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Research Article

A Pre-experimental Study to Assess the Effectiveness of Self-Structured Teaching Plan of Knowledge on Menstrual Hygiene among Nursing Students of Himalayan School of Nursing, Ambala (Haryana)

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ABSTRACT

Aim: The present study aims to assess and compare the knowledge on menstrual hygiene among nursing students of Himalayan School of Nursing, Ambala (Haryana), before and after implementation of self-structured teaching plan. **Materials and Methods:** A quantitative study using pre-experimental pre-test and post-test design. A sample size of 60 nursing students was selected using random sampling technique, semi-structured questionnaire was used to process the level of knowledge of nursing students on menstrual hygiene. **Result:** The finding of the study had showed that in pre-test knowledge score, majority of the nursing students had excellent level of knowledge, i.e., 5% followed by 30% had good level of knowledge, 65% had very good level of knowledge, and 0% had poor level of knowledge. In post-test knowledge score, majority of nursing students had good level of knowledge, i.e., 21.6% followed by 66.6% had very good level of knowledge, 11.6% had excellent, and 0% poor level of knowledge. It was concluded that there is increased in post-test knowledge score as compared to pre-test knowledge score. It was found that all the sociodemographic variables such as age, religion, occupation, residence, and source of information on menstrual hygiene are non-statistically significant. **conclusion:** The finding of the study reveals that the mean of pre-test level of knowledge score is 11.38 and the mean of post-test level of knowledge score is 12.16.

Keywords: Effectiveness, Knowledge, Menstrual hygiene, Self-structured teaching plan

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Introduction

Adolescents belong to vital age group not only because they are the entrant population to parenthood but also because they are threshold between childhood and adulthood. As they attempt to cross this threshold, they face various physiological, psychological, and developmental changes. The word "adolescent" is derived from the Latin word "adolescere" which means to grow to maturity that indicates the defining features of adolescence menstruation which is the first indication of puberty. During puberty, the physical changes occur which transform the body of child into that of an adult, changes in body size, and changes in body proportions. A menstrual taboo is any social taboo concerned with menstruation. In some societies, it involves menstruation being perceived as unclean or embarrassing, extending even to the mention of menstruation both in public (in the media and advertising) and in private (among the friends, in the household, and with men). Many traditional religions consider menstruation ritually unclean. Most of

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the girls receive their gynecological information from their mothers, religious books, older sister, or a peer. However, such information was generally given after menarche rather than before. Hence, there is a need to provide healthy family life education to the woman particularly the adolescent girls (AGs).[1]

Menstruation is still regarded as something unclean or dirty in Indian society. The reaction to menstruation depends on awareness and knowledge of the subject. The manner in which a girl learns about menstruation and its associated changes may have an impact on her response to the event of menarche. Although menstruation is a natural process, it is linked with several misconceptions and practices, which sometimes result into adverse health outcomes. Isolation of the menstruating girls and restrictions being imposed on them in the family, have reinforced a negative attitude toward this phenomenon. Menstrual practices are clouded by taboos and social-cultural restrictions even today, resulting in AGs remaining ignorant of the scientific facts and hygienic health practices, necessary for maintaining positive reproductive health. Women having better knowledge regarding menstrual hygiene and safe practices are less vulnerable to reproductive tract infections (RTIs) and its consequences. Therefore, increased knowledge of menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of women. The social stigma attached to menstruation causes many girls and women to carry out dangerous hygiene practices. Lacking a platform to share menstrual hygiene problems, girls and women often suffer from discomfort and infection, avoiding urination during menstruation, and using any kind of cloth available old (or) unwashed as an, but still girls are not visiting medical practitioners.[2]

Menstruation is also known as periods or monthly is the regular discharge of blood and mucosal tissue (known as menses) from inner lining uterus through the vagina. The first period is usually benign between 12 and 15 years of age. A point in time known as menarche; however, periods may occasionally start as young as 8 years old and still be considered normal. The average age of the first period is generally later in the developing world. A lack of period known as amenorrhea is when periods do not occur by age 15 or have not occurred in 90 days.[3]

