

Knowledge and Attitude Regarding Menstruation among Teenage Boys

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Abstract

Aim: This study aims to assess the Knowledge & Attitude towards Menstruation and to identify the effect of counselling regarding Menstruation among teenage boys.

Methodology: a prospective interventional study carried out among 173 samples in selected school and college of Bengaluru. The data was collected by using self-designed and validated questionnaire and responses were recorded. All information's were processed and analysed by using Microsoft excel.

Results: It was found that most of the subjects' knowledge (pre-test average score was 3.64 and post-test average score was 5.82) towards Menstruation was found to be improved after suitable intervention. As well the attitude was also improved in post-intervention among the study subjects (pre-test average attitude score was 4.52 and post-test average score was 5.12).

Keywords: Menstruation, teenage boys, knowledge, attitude, stigma

Introduction

Ignoring or despising menstruation is one of the ways that misogyny manifests itself -Lara Owen
Eventually Menstruation is a normal functional process that marks the start of reproductive life, yet because of cultural taboos, a lack of knowledge, and inaccurate information, it is to some extent seen as an impure phenomenon in Indian society, which unnecessarily restricts females' ability to go about their daily lives as normal [1]. During menstruation, the uterus releases blood and tissue through the vagina, the commencement of the reproductive phase in females is known as “menarche”, which is the prominent element of puberty and the result of various physiological changes, including the release of estrogen from the ovaries also indicating the adolescent female body's growth wired up with the capacity to ovulate and give birth, however neither ovulation nor fertility are assured by the advent of menarche. Menarche can occur at any age, with genetic and environmental factors like financial position, family life, race, exercise, and diet all putting emphasis. For young girls who are fertile, this is a normal and healthy occurrence. A stage of “menopause” epitomized by a decline in estrogen production. Anovulation-induced menstrual cycle cessation is described as such. The endocrine switch from the estrogen cycle of the reproductive stage to the estrogen drop of the reproductively dormant occurs simultaneously with the loss of ovarian function [2, 3, 4, 5] Even today, the traditional and social influences appear to be a hurdle to the modernization of this topic in India, as it is still considered taboo. Menstruation is still regarded as unclean

and impure on a cultural level in many parts of India. The myths are found to originate from the Vedic era, and it is seldom connected to killing of Vritra's by the Indra's. Women are believed to share the guilt of Indra, as it is inscribed in the Veda that the guilt of killing a Brahmanamurder is said to manifest every month as menstruation. Women are also not allowed to carry on with daily activities while menstruating according to Hinduism. Menstruating women are forbidden from participating in sacraments, particularly communion, or from touching sacred objects like the Bible or religious emblems and in Islam, women are not obligated to perform certain rites, including daily prayers and fasting, even though they are not denied to them. This is not a usual feature, but it is still present today [6, 7]. In Modern societies, this is frequently referred to by pseudonyms "the periods." However this varies from person to person, it normally lasts 2 to 5 days. Menstruation ushers in a new stage of life for the 1.8 billion people who menstruate each month around the world. Menstruation can become an epoch of stigma and dispossession for people because of gender discrimination, extreme poverty, humanitarian crises, and damaging customs. This can make it harder for them to exercise their fundamental human rights it is legitimate for menstruating women and girls, as well as transgender men and non - binary persons [8, 9]. Round the clock, menstruation is associated with social shame and unfavourable cultural beliefs for many women and girls these viewpoints not only have the potential to reinforce sexist stereotypes and undervalue women and girls, but they also serve to silence the subject. The lack of discussion on this issue makes it harder for women and girls to get the services they need and reinforces gender disparities [10]. Even though not often but still feminine voices are not heard in decision-making processes within households, communities, and development programs as a result of unequal power relations between men and women [11]. Adolescence, the bridging stage between childhood and adulthood, is faced with major psychological, endocrine, and physical changes occur during the period of "puberty", a stage of life when children changeover into adolescents who are ready for sexual activity. By its staple, puberty is an evolving process that takes place within an individual and is triggered by the hypothalamic gonadotropin-releasing hormone being activated, as well as by the discharge of gonadotropins, gonadal steroids, and physical growth. This biochemical cascade serves as the biological underpinning for pubertal changes in secondary sexual features consisting of development of breast, genitalia, and pubic hair, reproductive capacity, height, weight, concomitant psychological and behavioural changes. The majority of boys will have actually began their growth spurt, and puberty-related changes has started as their voices go deeper and now have a voice crackling and some people develop acne. Physical changes in women folk may be nearly complete, and the majority of girls now have regular periods [12, 13].

