

Knowledge, Attitude and Socio-cultural Beliefs of Adolescent Girls Towards Menstruation

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Acknowledgement: We thank the Indian Council of Medical Research (ICMR) who approved this project for STS-2014.

Funding: Grant of rupees (INR) 10,000.00 has been received by Smriti Khari from Indian Council of Medical Research (STS-2014) after completion of the project.

Conflict of Interest: Oral presentation by Smriti Khari has been done on 30th November, 2014 at Annual National conference of Association of Industrial Psychiatry of India at Bhopal, Madhya Pradesh, India.

Permission from IRB: Yes

Ethical dilemmas faced during study: None

How to cite

Kapoor A, Khari S. Knowledge, Attitude and Socio-cultural Beliefs of Adolescent Girls Towards Menstruation. J Nepal Paediatr Soc 2016;36(1):42-49.

doi: <http://dx.doi.org/10.3126/jnps.v36i1.14386>

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Abstract

Introduction: Knowledge regarding physiology of menstruation and hygienic practices are poor in adolescent girls. Deep rooted social beliefs make their attitude more negative. **Material and Methods:** In a hospital based cross sectional study, one hundred adolescent girls who have attained menarche were interviewed with a pre-validated semi-structured questionnaire to assess their knowledge, experiences, effect of mother's education on menstrual hygienic practices and factors affecting their positive and negative attitude. **Results:** Mean age of menarche was 13.28 (SD \pm 1.42) years. Mothers were the first informant to 56% girls. Only 11 % girls knew that menstruation is a normal biological phenomenon and 28% girls were mentally prepared before menarche. Readymade pads were being used by 46% girls. Most girls were forced to follow various restrictions during menstruation. Maternal education was significantly associated with use of readymade pads (p -value 0.031). Significant positive correlation was seen between premenarchal preparedness to pleasantness ($r = 0.3215$; $p = 0.001$) while negative correlation was found between preparedness to secrecy ($r = -0.1549$; $p = 0.124$), annoyance ($r = -0.1421$; $p = 0.158$) and worrying thoughts ($r = -0.2074$; $p = 0.038$). Negative correlation was also seen between years of experience with menses to secrecy and worrying thought ($r = -0.0162$; $p = 0.872$ and $r = -0.1033$; $p = 0.864$ respectively). **Conclusion:** There is significant lack of knowledge, poor hygienic practices and negative attitude among adolescent girls that needs to be addressed by educating them and their mothers.

Key words: Adolescent girls, menarche, menstruation

Introduction

Adolescence has been recognized as a special period which denotes the transition from childhood to adulthood. Age group 10-19 years [Early adolescence (10-13 years), Mid adolescence (14-16 years) and Late adolescence (17-19 years)] is considered as the period of adolescence during which sexual development happens along with psychological and cognitive changes. Attaining menarche

is a very important milestone to mark this developmental process in girls. Normal menstrual cycles are typically 21-35 days long (maximum upto 45 days in early post menarchal year) and last for 3-7 days. Majority of girls are unaware about menarche and menstrual bleeding before they experience it for the first time and are unprepared mentally and emotionally. Attitude towards menstruation, either positive or negative, depends on preparedness of pre-pubescent girls and influenced by socio-cultural environment¹. It also depends upon awareness, age at menarche, cycle length, intensity and duration of menstrual flow². Girls mostly receive incomplete and inaccurate informations regarding menstruation and their response to menarche depend on degree of physical discomfort they face during menstruation³. Lot of myths and taboos regarding sex education prevails among Indian families and menstruation is considered unclean in Indian society. Various restrictions imposed on menstruating girls and secrecy surrounding it affects them psychologically, lowering their self esteem and giving them feeling of shame and disgust. Majority of girls impose self restrictions like going to school or play based on wrong belief that they are physically weak on those days.

Mothers, friends, teachers, relatives media like television are the sources providing information on menstruation. It has been found that girl's knowledge regarding the use of commercially available sanitary pad is positively related to maternal literacy⁴. A key priority for women and girls is to have the necessary knowledge, facilities and the cultural environment to manage menstruation hygienically and with dignity. Many Indian females have some or the other menstrual problems and genital tract infection but they don't consult a health professional due to poor health seeking behavior⁵. Thakre et al in their study concluded that a variety of factors are known to affect menstrual behaviors, the most influential being economic and residential status (urban and rural)⁶.

This was a cross sectional study with an aim to assess the attitude, gaps in the knowledge, beliefs and hygienic practices with respect to menstruation among adolescent girls attending a tertiary care teaching hospital for their various medical problems.

Material and Methods

This was a hospital based cross-sectional short term project, conducted in a tertiary care hospital, attached to a teaching institute, catering predominantly lower and middle socio economic class. Hundred girls

in the age group 10-19 years were included in the study. A convenient sampling method was used for selection of subjects. These girls were subjected to an interview based on semi structured and pre-validated (validated by faculty of Pediatric and OBG Departments) questionnaire in presence of their parents or guardians after taking informed consent.

First part of the questionnaire consisted of demographic data; present age, age at menarche, education, details of their menstrual cycles (duration, length and flow amount) and maternal literacy. Girls were asked for their perception regarding regularity/irregularity of their cycles. Irregular cycles were taken simply as what is irregular for that individual girl who may fall in the limits of normalcy.

Hygienic practices like what absorbent material they use, how they dispose them off, toilet facility at home and method of cleaning external genitalia were asked. They were questioned for premenstrual symptoms, use of pain killer for dysmenorrhoea and Iron tablet for anemia. Open ended questions were used to assess the knowledge- why girls get periods? Will you worry if you miss your period?

In second part of self administered questionnaire (consisting of 30 items), attitude related questions were asked in three point Likert scale (1 being disagree, 2 as neutral and 3 as agree) after translating them in Hindi (Appendix). It included 5 subsets covering areas like preparedness before menarche (8 items; Cronbach alpha 0.76), secrecy (7 items; Cronbach alpha 0.52), pleasantness (6 items; Cronbach alpha 0.56), annoyance (4 items; Cronbach alpha 0.32) and worrying thoughts (5 items; Cronbach alpha 0.44). We have modified the scale originally used by Lisandra Rodriguez White as per local perspective⁷. L R White has utilized 24 items covering three subscales; positive feeling, negative feeling and openness towards menarche from AMAQ (Adolescent Menstrual Attitude Questionnaire) developed by Morse, Kieren & Botorff, 1993⁸.

Statistical analysis: Data collection was done over two months period after approval from ICMR (Indian Council of Medical Research) and Institutional Ethics Committee. Data was cleaned, coded and filled into Excel sheet. Percentage, mean and standard deviation were calculated. Chi Square test was applied to study the association. Correlation between premenarchal preparedness to secrecy, worrying thought, annoyance and pleasantness was calculated by Pearson's correlation coefficient. Correlation between years

of experience with menses to secrecy and worrying thoughts were also calculated. To find out the internal consistency for each subset of questions, Cronbach alpha was calculated by using free online software ⁹.

Inclusion criteria: Adolescent girls from 10-19 years of age who have attained menarche and given consent for interview.

Exclusion criteria: Mentally challenged girls of same age group and Girls who themselves or their parents/ guardian refused to give consent

Primary outcome measured: Baseline knowledge, beliefs and practices regarding menstruation among adolescent girls of age group 10 – 19 years

Secondary outcomes to be measured were: Effect of maternal literacy on girls' knowledge, beliefs and practices and Effect of premenarchial preparedness on various positive and negative psychological impact like pleasantness, secrecy, worrying thought and annoyance

Results

Among 100 adolescent girls interviewed, majority belonged to mid adolescence (14-16) years age group (46%). All girls were unmarried. Nearly half of the girls' mothers were either illiterate or educated up to 5th standard (Table 1).

In our cohort, mean age of attaining menarche was 13.28 (SD \pm 1.42) years. Majority (75%) were having irregular cycles but none consulted the doctor for it. Mothers were the first informant regarding menstruation to 56% girls (table 2).

The catchment area of hospital being an urban suburb, 85% girls had toilet facility at home yet 38% were using only water without soap or antiseptics for cleaning their external genitalia. Commercially available absorbent pads were exclusively used by 46% girls only (Table 3).

Crampy lower abdominal pain was the commonest medical complaints amongst all (Table 4).

Various restrictions were imposed on these girls most common being entering into a temple (70%) followed by entering into kitchen and touching food items (Table 5).

When asked about the reason why girls get menstruation, large number (42%) believed that it was for reproduction and only 11 said that it was a normal biological phenomenon (Table 6).

Table 7 shows some positive and negative attitude questions with their responses from Likert scale.

By applying Chi-Squared test, we found that maternal education was significantly associated with girl's practice of using commercially available pad ($p = 0.031$), although no association was found with use of iron tablets ($p = 0.125$), cleaning practices of external genitalia ($p = 0.068$) and girls' mental preparation for menstruation ($p = 0.205$).

Significant positive correlation was seen between premenarchal preparedness to pleasantness ($r = 0.3215$; $p = 0.001$) while negative correlation was found between preparedness to secrecy ($r = -0.1549$; $p = 0.124$), annoyance ($r = -0.1421$; $p = 0.158$) and worrying thoughts ($r = -0.2074$; $p = 0.038$) despite of weak relationships. Negative correlation was seen between years of experience with menses (calculated from current age and age of attaining menarche) to secrecy and worrying thought ($r = -0.0162$; $p = 0.872$ and $r = -0.1033$; $p = 0.864$ respectively).

Table 1: Demographic characteristics of study patients (n=100)

Variables	No (n=100)	
Age	Early adolescence (11-13 years)	10
	Mid adolescence (14-16 years)	46
	Late adolescence (17-19 years)	44
Education	7 th standard	6
	8 th standard	13
	9 th standard	14
	10 th standard	17
	11 th standard	9
	12 th standard	16
	College going	17
	School dropouts	8
Maternal Education	Illiterate	31
	Up to 5 th standard	21
	6 – 12 th standard	35
	Graduate	10
	Post graduate	2
	Not applicable	1
Working Status Of Mother	Working	31
	Not working	68
	Not applicable (dead)	1

Table 2: Details of menstruation of patients included

	Variables	No (n=100)
Menarche (Mean Age – 13.28)	11 year	11
	12 year	20
	13 year	29
	14 year	18
	15 year	12
	16 year	8
	Don't remember	2
Menstrual Cycle Length	Less than 21 days	4
	21 – 35 days	90
	More than 35 days	5
	Not applicable (attained menarche 1 month back)	1
Cycle Regularity	Regular	24
	Irregular	75
	Not applicable (attained menarche 1 month back)	1
Duration of Menstrual Flow	Less than 3 days	10
	3 -7 days	84
	More than 7 days	6
First Informant About Menstruation	Mother	56
	Elder sister	19
	Friends	11
	School teacher	11
	Aunt	1
	Book	1
	Grand mother	1

Table 3: Details of maintaining health and hygiene during menstruation

	Variables	No (n=100)
Toilet facility at home	Yes	85
	No	15
Cleanliness of genitalia	With water only	38
	Soap and water	53
	Water, soap and antiseptics	9
Absorbent used	Commercially available pad	46
	Homemade cloth	43
	Both	11
Disposal of absorbent	Wrap in paper/polythene bag and dispose	75
	Burn	14
	Wash and reuse	6
	First wash and then burn	5
Taking iron tablets	Yes	88
	No	12
Taking pain killers	Yes	35
	No	65

Table 4: Premenstrual symptoms in study patients

Symptoms		Number (n=100)
Physical symptoms	Crampy lower abdominal pain	82
	Pain in lower back and thigh	44
	Fatigue	44
	Headache	10
	Breast discomfort	5
	Acne	3
	Decreased appetite	1
Emotional and behavioural symptoms	Depressed mood	16
	Anxiety	9
	Insomnia	14
	Mood swings	4

Table 5: Restrictions faced by patients during menstruation

S No	Restrictions	Number (n=100)
1	To enter into temple	70
2	To Enter in to kitchen	43
3	To touch food/water/papad/pickle in kitchen	35
4	Avoiding hair wash	14
5	Not allowed to sleep in bed	10
6	Avoid visiting neighbour	11
7	Avoiding long journey	9
8	Complete isolation in home	7
9	Avoid eating sour food	3
10	Avoid attending marriages	2
11	Avoid going out in full moon and new moon	1
12	Avoid touching male members of the family	1
13	Not allowed to go to school	1
14	Avoid applying henna at palm	1

Table 6: Reasons given by the girls for the cause of menstrual bleeding

S No	Reasons	Number (n=100)
1	To purify blood	39
2	To reproduce	42
3	It's a biological phenomenon	11
4	It's a gift of god	1
5	It is important for marriage	1
6	It is a sign of maturity	1
7	It is a sign of virginity	1
8	Do not know	4

Table 7: Attitude of girls regarding menstruation

S No	Attitudes	Agree	Neutral	Disagree
1	I felt ready before I got my first period due to prior information	28	1	71
2	I knew how to use pad or cloth before I got my first period	28	0	72
3	I worry a lot that my period will start unexpectedly	99	0	1
4	I worry a lot that blood will stain my cloths	83	4	13
5	I am embarrassed to ask questions about periods	70	8	22
6	I feel scared that boys will find out that I am having my periods	43	1	56
7	I am glad that I have become mature enough to menstruate	28	16	56
8	I felt like a woman once I started menstruating	77	0	23
9	I felt bad when I came to know that I had started menstruating	75	10	15
10	I don't like studying regarding menstruation at school	53	16	31

Discussion

In the present study, mean age of menarche was 13.28 (SD 1.42) years, which is in accordance to the study conducted by other authors^{6,10,11}. The age of attaining menarche ranged from 11 to 16 years with maximum number between 12-14 years. The difference could be due to hereditary or socio-economic variability.

Majority (75%) girls had irregular periods and six had menstrual flow for more than seven days, still none contacted a doctor which showed poor health care seeking behavior in them, an observation supported by other studies also; 5.3% consulted doctor in study by Singh et al¹²; 7% in study by A O Busari⁴.

Mother was the first informant regarding menstruation in 56% cases while in a study conducted among 664 schoolgirls aged 14-18 in Mansoura, Egypt mass media was the main source of information about menstrual hygiene, followed by mothers¹³.

In this study, 71% girls were found ignorant and psychologically unprepared about menstruation and 72% did not know how to use sanitary pads before menarche. This was similar to the results reported in a study from Nigeria where 84 % of girls were psychologically unprepared for their first menses¹⁴. This could be explained by the poor educational status of mothers (31% illiterate and 21% educated up to 5th standard only) inhibiting them communicating to their daughters regarding sex education.

Present study also showed that only 11% girls believed it to be a normal physiological process while majority thought that it purifies blood or mean to reproduce where as the other studies reported as 18 to 19%^{5,15} girls thought it as a normal physiological process.

Khanna et al reported that nearly 70% girls believed it to be an unnatural process¹⁰. In contrast, 72.8% girls in a study conducted by Kamaljit et al believed it to be a normal process¹⁶.

In the present study, 46% girls were using commercially available sanitary pads while only 11.25% girls used sanitary pads in a study conducted by Dasgupta et al¹⁷ and approximately 20% by Khanna et al¹⁰. Use of commercially available pad was found to be associated with mother's educational status ($p=0.031$), similar to the observation by AO Busari⁴.

In accordance with the study done in Uttarakhand, India¹⁵ where toilet facility was available to 88% girls, in present study 85% girls had toilet facility at home; still many had poor menstrual hygienic practices, thus emphasizing the need of health education to them.

Various restrictions were imposed on menstruating adolescent girls, a social custom also reported by many local and international published literatures. It could be due to socio-cultural beliefs that during menstruation females are in a state of uncleanliness¹⁸. Although menarche is celebrated hugely in certain societies as a mark of achieving an important developmental milestone in womanhood, menstruation is regarded as something which should be kept secret to avoid embarrassment¹⁹. These restrictions contribute negatively to their attitude and affect them psychologically that brings low self esteem and feeling of shame and disgust²⁰.

Our result was also comparable (71%) to the study by Demirbag & Gungomus, who have also reported that 70.3% of female students felt inadequately prepared for menarche because of inadequate knowledge of the subject²¹. Unprepared girls having early menarche showed more negative attitude and beliefs related to menstruation²².

The positive association seen between premenarchal preparedness with pleasantness (feeling of grown up and womanhood) and negative association between preparedness to negative attitudes like secrecy, annoyance and worrying thoughts seen in present study are well supported by other published literature^{19,23}. Negative attitudes like secrecy and worrying thoughts showed small negative relationship with years of experience after menarche. This finding is supported by Firat et al²⁴.

When asked whether they were comfortable talking to their fathers regarding menses, majority (82%) said

that they are not while a study conducted by Cevirme et al revealed that 48.8% females hide the fact that they are menstruating from other people especially men²⁵.

Conclusion

Present study concludes that knowledge, beliefs, attitude and practices regarding menstruation among adolescent girls are unsatisfactory in part of central India where it was conducted. Negativity surrounding the menstruation which is a normal physiological process can be reduced by reproductive health education by individuals and society.

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Please read each sentence and tell me how much you agree or disagree with each one. Please tick only one

S.No.	जानकारी (Awareness)	D	N	A
1	मुझे उपयोगी जानकारी दी गई थी मेरे पहले चक्र से पूर्व			
2	मैं पूरी तरह से तैयार थी पहले चक्र से पूर्व			
3	मैं जानती थी कि मुझे क्या करना है			
4	मैं जानती थी कि मेरे शरीर को क्या हो रहा है			
5	मेरे पास उचित सामग्री उपलब्ध थी			
6	मुझे पता था कि कैसे कपड़े का प्रयोग करना है			
7	मेरे चक्र के दौरान मुझे भय था कि लडके इस बारे में जान जाएंगे			
8	मैंने यह बात किसी को नहीं बताई थी कि मेरी महवारी शुरू हो चुकी है			
9	मुझे मेरे पिताजी से इस बारे में बात करने में शिक्षक होती है			
10	मुझे महवारी के बारे में जानकर खुशी हुई			
11	मुझे हिचकिचाहट होती है, दुकान पर पैड खरीदते समय			
12	यह सच जानके कि मुझे महवारी होती है, मुझे बुरा लगा			
13	मेरी पहली महवारी के दौरान मैं डरी हुई थी			
14	मैं नहीं चाहती कि कोई मुझे कचरे में पैड डालते हुए देखे			
15	मुझे मेरे मित्रों से महवारी के विषय में बात करने में हिचकिचाहट है			
16	मुझे चिंता रहती है कि मेरे कपड़ों में दाग ना लग जाए			
17	मैं मेरे महावारी के लिए और प्रतीक्षा नहीं करना चाहती थी			
18	मुझे महवारी शुरू होने पर बड़े होने का एहसास हुआ			
19	मैं बहुत ही उत्तेजित थी जब मुझे पहला मासिक धर्म आया			
20	मुझे विद्यालय में महवारी के बारे में पढ़ना पसंद नहीं			
21	मुझे भय रहता है कि लोगों को पता चल जाएगा मेरी महवारी के बारे में			
22	यदि कोई महवारी के बारे में बोलता है तो मैं घबरा जाती हूँ			
23	यह जान कर कि मैं बड़ी हो गई हूँ महवारी के लिए मुझे खुशी हुयी			
24	मैं लडकों से मासिक धर्म के बारे में बात करने से संकोच नहीं करती			
25	मुझे गर्व होता है कि मुझे महवारी होती है			
26	महवारी के समय मैं अपने आप को बदसूरत महसूस करती हूँ			
27	दर्द की गोली का इस्तेमाल पूर्ण रूप से सुरक्षित है			
28	मैं विद्यालय से छुट्टी लेती हूँ, महवारी के समय			
29	जब मेरे महवारी का समय नजदीक होता है तब मैं तनाव में रहती हूँ			
30	मैं आराम से महवारी के समय सो लेती हूँ			

APPENDIX

D = Disagree, N = Neutral, A = Agree