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Research article

A study to assess the knowledge regarding menstrual hygiene among adolescent girls in a selected senior secondary school at rural area of Jaipur district

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Abstract

A non experimental research study was under taken to assess the knowledge regarding menstrual hygiene among 60 adolescent girls of a higher secondary school at rural area of Jaipur district in 2017, with a view to prepare an information booklet. **Aim:** The study are to assess the knowledge regarding menstrual hygiene among adolescent girls, to assess the association between knowledge of adolescent girls with selected demographic variables and to prepare an information booklet on maintenance of menstrual hygiene. **Materials and Methods:** The present non experimental descriptive study was under taken to assess the knowledge of adolescent girls regarding menstrual hygiene. The statistical methods used for analysis of demographic data was frequency and percentage, level of knowledge score was evaluated by mean, association of knowledge with demographic data is done by chi square. **Results:** The findings revealed that out of 60 subjects, 7(12%) subjects had poor knowledge, 42(70%) subjects had average knowledge, and 11(18%) subjects had good knowledge. No significant association was noted between age, educational status, religion family type, family monthly income and source of information, P value for the same were (0.1179), (0.113), (0.71), (0.79), (0.202) and (0.09) respectively. However, significant association was noted between age of menarche and knowledge of respondents P value (0.04). **Conclusion:** Therefore, it is recommended that the mothers and school teachers should participate actively to improve knowledge of adolescent girls regarding menstrual hygiene at their level.

Keywords: Menstrual hygiene, adolescent girls, Jaipur.

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1. Introduction

Adolescent is a period of transition from childhood to adulthood; which is usually between the age group 11 and 20 years. Globally there were 1.2 billion adolescent girls, which accounts for eighteen percent of the world's population. Adolescent girls in India constitute almost 47 percentage of the population [1]. Adolescent period is the formative period when maximum amounts of changes take place and pubertal change is one of them. The main pubertal change that occurs in girls is menstruation. This is an important landmark in the process of growth and maturation and prepares them for motherhood. Yesterday's girl is today's adolescent and tomorrow's mother [2]. Menstruation is a physiological phenomenon which is unique to females that begins in adolescence. It is monthly uterine bleeding for 4-5 days coming regularly every 28 days. Normally females get 13 menses in a year and around 400 menses in her reproductive life. The first menstruation is termed as

"menarche". The age of menarche is between 10- 16 years in India [3]. Though menstruation is a natural and normal physiological process for all healthy adult women as ever, it has been surrounded by secrecy, negativity and myths in much society [4]. Menstrual hygiene refers to the personal hygiene practice during menstruation. A girl needs to practice a high level of personal hygiene during her periods and the personal hygiene starts from the selection of best sanitary products, its proper usage, disposal, body cleanliness, diet, etc. Menstrual hygiene is important because it is a natural process of hygiene related to practice of girls during menstruation as it has an impact in terms of to prevent reproductive tract infections and urinary tract infections [5]. Many studies depicted that there is improper and inadequate care and unhygienic practices during menstruation among adolescent girls. An article in The Times of India revealed that only 12% of menstruating women use sanitary napkins and 88% of women use unsanitized cloth, ashes and husk sand. Incidence of reproductive tract infection is 70% more common among these women [6].Moreover, hygiene is neglected by girls especially in rural areas, due to lack of availability and inability to afford sanitary napkins [7]. A study conducted in Aurangabad, India reported that 60% of urban girls used market available sanitary napkins whereas; this was limited to 6% of rural girls [8]. There is lack of awareness of menstrual hygiene and care during menstruation which is due to the lack of education related to menstruation and menstrual hygiene. A study conducted in Nagpur reported that only 36.95% of the girls were aware of menstruation before menarche. More than three fourth of girls were not aware about the cause and source of bleeding and majority of them had knowledge about the use of sanitary pads [9]. Therefore, adolescent girls need the support and guidance of parents and nurses to facilitate healthy life practices. Increased knowledge about menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of women [10]. It is still clouded by socio-cultural restriction and taboos and associated with various myth and misconception [11]. A study conducted in Ranchi, India reported that 45.5% of the girls face social restrictions, majority of them were restricted in religious practices, wearing new clothes, cooking food, etc [12].