FEMALE	MALE
Underarm hair growth • Breast development • Hip growth • Pubic hair growth • Onset of Menstruation	Facial hair growth • Voice change • Underarm hair growth • Pubic hair growth • Ejaculation

Table 1 Changes in puberty: female vs male [14]

Teenagers' health needs are usually overlooked because they are generally considered to be a "healthy" segment of the population; yet, efforts in their education and health, as well as the coordination of economic policies, encourage productivity and economic growth. The interAmerican system's specialist organization for health is The Pan American Health Organization (PAHO), the World Health Organization's Regional Office for the Americas works to strengthen health systems, and to respond to emergencies [15].

Table 2 *PAHO Classification* [16]

Ages between 14 and 16 define the middle adolescence. Excluding males from the conversation about menstruation, especially during adolescence, a key time when gender-related conceptions are formed, can accentuate gender differences in health and attitudes regarding biological rhythms [16, 17]. According to The United Nations Educational, Scientific and Cultural Organization (UNESCO) teachers, particularly men, might not be sufficiently sensitive to girls' needs in a patriarchal country like India, men have more influence over decisions. The majority of males are unaware of the basic physiology of menstruation, including the menstrual cycle [8]. Boys who don't understand menstruation, make fun of girls with period jokes, and smirk are contributing to the issue. Girls' career prospects and self-esteem may suffer if they neglect classes and forsake their education [18]. Menstruation-related silence can contribute to ignorance and neglect, particularly at the public level due to this, women and girls are more fragile and prone to discrimination and elements like period poverty. Menstruation is a bodily process experienced by women, girls, as well as other people including non-binary and trans community, but menstrual health issues are human rights issues, making them important to society as a whole. This urges all men and boys to participate in discussions about gender equality and the promotion of positive masculinities with the goal of eradicating stigma and discrimination concerning menstruation [9]. Starting as early as age four which is considered to be the ideal time to discuss about periods with your son which gradually increase your son's understanding by giving him more information as his cognition grows by starting young also makes it easier for you as a parent to discuss periods with your child as he'll treat one another like any other matter and won't fraternize them with any embarrassment or shame. In whatsoever regard, it is ideal if he is aware of periods before he starts observing physical changes in his peers hence it seems to be wise to inform him about how boys should behave [19].

The chaos an adolescent encounters at various phases of development, numerous circumstances, demands and obstacles call for specific care during the adolescent period. Menstruation is subject to numerous prohibitions and taboos in India [20]. In Indian society, menstruation is still seen as something filthy or unclean among males and some of the older generation women. The approach to menstruation is influenced by one's understanding of the topic hence to overcome the cultural taboos and religious stigmas related to menstruation, the community as a whole needs to shift its attitude of menstruation. It is necessary to talk about and prepare the ways to implement this shift across all of India based on additional research [1]. Period teasing is aligned to inadequate menstrual hygiene habits and constrictive societal standards, which affects gender equality in educational possibilities. When there is period stigma, educating people about menstruation narrowly from a biomedical perspective might not be sufficient to stop period mocking [21]. Education is the first step in eradicating the taboo surrounding periods, to dispel any prevalent myths regarding periods, such as that they are nasty, it is imperative to educate both boys and girls on how they function and to open the subject up for productive debate. Including boys in "period talks" helps to dispel stigma and strengthen the community [18]. Assessing Knowledge and Attitude makes the information, both quantitatively and qualitatively approachable. Misconceptions or misunderstandings that could be bottlenecks to the initiatives we want to adopt or possible obstacles to behavior change are revealed by knowledge and attitude evaluation. There may be significant gaps between what people say and what they actually do and so can improve understanding, attitude, and habits surrounding certain themes. Establish a benchmark for potential comparisons to help evaluate the effectiveness of health education programs it will also design activities that are culturally acceptable [22]. There is a role for manhood to be involved in menstrual issues to help reduce the restraining practices and undesirable view of menstruation,

comprising in Indian and other societies, besides to endorse healthier menstrual hygiene management in addition to affect such revolution, it is necessary to apprehend the knowledge and attitudes that males currently hold so that fitting actions can be taken. The young population is found to be ensnared and chaotic due to the unlike schools of thoughts at home and the outer world, henceforth it designates a perseverance to investigate boys' knowledge on menstrual knowledge and educate them about the right strategies of menstrual hygiene, attitudes [16, 23]. As the teenagers undergo many physical and psychological changes, there will be many fallacy and miscomprehension about their changes. For girls always their mothers and other elders would help them adapt to the situation, but in the case of boys they are being consumed by the society and are trapped into several taboos. This could leave them with inaccurate information, and they could also become uninformed. The study will ameliorate the knowledge and attitude among boys in the frame of menstruation.

Methodology

this was a prospective interventional study, in which the participants were evaluated once. The study was conducted at selected schools and colleges in Bengaluru District. The study was approved by the ethics committee of the institute in which it was conducted and all the participants were recruited after obtaining written informed consent. A total of 180 subjects were collected out of which 173 subjects were selected for the study. Subjects were selected based on the inclusion and exclusion criteria.