Hygiene generally refers to the set of practices associated with the preservation of health and healthy living. The focus is mainly on personal hygiene that looks at cleanliness of the hairs, body, hands, fingers, feet, and clothing and menstrual hygiene.[3]

Menstrual hygiene management (MHM) is about access to menstrual hygiene product to absorb or collect menstrual blood privacy to change the materials and assess to facilities to dispose of used menstrual management material, MHM can be particularly challenging for girls and women in developing countries despite. It is significant. Maturation can be a barrier to education for many girls, as a lack of effective sanitary products restricts girl's involvement in educational and social activities.[4]

Menstrual hygiene day creates an occasion for publishing information about MHM issues in the media. The day offers for the integration of menstrual global national and local policies and program.[4]

Need for the study

The girl should be educated about significance of menstruation and development of secondary sexual characteristic selection of sanitary menstrual absorbent and its proper disposal due to unhygienic practices of menstrual hygiene, there are some complications such as cervicitis, bacterial vaginosis, fungal infection, and inflammatory disease which are prevalent among females so that she does not develop psychological upset and received education world indirectly wipe away the age-old wrong ideas make her feel free to discuss menstrual maters without any inhibition.

Variety of different approaches to health promotion can be adopted by nurses in practice including education persuasion manipulation and attempts to promote an environment where healthy decision about lifestyle can be made.

Thus, by conducting this research, we are trying to impart knowledge to the adolescent girls (AGs) of the nursing department of HGPI regarding menstrual hygiene and its management and can reduce the incidence of complications arising from unhygienic practices during the menstrual period.

Problem statement

A pre-experimental study was to assess the effectiveness of self-structured teaching plan of knowledge on menstrual hygiene among nursing students of Himalayan School of Nursing, Ambala (Haryana).

Objective

The objective of the study was as follows:

1. To assess the knowledge on menstrual hygiene among nursing students of Himalayan School of Nursing, Ambala (Haryana), before the implementation of self-structured teaching plan
2. To assess the knowledge on menstrual hygiene among nursing students of Himalayan School of Nursing, Ambala (Haryana), after the implementation of self-structured teaching plan
3. To compare the knowledge on menstrual hygiene among nursing students of Himalayan School of Nursing, Ambala (Haryana), before and after the implementation of self-structured teaching plan
4. To find out the association on menstrual hygiene among nursing students of Himalayan School of Nursing,

Ambala (Haryana), after the implementation of self-structured teaching plan with their selected variables.

Materials and Methods

A pre-experimental, pre-test and post-test research design was used to conduct the study in Himalayan School of Nursing, Kala Amb, Ambala (Haryana). A sample size of 60 nursing students was selected using random sampling technique. Permission was obtained from the research committee of Himalayan Institute of Nursing, Kala Amb, Ambala (Haryana). The informed consent was taken from nursing students who were willing to participate in the study. Self-structured questionnaire was used to assess the level of knowledge among nursing students on menstrual hygiene and self-structured teaching plan was provided.

Tools of data collection

The tool consists of three parts:

1. Demographic data profile sheet: Demographic data profile sheet was used for the assessment of demographic variables such as age, religion, occupation of father, residence, source of information, and age at which your menstrual start
2. Self-structured questionnaire: Self-structured questionnaire was used to assess the knowledge on menstrual hygiene among nursing students of Himalayan School of Nursing
3. Self-structured teaching plan on menstrual hygiene.

Data analysis

Description of Analysis.

S. No.	Data analysis	Method	Objectives
1.	Descriptive statistics	Frequency and percentage distribution, mean, mode, median, and standard deviation	Distribution based on demographic variable to assess the level of knowledge of menstrual hygiene among nursing students
2.	Inferential statistics	Chi-square test, one-sample *t*-test	To associate the level of knowledge on menstrual hygiene among nursing students with their selected demographic variables

Results

Table 1 depicts that-

The frequency distribution of demographic variables of nursing students according to age, majority of the nursing students 10% were in the age group of 17 years, followed by 35% were in the age group of 18 years, 36.6% were in the age group of 19 years, and 18.3% were in the age group of more than 19 years.

The frequency distribution of demographic variables of nursing students according to religion, majority of nursing students, i.e., 83.3% were in the Hindu, followed by 1.6% were in the Muslim, 0% were in the Christian, and 15% were in the Sikh.

Table 1: Frequency and percentage distribution of demographic characteristics of nursing students

Selected demographic variables	Frequency	Percentage
Age (years)		
17	6	10
18	21	35
19	22	36.6
More than 19	11	18.3
Religion		
Hindu	50	83.3
Muslim	1	1.6
Christian	0	0
Sikh	9	15
Occupation of father		
Farmer	33	55
Business	2	3.3
Private job	18	30
Government job	7	11.6
Place of residence		
Rural	28	46.6
Urban	23	38.3
Semi-urban	0	0
Other places	9	15
Source of information regarding menstruation		
Elders in the family	46	76.6
Friends	7	11.6
Newspaper	0	0
Others	7	11.6
Age at which your menstrual started (years)		
11	2	3.3
12	4	6.6
13	13	21.6
14	41	68.3

The frequency distribution of demographic variables of nursing students according to occupation, majority of nursing students 55% were from farmer, followed by 3.3% were in the business, 30% were in the private job, and 11.6% were in the government job.

The frequency distribution of demographic variable of nursing students according to residence, majority of the nursing students 46.6% were from rural area, followed by 38.3% were from urban area, 0% were semi-urban, and 15% were from others.

The frequency distribution of demographic variables of nursing students according to the source of knowledge, majority of the nursing students 76.6% get information from elders in family, followed by 11.6% get information from friend, 0% through newspaper, and 11.6% through others.

The frequency distribution of demographic variables of nursing students according to the started menstrual age, majority of the nursing students 3.3% were in the 11 years, followed by 6.6% were in the 12 years, 21.6% were in the 13 years, and 68.3% were in the 14 years.

Table 2: Mean median, standard deviation, and range were used to assess the knowledge on menstrual hygiene among nursing students of Himalayan School of Nursing, Ambala (Haryana)

Group	Mean		Difference of mean	Standard Deviation		Paired *t*-test and df
	Pre-test	Post-test		Pre-test	Post-test	
Nursing students	11.38	12.16	−0.78	214.25	1140.2	1.682 df=3

Data in Table 2 represent that mean post-test knowledge score x_2=12.6 was apparently higher than the mean pre-test knowledge score x_1=11.38; the difference between the mean is −0.78 and SD in pre-test 214.25 and post-test 1140.2 and the paired t-test 1.682 value, i.e., significant.

The data presented in Table 3 fulfill the objective 1 as out of 60 (100%) samples, majority 39 (65%) had very good knowledge, 18 (30%) had good knowledge, 0 (0%) had poor knowledge, and 3 (5%) had excellent knowledge regarding menstrual hygiene. The mean, median, and SD justify the knowledge of nursing students.

The data presented in Table 3 fulfill the objective as out of 60 (100%) samples, majority 13 (21.6%) had good knowledge, 14 (66.6%) had very good knowledge, 0 (0%) poor, and 7 (11.6%) had excellent level of knowledge on menstrual hygiene. The mean, median, and SD justify the knowledge of nursing students.

Level of post-test knowledge	Frequency	Percentage	Mean	Median	SD
Poor (0–6)	0	0	12.16	12	1140.2
Good (13–18)	13	21.6			
Very good (19–25)	40	66.6			
Excellent (25–30)	7	11.6			

Table 4 shows Chi-square test for association between the post-test knowledge score with the selected demographic variables.

The data revealed that age (12.000), religion (12.000), occupation (12.000), place (12.000), source of information (8.000), and started menstrual age (12.000) were found statistically significant because $P \geq 0.05$, whereas the age of nursing students, religion, occupation, residence and source of information, and started menstrual age were not statistically significant.

Discussion

The aim of the study was to assess the effectiveness of planned teaching program on knowledge regarding menstrual hygiene among AGs. An evaluative approach was adopted. A total of 60 AGs were selected using purposive sampling technique during the month of February 2012 from selected schools of Mohali district, Punjab. A self-administered structured knowledge questionnaire was selected to assess the knowledge of the AGs regarding menstrual hygiene. Collected

Table 3: Frequency and percentage distribution of pre-test and post-test level of knowledge on menstrual hygiene among nursing students of Himalayan School of Nursing, Ambala (Haryana)

Level of knowledge	Frequency *n*=60	Percentage	Mean	Median	SD
Poor (0–6)	0	0	11.38	11	214.25
Good (13–18)	18	30			
Very good (19–24)	39	65			
Excellent (25–30)	3	5			

data were analyzed by descriptive and inferential statistics. It was found that most of the subjects were having low (50%) and average (48.3%) level of knowledge during pre-test. However, after planned teaching program session, most of the subjects were having good (50%) and excellent (48.3%) level of knowledge in post-test. The effectiveness of planned teaching program was found highly significant (P = 0.000). It was also found that majority of the study variables were not significantly associated with the knowledge level of AGs except educational status of mother, family income per month, and teacher as a source of information. It is concluded that planned teaching program was an effective method to improve the knowledge of AGs regarding menstrual hygiene. The knowledge of AGs has significant association with the educational status of their mother because mother is the primary source of information.[5]

This study aimed to assess the level of awareness of menarche and hygienic practices during menstruation in context of schooling. Materials and Methods - A community-based cross-sectional study using a mix method approach (qualitative and quantitative). It was conducted among 650 AGs in the field practice area of Rural Health and Training Centre, Chiraigaon block of district Varanasi between January and June 2011. A pre-tested, semi-structured interview schedule was used. Data were analyzed statistically using the Statistical Package for the Social Sciences software. Results - Out of the total 650 respondents, 590 (90.78%) had attained menarche at the time of interview and only one-third of the respondents (29.4%) were aware of menstruation before menarche and sisters (55%) played the key role in providing information to them. Only 31% of respondents were using sanitary pads during menstruation. Self-reported RTI was observed more in respondents not

Table 4: Chi-square showing the association of knowledge on menstrual hygiene among nursing students' Himalayan School of Nursing, Ambala (Haryana)

Selected demographic variables	Frequency n=60	Percentage	Chi-square, df, *P*-value
Age (years)			
17	6	10	12.00, 9.213309, NS
18	21	35	
19	22	36.6	
More than 19	11	18.3	
Religion			
Hindu	50	83.3	12.000, 9.213309, NS
Muslim	1	1.6	
Christian	0	0	
Sikh	9	15	
Occupation of father			
Farmer	33	55	12.000, 9.213309, NS
Business	2	3.3	
Private job	18	30	
Government job	7	11.6	
Place of residence			
Rural	28	46.6	12.000, 9.213309, NS
Urban	23	38.3	
Semi-urban	0	0	
Other places	9	15	
Source of information regarding menstruation			
Elders in the family	46	76.6	8.000, 6.238103, NS
Friends	7	11.6	
Newspaper	0	0	
Others	7	11.6	
Age at which your menstrual started (years)			
11	2	3.3	12.000, 9.213309, NS
12	4	6.6	
13	13	21.6	
14	41	68.3	

(*S) Significant {$P \leq 0.05$}, NS: Non-significant {≥ 0.05}

maintaining hygienic practices (6.6%) as compared to those maintaining hygiene (2.6%).[6]

Conclusion

It was concluded that there is increased in post-test knowledge score as compared to pre-test knowledge score. It was the result of self-structured teaching plan on knowledge regarding menstrual hygiene.

It was found that all the sociodemographic variables such as age, religion, occupation, residence, and source of information on menstrual hygiene are non-statistically significant.

Conflicts of Interest

There were no such conflicts and bias during the study.

Source of Finding

It is a self-funded research study.

Ethical Consideration

No ethical issue exists.

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