Objectives of the study:

1. To assess the knowledge regarding menstrual hygiene among adolescent girls.
2. To assess the association between knowledge of adolescent girls with selected demographic variables.
3. To prepare an information booklet on maintenance of menstrual hygiene.

Hypotheses:

H_0: There will be no significant association between the knowledge and selected demographic variables of adolescent girls.

Conceptual frame work:

My study is based on Rosenbeck health belief model.

2. Methodology

The present non experimental descriptive design study was under taken to assess the knowledge of adolescent girls regarding menstrual hygiene using a structured knowledge questionnaire.
The validity of tool was done by experts in the fields of nursing, medicine and statistics. The tool was thereafter modified as per the suggestion given by experts.
The reliability coefficient of internal consistency was computed by Karl Pearson coefficient correlation method. The reliability coefficient obtained for tool on knowledge was = 0.83, found to be internally consistent and reliable for the study.

Ethical consideration:

1. Permission was obtained from the Principal of Shri Krishna Sarvoday Senior Secondary School, Achrol, Jaipur district.
2. Informed written consent was obtained from the adolescent girls who enrolled for the study. The respondents were assured the anonymity and confidentiality of the information provided by them.

Data collection

Data collection was done on 10 -3 -2017 on 60 girl students of Shri Krishna Sarvoday Senior Secondary School, Achrol, Jaipur district.

3. Result

Description of demographic variable of adolescent girls (figure 1 to figure 7).

Description of demographic variable of adolecent girls

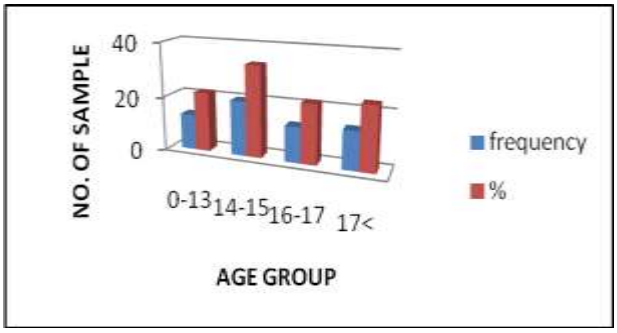

Figure No 1: Frequency and percentage distribution of adolescent girls by their age in years

Above figure shows that percentage and frequency wise distribution of adolescent girls according to their age shows that the highest percentage 33%(20) of adolescent girls were in the age group of 14-15 years, 23%(14) were in the age group of >17 years, 22%(13) were in the age group of <13 years, 22 %(13) were in the age group of 16-17 years of age.
It was found that majority 33% (20) of them belongs to the age group of 14-15 years

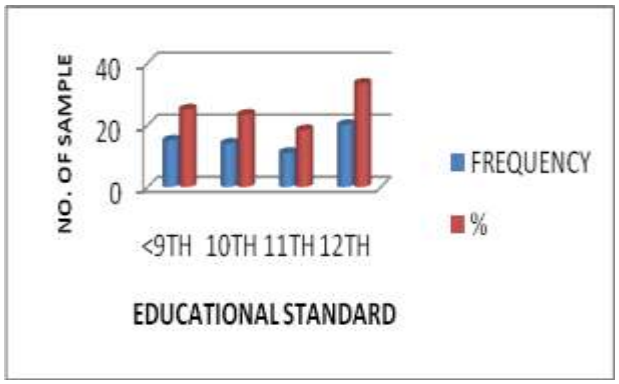

Figure No 2: Frequency and percentage distribution of adolescent girls by their education status

Above figure shows that percentage and frequency wise distribution of adolescent girls according to their education status. Higher percentage of adolescent girls 33% (20) had completed their 12th standard, 25% (15) of adolescent girls had <9th Standard, 23% (14) had completed their 10th standard and 18% (11) of them had their 11th Standard.
It was found that Majority 33% (20) of adolescent girls had completed their 12th standard

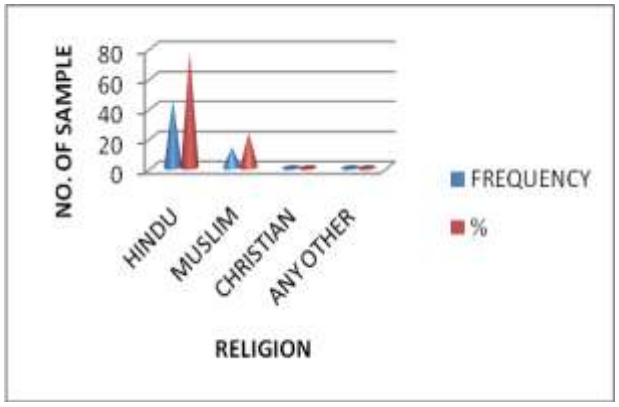

Figure No 3: Frequency and percentage distribution of adolescent girls by their religion

Above figure shows that percentage and frequency wise distribution of adolescent girls according to their religion shows that the highest percentage 77% (46)of adolescent girls were Hindus, 23%(14) of adolescent girls belong to Muslim religion and 0% (0) belong to Christian religion and any other 0% (0).
It was found that majority 77% (46) of them belong to the Hindu religion

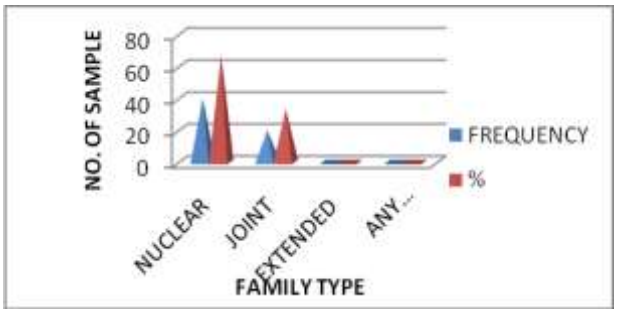

Figure: 4 Frequency and percentage distribution of adolescent girls by their type of family.

Above figure shows that percentage and frequency wise distribution of adolescent girls according to their type of family. Highest percentage 67% (40) of adolescent girls belongs to nuclear family, 33% (20) belong to joint family. 0% (0) belongs to extended family and 0% (0) to any other.
It was found that majority (67%) (40) of them belong to the nuclear family

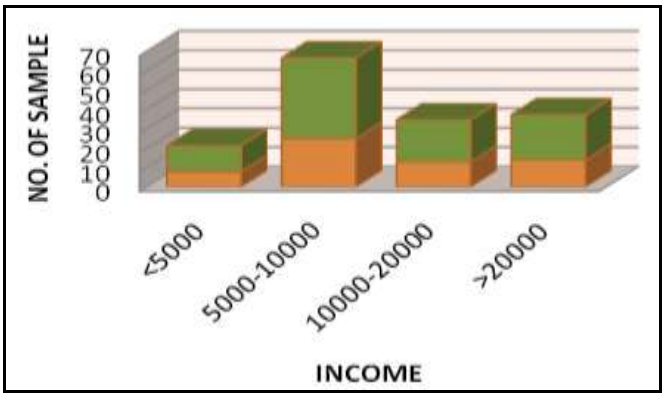

Figure No 5: Frequency and percentage distribution of adolescent girls by their monthly income of the family

Above figure shows that percentage and frequency wise distribution of adolescent girls according to their monthly income of the family shows that majority 42% (25) had their income 5000-10000, 23%(14) had their income ranging between rupees >20000, 22%(13) of them had their income ranging between rupees 10000-20000 and 13%(8) had their income rupees <5000
It was found that majority 42% (25) of adolescent girls belong to middle class family

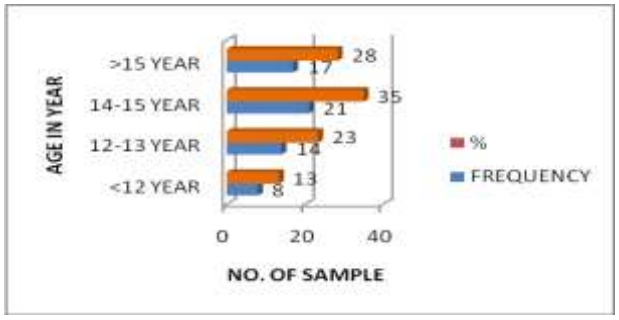

Figure No 6: Frequency and percentage distribution of adolescent girls by their age of menarche

Above figure shows that percentage and frequency wise distribution of adolescent girls according to their age of menarche shows that the highest percentage 35% (21)the age 14-15 years, 28% (17)were in the age group of >15 years, 23% (14) were in the age group of 12-13years, 13% (8) were in the age group of <12 years.

It was found that majority (35%) of them belongs to the age group of 14-15 years

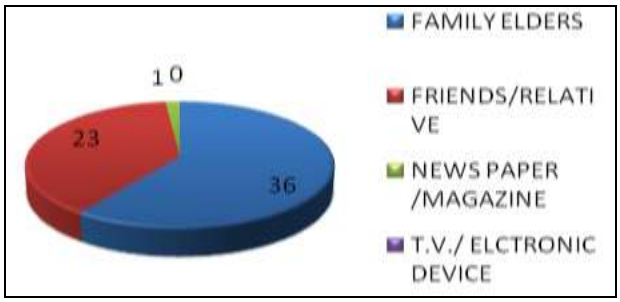

Figure: 7 Frequency and percentage distribution of adolescent girls by their source of information

Above figure shows that Percentage and frequency wise distribution of adolescent girls according to their source of information, highest 60% (36) of the adolescent girls had their source of information from elders of the family, 38% (23) of them had friends/relatives, 2%(1) of them had their news paper/magazine and 0%(0) of them had TV/electronic device. It was found that majority 60% (36) of the adolescent girls had their source of information from elders of the family

Table No 1: Distribution of adolescent girls as per Knowledge regarding menstrual hygiene

Level of knowledge	No. Of candidate	%
Poor(0-10)	7	12
Average(11-20)	42	70
Good(21-30)	11	18
Total	60	100

Above table shows that the knowledge level out of 60 subjects, 7 (12%) subjects had poor knowledge, 42 (70%) subjects had average knowledge and 11(18%) subject had good knowledge.

No significant association was noted between age, educational status, religion, family type, family monthly income and source of information, P value for the same were (0.1179), (0.113), (0.71), (0.79), (0.202) and (0.09) respectively (Tables 2 a to 2 f) . However, significant association was noted between age of menarche and knowledge of respondents P value (0.04) (Table3). Therefore, it is recommended that the mothers and school teachers should participate actively to improve knowledge of adolescent girls regarding menstrual hygiene at their level

Table No 2a: Association between age group and knowledge of respondents

Age	Knowledge level			Chi-square	Df	P – value
	Poor	Avg	Good			
<13	2	11	0	10.65	6	.1179
14-15	2	13	5			
16-17	0	8	5			
>17	3	10	1			

Above table shows that the calculated "P" value (0.1179) was more than established "P" value (.05) at the degree of freedom 6. Hence, there was no significant association between age and knowledge score of the respondent.

Table No 2b: Association between educational status and knowledge of respondents

Educational status	Knowledge level			Chi-square	Df	P-value
	Poor	Avg	Good			
<9TH	0	13	2	9.7	6	.133
10TH	0	12	2			
11TH	3	6	2			
12TH	4	11	5			

Above table shows that the calculated "P" value (0.133) was more than established "P" value (.05) at the degree of freedom 6.Hence, there was no significant association between educational status and knowledge score of the respondent.

Table No 2c: Association between religion and knowledge of respondents

Religion	Knowledge level			Chi-square	Df	P-value
	Poor	Avg	Good			
Hindu	6	31	9	.67	2	.71
Muslim	1	11	2			
Christian	0	0	0			
Any other	0	0	0			

Above table shows that the calculated "P" value (0.71) was more than established "P" value (.05) at the degree of freedom 2. Hence, there was no significant association between religion and knowledge score of the respondent.

Table No 2d: Association between type of family and knowledge of respondents

Family type	Knowledge level			Chi-square	Df	P-value
	Poor	Avg	Good			
Nuclear	4	28	8	.468	2	.79
Joint	3	14	3			
Extended	0	0	0			
Any other	0	0	0			

Above table shows that the calculated "P" value (0.79) was more than established "P" value (.05) at the degree of freedom 2. Hence, there was no significant association between type of family and knowledge score of the respondent.

Table No 2e: Association between monthly income of family and knowledge of respondents

Family income	Knowledge level			Chi-square	Df	P-value
	Poor	Avg	Good			
<5000	1	3	4	8.5	6	.202
5000-10000	4	18	3			
10000-20000	0	10	3			
>20000	2	11	1			

Above table shows that the calculated "P" value (0.202) was more than established "P" value (.05) at the degree of freedom 6. Hence, there was no significant association between family monthly income and knowledge score of the respondent.

Table No 2f: Association between source of information and knowledge of respondents

Source of information	Knowledge level			Chi-square	Df	P-value
	Poor	Avg	Good			
Family elders	4	26	6	7.9	4	.09
Friends/relative	2	16	5			
News paper /magazine	1	0	0			
T.v./ elctronic device	0	0	0			

Above table shows that the calculated "P" value (0.09) was more than established "P" value (.05) at the degree of freedom 4. Hence, there was no significant association between source of information and knowledge score of the respondent.

Table No 3: Association between ages of menarche and knowledge of respondents

Menarche age	Knowledge level			Chi-square	Df	P-value
	Poor	Avg	Good			
<12 year	0	8	0	12.76	6	.04
12-13 year	1	9	4			
14-15 year	2	15	4			
15 year	4	10	3			

Above table shows that the calculated "P" value (0.04) was less than established "P" value (.05) at the degree of freedom 6. Hence there was significant association between menarche age and knowledge score of the respondents.

4. Discussion

In my study 12% of adolescent girls had poor knowledge where as it is found that in a study done at Bhartiya Public School, Ambla Haryana by Vandana et al 50% of the subject had below average knowledge study done at Ethopia having by Shivaleela et al there was significant association between source of information and knowledge score of respondents. Whereas, in my study no significant association between source of information and knowledge score of respondents.

There was no significant association between educational status and knowledge score of respondents in my study. Whereas, it was found that in a study done at Oromia regional state of Ethopia by Bacha Kitesa, there was significant association between educational status and knowledge score of respondents.

Study done at Rajkot district of Gujarat by Aarohi Mitra correct knowledge about the age of menarche was present amongst 83.50% study girls and majority of school going girls were educated between 9th to 11th standard. Whereas, in my study correct knowledge about the age of menarche was present amongst 28% adolescent girls and majority of school going girls were educated 12th standard.

Recommendations

- A similar study can be conducted for a larger group in order to generalize the findings.
- Further studies should be conducted about menstrual hygiene among adolescent girls.

Conclusion

The present study concluded that the level of knowledge of adolescent girls was inadequate regarding menstrual hygiene. The information booklet helps in increasing the knowledge and they improving the menstrual hygiene.Therefore, it is recommended that the mothers and school teachers should participate actively to improve knowledge of adolescent girls regarding menstrual hygiene at their level

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