Inclusion Criteria: a. Subjects whose parents has given consent. b. Subjects within the age group of 16-18 years. c. Male gender

Exclusion Criteria: a. Subjects those who are not willing to participate.

The different sources of data were one to one interview with study subject and questionnaire. The participants was explained the purpose of the study, relevant data was recorded from the teenage boys by providing the study tools consisting the topics like basic knowledge about menstruation, myths associated with menstruation, menstrual issues faced by the girls etc. The data thus obtained was entered in a Microsoft Excel Sheet and appropriate paired t test was carried out. A t-test was conducted with the pre and post scores for the area of Knowledge and Attitude. A paired-samples t-test was conducted to test the difference of pre and post test scores on a sample of 173 individuals for the area of knowledge and attitude.

Result

The study was carried out in selected schools and colleges of Bengaluru District which was for a period of 6 months. 180 subjects were enrolled in the study out of which 7 subjects were dropped out due to insufficient data and the overall sample size was 173. DISTRIBUTION OF SUBJECTS ACCORDING TO AGE Out of 173 subjects 50 (26.94%) were 16 year old, 54 (30.91%) were 17 year old, 59 (35.76%) were 18 year old and 10 (6.40%) were 19 year old as shown in below table.

Age	Number of Subjects	Percentage
16	50	26.94%
17	54	30.91%
18	59	35.76%
19	10	6.40%
Total	173	100%

Table 3: Distribution of subjects to age group

ASSESSMENT OF KNOWLEDGE TOWARDS MENSTRUATION:

Respondents were interviewed using a self-designed questionnaire (content validation) about their Knowledge and Attitude related to Menstruation. A total of 22 questions were included in the questionnaire which was further divided into 2 domains – Knowledge and Attitude. The knowledge domain consisted of 8 questions and Attitude domain consisted of 14 questions.

Questions	PRE TEST		POST TEST	
	n	%	n	%
K1	60	34.6%	117	67.6%
K2	95	54.95%	136	78.6%
K3	104	60.11%	145	83.81%
K4	32	18.49%	79	45.66%
K5	74	42.77%	126	72.83%
K6	107	61.8%	142	82.08%
K7	69	39.88%	127	73.41%
K8	89	51.44%	136	78.61%

Table 4: Distribution of response to knowledge questions

The mean value of the pretest responses was 3.64 and the mean value of the posttest responses was 5.82. It is evident from the figure that the mean value of the post test is increased compare to pretest.

ASSESSMENT OF ATTITUDE TOWARDS MENSTRUATION:

Questions	PRE TEST		POST TEST	
	n	%	n	%
A2	72	41.61%	98	56.64%
A3	29	16.76%	12	6.93%
A4	58	33.52%	25	14.45%
A5	104	60.1%	103	59.5%
A6	49	28.3%	43	24.8%
A7	77	44.5%	111	64.1%
A8	60	34.6%	94	54.3%
A9	86	49.7%5	88	50.8%
A10	64	99%	68	39.3%
A11	43	24.8%	45	26.01%
A12	74	42.77%	99	57.22%
A13	67	38.72%	100	57.8%

Table 5: Distribution of response to attitude questions

The mean value of the pretest responses was 4.52 and the mean value of the posttest responses was 5.12. It is evident from the figure that the mean value of the post test is increased compare to pretest.

T-Test: Paired Two Sample for Means

	POST TEST	PRE TEST
Mean	94.7	70.65
Variance	1522.957895	509.7132

Pearson Correlation	0.768384192	
Hypothesized Mean Difference	0	
df	19	
t Stat	4.128545239	
P(T<=t) one-tail	0.000285638	
t Critical one-tail	1.729132812	
P(T<=t) two-tail	0.000571275	
t Critical two-tail	2.093024054	

Table 6: Paired samples t-test

A t-test was conducted with the pre and post scores for the area of Knowledge and Attitude. A paired-samples t-test was conducted to test the difference of pre and post test scores on a sample of 173 individuals for the area of knowledge and attitude. A statistical difference in pre and post test scores, $t(173) = 4.128$, $p < .05$. Based on the results, post test scores were 4.128 times more likely to be higher compared to pre-test scores. It was found that $\alpha = 0.05$ and critical value is 1.729 and upon comparison with the t value we can see that it is much larger compared to the critical value. This re-emphasizes how both the sets of pre and post scores are greatly different from each other.

The significance value ($p = .00$) shows that the differences between the groups are significant. This means that we can reject our null hypothesis and accept our alternative hypothesis.

Discussion

An educational interventional study was performed in the selected schools and colleges of Bengaluru District which was for a period of 6 months by enrolling 173 study subjects, based on various inclusion and exclusion criteria.

Out of 173 subjects included in the study, most of them belonged to age group of 16-19 years. The average age of the study subjects was 17.5 years which is divergent to the mean age of participants as in the study of **Chang YT et al.**,^[42] conducted in Taiwan. