



Menstrual Knowledge and Hygiene Management of Adolescent Girls

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Authors' contributions

This work was carried out in collaboration between both authors. Author PR designed the study, performed the statistical analysis, wrote the protocol, wrote the first draft of the manuscript and managed the analyses of the study. Author RGR managed the literature searches. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/CJAST/2019/v33i430084

Editor(s):

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Complete Peer review History: <http://www.sdiarticle3.com/review-history/41982>

Short Research Article

Received 27 October 2018

Accepted 10 February 2019

Published 08 March 2019

ABSTRACT

Aim: The study measured the menstrual knowledge and hygiene practices of adolescent girls of low socio income group.

Study Design: Purposive sampling method was used for the selection of study participants.

Place and Methodology: A self-developed Questionnaire was used to collect data on knowledge and hygiene practices among the adolescent girls of Hyderabad.

Results: Results showed that the levels of knowledge regarding menstrual health is low among the adolescent girls. Menstruation is clouded in social taboos and is never discussed in homes and hence the adolescent girls are ignorant about it. They accidentally discover and experience menstruation as it happens. It is a prerequisite and a right for adolescent girls to have accurate and adequate knowledge about menstruation and its appropriate related hygiene practices. Further, there exists a positive correlation between menstrual knowledge and hygiene management by

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adolescent girls which clearly indicates that if the menstrual knowledge increases among adolescent girls, then there can be improvement in the hygiene practices as well by the same group.

Keywords: Adolescent; knowledge; hygiene; menarche; menstruation.

1. INTRODUCTION

Adolescence is a unique phase of human development that spreads between the ages of 10 and 19 years. Accelerated growth in reproductive organs is the most significant change during the adolescent period. The girls attain puberty and their menstrual cycle starts. Menstruation is a normal and unique phenomenon to females. Studies have revealed that adolescent girls have incomplete and inaccurate knowledge about menstruation and hygiene. Menstruation knowledge and its hygiene practices are surrounded with socio cultural taboos and hence adolescent girls are ignorant of the scientific practices, facts and hygienic health practices, which sometimes result in adverse health outcomes. The knowledge and practices related to menstruation are dependent on socio economic conditions as well [1]. Hygienic practices of women during menstruation are of considerable importance, otherwise they could be serious health complications and also reproductive tract infections. Good hygienic practices such as the use of sanitary pads, frequently changing pads and adequate washing of the genital area are essential during menstruation. Menstruation knowledge and hygiene practices are rarely discussed at home or in schools, because of the phenomenon being clouded by taboos and social restrictions. Lack of information for adolescent girls about menstruation knowledge and hygienic practices leads to adverse health outcomes like reproductive tract infection, and UTIs. Unhygienic menstrual practices and management among adolescent girls increase susceptibility to infection. The study investigated menstruation related knowledge and practices among adolescent girls in Hyderabad district in India. The relationship between menstrual knowledge and hygiene management will be further interrogated.

2. MATERIALS AND METHODS

The descriptive study was carried out in Hyderabad district in India. It mainly focused on the low socio economic households as these constitute the most vulnerable group in India. A

variety of factors are known to affect menstrual behaviors, the most influential one being economic status of households. A total of 60 respondents were selected through a purposive sampling technique. A questionnaire, structured and closed ended questions were used to capture data on menstruation knowledge levels and hygiene practices of the adolescent girls of low socio income groups. Informed consents were obtained from the parents and assents for participation. Participation was entirely voluntary and confidentiality was ensured. The knowledge questions consisted of questions such as process of menstruation, cause, source, duration of menstruation along with menarche. The hygiene practice questions included use of absorbent material during menstruation, about personal hygiene during menstruation, and frequency of changing pads. The information collected was tabulated and statistically analyzed by using percentages, frequencies and correlations.

3. RESULTS AND DISCUSSION

3.1 Menstruation Process Knowledge

The Table 1 indicates that about 3/4 of the adolescent girls in the study "Don't know" what menstruation process is, 23.33% of adolescent girls pointed out that menstruation is physiological process and 6.66 % indicated that menstruation is pathological process. Physiological process refers to the process that occurs naturally in the human body, this process is the vital function for the human body. On the other hand, pathological process refers to the disease due to invasion of the body by pathogenic microorganisms and their multiplication which can lead to tissue damage and disease. The above figures give a clear idea that adolescent girls are not aware of the menstruation process and why it occurs to them.

Majority (53.33%) of the adolescent girls were aware of the fact that menstruation process is caused by hormonal process in the female human body. Hormones are the chemical messenger of the body. It was depressing to note that 13.33% of the adolescent girls in the study

believed that menstruation is caused by a disease. As much as 33.33% of the adolescent girls did not know the cause of menstruation. 66.66% of adolescent girls “Don’t know” the source of menstruation blood. This figure indicates that menstrual knowledge is poor among the adolescent girls, probably because no proper information channels are available for them. Menstruation is still a social taboo in this society. This might be because nobody talks much about the menstruation, even at household or school level. There is gap in the educational system in India, where reproductive health is not taught because either it is considered non-important or unsocial. It is assumed that knowledge regarding menstruation will come gradually by its own.

The duration of normal menstruation cycle of 20-28 days was indicated correctly by less than 50 % of the adolescent girls. Menstrual cycle is the normal 28-day cycle of the girls who have attained menarche. This normal cycle indicates the normal and healthy life of the girls. This cycle is the normal cycle of all females.

Prior information about menarche before they actually experience it was not available to 90% of the adolescent girls. 10% had heard about menarche and menstruation cycle before they actually experienced it. The prior information is not given to adolescent girls before they actually experience it because of the social taboos and

beliefs that still prevail in Hyderabad district. Menstruation is still not discussed openly. Thakre et al. [2] found that only 36.95% of the girls were aware of menstruation before menarche. The major source of information about menstruation was their mothers. More than three quarters of the girls in the study were not aware of the cause and the source of menstrual blood.

Mahajan and Kaushal [3] pointed out that that 29% of adolescent girls had adequate knowledge about menstrual hygiene, and 71% had inadequate knowledge about menstrual hygiene. Composite practice scores showed that 19%, 69%, and 12% samples had poor, fair, and good score of practices regarding menstrual hygiene, respectively. Results indicate that there is a significant positive association between good knowledge of menstruation and educational status of the mother only. (elaborate a bit).

3.2 Menstrual Hygiene Practices

Table 2 shows menstrual hygiene practices among adolescent girls. All the adolescent girls in the study used absorbent cloth during their menstrual cycle. The commercially available pads were used by only 40 % of the adolescent girls while more than half (60%) adolescent girls used old clothes during their periods. Use of the old clothes by the majority of the adolescent girls was due to affordability and accessibility

Table 1. Knowledge levels on the process of menstruation amongst Adolescent Girls

n=60		
Menstruation process is a	Frequency	Percentage
Physiological process	14	23.33%
Pathological process	4	6.66%
Don't know	42	70.00%
Cause of Menstruation		
Hormones	32	53.33%
Caused by the disease	8	13.33%
Don't know	20	33.33%
Source of Menstrual blood		
Uterus	4	6.66%
Vagina	16	26.00%
Don't know	40	66.66%
Duration of Normal Menstrual cycle		
20-28 days	20	33.33%
28-40 days	4	6.66%
Don't know	36	60.00%
Heard about Menstruation before attaining menarche		
Yes	6	10.00%
No	54	90.00%

Table 2. Practices regarding menstrual hygiene among adolescent girls

Statements	n=60			
	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Uses absorbent materials during menstruation	60	100	–	–
Uses commercially made sanitary pad as absorbent material during menstruation	24	40.00	44	73.33
Clean clothes with soap and water	30	68.00	14	31.81
Dry cloths in sunlight	28	63.36	16	36.36
Changing pads or cloths more than three times and above during menstruation	20	33.33	40	66.66
Do you change /reuse the cloth for every cycle	28	46.66	32	53.33
Disposes used sanitary pads in dustbin	34	56.66	26	43.33
Uses paper to dispose the pads by wrapping	18	30.00	42	70.00
Takes bath daily with soap during menstruation	36	60.00	24	40.00
Clean external genitalia during menstruation	32	53.33	28	46.66
During Menstrual cycle, I use undergarment separately	8	13.33	52	86.66

Table 3. Association between menstruation knowledge and hygiene practice in adolescent girls

		Knowledge	Hygiene Practices
Knowledge	Pearson Correlation	.626	
	Sig. (2-tailed)		
	N		
Hygiene practice	Pearson Correlation		
	Sig. (2-tailed)		
	N		

**significant at 0.05% level of probability*

challenges. Sharma et al. [4] found that majority of the girls preferred cloth pieces rather than sanitary pads as menstrual absorbents. Apparently, poverty, high cost of disposable sanitary pads and to some extent ignorance discouraged the girls from using the menstrual absorbents available in the market. Thakur et al. [5] Sanitary napkins (either alone or along with reusable cloth) are used by the majority (74.5%) of the young women. It is surprising to see that in urban area almost 25% participants are still using cloths. Obviously, due to the poor socio economic conditions of many urban families, they cannot afford to purchase costly sanitary napkins.

As much as 70% of the adolescent girls used

soap and water to clean their used sanitary pads. This figure is noteworthy and indicates some good practice among the adolescent girls. The majority of the adolescent girls (63.36%) dried the clothes in sunlight. 40% of adolescent dried their used sanitary clothes in shade because they feel shy and believe that if they dry in sunlight other members will come to know about their menses. But still as much as 40% of adolescent girls dried their used menstrual clothes in hidden places because they did not want other members to know about their menstrual cycles. The limited, inadequate knowledge about menstruation might be the cause for the girls in the present study to feel embarrassed, anxious and hence they did not dry their used clothes in sun.

The above table clearly indicated low hygiene practices among the adolescent girls which could be due to limited menstruation knowledge. The majority of the adolescent girls did not change their pads or cloths more than three times or more during menstruation. This result indicated low hygiene practices during menstruation. The majority of the adolescent girls (56.66%) did not dispose used sanitary pads in dustbins. Moreover, 70.00% of the respondents did not wrap the pads with papers to dispose them. The majority of the adolescent girls (86.66%), did not use undergarment separately for period during menstruation. This finding is in line with the findings by Fehintola et al. [6] where majority of the respondents (49.58%) disposed the absorbent material without wrapping it and disposed it in the toilet indicating poor hygiene practices during menstruation.

Ramchandra et al. [7] in their study on "knowledge and practices regarding menstrual hygiene among urban adolescent girls" noted that around 34% participants were aware of menstruation prior to their menarche, and that mothers were the main source of information among adolescent girls. Overall, 69% of adolescent girls were using sanitary napkins as menstrual absorbents, while 6% used both cloth and sanitary napkins. Almost half of the rural participants dried the absorbent cloth inside their rooms.

Varghese et al. [8] pointed out the average level of menstrual hygiene practices was less than 50%. Factor analysis on menstrual hygiene showed highest scores on frequency of changing the pad, bath during menstruation, absorbent cloth used and access to water. Average level of hygiene practices was comparatively more among girls who belonged to higher socio-economic groups (P value = 0.003) and those who had access to a covered toilet (P value = 0.000).

3.3 Testing of Hypothesis

3.3.1 Null hypothesis

There will be no association between menstrual health knowledge and hygiene practices of adolescent girls.

3.3.2 Alternate hypothesis

There will be a significant association between menstrual health knowledge and hygiene practice of adolescent girls (Table 3).

An inference could be drawn from the above table that knowledge about menstruation and menstrual hygiene practice have a positive correlation with each other, This correlation clearly indicates that if the menstrual knowledge of the adolescent girls increases that there can be improvement in the hygiene practices of the adolescent girls.

4. CONCLUSION AND RECOMMENDATIONS

The main problem areas identified in this study were poor knowledge of menstruation, and hygiene practices. This study emphasized the prerequisite for adolescent girls to have accurate and adequate knowledge about menstruation and its appropriate hygiene practices to be intensified. Formal as well as informal channels of communication such as mothers, sisters and friends need to be empowered for the delivery of such knowledge [9].

Inadequate menstrual knowledge, results in poor menstrual hygiene by the adolescent girls. Menstrual education should be included in School curriculum to raise awareness on healthy hygiene practices during menstruation. Menstrual health is an important part of the life cycle approach to women's health, so loud and clear messages and services on this issue must reach adolescent girls.

There is a need to provide skills among the adolescent girls for safe and healthy hygienic practices and to make appropriate choices enabling them to lead healthy reproductive lives and prevent the risk for reproductive tract infections. Mothers and teachers should function as primary sources of information on menstruation including reproductive health. Education has been the key stone in propagating menstrual hygiene practices. Menstrual education can be conducted by non-governmental organizations, health workers and other relevant government agencies. As the mothers are the primary informant for the adolescent girls, menstrual health education should also be imparted to them.

Strategies such as supply of cheap and affordable sanitary napkins, access to water, sanitation, hygiene of external genitalia and access to covered toilets are still deficient and these play a major role in promoting the adoption of safe menstrual hygiene practices. Subsidies should be given on sanitary napkins to make it more affordable.

Kotian et al. [10] pointed that it is very important that lower socio-economic groups should be educated about the importance of maintaining hygiene during menstruation by proper health education and equip them with skills regarding safe and hygienic practices to prevent the risk for reproductive tract infections.

CONSENT

Written consents were obtained from the parents and assents for participation. Participation was entirely voluntary and confidentiality was ensured.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:

The peer review history for this paper can be accessed here:
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