000	7500	597	560
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Journal of Microbiology and Related Research	Semiannual	8500	8000	664	625
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Journal of Orthopedic Education	Triannual	5500	5000	430	391
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Indian Journal of Biology	Semiannual	5500	5000	430	391
Indian Journal of Library and Information Science	Triannual	9500	9000	742	703
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Awareness and Attitude Regarding Cirrhosis of Liver among Arts and Science College Students

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Abstract

Introduction: Cirrhosis is a complication of many liver diseases characterized by abnormal structure and function of the liver. The diseases that lead to cirrhosis do so because they injure and kill liver cells, after which the inflammation and repair that is associated with the dying liver cells cause scar tissue to form. The liver cells that do not die multiply in an attempt to replace the cells that have died. This results in clusters of newly formed liver cells (regenerative nodules) within the scar tissue. *Objective of the study:* To assess the existing awareness and attitude regarding cirrhosis of liver among arts and science college students. *Methods:* The research design adopted for this study was Non-experimental descriptive correlation design, with the sample size of 40 students studying in Padmashree institute of management and sciences, Bengaluru. The sampling technique used was probability simple random sampling technique. The tool used were section - A Socio-demographic Performa of the arts and science college students, section - B structured knowledge questionnaire regarding cirrhosis of liver and Section - C Likert's attitude scale regarding cirrhosis of liver. Data was analyzed by using Descriptive and inferential statistics. *Results:* The sample of 40 was assessed regarding their awareness and attitude regarding cirrhosis of liver, in awareness majority of the students had inadequate awareness 22 (55%). Regarding the attitude level, 19 (47.5%) had neutral attitude. *Conclusion:* The results reveal that maximum number 22 (55%) of them were having inadequate awareness regarding cirrhosis of liver, 18 (45%) of them have moderate adequate awareness regarding cirrhosis of liver and none of them have adequate awareness regarding cirrhosis of liver. Among total 40 majority 19 (47.5%) have neutral attitude (50-75), 15 (37.5%) have favorable attitude (>75) and only 6 (15%) have unfavorable attitude (<50) regarding Cirrhosis of liver.

Keywords: Awareness; Attitude; Cirrhosis of liver

Introduction

Cirrhosis is the seventh leading cause of death by disease, killing about 25,000 people each year globally. Also, the cost of cirrhosis of liver in terms of human suffering, hospital costs, and lost productivity is high, majority of the patients land up in hospitalization with one or the other complications such as esophageal varices, hepatic encephalopathy, portal hypertension, bleeding and kidney disorders [1]. WHO estimates that there are 140 million people with alcoholism worldwide. WHO's Global Alcohol database (1996) has been used to estimate the worldwide patterns of alcohol consumption and allow comparisons of alcohol-related morbidity and mortality. The burden of alcohol-related disease is the highest in the developed world as well as in developing regions, where it may account for as much as 9.2% of all disability-adjusted life years [2]. Although several factors have been implicated in the aetiology of cirrhosis, alcohol consumption is considered the major causative factors. Countries with the highest incidence of cirrhosis have the greatest per capita consumption of o alcohol. Cirrhosis is the 10th leading cause of death among young and middle-age adults. Approximately 10,000 to 24,000 deaths from cirrhosis may be attributable to alcohol consumption each year, according to the National Institutes of Health [3].

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Aims of the study

To assess the existing awareness and attitude regarding cirrhosis of liver among arts and science college students.

Material and Methods

Setting

The study was conducted in Padmashree Institute of management and sciences, Bengaluru.

Population

The target population of the study was comprised of all students studying in Padmashree Institute of management and sciences, Bengaluru.

Criteria for sample selection

Inclusion criteria:

It includes the drivers who:

1. Students age between 18-25 years, male students.
2. Students who are willing to participate in the study.
3. Students who can speak English.
4. Students who are available at the time of data collection.

Exclusion criteria:

It excludes the:

1. Students who have undergone teaching programme on cirrhosis of liver.
2. Students whose family members have experienced cirrhosis of liver.

Sampling technique

Simple random sampling technique by using lottery method was used to select the sample.

Description of tools

The tools consist of the following sections.

Section A: Background variables are age in years, religion, course of study, father's occupation, monthly income, place of residence, have you heard about cirrhosis of liver, if yes specify sources of information.

Section B: Structured knowledge questionnaire was used to assess awareness regarding cirrhosis of liver among arts and science college students.

Scoring Interpretation

Scoring key was prepared for section B, score "1" was awarded to correct response and "0" for wrong response in all items. Thus a total score of 28 were allotted to interpret the level of knowledge of drivers, the score were categorized as,

a) <50% - Inadequate knowledge

b) 50-75% - Moderate knowledge

c) >75% - Adequate knowledge

Section C: Likert attitude scale was used to assess attitude of arts and science college students on cirrhosis of liver.

Scoring Interpretation

In section C, for positive questions score of 3 for agree, score of 2 for uncertain agree, 1 for disagree. For negative question 3 for disagree, 2 for uncertain agree, 1 for agree. Thus total score of 36 were allotted. To interpret the level of attitude of driver, the score were categorized as:

a) <50% - Unfavorable attitude

b) 50-75% - Neutral attitude

c) >75% - Favorable attitude

Results

Table 1: Description of demographic variables among arts and science college students

S. no.	Demographic characteristics	Categories	Frequency	Percentage
1.	Age in years	Below 20 years	12	30
		21-25 years	22	55
		Above 25 years	6	15
2.	Religion	Hindu	37	92.5
		Christian	-	-
		Muslim	3	7.5
		Others	-	-

3.	Course of study	Undergraduate	17	42.5
		Postgraduate	23	57.5
4.	Father's occupation	Agriculture/business /selfemployee	17	42.5
		Govt.employee	5	12.5
		Private employee	12	30
		Daily wages	6	15
5.	Family monthly income in rupees	< 10,000	6	15
		10,001-15,000	9	22.5
		15,001-20,000	17	42.5
		20,001-25,000	4	10
		Above 25,000	4	10
6.	Place of residence	Urban	14	35
		Semiurban	10	25
		Rural	16	40
7.	Have you heard about cirrhosis of liver?	Yes	4	10
		No	36	90
8.	If yes, specify sources of information	Relatives	-	-
		Magazine	-	-
		Newspaper	-	-
		Media	4	10

Table 2: Distribution of arts and science college students according to the level of awareness regarding cirrhosis of liver.

S. no	Level of awareness	Frequency	Percentage
1	Inadequate (<50%)	22	55
2	Moderately adequate awareness (50-75%)	18	45
3	Adequate (>75%)	-	-
	Over all	40	100

Table 3: Range mean and SD of knowledge regarding Cirrhosis of liver among arts and science college students.

S. no.	Aspects of knowledge	Max score	Knowledge			
			Range	Mean	SD	Mean %
1.	Awareness regarding general information about Cirrhosis of liver	3	0-3	1.925	0.77	41.67
2.	Awareness regarding types and causes of Cirrhosis of liver	4	0-3	1.85	1.051	46.25
3.	Awareness regarding sign and symptoms and diagnostic evaluation of Cirrhosis of liver	6	0-5	2.425	1.64	40.41
4.	Awareness regarding management of Cirrhosis of liver	9	0-5	3.4	1.343	37.78
5.	Awareness regarding prevention of Cirrhosis of liver	6	0-6	2.575	1.216	42.92
	Over all	28	3-18	12.55	6.02	44.82

Table 4: Distribution of arts and science college students according to level of attitude regarding Cirrhosis of liver.

S. No.	Level of attitude	Frequency	Percentage
1	Unfavorable attitude(<50)	6	15
2	Neutral attitude (50-75)	19	47.5
3	Favorable attitude (>75)	15	37.5
	Over all	40	100

Table 5: Range mean and SD of attitude regarding Cirrhosis of liver among arts and science college students

n=40

S. no.	Attitude	Max score	Range	Mean	SD	Mean %
1.	Over all attitude	36	21-33	25.28	4.94	70.22

Table 6: Correlation between Awareness and attitude regarding Cirrhosis of liver among arts and science college students

n = 40

S. no	Variables	Attitude	
		r	p-value
1	Awareness	0.54**	p<0.001

Note: **-denotes significant at p<0.001.

Table 7: Outcomes of Chi-square analyses for association between awareness regarding cirrhosis of liver of arts and science college students with their demographic variables.

n = 40

S. no	Demographic characteristics	Categories	Sample (n=40)	Level of awareness				Chi-square value	p-value
				Inadequate		Moderate & adequate			
			F	%	F	%	F	%		
1.	Age in years	Below 20 years	12	30	4	18.18	8	44.44	3.8812 df=2, NS	p<0.05
		21-25 years	22	55	15	68.18	7	38.88		
		Above 25 years	6	15	3	13.63	3	16.66		
2.	Religion	Hindu	37	92.5	22	95.65	15	88.23	0.7751, df=3, NS	p<0.05
		Christian	-	-	-	-	-	-		
		Muslim	3	7.5	1	4.34	2	11.76		
		Others	-	-	-	-	-	-		
3.	Course of study	Under graduate	17	42.5	7	31.81	10	55.55	2.2827, df=1, NS	p<0.05
		Post graduate	23	57.5	15	68.18	8	44.44		
4.	Father's occupation	Agriculture/ Bussinessman/self employee	17	42.5	10	47.61	7	36.84	3.2375 df=3, NS	p<0.05
		Govt. employee	5	12.5	4	19.04	1	5.26		
		Private employee	12	30	5	23.80	7	36.84		
		Daily wages	6	15	2	9.52	4	21.05		
5.	Family monthly income	< 10,000	6	15	2	9.52	4	21.05	3.4118 df=4, NS	p<0.05
		10,001-15,000	9	22.5	7	33.33	2	10.52		
		15,001-20,000	17	42.5	8	38.79	9	47.36		
		20,001-25,000	4	10	2	9.52	2	10.52		
		Above 25,000	4	10	2	9.52	2	10.52		
6.	Place of residence	Urban	14	35	8	34.78	6	35.29	0.3946, df=2, NS	p<0.05
		Semi urban	10	25	5	21.73	5	29.41		
		Rural	16	40	10	43.47	6	35.29		
7.	Have you heard about Cirrhosis of liver?	Yes	4	10	4	18.18	-	-	3.63, df=1, NS	p<0.05
		No	36	90	18	81.88	18	100		
8.	If yes, specify sources (n=4)	Relative	-	-						
		Magazine	-	-						
		Newspaper	-	-						
		Media	4	100			4	100		

Note: S-significant (p<0.05), NS-Not significant (p>0.05).

Table 8: Outcomes of Chi-square analysis for the association between attitude regarding cirrhosis liver with selected demographic variables of arts and science students. n = 40

S. no	Demographic characteristics	Categories	Sample (n=40)	Level of Attitude				Chi-square value	p-value
				Inadequate		Moderate & adequate			
			F	%	F	%	F	%		
1.	Age in years	Below 20 years	12	30	3	50	9	26.47	1.5567 df=2, NS	p<0.05
		21-25 years	22	55	2	33.33	20	58.82		
		Above 25 years	6	15	1	16.67	5	14.70		
2.	Religion	Hindu	37	92.5	5	83.33	32	94.12	0.855, df=1, NS	p<0.05
		Christian	-	-	-	-	-	-		
		Muslim	3	7.5	1	16.67	2	5.88		
		Others	-	-	-	-	-	-		
3.	Course of study	Under graduate	17	42.5	5	83.33	12	35.29	4.8162, df=1, NS	p<0.05
		Post graduate	23	57.5	1	16.67	22	64.71		
4.	Father's occupation	Agriculture/ Bussinessman/self employee	17	42.5	2	33.33	15	44.12	2.2376 df=3, NS	p<0.05
		Govt. employee	5	12.5	1	16.67	4	14.71		
		Private employee	12	30	1	16.67	11	29.41		
		Daily wages	6	15	2	33.33	4	11.76		
5.	Family monthly income	< 10,000	6	15	1	16.67	5	14.71	0.8868, df=4, NS	p<0.05
		10,001-15,000	9	22.5	1	16.67	8	23.53		
		15,001-20,000	17	42.5	2	33.33	15	38.24		
		20,001-25,000	4	10	1	16.67	3	8.82		
		Above 25,000	4	10	1	16.67	3	8.82		
6.	Place of residence	Urban	14	35	1	16.67	13	38.24		p<0.05
		Semi urban	10	25	4	66.67	6	17.65		
		Rural	16	40	1	16.67	15	44.12	6.540, df=2, NS	
7.	Have you heard about Cirrhosis of liver?	Yes	4	10	1	16.67	3	8.82	0.3486, df=1, NS	p<0.05
		No	36	90	5	83.33	31	91.18		
8.	If yes, specify sources (n=4)	Relative	-	-						
		Magazine	-	-						
		Newspaper	-	-						
		Media	4	100			4	100		

Note: S-significant (p<0.05); NS-Not significant (p>0.05).

Discussion

In the present study it is evidence that regarding age wise distribution shows that the all majority of the subject 22 (55%) belongs to 21-25 years, with reference to religion majority of the subjects 37 (92.5%) belongs to Hindu religion. In context with course of study majority 23 (57.5%) are studying postgraduate course, with regards to the father's occupation majority 17 (42.5%) of the subjects have agriculture/business/selfemployee. In regards to family income per month majority 17 (42.5%) of the subject have family monthly income of Rs. 15,001-20,000. With regards to place of residence majority 16 (40%) are living in the rural area. Regarding whether they have heard of cirrhosis of liver majority 36 (90%) have not heard of cirrhosis of liver.

Similar study was conducted (Dae Won Jun et al.) A study of the awareness of chronic liver diseases among Korean adults. A survey of chronic liver disease involving a total of 2,794 respondents was conducted. The respondents included patients and their guardians, visitors for health check-ups, and online pollees who completed a questionnaire on the awareness of fatty liver or chronic liver disease. Of the entire cohort, 854 (39.7%) said they have had or still have fatty liver or an elevated transaminase level (>40 IU/L), but only 23.4% of the respondents had visited a hospital. It was found that 35% of healthy subjects and 45% of patients and their guardians misunderstood hepatitis B as the hereditary disease. Furthermore, 26% of the subjects responded that patients with inactive hepatitis B do not require regular follow-up. While

17.9% answered that it is not too late to test for liver cancer when symptoms arise, 38.8% believed that liver transplant in liver cancer patients has a low success rate and is thus not recommended. The study concludes that despite the inundation of information and widespread media advertising, the awareness of chronic liver disease is unsatisfactory among Korean adults [4].

Conclusion

The result of the current study confirmed that students of arts and Science College had inadequate awareness regarding cirrhosis of liver with neutral attitude; there was a positive correlation between awareness and attitude. The study recommend that the students need counseling, education and awareness programme, interactive learning sessions, self instructional module, etc.to disseminate the awareness and attitude regarding cirrhosis of liver.

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Conflict of Interest: None Declared

Ethical permission: obtained from institution ethical committee and patient consent was obtained

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Original Article

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Assessment of Knowledge on Breast Cancer among Antenatal Mothers at Mamandur Rural Health Centre, Kancheepuram District

M. Hemamalini[1], Tamilselvi[2], Ogu Glory Adaugo[3]

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Abstract

Breast cancer is a major public health issue and most commonly diagnosed for women worldwide. Breast cancer accounts for 22.9% of all cancer in women. It is estimated nearly 1.7 million new cases of cancer occurred worldwide in 2012. This represents about 12% of new cancer cases and 25% of all cancers in women. The objective of the study was to assess the level of knowledge on breast cancer among antenatal mothers. The study was conducted at mamandur SRM rural health centre, Kancheepuram district. A total of 50 samples were selected using non-probability purposive sampling technique. The tool used for the study comprises of 2 sections, section A- Demographic Data (which includes: age, religion, type of family, educational status, area of residence, income) and section B- a structured questionnaire developed by the investigator which indicates 25 questions to assess the level of knowledge on breast cancer among antenatal mothers. The findings of the study revealed that 32 (64.0%) of antenatal mothers had inadequate knowledge, 18 (36.0%) of antenatal mothers had moderate knowledge and none of them are having adequate knowledge. Therefore adolescent girls and women of all age group must be able to recognise the signs and symptoms of breast lump to facilitate rapid identification and transport of patient to the hospital.

Keywords: Breast cancer; Knowledge; antenatal mothers; diagnosis; referral.

Introduction

Breast cancer is a leading cancer among the women worldwide with more than 5, 40,000 new cases each year. Over 40% of these cases are in the developing countries. Breast cancer is the second leading cause for death worldwide and fifth most common cancer in India. According to the population based tumour registry cell of the Indian medical research in New Delhi, breast cancer constitutes about 12% of all cancers detected in Delhi and about 24% of all cancer in women. Breast cancer is the most common invasive cancer in females worldwide. It accounts for 16% of all female cancers and 22.9% of invasive cancers in women. 18.2% of all cancer deaths worldwide, including both males and females are from breast cancer.

Breast cancer rates are much higher in developed nations compared to developing ones. There are several reasons for this, with possibly life expectancy being one of the key factors- breast cancer is more common in elderly women; women in the richest countries live much longer than those in the poorest nations. The different lifestyles and eating habits of females in rich and poor countries are also contributory factors, experts believe.

According to the National Cancer Institute, 232,340 female breast cancers and 2,240 male cancers are reported in the USA each year, as well as about 39,620 deaths caused by the disease.

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Antenatal mothers who will be exposed to direct education on breast cancer and breast self-examination have the capacity to teach the breast self-examination to others in ways that are satisfying to them. The nurse might be the best source to health to such antenatal mothers. This chain reaction is promising and there may be a group of women who are equipped for early detection of breast cancer and who are capable of influencing and training other women about self-examination. This type of education by the nurse can spread health messages much faster in the community.

Breast cancer is a major public health issue and most commonly diagnosed for women worldwide. Breast cancer accounts for 22.9% of all cancer in women. It is estimated nearly 1.7 million new cases of cancer occurred worldwide in 2012. This represents about 12% of new cancer cases and 25% of all cancers in women. Breast cancer is hormone related, and the factors that modify the risk of this cancer when diagnosed premenopausal and when diagnosed postmenopausal are not the same.

National cancer institute (2010) [16] reported that 13.2% of women in US will develop breast cancer. Breast cancer is a growing problem in India with estimates as high as1 in 22 women predicted to develop the disease, while the breast cancer rate much higher in the united states 1 in 8 women. Environment health stated that Canadian researchers found that certain jobs especially those that bring the human body into contact with possible carcinogens and endocrine disrupters are linked to a higher risk of developing breast cancer.

Global cancer statistics (2016) indicate that United States, India and china account for almost one third of the global breast cancer burden. Persistent efforts over 40-50 years in the US have resulted in a large proportion of women presenting in early stages and there has been a consistent decrease in the death rates due to breast cancer, even though the incidence of breast cancer is rising steadily.

World health organisation (2016), breast cancer is the most common cancer among women worldwide, claiming the lives of hundreds of thousands of women each year and affecting countries at all levels of modernization.

Shekhar Salkar (2010) said that one case per day is been recorded and it is the highest in India, it is 35 cases per one lakh population in Goa as against 23.3% in Delhi, 21.9% in Chennai and 21.1% in Mumbai. The incidence is found to be the highest among affluent and literates and different minorities in different states for a variety of reasons.

Dr Rebecca H. Johnson (2015) said that breast cancer in young women is a significant issue, 7% of all female cancer is diagnosed in women under 40 years age. Young women with breast cancer face significant and unique challenges, including a higher likelihood of biologically aggressive treatment and long term treatment related toxicities and unique psychosocial concerns.

P.K. Julka (2011) reported that breast cancer has overtaken cervical cancer to become the leading site of cancer in metro cities and is expected to double with the relative proportion ranging from 21.7%-28.7%. A recent study of breast cancer risk in India revealed that 1 in 28 women develop breast cancer during her life time. This is higher in urban areas being 1 in 22 in life time compared to rural areas.

Prevention is better than cure but no one knows the exact cause of breast cancer or how to prevent it. Since 90% of breast cancer are discovered by self-breast examination. Breast examination is a free cost health practice and it can be practice and it can be practiced by both young and old women. Most women are rejecting.

Medical care if they have lump in the breast because women are unwilling to show their breast to others, even health provider.

Recent studies show there is a need to increase knowledge of antenatal mothers about the risks of breast cancer and early detection. Lack of knowledge about this might have been due to insufficient education programs for breast health awareness.

Research Methodology

Quantitative approach and descriptive research design was adopted for the present study. The variables included for the study were study variable and demographic variables. Knowledge on breast cancer was the study variable and the demographic variables comprises of Age, religion, type of family, socio-economic status, income, area of residence, number of pregnancies, educational status. The study was conducted at SRM primary health centre mamandoor, Kancheepuram district. Population of the study includes antenatal mothers who came for antenatal check-up in SRM primary health centre mamandoor, Kancheepuram district. Population of the study includes antenatal mothers who came for antenatal check-up in SRM primary health centre mamandoor, Kancheepuram district. Total sample size was 50 who fulfilled the inclusion criteria. Non probability purposive sampling technique was adopted.

Description of the Data Collection Tool

The tool consists of 2 parts.

Section A

Structured questionnaire to elicit the demographic variables consists of age, religion, type of family, socio-economic status, income, area of residence, number of pregnancies, educational status.

Section B

A structured Questionnaire was used to assess the knowledge of breast cancer among antenatal mothers who came for antenatal check-up at SRM rural health centre mamandoor. The tool consisted of 25 questions regarding breast cancer, meaning, risk factors, clinical manifestation, screening, management and prevention of breast cancer.

The content of the tools were established on the basis of opinion of the community health nursing experts. Suggestions were given and they were incorporated in the tool to proceed for data collection.

Reliability of the tool to assess the level of knowledge on breast cancer among antenatal mothers was established by using re- test method and its correlation coefficient r- value is 0.82. This correlation coefficient is very high and hence considered reliable or assessing the level of knowledge on breast cancer among antenatal mothers in mamandoor.

Ethical Consideration

The study was approved by dissertation committee of SRM college of Nursing, SRM University, kattankulathur kancheepuram district. Permission was obtained from the Dean in charge, SRM college of Nursing and informed consent was obtained from each participant for the study before starting data collection. Assurance was given to the subjects that anonymity of each individual would be maintained and they are free to withdraw from the study at any time.

Data Collection Proceedure

The investigator collected data at SRM rural health centre mamandoor, kancheepuram district according to the inclusion criteria and the investigator explained the objectives and method of data collection. Data collection was done within the period of one week. The data was collected during the day time. Self-introduction about the researcher and details about the study was explained to the samples and their content was obtained. The level of knowledge on breast cancer among antenatal mothers was assessed using the tools. The confidentiality about the data and finding were assured to the participants. The participants took 20 min to complete the tool and their cooperation was imperative. Descriptive and inferential statistics were used to analyse the collected data. Both descriptive and inferential statistics were used to analyse the data collected.

Results

Table 1: Frequency and Percentage distribution of demographic variables among antenatal mothers. N=50

Demographic variables		N	%
Age	19 -25 years	31	62.0%
	26 -30 years	18	36.0%
	31 -35 years	1	2.0%
Religion	Christian	4	8.0%
	Hindu	42	84.0%
	Muslim	4	8.0%
Type of family	Nuclear	26	52.0%
	Joint	24	48.0%
Educational status	Primary	14	28.0%
	High school	32	64.0%
	Higher secondary	2	4.0%
	Graduate	2	4.0%
Number of Pregnancy	One	16	32.0%
	Two	19	38.0%
	Three	11	22.0%
	>Three	4	8.0%
Area of residence	Urban	18	36.0%
	Rural	32	64.0%
Income	Rs 1590 -Rs 4726	21	42.0%
	Rs 4727 -Rs 7877	24	48.0%
	Rs 7878 -Rs 11876	5	10.0%
Socio-economic Status	Lower	11	22.0%
	Lower middle	20	40.0%
	Upper lower	4	8.0%
	Upper middle	15	30.0%

Table 1 depicts the frequency and percentage distribution of demographic variables among antenatal mothers.

Table 2: Frequency and percentage distribution of the level of knowledge on breast cancer among antenatal mothers N=50

Level of knowledge	No. of women	%
Inadequate	32	64.0%
Moderate	18	36.0%
Adequate	0	0.0%
Total	50	100.0%

Table 2 reveals that 64% of the antenatal mothers are having inadequate knowledge, 36% of the mothers are having moderate knowledge and none of them are having adequate knowledge

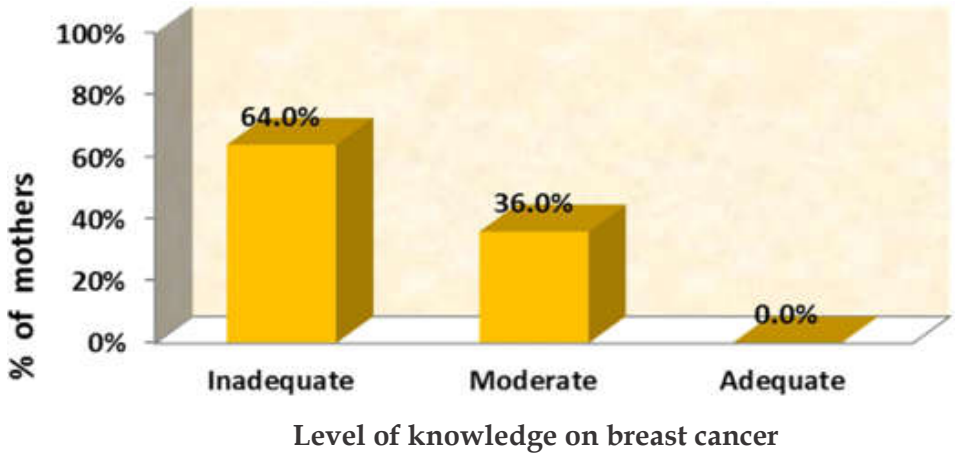

Fig. 1: Percentage distribution of level of knowledge on breast cancer among antenatal mothers.

Table 3: Association between the level of knowledge on breast cancer among antennal mothers N=50

Demographic variables		Level of knowledge on breast cancer				Total	Chi square test
		Inadequate		Moderate			
		N	%	n	%		
Age	19 -25 years	25	80.6%	6	19.4%	31	X^2 =10.43 p=0.01** Significant
	26 -30 years	7	38.9%	11	61.1%	18	
	31 -35 years	0	0.0%	1	100.0%	1	
Religion	Christian	2	50.0%	2	50.0%	4	X^2=0.55 p=0.75
	Hindu	27	64.3%	15	35.7%	42	Not significant
	Muslim	3	75.0%	1	25.0%	4	
Type of Family	Nuclear	17	65.4%	9	34.6%	26	X^2=0.05 p=0.83
	Joint	15	62.5%	9	37.5%	24	Not significant
Educational Status	Primary	11	78.6%	3	21.4%	14	X^2=8.43 p=0.04*
	High school	21	65.6%	11	34.4%	32	Significant
	Higher secondary	0	0.0%	2	100.0%	2	
	Graduate	0	0.0%	2	100.0%	2	
Number of Pregnancy	One	12	75.0%	4	25.0%	16	X^2=1.61 p=0.65
	Two	12	63.2%	7	36.8%	19	Not significant
	Three	6	54.5%	5	45.5%	11	
	>Three	2	50.0%	2	50.0%	4	
Area of Residence	Urban	8	44.4%	10	45.6%	18	X^2=4.66 p=0.03* Significant
	Rural	24	75.0%	8	25.0%	32	
Income	Rs 1590 -4726	12	57.1%	9	42.9%	21	X^2=3.26 p=0.19 Not significant
	Rs 4727 -7877	15	62.5%	9	37.5%	24	
	Rs 7878 -11876	5	100.0%			5	
Socio-Economic Status	Lower	8	72.7%	3	27.3%	11	X^2=1.32 p=0.72
	Lower middle	11	55.0%	9	45.0%	20	Not significant
	Upper lower	3	75.0%	1	25.0%	4	
	Upper middle	10	66.7%	5	33.3%	15	

Table 3 reveals that there was significant association of knowledge with age, education and area of residence at p< 0.05 level

Discussion

The study reveals that the level of knowledge on breast cancer among antenatal mothers in SRM rural health centre mamandoor, among 50 samples 32 (64%) antenatal mothers have inadequate knowledge, 18 (36%) antenatal mothers have moderate knowledge and none of the antenatal mothers have adequate knowledge on breast cancer.

Similar study conducted by AR Isara and CI Ojedokun [2011] on knowledge of breast cancer and practice of breast self-examination among female senior secondary school students in Abuja, Nigeria. Two hundred and eighty seven students participated in the study. Their mean age was 16.5 Â±1.4 years. A greater proportion of respondents 163 (56.8%) had poor knowledge of breast cancer while 217 (75.6%) had poor knowledge of breast self-examination. Only 114 (39.7%) of the respondents knew that being a female was a risk factor for breast cancer and the least known risk factor were obesity and aging. The major source of information for breast cancer and BSE among the respondents was the mass media. Only 29 (10.1%) of respondents had practiced breast self-examination. Knowledge of breast self-examination was significantly associated with practice. This study revealed that female secondary school students have poor knowledge of breast cancer. A good proportion of them knew that breast self-examination could be used as a screening method for breast cancer but only few had practiced breast self-examination

The study finding was also supported by the study conducted by N.K. Irurhe [2012] [10] on knowledge and awareness of breast cancer among female secondary schools students in Nigeria. The study was a cross-sectional survey amongst students of three secondary schools in Nigeria. Each respondent was given a self-administered questionnaire. 194 (97%) heard of breast cancer before, 61 (30.5%) mentioned radio/television as the first source of information, Knowledge of respondents was low. In conclusion majority of the respondents had heard of breast cancer but the knowledge and understanding of the disease was very low.

Considerable health education or campaigns is needed to increase the public's awareness on breast cancer.

Conclusion

In conclusion, the present study findings revealed that majority 32 (64%) samples had inadequate knowledge and none of them had adequate knowledge and it was also found that significant association was established between the knowledge with age, educational status and urban area of residence.

However, breast cancer education will not be effective if directed only towards antenatal mothers. Therefore, individuals from adolescent to adult age group must be able to recognise the signs and symptoms of breast cancer to facilitate identification and transport of the patient to the hospital. Future studies are needed which focus on community surveys including both rural and urban populations. Efforts should be made to educate the public about breast cancer so that people can make more rational and beneficial health care decisions.

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Original Article

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Variation in Vitamin E Levels between Day and Night Shift Nursing Staff of Indoor Patient Wards

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Abstract

Context: The only staffs that are present always in any hospital, with or without the presence of other staff, are the nursing staff. Obviously, nursing staff are the backbones of hospitals. To perform duties properly, they should maintain physical and mental wellbeing, because any deterioration of their health would, in turn, affect the health of the patients they are attending to. So, assessment of the health of nursing staff is essential. *Aims:* Assessment of health of nursing staff can be done in many ways, for example, by measurement of status of the important antioxidant, vitamin E. So, aim of the work described here was to evaluate whether there was any change in serum vitamin E levels in nursing staff of different shifts, and if so, to determine the degree of significance in the change. *Settings and Design:* The study included sixteen nursing staff from the day shift, and age and sex-matched sixteen staff from the night shift, from the indoor patient departments. *Methods and Material:* Serum vitamin E levels were assayed in all subjects. *Statistical analysis used:* Comparison of two groups was undertaken using SPSS. *Results:* Serum vitamin E levels were significantly decreased in night shift nursing staff with respect to those of day shift. *Conclusions:* The results suggest that decrease of vitamin E levels in serum may be related to night shift duty and stress. Vitamin E may be considered as a useful biomarker of antioxidant status in night shift duty and stress, and can help in monitoring and possible remedial strategy.

Keywords: Nursing staff; stress; vitamin E.

Introduction

Nursing staff are the backbone of hospitals who are present always, regardless of the presence or absence of other staff. Naturally, the health of the nursing staff affects their performance and therefore, indirectly, the health of the patients they attend to. Health of the staff can be assessed in various ways, and vitamin E is a very important parameter in this regard.

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Of many components, vitamin E has commanded the most interest because of its availability, overall health impact and central role in preventing oxidation at the cellular level [1]. Oxidative stress can result from or be enhanced by a large variety of conditions including strenuous physical activities. While many enzymes and compounds are involved in protecting cells from the adverse effects of oxidative stress, vitamin E occupies an important and unique position in the overall antioxidant defense [2]. Vitamin E, a potent peroxyl radical scavenger, is a chain-breaking antioxidant that prevents the propagation of free radical damage in biological membranes [3].

Some studies have showed unequivocalor no significant relationship between vitamin E levels and oxidative stress [4,5]. Also there is a paucity of data available in the literature regarding serum vitamin E levels in nursing staff, particularly from

our country. So, the aim of the work described here was to evaluate whether oxidative stress was accompanied by change in serum vitamin E levels, and if so, to determine the degree of significance in the change.

Subjects and Methods

Duration of the present study was nine months. Before enrollment of the subjects, all the participants gave their written consent to take part in this investigation. The study included sixteen nursing staff from the day shift, and age and sex-matched sixteen staff from the night shift, from the indoor patient departments. Complete history and physical examination of all subjects were undertaken. Exclusion criteria included smokers, those suffering from systemic or other diseases affecting immune system or any malignancy, febrile illness, kidney and liver dysfunction, participants who had cholestasis, unusual dietary habits, acute or chronic infections and malabsorptive syndromes. Lastly, subjects having oral supplements or drugs-containing vitamin E during the past six months and topical application of vitamin E during the preceding one month were excluded. The study was approved by the Institutional Ethical Committee.

Venous blood sample were collected from all subjects. All samples were coded and assayed in a blind fashion by an investigator who was unaware of the participant's group. Serum vitamin E levels were assayed using Hahim and Schuttringer's method [6]. Comparison of the groups was undertaken. Statistical analysis of data was performed using SPSS (Statistical Package for Social Sciences) software version 20 (IBM, New York, USA), and inferences were drawn. A value of $p < 0.05$ was considered to be statistically significant.

Results

The age of patients ranged from 31 to 57 years.

Confidence interval: The mean of Group One minus Group Two equals 121.00 95% confidence interval of this difference: From 27.34 to 214.66 Intermediate values used in calculations:

t = 2.6385

df = 30

standard error of difference = 45.860

Serum vitamin E levels were significantly decreased in group two with respect to those of group one.

Table 1: Serum levels of vitamin E (in micrograms/dl) in the subjects

Group	One (day shift)	Two (night shift)
Mean	1284.00	1163.00
SD	149.00	107.00
SEM	37.25	26.75
N	16	16

Serum vitamin E levels were significantly decreased in group two with respect to those of group one.

Discussion

Stressful stimuli can disrupt the physiological homeostasis, and inability to cope with such aversive inputs has widespread deleterious effects on the biological system [7].

Exposure to such stressors can evoke responses like anorexia, hypertension, etc [8].

Obviously, stress affects the performance of humans. Free radicals are produced in the central nervous system during restraint stress, and the free radicals might be responsible for such stress-induced behavior [9]. Stress itself causes neurotoxic damage through reactive radical species and inthis way could affect synaptic plasticity anddendritic morphology [10]. A causal relationship has been found between cellular oxidative stress, regulation of anxiety and emotional stress [11].

As free radicals are scavenged by antioxidants, the role of antioxidants like vitamin E are important in stress pathophysiology. The major function, if not the only function, of vitamin E, is that of a peroxyl radical scavenger. The importance of this function is to maintain the integrity of long-chain polyunsaturated fatty acids in the membranes of cells and thus maintain their bioactivity [12]. Tocopherol then breaks and terminates the chain (and is itself converted to tocopheroxyl radical, which is relatively stable), thus breaking the chain reaction. The tocopheroxyl radical reacts with another peroxyl radical to form inactive products [13]. Vitamin E has been shown to be beneficial by its antioxidant role in various diseases [14,15].

Levels of vitamin E might be important in stress, and therefore indirectly, in performance. In our study serum vitamin E levels were significantly decreased in nurses and staff of night shift (group two) with respect to those of day shift (group one).

Restraint stress has been found to reduce levels of antioxidants like superoxide dismutase and catalase and increase levels of free radical-induced lipid peroxidation products like

malondialdehyde [16,17]. It is well documented that antioxidants can remove the reactive oxygen species and reactive nitrogen species through scavenging radicals and suppressing the oxidative stress pathway, which further protect against neuronal damage caused oxidative or nitrosative stress sources in the brain, hopefully resulting in remission of depression or anxiety symptoms [18].

We hypothesized that due to increased stress at night, the nurses and staff of night shift had decreased antioxidant levels compared to their counterpart staff of day shift.

This study has limitations that must be considered. The number of subjects in the study groups was not large. Thus, care must be taken in extrapolating the present findings to other populations. Hence, results of our study might not reflect the true picture of the population as a whole. Probably, a multicentric study on a larger population would be better in revealing the actual statistics. Also, subjects were taking a number of medications (other than those mentioned in our exclusion criteria) for various reasons not related to our study. However, these drugs do not affect serum vitamin E levels.

Despite these limitations, we believe that our study points towards using vitamin E as an important, promising antioxidant marker for stress. As our findings point to a decrease in the antioxidant vitamin E, the problem of oxidative stress in night shift should also be further investigated in a larger number of patients, and other markers of oxidative stress and antioxidants should be assessed.

The results of our study suggest that depletion of vitamin E levels in serummay be related to night shift duty and stress. Vitamin E may be considered as a helpful biomarker of antioxidant status in night shift duty and stress and might be used for monitoringand possible remedial strategy measures.

Conclusion

The results of our study suggest that depletion of vitamin E levels in serum may be related to night shift duty and stress. Vitamin E may be considered as a helpful biomarker of antioxidant status in night shift duty and stress and might be used for monitoring and possible remedial strategy measures.

Key Messages

Assessment of health of nursing staff is essential. Serum vitamin E was assayed and found significantly decreased insixteen nursing staff from day shift compared to night shift. This may be related to stress. Vitamin E may be auseful biomarker of antioxidant status for night shift duty and stress.

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Comparitive Study on Effectiveness of Nurse Led Intervention on Psychosocial problems among Institutionalized Elderly

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Soney M. Varghese. Comparitive Study on Effectiveness of Nurse Led Intervention on Psychosocial problems among Institutionalized Elderly. Community and Public Health Nursing. 2019;4(1):21-23.

Abstract

Introduction: Ageing is a global phenomenon. India is no exception to this demographic transition. The problems and issues of its greying population occupy the back seat. It is projected that the proportion of Indians aged 60 and older will rise from 7.5% in 2010 to 11.1% in 2025. Ignoring their needs and rights and leaving them unaddressed can pose a great threat to our social development. (Mane Abhay B, 2016). *Methodology:* A quantitative approach with experimental pretest, posttest design was used. Hundred samples were collected by convenience sampling technique as per inclusion criteria and divided them into experimental and control groups. Validity and reliability of tools were obtained. Nurse Led Intervention was administered to the experimental group and post test was done. After posttest Nurse led interventions were administered to control group to avoid ethical issues. Both descriptive and inferential statistics were used for data analysis. *Result:* Post test result indicated that the mean post test scores were significantly reduced than the mean pre- test score ($p<0.001$). The findings of the present study highlight the fact that the Nurse Led Intervention was highly significant to reduce psychosocial problems among institutionalized elderly. *Conclusion:* Study findings provide initial evidence for the feasibility, acceptability, and sustained effects of the nurse-led intervention in improving outcomes, reducing use of expensive health services, and improving psychosocial health of elderly.

Keywords: Psychosocial problems; Elderly.

Introduction

Today there is an urgent need to include elderly friendly provisions in all governmental schemes and programs because their life span and their share in national population has increased remarkably. Ignoring their needs and rights and leaving them unaddressed can pose a great threat to our social development agenda. Forty-three out of 100 elderly people in India are victims of psychological problems due to loneliness, and other relationship issues, a new study has said. Based on the feedback from 50,000 older persons across the country during the months of June and July this year, the study by Age well Foundation revealed almost half of the elderly population was not taken care of by their families

Need for the Study

Forty-three per cent older persons are facing psychological problems due to loneliness, relationship issues. It was also observed that more than 45 per cent elderly claimed that their family members do not care for their needs and interests. The reduction in fertility level, reinforced by steady increase in the life expectancy has produced fundamental changes in the age structure of the population, which in turn leads to the aging population. The needs and

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problems of the elderly vary significantly according to their age, socio-economic status, health, living status and other such background characteristics. Various studies have been conducted to analyze the health and related issues associated with old age, which needs further exploration. So the researcher took up this present study to assess the effect of Nurse Led Intervention on psychosocial problems for the institutionalized elderly.

Methodology

The study has been approved by the ethical committee of Malankara Orthodox Syrian Christian Medical College Hospital, Kolanchery, Ernakulam, Kerala, India. Permission was obtained from the concerned authorities of selected old age homes. Hundred samples were selected from the old age homes based on the inclusion criteria like elderly Residing in old age homes, In the age group of 60-80years, able to verbalize their feelings and follow the commends and instructions, with physical problems, Period of stay less than 5 years. Exclusion criteria's were Who is completely paralyzed, Bed bound for more than 6 months, Having severe psychosocial problems, With visual and auditory impairment, Who are terminally ill. After fulfilling the criteria divided them into experimental and control group with 50 samples in each group. The researcher visited the old age homes and met the care takers and explained about the study and their willingness to participate in the study was sought. Informed consent was obtained from the care takers and samples and confidentiality of the results were assured.

Assessed the demographic characteristics of the institutionalized elderly population like age, gender, educational status, monthly income, marital status, physical health status, duration of stay in old age homes, reason for institutionalization by using 10 structured questions. By using structured questionnaire assessed the psychosocial problems of the institutionalized elderly by using 3 point rating scale. The elderly in the experimental group received nurse led intervention program consisting of forty minutes and two sessions per week for 8 weeks. Weekly follow up was carried out. The program included laughter therapy, and Structured teaching programme for the management of psychosocial problems. The post test was carried out by the elderly after the intervention. The data analysis plan included both descriptive and inferential statistics in the form of frequency percentage, mean, standard deviation and Paired 't' test.

Results

Study findings are organized and presented under following sections:

Secttion A: Demographic characteristics of institutionalized elderly.

Secttion B: Comparison of Nurse Led Intervention on psychosocial problems among institutionalized elderly in experimental and control group.

Secttion - A: Demographic Characteristics of Institutionalized Elderly

With regard to age majority (44%) of the institutionalized elderly persons were between 60 and 70 years. Majority (56%) of the institutionalized elderly persons were male. Majority (50%) only could read and write. Very few (10 to 14%) had completed 8 to 10 years of schooling. Regarding income 48% of the institutionalized elderly had no income (26%) had Rs. 2000/- as income. Regarding marital status, (46%) were unmarried, 50% were widow and widowers and only 4% were divorced. Regarding physical health status, 62% had complaints of one or the other physical health problem. Majority of institutionalized elderly (52%) were staying for less than a year and 1-3 years. Majority (72%) of them came to old age home due to lack of care by family members. And 28% came to old age home due to conflicting relationship with family.

Section - B

Table 1: Psychosocial problems among the institutionalized elderly before & after nurse led intervention in control and experimental group (n = 100)

Psycho social problems	Control Group				Experimental Group				Independent t test
	Pre Test		Post Test		Pre Test		Post Test		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Depression	8.32	1.634	8.34	1.624	8.34	1.624	6.34	1.573	
Loneliness	5.96	1.399	5.98	1.378	5.98	1.378	4.06	1.038	
Isolation	4.48	1.165	4.52	1.129	4.52	1.129	2.74	.922	
Anxiety	4.96	1.384	4.98	1.392	4.98	1.392	3.12	1.1000	
Neglect	7.74	1.175	7.76	1.188	7.76	1.188	5.86	1.030	
Lack of confidence	3.86	1.125	3.84	1.131	3.84	1.131	2.28	.927	
Loss of memory	2.86	0.351	2.88	0.328	2.88	.328	1.64	.631	

Table 1 shows the mean difference of psychosocial problems in pretest and posttest among those who received intervention and the mean difference was statistically significant at p value 0.001.

Nurse led intervention was effective in reducing psychosocial problems among elderly.

Discussion

Researcher examined the effect of a Nurse led intervention program on the psychosocial health of the Institutionalized elderly. The results showed that the mean score of psychosocial problems significantly decreased in the experimental group after the intervention, indicating the positive effect of intervention on the participants of this group (p=0.001). Study findings were supported by a study conducted by Maureen Markle-Reid et al. in 2014, states that of the 142 participants, 56% had clinically significant depressive symptoms, with 38% having moderate to severe symptoms. The interprofessional nurse-led intervention was feasible and acceptable to older home care clients with depressive symptoms. It was effective in reducing depressive symptoms and improving HRQoL. The intervention also reduced anxiety. Significant reductions were observed in the use of hospitalization, ambulance services, and emergency room visits over the study period.

Conclusion

To conclude Elderly are experiencing physical problems. Nurse led intervention is significantly effective in reducing physical problems among the institutionalized elderly.

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To Assess the Knowledge Regarding Management of Fever among Mothers of Under Five Children

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Abstract

Health of the children has been considered as the vital importance to all societies because children are the future resources of mankind. Children are future citizens of our country. *Statement of Problem:* A descriptive study to assess the knowledge regarding management of fever among mothers of under five children in Amala institute of medical sciences & Research center, Thrissur. *Objectives:* To assess the knowledge of mothers of under-five regarding fever management, To find out association between level of knowledge and selected demographic variables, To prepare an information leaflet on fever management. The research approach adopted for this study is non experimental quantitative approach. The research design selected for this study is descriptive design. Population in this study consisted of mothers having children below five years of age sample in this study consisted of 50 mothers of under five children who were admitted in pediatric wards and OPD of Amala Institute of Medical Sciences. Convenient sampling was adopted for the study. *Results:* 2% of mothers were found to have very good knowledge. 27% of mothers having good knowledge. 21% of mothers having average knowledge. From the findings, it is found that there are association with income and usage of thermometer and knowledge of mothers. No association with selected demographic variables such as age, birth order, type of family. Nurse educators should continuously update their knowledge with latest research findings and provide health education programmes to mothers.

Keywords: Fever, Mothers, Knowledge

Introduction

Health of the children has been considered as the vital importance to all societies because children are the future resources of mankind. Due to developing immunological system and poor sense of hygiene among the children they are prone tomany infections. The main primary symptom in any infection is fever. If any disease occur the first and for most symptom is increase in temperature. Fever is condition in which an increase in average body temperature of 98.6^0 C. Fever in children is one of the most common manifestations of an illness. Fever occurs when various infections and non infectious processes interact with the host's defense mechanism.

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Need and Significance

A child is precious not only to parents, family, community & nation but also to the world at large. So mother's knowledge on care of children greatly influences the health status of the child by reducing the mortality and the morbidity rate

Statement of Problem

A descriptive study to assess the knowledge regarding management of fever among mothers of under five children in Amala institute of medical sciences & Research center, Thrissur.

Objectives

- To assess the knowledge of mothers of under-five regarding fever management.
- To find out association between level of knowledge and selected demographic variables.
- To prepare an information leaflet on fever management.

Assumptions

Mothers have a little knowledge regarding management of fever.

Hypothesis

There is a significant association between knowledge regarding fever management among under five mothers with the selected demographic variables.

Materials and Methods

Research Approach

The research approach adopted for this study is non experimental quantitative approach.

Research Design

The research design depicts the overall plan for organization of scientific investigation. The research design selected for this study is descriptive design.

Population

Population is a set of people or entities to which the results of a research are to be generalized. Population in this study consisted of mothers having children below five years of age.

Sample and Sample Size

It is the process of selecting a part of assigned population to represent the entire population. The sample in this study consisted of 50 mothers of under five children who were admitted in pediatric wards and OPD of Amala Institute of Medical Sciences.

Sampling Technique

Convenient sampling was adopted for the study. Samples are selected from the pediatric wards and OPD.

Sampling Criteria

Inclusion Criteria

- Mothers having children five years of age.
- Mothers who are attending pediatric OPD and wards.

Exclusion Criteria

- Mothers who are not willing to participate in the study
- Mothers who can't read or write English or malayalam

Data Collection Tool

A structured questionnaire on fever & its management was used for the collection of data.

Questionnaire was divided into 2

I. Demographic variables

II. A structured knowledge questionnaire on fever and its management.

The questionnaire consist of 25 questions. The scoring was done in such a way that correct score carries one mark and for wrong response 0.

Criteria Measures

0-5 - Very poor

6-10- Poor

11-15- Average

16-20- Good

21-25- Very good

Data Collection Procedure

After getting permission from the management of Amala hospital, data was collected using questionnaires from mothers of under five children in pediatric wards and OPD of Amalahospital. Data collection for period of 3 days. After self introduction, nature and objectives of the study was explained to the samples. Concern was taken. Questionnaires was given and samples were asked to fill the questionnaire according to the instructions given. At the end of successful data collection, to enhance their knowledge an information leaflet on fever management was distributed to the samples. Later we conveyed gratitude to all participants who cooperated for the study.

Pilot Study

Pilot study is a primary research conducted to test the elements of design before commencement of an actual full scale project.

In order to test the feasibility and practicability of tool, pilot study was conducted in mothers of under five children who were admitted in pediatric wards and OPD of Amala Hospital, Thrissuron 24/7/18. The average time taken for the study was 25 minutes. The reliability of tool is checked and 'r' value is 0.93.

Data Analysis

Data collected were analyzed and interpreted using descriptive statistics. Tables, diagrams are used to represent the data. The study findings are discussed in three sections.

Section 1: Analysis of demographic variables

Section 2: Analysisof knowledge of mother regarding fever management

Section 3: Association between knowledge of mothers and demographic variable

Section 1: Analysis of Demographic Variables

Table 1: Distribution of subjects according to age

N=50

Sl. No	Age	Frequency	Percentage (%)
1	20-25	17	34%
2	26-30	20	40%
3	>30	13	26%

Table 2: Distribution of subjects according to Religion N=50

Sl. No	Religion	Frequency	Percentage(%)
1	Hindu	20	40%
2	Muslim	13	26%
3	Christian	17	34%

Table 3: Distribution of subjects according to education N=50

Sl. No	Education	Frequency	Percentage(%)
1	Primary	2	4%
2	Secondary	8	16%
3	Degree	34	68%
4	Post Graduate	6	12%

Table 4: Distribution of subjects according to type of family

N=50

Sl. No	Type of Family	Frequency	Percentage
1	Nuclear family	21	42%
2	Joint family	29	58%

Section 2: Analysis of Knowledge of Mothers Regarding fever Management

Fig. 1: Distribution of subjects according to knowledge of mothers

Impression: Majority of subjects 54% having good level of knowledge,42%have average knowledge and only 4% have very good knowledge.

Section 3: Association between Selected Demographic Variables and Knowledge of Mothers

Table 5: Association between age and knowledge of mothers

Sl. No	Age in Year	Average	Good	Very Good	X^2	Table Value
1	20-25	6	9	1	2.275	9.49
2	26-30	8	12	0		
3	>30	6	7	1		

Table 5 shows that calculated value is < table value, so there was no association between age and knowledge of mothers.

Table 6: Association between income and knowledge of mothers

Sl. No	Income	Average	Good	Very Good	X^2	Table Value
1	<10000	11	10	0	16.66	12.52
2	10000-15000	8	9	0		
3	15000-20000	0	6	0		
4	>20000	1	3	2		

Table 6 shows that calculated value is > table value, so there is association between income and knowledge of mothers.

Table 7: Association between birth order and knowledge of mothers

Sl. No	Birth Order	Average	Good	Very Good	X^2	Table Value
1	1	7	11	1	6.725	12.59
2	2	11	14	0		
3	3	3	1	1		
4	4	0	1	0		

Table 7 shows that calculated value is < table value, so there was no association between birth order and knowledge of mothers.

Table 8: Association between type of family and knowledge of mothers

Sl. No	Type of Family	Average	Good	Very Good	X^2	Table Value
1	Nuclear family	8	13	0	1.97	5.99
2	Joint family	13	14	2		

Table 8 shows that calculated value is < table value , so there was no association between type of family and knowledge of mothers.

Table 9: Association between usage of thermometer and knowledge of mothers

Sl. No	Usage of Thermometer	Average	Good	Very Good	X^2	Table Value
1	Present	12	12	1	9.64	9.49
2	Absent	9	15	1		

Table 9 shows that calculated value is > table value, so there is association between usage of thermometer and knowledge of mothers.

Findings of the Study

Findings of the Study are Presented in the Following:

Association between selected demographic variables and knowledge of mothers from the findings, it is found that there are association with income and usage of thermometer and knowledge of mothers. No association with selected demographic variables such as age, birth order, type of family.

Recommendations

- A similar study can be conducted using large sample.
- The duration of study could be increased.
- Appropriate instructions could be planned to solve the limitations.
- Emphasize should be given on multi disciplinary supervision.
- A comparative study with control group can be done in order to have a better precision and accuracy in the findings.

Limitations

- The study was only to the mothers who came to the outpatient and inpatient department of Amala Institute of Medical sciences.

Nursing Implications

The present indicates that the mothers have average knowledge about management of fever. The study serves as a guiding point towards identifying the level of knowledge and the demographic variables. The implications of this study were discussed under the following headings:-

Nursing Education

An effective education to mothers will enlighten their knowledge regarding the fever management. Special interest should also to be taken to educate young mothers about the importance of fever management and prevention of febrile seizures. Nurse educators should continuously update their knowledge with latest research findings and provide health education programmes to mothers.

Nursing Administration

- Adequate provision can be made by the nursing administrators to provide education to young mothers.
- Administrative support should be provided to staff nurses to implement health education programmes.
- Efficiency of the health education programmes has to be ascertained and suitable modifications can be brought about in content and plan of the programmes.

Nursing Practice

In general clinical settings and in child health settings nurse can take the initiative to assess and provide health education about the management of fever.

Nursing Research

Fever occurs most commonly in under five children. They are more prone to get infections. So there is a wide opportunity to conduct research on the management of fever. The nurse researcher can conduct the study in a large population setting. The findings from the study can be utilized while providing care in the pediatric settings.

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Knowledge on Obesity among Mothers of School Going Children

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Abstract

Childhood obesity is a serious medical condition that affects children and adolescents. Children who are obese are above the normal weight for their age and height. Obesity is a condition in which an individual is above the normal weight for his/her age and height. Obesity in children termed as childhood obesity. The more weight is gained by excessive fat accumulation which impairs health and leads to various body functioning disorders like thyroid diseases, diabetes, etc. If Body mass index (BMI) is more than 85%, will be considered as overweight and if it is above 95% it will be considered as the individual is obese.

Keywords: Obesity; Childhood; Body mass index; height; Weight.

Introduction

Childhood obesity is a serious medical condition that affects children and adolescents. Children who are obese are above the normal weight for their age and height [1].

Childhood obesity is particularly troubling because the overweight often start children on the path to health problems that were once considered adult problems — diabetes, high blood pressure and high cholesterol. Many obese children become obese adults, especially if one or both parents are obese. Childhood obesity can also lead to poor self-esteem and depression [1].

Obesity is a condition in which an individual is above the normal weight for his/her age and height. Obesity in children termed as childhood obesity. The more weight is gained by excessive fat accumulation which impairs health and leads to various body functioning disorders like thyroid diseases, diabetes, etc. If Body mass index (BMI) is more than 85%, will be considered as overweight and if it is above 95% it will be considered as the individual is obese [3].

Children obese, overweight, or healthy, doctors use a scale called the body mass index or BMI. The BMI of a person is the measure of body weight relative to their height. It uses a formula to determine whether a person is underweight, normal, overweight or obese. For children, the scale uses an age and sex-specific measure called "BMI-for-age". Doctors use BMI-for-age growth charts made by the U.S. Centre for Disease Control and Prevention to track the growth of a child as per their age. The charts use a percentile system to show how your child's BMI compares with the other children in their age group [2].

The BMI of children and teens are classified as:

- 5^{th} to 84^{th} percentile – Healthy weight
- 85^{th} to 94^{th} percentile – Overweight
- 95^{th} percentile or higher – Obese

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What the numbers mean is that if a child is in the 85th percentile, he is heavier than 85 percent of the children of his age and is overweight. If he is in the 95th percentile, he is obese [2].

Statistics sourced from the Indian Journal of Endocrinology and Metabolism: (A.) Somewhere between 5.74 percent and 8.82 percent of schoolchildren in India are obese. (B.) In urban south India, 21.4 percent boys and 18.5 percent girls aged 13-18 are either overweight or obese.

Worldwide, in the year 2000, the International Obesity Task Force (IOTF) declared about 10 percent of children aged 5-17 (about 155 million) were overweight, out of which two to three per cent (30 to 45 million) were obese. Among the reasons for childhood obesity were ubiquitous [4].

World Health Organization (WHO) has resolved to ensure that there is no increase in levels of obesity by the year 2025, based on obesity prevalence in the year 2010. Between 2000 and 2013, the Global Burden of Disease collaborative collected data on obesity trends from 184 WHO member countries. Researchers at the World Obesity Federation, United Kingdom used this data to extrapolate the prevalence of obesity in 2025. They found that worldwide, in the next eight years [5], around 268 million children and adolescents between the ages of 5 and 17 years are likely to weigh on the heavier side, of which 91 million are likely to be obese. These figures take into account current governmental policies and lifestyle habits. In addition, by the year 2025, around 12 million children are likely to suffer from glucose intolerance, 4 million children could develop type 2 diabetes, 27 million children could be diagnosed with high blood pressure, and 38 million children are likely to develop liver disease [4].

Material and Methods

Qualitative approach and descriptive survey Design was adopted for the study. The variables studied are study variable and demographic variables. The study variable was Knowledge on obesity among mothers of school going children (6 to 12 Yrs), where as the demographic variables includes: Age, Gender, Religion, Number of Children, Educational Status of Mother, Occupation, Income per Month, Body mass index. The study was conducted at Pediatric out patients department at Hindu Mission Hospital, Kancheepuram Dist. The accessible population constitutes of 6 to 12 Yrs who attended the pediatric out patients department in Hindu Mission Hospital. The sample size for the present study was 30. Non probability purposive sampling technic was adopted to select a sample for the study. The inclusion criteria include:

1. Mothers who are having school going Children (6-12) years
2. Willing to participate in the study.
3. Children between (6-12) years who attended pediatric outpatient department at Hindu Mission Hospital.

Exclusion Criteria

1. Children who were malnourished (Under Weight).
2. Mother's who are not willing to participate in this study.

The Tools used for the data collection was structured questionnaires developed by the investigator which consists of 2 sections.

Section A

Demographic data which consists the item for obtaining information about the selected backgrounds factors such as age, sex, Religion, Number of Children, Educational Status of Mother, Occupation, Income per Month, Body mass index.

Section B

Structured Questionnaires developed by the investigator was used to assess the knowledge on obesity. A structured questionnaires consists of 20 statements in 5 aspects, obesity, diet, exercise, treatment, prevention.

The study was approved by ethical committee of Hindu Mission Hospital and Hindu Mission College of Nursing. The investigator explains the objectives and method of data collection. Data collection was done within the given period of one week in Hindu Mission Hospital. The data collection was done during the day time self introduction about the researcher and details about study was explained to the samples and the consent was obtained. The confidentiality about the data finding was assured to participants. The participants to 15 minutus to complete the tool and their cooperation were good. The collected data was coded and statistical analysis was done.

Results

Table 1: Distribution of demographic variables of the mother who are having school going children

N=30

Demographic variables	Frequency	Percentage
Age:		
6-7 years	19	63.35%
8-9 years	6	20%
10-11 years	4	13.33%
1-12 year	1	3.33%
Gender:		
male	16	53.33%
female	14	36.66%
Religion:		
Hindu	29	96.66%
Muslim	-	-
Christian	1	3.33%
Others	-	-
Number of children:		
Only one	10	33.33%
1-2	19	63.33%
3-4	-	-
5-6	1	3.33%
Educational status of mothers:		
Illiterate	1	3.33%
Higher secondary	3	10%
graduate	17	56.66%
Post graduate	9	30%

Table 2: Assessment of level of knowledge regarding childhood obesity among mothers who are having school going children with their demographic variables

N=30

Level of Knowledge	Frequency (f)	Percentage (%)
Adequate (21-30)	5	16.6%
Moderate (11-20)	23	76.5%
Inadequate (<10)	2	6.6%

Discussion

Today it is estimated that there are more than 300 million obese people world-wide. Obesity is a condition of excess body fat often associated with a large number of debilitating and life-threatening disorders. It is still a matter of debate as to how to define obesity in young people. Overweight children have an increased risk of being overweight as adults. Genetics, behavior, and family environment play a role in childhood overweight. Childhood overweight increases the risk for certain medical and psychological conditions. Encourage overweight children to expand high energy activity, minimize low energy activity (screen watching), and develop healthful eating habits. Breast feeding is protective against obesity. Diet restriction is not recommended in very young children. Children are to be watched for gain in height rather than reduction in weight [4].

The focus of the study was to assess the knowledge of obesity among mothers of school going children (6-12 yrs), Hindu Mission Hospital in pediatric outpatient department. The results reveal that 16.6% (5) of mothers had adequate knowledge, 76.5% (23) of mothers had moderate knowledge and 6.6% (2) of mothers had inadequate knowledge regarding obesity.

The similar study was conducted by Dr. Preetam B Mahajan, 2010, on childhood obesity among school children (6-12 yrs) The prevalence of overweight [6] (≥85th percentile) among children was 4.41% and prevalence of obesity (>95th percentile) was 2.12%. Mahe region had the highest prevalence of overweight (8.66%) and obesity (4.69%). Female children from private schools and urban areas were at greater risk of being overweight and obese [5].

Conclusion

The present study addresses 16.6% (5) of mothers had adequate knowledge, 76.5% (23) of mothers had moderate knowledge and 6.6% (2) of mothers had inadequate knowledge regarding obesity. Here are a few basic ways to prevent childhood obesity, breastfeed over formula feeding of babies, if that is an option. Nurse should give awareness regarding prevention of obesity. Help the child develop a liking for fruits and vegetables by delaying junk food as long as possible Avoid sugar-rich foods such [2] as candy, chocolates, ice creams and juices and reserve them for special occasions reduce screen time and increase outdoor time. Physical activity burns the calories consumed Encourage participation in sports and outdoor activities [2].

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Original Article

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A Pre-Experimental Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Prevention of Dengue Fever among Children

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Abstract

Health is the precious possession of all human being as it is an asset for an individual and community as well. Today health is recognized as a fundamental right of human being. Nowadays the major health problems in India are more in rural as well as urban areas. In rural areas mosquito borne disease are more due to unhygienic practices. Mosquito are the most important vectors of human infectious disease like malaria, Dengue, Filaria and Chikungunya. This mosquito came more human suffering than any other organism. Over one million people die from mosquito-borne disease every year. Today, dengue fever is considered one of the most important arthropod-borne viral diseases in humans in terms of morbidity and mortality. So researcher felt that is vital that children's should possess knowledge on some vector born diseases especially dengue fever and its prevention. The research approach adopted in the present study was evaluative approach, and research design was one group pre test and post test design which belongs to pre-experimental design. Purposive Non random sampling technique was used to select the school as well as the sample. The sample size was of 60 children's of aged between 10 to 18 years. Data were collected by using structured interview schedule and structured teaching programme was intervened, again after a gap of seven days post test was conducted with the same tool. Result showed that the pre test mean score was 14.03 (S.D =4.190) and in post test it was 22.80 (S.D =1.538) which indicated an improvement in the knowledge level of the respondents after structured teaching programme.

Keywords: Dengue; vectors borne disease; structured teaching programme; knowledge.

Introduction

Health is the precious possession of all human being as it is an asset for an individual and community as well. It is a basic fundamental right of each individual, to maintain a level of health that will promote them to work productively and participate actively in the social life of their community. A person is said to be healthy when he or she is completely fit with physical, mental, spiritual and well adjusted with their environment and also if there is no complaints or absence of any discomfort [1].

Nowadays the major health problems in India are more in rural as well as urban areas. In rural areas mosquito borne disease are more due to unhygienic practices. Mosquito are the most important vectors of human infectious disease like malaria, Dengue, Filaria and Chikungunya. This mosquito came more human suffering than any other organism [2].

Dengue fever is caused by a bite from an infected mosquito. This species of mosquito has black and white stripes on its legs and body. It bites during day light hours. Its preferred breeding waters are

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clean stagnant waters in shady areas. The WHO says some 25 billion people two fifths of the world's populations are now at risk from dengue and estimates that there may be 50 million of dengue infection worldwide every year [3]. During the rainy season mosquitoes breed in stagnant water. Water storage, containers for drinking, washing, bathing, is the primary source of larval accounting for 90% of the total breeding place. Important breeding place of mosquitoes is in slums, and open drainage, waste disposal. The people living in the hereby area are easily become the victims of vector – borne disease [4].

Dengue fever and dengue hemorrhagic fever are acute febrile disease found in the tropics and caused by four closely related virus serotypes of the genus Flavivirus, family Flaviviridae. It is also known as break bone fever. Dengue spreads by the bite of an infected mosquito Aedes Aegypti. The mosquito gets the virus by biting the infected persons [5]. The first symptoms of the diseases occur about 5-7 days often after an infected bite. dengue fever is an acute febrile infection characterized by sudden onset fever for 3-8 days intensive Headache, Muscle pain, Joint pain, Eye pain, Anorexia & disturbances and rash. Dengue is a fatal disease and deserves immediate medical treatment [6].

Prevention can be done by protecting individual themselves from bites of mosquitoes and it is possible by controlling proliferation of mosquitoes in stagnant water, properly covering all water tanks, people should wear long sleeves shirts and long pants, use of mosquito spray, repellents (coils, cream), chemical agents such as NNDB, DEET etc are used to kill Aedes mosquitoes [7]. The above facts created an insight in the investigor mind that by improving the knowledge of school going children through structured teaching programme, the incidence of some vector born diseases especially dengue fever and its prevention may be reduced.

Methods

The research approach adopted in the present study was evaluative approach, and research design was one group pre test and post test design which belongs to pre- experimental design. Purposive Non random sampling technique was used to select the school i.e. Government Arya senior secondary school sohana mohali. The sample size was of 60 school children's age between 10 to 18 years. The pilot study revealed the feasibility of the study. Reliability of the tool was determined by the test retest method. By using Karl Pearson's co- efficient of co relation method "r" value is obtained. [r^1=0.92]. It shows that the tool was highly reliable for the final study. Data were collected by using structured interview schedule through multiple choice questions and structured teaching programme was intervened, again after a gap of seven days post test was conducted with the same tool. Analysis of the data was done by using descriptive statistics as mean, standard deviation and paired' test and and Chi- square test.

Results

The analysis and interpretation of data have been organized and presented under the following section.

Table 1: Frequency and percentage distribution of children by their socio demographic variables.

Frequency distribution		Frequency	Percentage
Age in years	10-12	33	55
	13-15	11	18.3
	16-18	16	26.6
Gender	Male	31	51.6
	Female	29	48.3
Religion	Hindu	27	45
	Sikh	20	33
	Muslim	10	17
	Others	3	5
Type of family	Nuclear	33	55
	Joint	27	45
Type of House	Kaccha	16	27
	Paccka	44	73
Monthly family income	5000-10000	43	72
	10001-15000	7	12
	15001-20000	5	8
	>20000	5	8
Source of information	Books	38	63
	Newspapers	8	13
	Mass Media	3	5
	Family, Friends, Teachers	11	18

- More than half of the children 55% (33) were from 10-12 years, 18.3% (11) were from 13-15 years and 26.63% (16) were from 16-18 year age group**.**
- Majority of subjects were males 51.6% (31) and 48.3% (29) were females.
- Majority of subjects were in Hindu religion 45% (27,) Sikh religion 33% (20), Muslim religion 17% (10) and 5% (3) are others religion.

- Majority of subjects were living in nuclear family 55% (33) and 45% (27) in joint family.
- Majority of children were living in paccka house 73% (44) and 27% (16) living in Kaccha house.
- Majority of children's parents income between 5000 to 10000 72% (43), 10001 to 15000 12% (7), 15001 to 20000 8% (5) and more than 20000 8% (5).
- Majority of subjects were get information from books 63% (38), and 13% (8) from Newspapers, 5% (3) and 18% (11) from family, friends and teachers (Table 1).

In pre test, more than half of the informants had average knowledge (65%) followed by low knowledge (35%) and no single informant had high knowledge. The score of post test indicated marked increase in knowledge levels of children that is more than half of the respondents had average knowledge (56.7%) followed by high knowledge (43.3%) and it was also interesting to know that no single respondent in post test obtained low knowledge (Table 2).

The pre test mean score was 14.03 (S.D =4.19) and in post test it was 22.80 (S.D =1.53) which indicated an improvement in the knowledge level of the respondents after structured teaching programme (Table 3).

The Mean difference of (8.77), S.D = 2.66 of overall knowledge with paired 't' value (15.62). Thus it reveals that the mean post test knowledge scores were significantly higher than the mean pre test knowledge scores of children. It shows there is a significant difference between pre test and post test knowledge scores of children regarding prevention of dengue fever (Table 4).

There is no significant relationship between age, gender, religion, type of family, type of house family monthly income and sources of information regarding prevention of dengue with post test knowledge scores regarding prevention of dengue among children (Table 5).

Table 2: Frequency and percentage distribution of overall level of knowledge regarding dengue fever among children

Level of knowledge	Pre Test		Post Test	
	Frequency	Percentage	Frequency	Percentage
Low knowledge	21	35%	0	00 %
Average knowledge	39	65%	34	56.7%
High knowledge	00	00%	26	43.3%

Table 3: Mean and Standard Deviation of pre test and post test knowledge scores regarding prevention of dengue among children

	Pre		Post	
	Mean	SD	Mean	SD
Knowledge regarding prevention of dengue	14.03	4.19	22.80	1.53

Table 4: Comparison of knowledge scores of children before and after Structured Teaching Programme regarding prevention of dengue

	Mean diff	SD Difference	SE differe	Paired t test
Knowledge of dengue	8.77	2.66	0.46	15.62

Table 5: Association between socio demographic variables of children with their post test knowledge scores regarding dengue

Variables	Calculated χ^2 value	Association	Degree of freedom	χ^2 Table value at 5% level of significance
Age	3.119	NS	3	7.81
Gender	0.019	NS	1	3.84
Religion	4.25	NS	3	7.81
Type of family	0.043	NS	1	3.84
Type of house	4.324	NS	3	7.81
Family monthly income	2.72	NS	3	7.81
Sources of information	2.481	NS	3	7.81

Note: NS denotes No Significant.

Disscussion

Healthy environment depends upon the healthy family. Healthy family again depends upon the individual. Every individual have the right of good health. As many micro organisms are around human, there is a need for everyone to make aware how to protect and how to prevent from occurrence of diseases.

- The pre test mean score was 14.03 (S.D =4.19) and in post test it was 22.80 (S.D =1.53) which indicated an improvement in the knowledge level of the respondents after structured teaching programme.
- The Mean difference of (8.77), S.D = 2.66 of overall knowledge with paired 't' value (15.62). Thus it reveals that the mean post test knowledge scores were significantly higher than the mean pre test knowledge scores of children. It shows there is a significant difference between pre test and post test knowledge scores of children regarding prevention of dengue fever. Thus the research hypothesis was accepted.
- There is no significant relationship between age, gender, religion, type of family, type of house family monthly income and sources of information regarding prevention of dengue with post test knowledge scores regarding prevention of dengue among children.

Conclusion

The conclusion of the study regarding knowledge of the pre test mean score was 14.03 (S.D =4.19) and in post test it was 22.80 (S.D =1.53) which indicated an improvement in the knowledge level of the respondents after structured teaching programme. Thus it reveals that the mean post test knowledge scores were significantly higher than the mean pre test knowledge scores of children regarding prevention of dengue. Thus the research hypothesis was accepted. It shows that there is a significant difference between pre test and post test knowledge scores of children. Chi square result showed that there is no association was between age, gender, religion, type of family, type of house family monthly income and sources of information regarding prevention of dengue with post test knowledge scores regarding prevention of dengue among children. Hence, the research hypotheses related to above demographic variables has rejected.

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Conflict of Interest

The authors declare that they have no conflicts of interest.

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Diabetes Fact: Bangladesh Perspective

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Abstract

Bangladesh is a developing country where 75% of total population lives in rural area. Subsequently they have poor healthcare access as 26% of rural professionals remain vacant and nearly 40%, absent. Although official documents indicate that 80% of the population has access to affordable essential drugs, there is plenty of evidence of a scarcity of essential drugs in government healthcare facilities. Nearly 45% rural people take medical assessment from unqualified health workers including medical assistants, mid-wives, village doctors, community health workers in comparison to that by qualified medical graduates (only 10%-20%). More than 75% women having complications sought treatment from an unqualified provider. These are mostly because concern over medical costs, and pronounced socioeconomic disparities found for care-seeking behavior in both urban and rural Bangladesh. However, the government's expenditure on health is the third largest in the country, after education and defense. Diabetes is a complicated chronic disease; non-compliant patients are in a risk of moderate to severe complications, to much extent unexplored to maximum people of Bangladesh. Annually diabetes is responsible for 5% of all deaths globally, and its prevalence is increasing steadily. As reported by International Diabetes Federation (IDF), approximately 75–80% of people with diabetes die due to cardiovascular complications.

Keywords: Bangladesh; Diabetes; Prevalence; Glycemic Control; Obesity; Stroke

Introduction

Diabetes is one of the four major types of noncommunicable diseases (NCDs) that make the largest contribution to morbidity and mortality worldwide. According to WHO global health days 2016, about 422 million people globally had diabetes, with most living in the developing countries, and unfortunately, more than 80% of diabetes deaths occur in low - and middle-income countries. And 80% of people with diabetes live in low- and middle-income countries. The prevalence of diabetes is increasing in Bangladesh in both urban and rural areas. A recent scoping review (1994-2013) revealed that the prevalence of type 2 diabetes varied from 4.5% to 35.0% in Bangladesh. It increases healthcare use and expenditure and imposes a huge economic burden on the healthcare systems. The International Diabetes Federation estimated 7.1 million people with diabetes in Bangladesh and almost an equal number with undetected diabetes. This number is estimated to double by 2025. It may lead to stroke, heart attack, chronic kidney diseases, neuropathy, visual impairment and amputations. Although most of these complications can largely be prevented through inexpensive, easy-to-use and cost-effective interventions. During 90s, the country has a relatively low diabetes affected population. According to the International Diabetes Federation, the prevalence will be 13% by 2030. Bangladesh was ranked as the 8th highest diabetic populous country in the time period of 2010-2011. About 129,000 deaths were attributed to diabetes in Bangladesh in 2015, as reported by leading research organization ICDDR, B.

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Materials and Methods

A comprehensive review of literature search including books, journal, newsletters, newspaper, magazine column and many more. Some physicians, technical experts, industry high officials, hospital authority, journalists, nurses and employees of pharma companies stated their valuable observation. Projections were based on drug end users, providers, practical aspects of diabetic patient compliance, implication and types of different types of non-compliances by the in several institutions of Bangladesh. Medline, Embase and PubMed and manually checked references of all identified relevant publications that described the diabetes issues in Bangladesh.

Results and Discussion

Climate, Urbanization and Lifestyle

"A 1^0C rise in environmental temperature could account for more than 100,000 new diabetes cases per year in the USA alone." [1]. A similar study says Bangladesh will exceed 35^0C before the end of the century [2]. Bangladesh, a developing country with fast economic growth, has been experiencing rapid urbanization for the past several decades. This development and urbanization raise the concern that the chronic disease burden may show an increasing trend in future, especially due to altering food habit including increased access to and popularity of processed food, irregular meal times, less physical activity, etc [3]. Bangladeshi women more at health risk than men due to inactivity (WHO) [4]. Three big reason to diabetes among Bangladeshi people are Carbohydrate-dependent food pattern, Sedentary lifestyle and huge gap between the number of diabetic patients and doctors [5]. According to the WHO-Diabetes country profile of Bangladesh in 2016, the physical inactivity was prevailing among 25.1% of population [6].

10 Millio nBangladeshis Suffering from Diabetes

An estimated 10 million people in Bangladesh have diabetes [7]. A similar study reveals a more shocking fact, almost one in ten adults in Bangladesh was found to have diabetes [8]. WHO stated 83% population of age group 25-65 never checks for diabetes [9]. A different report says almost similar thing. For an effective control and prevention of diabetes; 87% of Bangladeshis were non-compliant, compared to 71% of Indians and 52% Europeans [10]. Interesting thing is status of compliance is not improved in the last 14 years. 33% people age over 35 are diabetic or pre-diabetic, only 12% of them have their condition under control [11]. Approximately 17% of men and 23% of women were identified to have impaired fasting glucose or impaired glucose tolerance, collectively termed intermediate hyperglycaemia [12-15]. Only 25% of diabetics were aware of their status, women with diabetes were 37% less likely than men to know that they were diabetic and, even among known diabetics, 75% had suboptimal control of the condition [16]. According to the latest WHO data published in 2017 Diabetes Mellitus Deaths in Bangladesh reached 40,142 or 5.09% of total deaths. The age adjusted Death Rate is 40.08 per 100,000 of population ranks Bangladesh 57 in the world [17].

Socio-Demographic Characteristics and Knowledge about Diabetes

Levels of knowledge and practices were analyzed by sociodemographic characteristics and diabetic status (Table 1 and Table 2).

Type 2 Diabetes Mellitus Patients' Compliance

A study in BIRDEM, Dhaka found nearly 15% type 2 diabatic patients take both insulin and oral medication and 60% take oral medications only. Insulin intake is high in urban area due to cost and availability of the drug in local market. Around 25% respondents found to take herbal medications [24]. In 96 villages in Faridpur district, 12140 randomly selected men and women aged ≥30. Around 80% of known diabetics (i.e., with a prior diagnosis) reported that they did not monitor their blood glucose levels on at least a monthly basis [25]. A DAB associated study shows About 60% patients attended diabetes education class at least once followed by 24% never attended. Non-adherence rate of diet was close to 90% and exercise was 25% -overall 90% [26].

Diabetes Complications

Most commonly reported health effect was vision impairments or blindness (more than 60%), followed by poor wound healing (nearly 30 %) and dizziness (nearly 30%). In examining comorbidities, hypertension was most commonly self-reported in 50% (approx.) out of 220 participants of diabetes clinics in Mirzapur, Bangladesh [27]. In BIRDEM 2010, 75% of the 130 patients suffered co-morbidity, including retinopathy (35%), CVD (20%), neuropathy (15%) and diabetic foot (4%).

Table 1: Demographic Characteristics and Knowledge of Respondents

Study Place	Study Period	Study Type	Study Base	Findings
BIRDEM	2014-2015	Random Sampling	Occupation	Among 1200 diabetic patients involved in services (36%) both government and non-governmental jobs, vast majority among women were housewife (25%) and in business (21%), 82% of them were married [18]
ZH Sikder Women's Medical College & Hospital, Dhaka	2015	Cross sectional	Literacy & knowledge about diabetes	40% were secondary, 30% were primary, 15% were illiterate out of 100-case. 57% had poor knowledge, 14% had good knowledge and 29% had no idea about the complexity of diabetes [19]
Rural Bangladesh	2015	Cluster Random Sampling	Knowledge about diabetes	Overall knowledge of DM was poor; only 16.3%, 17.8%, and 13.4% of those with UDM, IFG, and normal FG knew that diabetes causes eye disease, compared with 55.6% of those with known DM [20]
96 rural villages of Faridpur	2017-2018	Random Sampling	Knowledge about diabetes	Approximately 55% being aware of any symptoms of diabetes and approximately 27% able to report ways to prevent the disease. However, two-thirds of respondents were able to report at least one medical intervention to control diabetes [16]

Table 2: Patients' Belief about Diabetes

Study Place	Study Period	Study Type	Study Base	Findings
BIHS	February to March 2014	Purposively sampled	knowledge and Perception	All participants were familiar with the term "diabetes". Most considered diabetes as a serious chronic condition requiring lifelong treatment and medications. Several participants believe of too much sweets and rice as contributory factor for diabetes. A few participants blamed the growth of the fast food industry and the increasing use of chemicals in [21]
BIHS and DMCH outdoor	August 2014 to January 2015	Non-probability purposive sampling	knowledge and Perception	Highest number of patients (43%) believe genetic factors were responsible for diabetes while others mentioned obesity, physical inactivity and food habits. One-third (31%) of the respondents perceived that diabetes is a result of excessive intake of sugar and 14% could not mention anything. [22]
An urban tertiary care hospital in Bangladesh	2014 to 2015	Structured Interview	knowledge and Perception	A higher proportion of men perceived that diabetes can be managed by changes in physical activity and medications than women. More men perceived kidney and eye problems along with heart diseases as serious complications. More women considered lack of physical activity as the most important cause [23].

More than half (57%) of were hypertensive and on antihypertensive drugs [28].

Diabetes and Kidney Dysfunction

40-50% of patients with type 1 diabetes and 20-30% of patients with type 2 diabetes developed diabetic nephropathy [29]. In BIRDEM 2014, prevalence of nephropathy was 25%; male 27% and female 22% found among 400 type 2 diabetic patients [30]. +35A>C polymorphism possibly responsible for nephropathy in Bangladeshi Type 2 diabetic subjects which is predominant in male [31]. Microalbuminuria was found in 24% of type 1 diabetes, 27% of Fibrocalculous pancreatic diabetes, and nearly 70% of type 2 diabetes children and adolescent in Changing Diabetes in Children (CDiC) clinic, BIRDEM [32]. In Bangladesh, the causes of CKD G5 among 954 patients who were on HD in 2012–13 were chronic glomerulonephritis (25.5%), diabetic nephropathy (41%) and hypertensive renal disease (33%) [33].

Diabetes and Stroke

At least 65% of people with diabetes die from heart disease or stroke [34]. Approximately 20% of patients with DM die from stroke [35]. 8400 stroke patients from different hospitals in Bangladesh over a period of sixteen years, diabetic patients were nearly 25% [36]. A prospective study of 380 patients with cerebral infarction admitted into Rangpur Medical College Hospital over an 18-month period, 76 (20%) patients were diabetic [37]. In Bangladesh, which is ranked 84 in WHO's mortality rate index (out of 163 countries), stroke is the third leading cause of death. The majority of cases (83%) occur in individuals over the age of forty; hypertension (63%) was found to be the main risk factor for stroke, followed by heart disease (24%), and diabetes (21%) [38]. A rural study by Royal Society of public health reveals 37% of stroke patients had elevated blood glucose level [39]. An earlier study in 3 medical college hospitals (DMCH, MMCH, CMCH), diabetes was found to be 3rd major factor (21%) of stroke [40].

Diabetic Neuropathy

Diabetic distal sensorimotor neuropathy (DSPN) is the most frequent type of polyneuropathy and the most frequent complication of diabetes affecting up to 50% of patients, found in an investigation on 111 Bangladeshi immigrants [41]. In Bangladesh 20% patients with diabetes have been suffering from peripheral neuropathy [42]. Neuropathy symptoms reported 35% by OPD of Rajshahi diabetic hospital [43]. 1 in every 5 diabetes subjects are suffering from peripheral neuropathy which is more serious in rural area, in a study of Dhaka and Northern districts (Pabna, Sirajgonj, Bogra, Dinajpur and Thakurgaon) of Bangladesh, between July 2012 to June 2013, number of participant1200 (urban-640, rural-560) [44].

Diabetes and Depression

In Bangladesh, one in ten adults has diabetes and 4.6% of the population is suffering from depression, 31% of diabetic patients suffer from some symptoms of depression, while 11% of diabetic patients have a major depressive disorder. On the other hand, people with depressive disorders have a 65% greater risk of developing diabetes than the general population [45]. Depression was identified as a significant health problem among patients with type 2 diabetes mellitus. Both diabetes and depression should be considered simultaneously during treatment plan [46]. The prevalence of depression among T2DM patients n Bangladeshi patients were found to be 30% in rural Bangladesh [47]. A similar result found with other studies overall Bangladesh population, between 15.3–36% [48]. Depression is not generally listed as complications of diabetes; however, it can be one of the most common and dangerous complications. Mansour et. al., 2013 stated "one plus one equal more than 2 when we add depression and diabetes" [49].

Smoking and Diabetes

Tobacco kills more than seven million people a year worldwide and Tobacco responsible for 1 in 5 deaths in Bangladesh. According to WHO study in 2009, 41.3 million people use tobacco in Bangladesh, of whom 47.3% are smokers. According to the Directorate General of Health Services, the number of patients visiting the outdoor department of the National Institute of Cardiovascular Diseases increased by 41.3% between 2009 and 2016 [50]. A recent study further adds that smoking increases the risk of diabetic foot amputation [51]. The concentration of Chromium in smoked and smokeless tobacco ranged from 0.25-3 μg/g and 0.36-6.29 μg/g respectively. Chromium posed a much higher risk for both smoked and smokeless tobacco users [52]. A number of experimental and clinical studies suggest that smoking decreases insulin sensitivity, and consequently results in the disorders of glucose and lipid metabolism such as hyperglycemia and dyslipidemia including

low HDL cholesterol and postprandial lipid intolerance [53].

Diabetes and Pregnancy

At mid pregnancy, insulin sensitivity starts to decline progressively, and became worse during the rest of the pregnancy, being worst in the late third trimester. It rebounds with the delivery of the placenta. Therefore, GDM usually develops in the late second trimester and disappears, instantly, post-delivery [54]. Prevalence of GDM was found to be 9% to 10% (13% according to ADA criteria) in Bangladesh [55]. At least 15% of Bangladeshi expecting women are diagnosed with Gestational Diabetes Mellitus (GDM) and among these 60% contribute to permanent diabetes within 10 years. Unrecognized and untreated GDM increases the risk of giving birth to congenital abnormal babies [56]. Overweight, obesity, hormonal issues, and genetic factor might play a role for the higher rate of diabetes in women. Diabetes afflicts women more than it does men in Bangladesh, according to a study published in the British medical journal The Lancet. They found almost double the rate of diabetes in urban areas than the villages of Bangladesh [57]. If GDM is left untreated, it carries a risk for both the mother and child and will result in serious short and long-term consequences which include neonatal and obstetric complications during pregnancy and childbirth such as miscarriages, lengthened labor pain, cesarean section, macrosomia, shoulder dystocia, neonatal hypoglycemia, still birth and neonatal death. It also increases the risk of obesity and DM in the mother and offspring in later life [58].

Diabetes and Fast food

A study among students of 4 private universities of Dhaka, 22% of the respondents mentioned that they consumed fast food 4 days a week and more than one-fifth had the meal every day. 54% of the respondents skipped their breakfast and had fast food after finishing their classes. Though 98% of the students were well informed about the negative effects associated with excessive fast food consumption, they were still profoundly addicted to it [59]. A similar study shows 97.4% students consume fast food contain Monosodium Glutamate (MSG) which causes obesity, headache, asthma and other body discomforts [60]. ICDDR, B shows that 10% of children aged between 5-18 years old are overweight and 4% are obese in urban area [61].

Diabetes and Obesity

Obesity and overweight are considered both non-communicable diseases and risk factors. Obesity and overweight increase the risk of diabetes, cancer and cardio-vascular diseases (CVD) [6]. WHO investigated whether the following characteristics of individuals, their communities and their households were associated with the risk of diabetes or prediabetes: the respondent's age, sex, marital status, educational level, working status and body mass index [62]. WHO painted a dismal picture of Bangladeshis' health: Different studies reveal 25% rural and more than 20% people had overweight; 27% rural and 28% urban people had central obesity (by waist-hip ratio); nearly 47% rural and more than 52% urban participants were tobacco-users; and 12% rural and nearly 29% urban people did not perform any physical work [63-66].

Type 2 diabetes in Children

Obesity has been studied extensively in many developed countries, but in Bangladesh studies and data related to obesity in children and adolescents are relatively scarce. A positive association between obesity with higher socio-economic status, lack of physical activity and urban residence has been reported [67]. Moreover, the city neighborhoods are not conducive to safe outdoor activities due to the confluence of population density, traffic jams, and crime; other prohibitive factors include a hot and humid climate, unremitting construction work, and excessive dust [68]. A 2015 study shows the number of undersized children decreased from 41% to 36% and the percentage of underweight malnourished children came down to 14% from 16% in last three years [69]. According to some estimate, in 2004, children of South Asian origin were more than 13 times more likely to have type 2 diabetes than white children [70]. Children with type 2 diabetes, which is common in older people, is rising "alarmingly" in Bangladesh, hospital data shows. A 300% raise in the last five years, according to the Changing Diabetes in Children Program of the BIRDEM hospital [71]. Another 2016 study, titled "Characteristics of Children and Adolescents at Onset of Type 2 Diabetes in a Tertiary Hospital in Bangladesh," has found that 58% children with Type 2 diabetes were obese, and 94% had a positive family history of this lifestyle-oriented disease [7]. The adverse effect of obesity on glucose metabolism is evident early in childhood. Obese children are hyper-insulinemic and have approximately 40% lower insulin stimulated glucose metabolism compared with non-obesechildren [72]. Sustained

economic growth has enabled the new middle class to consume higher intakes of food and to choose higher-calorie and so-called "fast-food" options more frequently [9].

Diabetes and ED

Sexuality is still a covert issue in Bangladesh and people usually hesitate to start talk regarding sex. Exploration of misconception with educational qualification revealed that misconception was also found in the well-educated persons and even in masters holders [73]. Erectile dysfunction, a critical disease of man of all ages, due to ignorance all most 80% Patient takes wrong treatment from so called Ayurveda doctor (Kabiraj & Hekim i.e. folk healers) [74]. However, according to Prof. MA Salam, Uro-oncologist at Urology & Transplantation Foundation of Bangladesh "35-75% of all diabetics suffer from erectile dysfunction. Diabetes harms blood and nerves, both important prerequisites for an erection" (The Independent, 2017). Frequency of ED is very high among T2DM men in Bangladesh, around 54% reported in a study between 2013-2014, 3980 diabetic men aged 30-69 years were interviewed at the out-patient departments of BSMMU, BIRDEM and 4 other diabetes centers in Dhaka, Bangladesh [76].

Healthcare Expenditure for Diabetes in Bangladesh

DM had 2 times more days of inpatient treatment, 1.3 times more outpatient visits, and nearly 10 times more medications than non-DMs, as reported by BMJ Global Health 2017. The total annual per capita expenditure on medical care was 6.1 times higher for DMs than non-DMs (US$635 vs US$104, respectively). Among DMs, nearly 10% reported not taking any antidiabetic medications, 46.4% took metformin, 38.7% sulfonylurea, 40.8% insulin, 38.7% any antihypertensive medication, and 14.2% took anti-lipids over the preceding 3 months [77]. A recent study by World Bank found $160 per year in household expenses for diabetes care (2013 dollars) in Bangladesh. The annual cost of diabetes care per person in the outpatient department of a tertiary care facility was US$314. Based on this finding, it is estimated that the total annual burden of some 5.1 million diabetic patients will be US$1.5 billion, which is a large burden for a developing country like Bangladesh [78]. In 2016, approximately 55,703 diabetic individuals received in-hospital care, with an estimated 2 6,41,000 out patient visits. The total annual estimated cost of diagnosed diabetes was approximately US$217.71 million [79]. The median monthly cost of diabetes maintenance was close to USD 10, approximately 10% of the median monthly income [27].

Diabetic Forecast

Almost one in ten adults in Bangladesh was found to have diabetes, which has recently become a major public health issue. A recent meta-analysis showed that the prevalence of diabetes among adults had increased substantially, from 4% in 1995 to 2000 and 5% in 2001 to 2005 to 9% in 2006 to 2010. International Diabetes Federation stated the prevalence will be 13% by 2030 [8]. According to the WHO, at least 2.8% of the population worldwide suffer from diabetes. Considering the increasing rate of type 2 diabetes it is understood that, by the 2030 the prevalence of diabetes mellitus will be double [80].

Conclusion

Poor compliance, at any point of life creates serious mischiefs. Bangladesh is a country where poor literacy and carelessness never even gives opportunity to the general people to know the reasons behind their health complexities due to non-compliance and non-adherences. The most important thing is patient education, that the modern world is giving the highest priorities. Rich or poor, privileged or unprivileged all segment of population should be brought under the arena of compliance through patient education, at least by health campaign. Both government and profit taking medicine companies should take initiatives regard.

Compliance with The Ethical Issues

- *Availability of data and materials*

Data sharing: Data will be available on request.

- *Competing interests*

The author declares that he has no competing interests

- *Funding*

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Abbreviations

Bangabandhu Sheikh Mujib Medical University (BSMMU), Bangladesh Institute of Research and Rehabilitation for Diabetes, Endocrine and Metabolic Disorders (BIRDEM); International Centre for Diarrheal Disease Research, Bangladesh (ICDDR, Bangladesh); Undiagnosed Diabetes Mellitus (UDM); Diabetes Mellitus (DM); Fasting Glucose (FG); Impaired fasting glucose (IFG); Bangladesh Institute of Health Science (BIHS); Dhaka Medical College Hospital (DMCH); Chittagong Medical College Hospital (CMCH); Mymensingh Medical College Hospital (MMCH); Changing Diabetes in Children (CDiC); Chronic Kidney Disease (CKD); American Diabetes Association (ADA); Erectile Dysfunction (ED)

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Breast Self Examination

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Abstract

A pre-experimental design with pre-test and post-test without control group was undertaken at urban area in Latur. 40 adolescent girls selected through Nonprobability convenient sampling technique to assess the effectiveness of structured teaching program regarding knowledge and attitude on Breast self-examination among the adolescent girls. The overall mean knowledge score of adolescent, girls during pre- test was 6.24±3.58 (SD) which is 31.36% of the total mean score, whereas during post–test, it was 5.8±1.09 (SD) which is 87.30% of the total mean score. Depicting difference of 55.93% increase in mean percentage of score. It reveals that the structured teaching program was effective among adolescents' girls. Reveals that adolescent girls had gained adequate knowledge. It is observed that during pre-test the adolescent girls had poor overall knowledge whereas it was good after the implementation of structured teaching program. Highly significant difference was found between pre-test and post-test knowledge score. The study shows breast self-examination and its health effects was effective to improve the knowledge & attitude of adolescent girls at urban areas, Latur.

Keywords: Effectiveness; Structured teaching program; Breast self-examination; Breast cancer; Adolescent girls.

Introduction:

Certain factors may be protective in relation to the development of thebreast cancer. Regular exercise has been shown to decrease the risk because it can delay menarche, suppress ministration and like pregnancy reduce the no of ovulatory menstrual cycle. Also it reduces body fat where estrogen is stored and can decrease extended exposure to estrogen [1].

Our relationship with the world starts from mother's breast milk. Breasts are very important organ for each women as this are the symbols of motherhood and womanhood. So any disease affecting breasts cancer is important. Current statistic indicate that a women's life time risk for developing breast cancer is one in eight, but this is not the same for all age group. For example, the risk for developing breast cancer by 35 year is 1 in 622, by 60 is 1 in 23. Approximately 80% breast cancer diagnosed after the age of 50 year in India out of 1 lakh people, 100 are affected by cancer and out of this 30 are affected by breast cancer. In India women are more affected by cancer than men (men 42 & women 52). The important reason for the breast cancer is increasingly seen in women. Although there are no specific cause of breast cancer, researcher have identified cluster of risk factor, Genetic mutation, increasing age, personal or family history breast cancer, early menarche, null parity and later maternal age at first birth, late menopause, history of benign proliferative breast disease, exposure to ionizing radiation, obesity, Harmon replacement therapy and alcohol in take [4].

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Need for Study

Cancer has become one of the ten leading causes of death in India. It is estimated that there re early 2 to 2.5 million cancer cases at any given point of time in India. Over 7 to 9 lakh new cases and 3 lakh deaths occur annually in India due to cancer, whereas in Karnataka there are about 1.5 lakh prevalent cases of cancer and about 35,000 new cases are added to this every year. Based on the consolidated report of cancer registries the overall common cancer sites in South India are stomach for males and cervix for females [2].

Breast cancer is the most common diagnosed malignancy in women worldwide (22%) and in India (18.5%) it ranks second to cervical cancer. The burden of breast cancer is increasing in both developed and developing countries; the peak occurrence of breast cancer in developed countries is above the age of 50 whereas in India it is above the age of 40. In India the age standardized incidence rate of breast cancer varies between 9 to 32 per 1,00,000 women. To generate the reliable data on magnitude and pattern of cancer, India started National cancer registry program in 1981. Up to 2003 the program comprised of six population based cancer registry and one registry serving rural area covering the total population of 35.7 million (only 3.5% of the Indian total population) and an increasing trend in incidence is reported from various registries of national cancer registry project and now India is a country with largest estimated number of breast cancer deaths worldwide [3].

Review of Literature

A case control study was conducted by Ali Abu – Salem Ot Abdulla Hassan M (2007) to identify and investigate the knowledge and practice of breast self-examination with the influencing factors. A total of 80 female nurses from Prince Rasheed Military Hospital were selected for the study. The data was collected by questionnaire and analyzed by using descriptive statistics. The study results indicated 52% of the sample performs breast self-examination. The study concluded positive correlation was found between nursing work experience and their practice in breast self-examinations [5].

Fatma demirkiran (2007) conducted study to know how the nurses and teachers perform BSE; are they reliable sources of information? 289 women working in Aydin, Turkey (125 nurses and 164 teachers) were included in the study. They found that the knowledge of nurses about Breast Self-Examination was higher than that of teachers (81.5%; $p<0.001$). They concluded that nurses and teachers should be supported with information enabling them to accomplish their roles in community. To improve Breast Self-Examination practice, it is crucial to co-ordinate continuous and planned education [6].

Madana H. et al. (2009) assessed the Breast cancer risk factor and screening awareness among women nurses and teachers in Amman, Jordan. This study used data from 163 nurses and 178 teachers surveyed in Amman to determine 2 dimension of breast cancer awareness score for nurses was 88.3%, compared with 73.1% for teachers ($p<.0001$). Study concluded that screening education program is very important for prevention of Breast cancer [7].

A cross sectional study was conducted on attitudes and knowledge of breast self-examination among Austrian women's in Australia. 975 healthy women in an Austria-wide population were asked about their knowledge of breast self-examination (BS) and mammography, and their cancer histories. 92% of the women knew BSE but only 31% practiced it thoroughly. Women living in rural communities with a life companion and younger women were more likely to practice BSE. Women who had family histories of cancer, especially older women, performed BSE significantly more often. There was a trend towards increasing BSE with increasing personal perception of the risk of cancer, especially among older women. The study showed a positive association between BSE and screening mammography. Although knowledge of BSE is widespread, it is actually practiced by only one third of women. Older women but not young women carry out BSE significantly more often when they have family histories of cancer. Information campaigns should target specific groups and emphasize the effectiveness of properly done BSE [8].

Problem Statement

"A study to assess the effectiveness of structured teaching program regarding knowledge and attitude on breast self-examination among adolescent girls at urban areas of Latur."

Objectives

1. To assess the existing knowledge regarding breast self-examination among adolescents girls present in urban areas at Latur.
2. To assess the pre-test knowledge & attitude regarding breast self-examination among adolescents girls in urban area at Latur.

3. To assess the post-test knowledge and attitude regarding breast self-examination amongadolescents girls in urban area at Latur.
4. To assess the effectiveness of structured teaching program.

Operational Definitions

Assess: In this study assess refers to estimate or judge the adult knowledge and attitude regarding breast self-examination.

Effectiveness: It is the significant improvement in knowledge among adolescent girls

Structured teaching program: refers to systematically planned teaching programme designed to provide information regarding breast self-examination

Knowledge: In this study knowledge refers to the correct meaningful verbal response of adolescents girls on breast self-examination.

Attitude: It refers to settled way of thinking or feeling, typically reflected in adolescent girls behavior.

Breast self-examination: a breast self-exam is the regular examination of ones breast to detect lung or other changes that may need to further evaluate as part of screening for breast cancer.

Breast cancer: Breast cancer is an uncontrolled growth of breast cells, the signs of breast cancer includes lump in the breast, a change in the breast shape, dimpling of the skin, abnormal discharge from the nipple or red scaly patch of skin.

Adolescent girls: In these study adolescent girls refer to the females between the age group of 13-19 years.

Hypothesis

H_1: There will be significant association in knowledge & attitude regarding breast self-examination

H_2: There will be significant difference in knowledge & attitude regarding breast self-examination at the end of STP.

Materials and Methods

Research Approach

Research approach used for this study is Quantitative-Evaluative approach.

Research Design

The research design adopted for this study is pre-experimental one group pretest and posttest research design without control group.

O_1 X O_2

O_2 - O_1 = E

The symbols used-

O_1: Pretest knowledge score of breast self-examination girls regarding knowledge on breast self-examination.

X: Structured teaching programm regarding knowledge on breast self-examination among adolescent girls.

O_2: Posttest knowledge score of adolescent girlsregarding knowledge on breast self-examination.

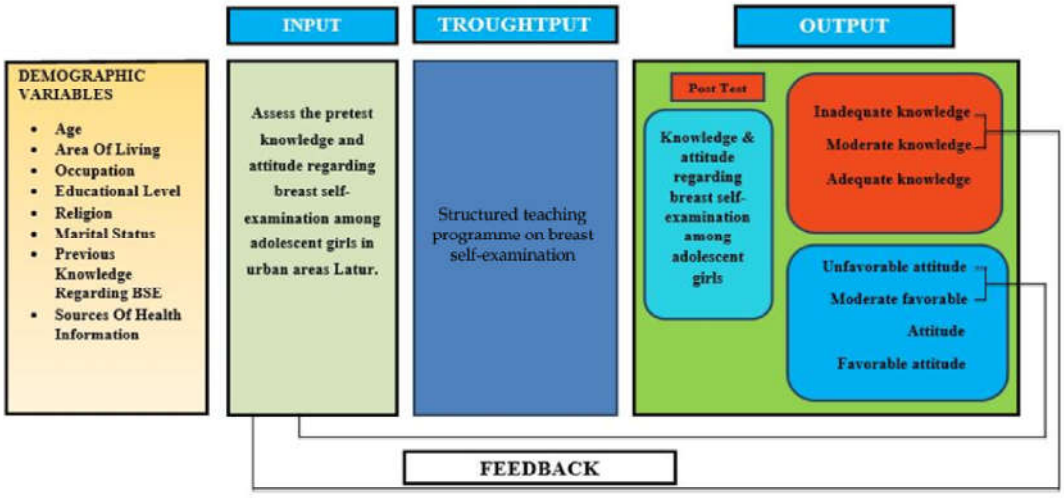

Fig. 1: Conceptual Framework based on General System Theory

E: Effectiveness of structured teaching program regarding knowledge on breast self-examination among adolescent girls.

Setting of study

The study was carried out in urban area, Latur.

Variables

Independent Variable: Structured Teaching Program on BSE

Dependent variable: In this study level of knowledge and attitude regarding BSE is dependent variable.

Demographic variable: Such as age, area of living, occupation, religion, education, marital status, previous knowledge, source of information.

Population: Adolescent girls in urban area, Latur.

Sample & Sampling Technique

Sampling: Adolescents of age 13 to 19 years living in urban area, Latur.

Sample size: 40 adolescent girls living in urban area, Latur.

Sampling Technique: Nonprobability convenient sampling technique

Results

Section 1: Description of the demographic data of adolescent girls.

Section 2: Assessment of knowledge and attitude on breast self-examination among adolescent girls before the implementation of structured teaching program.

Section 3: Assessment of knowledge and attitude breast self-examination among adolescent girls after the implementation of structured teaching program.

Section 4: Effectiveness of structured teaching program regarding knowledge and attitude breast self-examination among adolescent girls.

Sestion 5: Testing the hypothesis.

Table 1: Description of samples according to Demographic variables by frequency and percentage

Sr. No	Demographic Variables	Frequency	Percentage
1.	*Age*		
	13-15 yrs.	2	5%
	16-17 yrs.	12	30%
	18-19 yrs.	26	65%
	20-21 yrs.	0	0%
2.	*Area of living*		
	Rural	15	37.5%
	Urban	25	62.5%
3.	*Occupation.*		
	Student	40	100%
	Job	00	0%
	Housewife	00	0%
	Labor	00	0%
4.	*Educational Level*		
	Primary	0	0 %
	Secondary	14	35%
	Higher Secondary	11	27.5%
	Degree	15	37.5%
5.	*Religion*		
	Hindu	39	97.5%
	Muslim	1	2.5%
	Christian	0	0%
	Other	0	0%
6.	*Marital Status*		
	Married	0	0%
	Unmarried	40	100%
7	*Previous Knowledge regarding BSE*	10	25%
	Yes	30	75%
	No		
8	*Sources of Health Information*		
	Newspaper	5	12.5%
	Television	15	37.5%
	Books	20	50%
	Radio	0	0%
	Total	40	100%

Table 2: Pretest Knowledge Score

Sr. No	Level of Knowledge	Pre Test Scores	
		Number	Percentage
1	Adequate (above 16)	0	0%
2	Moderate (8-16)	4	10%
3	Inadequate (below 8)	36	90%

Table 3: Posttest Knowledge Score

Sr. No	Level of Knowledge	Post Test Scores	
		Number	Percentage
1	Adequate (above 16)	36	90
2	Moderate (8-16)	3	7.5
3	Inadequate (below 8)	1	2.5

Table 4: Pretest Attitude Score

Attitude score	Frequency	Percentage
Unfavorable attitude (<50%)	35	87.5%
Moderate favorable attitude (51-75%)	4	10%
Favorable attitude (>75%)	1	2.5%

Table 5: Posttest Attitude Score

Attitude score	Frequency	Percentage
Unfavorable attitude (<50%)	0	0%
Moderate favorable attitude (51-75%)	4	10%
Favorable attitude (>75%)	36	90%

Table 6: Area wise comparison of mean, SD, and mean percentage of pre-test and post- test knowledge scores about breast self-examination among adolescent girls

Area	Max score	Pre test scores			Post test score			Difference in mean (%)
		Mean	SD	Mean %	Mean	SD	Mean %	
Knowledge on general information on breast self-examination	7	2.3	1.38	32.85	6.4	1.12	91.42	58.57
Knowledge on risk factor and etiology of breast cancer	6	2.02	1.09	33.75	5	1.19	83.33	49.58
Knowledge on steps to perform breast self-examination	7	1.92	1.11	27.5	6.1	0.95	87.14	59.64
Overall	20	6.24	3.58	31.36	5.8	1.09	87.30	55.93

Table 7: Comparison of pre-test and post-test score of knowledge

Sr. No	Level of knowledge	Pre test scores		Post test scores	
		Number	Percentage	Number	Percentage
1	Adequate (>76%)	0	0%	36	90%
2	Moderate (51-75%)	4	10%	3	7.5%
3	Inadequate (<50%)	36	90%	1	2.5%

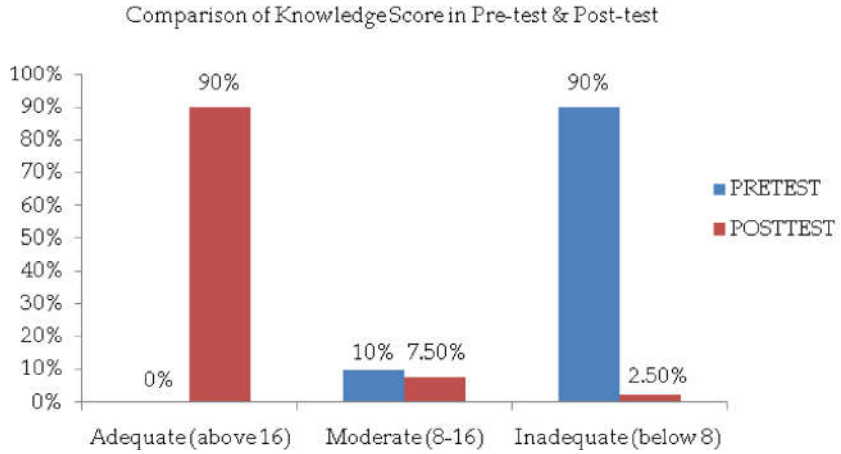

Fig. 1: Showing the average knowledge score in pre-test and post-test

Table 8: Comparison of pre-test and post-test score of attitude

Sr. No	Level of Knowledge	Pre Test Scores		Post Test Scores	
		Number	Percentage	Number	Percentage
1	Unfavorable attitude (<50%)	36	90%	1	2.5%
2	Moderate Favorable (51%-75%)	4	10%	4	10%
3	Favorable (>75%)	0	0%	35	87.5%

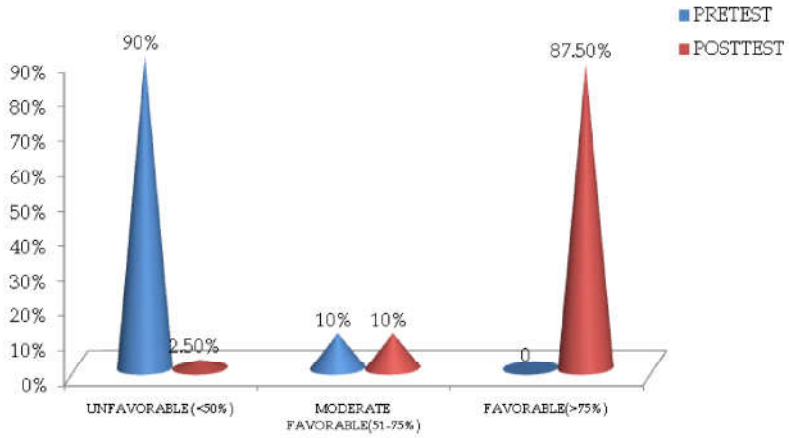

Fig. 2: Showing the average attitude score in pre-test and post-test

Table 9: Showing Effectiveness of STP – Knowledge

Group	N	Structurred Questionarie	Mean	SD	DF	"T" Value
STP– Knowledge on BSE	40	Pretest	6.24	3.58	39	3.79
		Posttest	5.8	1.09		

Table 10: Showing Effectiveness of STP – Attitude

Group	N	Structurred Questionarie	Mean	SD	Df	"T" Value
STP – Attitude on BSE	40	Pretest	13.55	2.75	39	86.36
		Posttest	24.95	2.56		

Table 11: Showing Analysis of data to find association between knowledge and selected demographic variables in Pre-test Knowledge on BSE in urban area.

Sr. No	Demographic variable	Inadequate	Moderate	Adequate	Total	p. Value
1.	*Age*					Significant
	a. 13-15	0	0	0	0	
	b. 16-17	2	1	1	4	
	c. 18-19	33	2	1	36	
	d. 20-21	00	0	0	0	
	Total	35	3	2	40	p=0.01
2.	*Area of Living*					Not
	a. Rural	17	1	0	18	significant
	b. Urban	19	3	0	22	
	Total	36	4	0	40	p=O.1
3.	*Occupation*					significant
	a. Student	36	4	0	40	
	b. Job	0	0	0	0	
	c. Housewife	0	0	0	0	
	d. Labor	0	0	0	0	
	Total	36	4	0	40	p=0.25
4.	*Educational Level*					Significant
	a. Primary	0	0	0	0	
	b. Secondary	2	0	0	2	
	c. Higher Secondary	17	1	0	18	
	d. Degree	18	1	1	20	
	Total	37	2	1	40	p=0.05
5.	*Religion*					Significant
	a. Hindu	39	0	0	39	
	b. Muslim	1	0	0	1	
	c. Christian	0	0	0	0	
	d. Other	0	0	0	0	
	Total	40	0	0	40	P=0.1
6.	*Marital Status*					Not
	a. Married	0	0	0	0	Significant
	b. Unmarried	40	0	0	40	
	Total	40	0	0	40	p=0.4
7.	*Previous knownledge*					Not
	a. Yes	10	0	0	10	Significant
	b. No	30	0	0	30	
	Total	40	0	0	40	p=0.4
8.	*Sources of Health Information*					Not
	a. Newspaper	5	1	0	6	Significant
	b. Television	11	1	0	12	
	c. Books	20	2	0	22	
	d. Redio	0	0	0	0	
	Total	36	4	0	40	p=0.25

Table 12: Showing: An Analysis of data to find association between knowledge and selected demographic variables in Post-test Knowledge on BSE in urban area.

Sr. No	Demographic variable	Inadequate	Moderate	Adequate	Total	p. value
1.	*Age*					Significant
	a. 13-15	0	0	0	0	
	b. 16-17	0	0	2	2	
	c. 18-19	0	2	36	38	
	d. 20-21	0	0	0	0	
	Total	0	2	38	40	p=0.01
2.	*Area of Living*					Significant
	a. Rural	0	1	16	17	
	b. Urban	0	1	22	23	
	Total	0	2	38	40	p=0.01
3.	*Occupation*					Significant
	a. Student	0	2	38	40	
	b. Job	0	0	0	0	
	c. Housewife	0	0	0	0	
	d. Labor	0	0	0	0	
	Total	0	2	38	40	p=0.025
4.	*Educational Level*					Significant
	a. Primary	0	0	0	0	
	b. Secondary	0	0	0	0	
	c. Higher Secondary	0	2	35	37	
	d. Degree	0	1	2	3	
	Total	0	3	37	40	p=0.05
5.	*Religion*					Significant
	a. Hindu	0	0	39	39	
	b. Muslim	0	0	1	1	
	c. Christian	0	0	0	0	
	d. Other	0	0	0	0	
	Total	0	0	40	40	p=0.1
6.	*Marital Status*					Not
	a. Married	0	0	0	0	Significant
	b. Unmarried	0	0	40	40	
	Total	0	0	0	40	p=0.4
7.	*Previous knownledge*					Significant
	a. Yes	0	1	29	30	
	b. No	0	1	9	10	
	Total	0	2	38	40	p=0.01
8.	*Sources of Health Information*					Significant
	a. Newspaper	0	1	4	5	
	b. Television	0	0	11	11	
	c. Books	0	1	23	24	
	d. Redio	0	0	0	0	
	Total	0	2	38	40	p=0.05

Summary

This chapter dealt with analysis and interpretation of data collected to evaluate the effectiveness of structured teaching module. Findings reveals that the pre-test knowledge mean was 6.24±3.58 (SD) which is 31.36% of the total score, whereas in post-test, the mean score 5.8±1.09 (SD) which is 87.30% of the total score.

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Abbreviations

Standard abbreviations should be used and be spelt out when first used in the text. Abbreviations should not be used in the title or abstract.

Checklist

- Manuscript Title
- Covering letter: Signed by all contributors
- Previous publication/ presentations mentioned, Source of funding mentioned
- Conflicts of interest disclosed

Authors

- Middle name initials provided.
- Author for correspondence, with e-mail address provided.
- Number of contributors restricted as per the instructions.
- Identity not revealed in paper except title page (e.g.name of the institute in Methods, citing previous study as 'our study')

Presentation and Format

- Double spacing
- Margins 2.5 cm from all four sides
- Title page contains all the desired information. Running title provided (not more than 50 characters)
- Abstract page contains the full title of the manuscript
- Abstract provided: Structured abstract provided for an original article.
- Key words provided (three or more)
- Introduction of 75-100 words
- Headings in title case (not ALL CAPITALS).
  References cited in square brackets
- References according to the journal's instructions

Language and grammar

- Uniformly American English
- Abbreviations spelt out in full for the first time. Numerals from 1 to l0 spelt out
- Numerals at the beginning of the sentence spelt out

Tables and figures

- No repetition of data in tables and graphs and in text.
- Actual numbers from which graphs drawn, provided.
- Figures necessary and of good quality (color)
- Table and figure numbers in Arabic letters (not Roman).
- Labels pasted on back of the photographs (no names written)
- Figure legends provided (not more than 40 words)
- Patients' privacy maintained, (if not permission taken)
- Credit note for borrowed figures/tables provided
- Manuscript provided on a CDROM (with double spacing)

Submitting the Manuscript

- Is the journal editor's contact information current?
- Is the cover letter included with the manuscript? Does the letter:

1. Include the author's postal address, e-mail address, telephone number, and fax number for future correspondence?
2. State that the manuscript is original, not previously published, and not under concurrent consideration elsewhere?
3. Inform the journal editor of the existence of any similar published manuscripts written by the author?
4. Mention any supplemental material you are submitting for the online version of your article. Contributors' Form (to be modified as applicable and one signed copy attached with the manuscript)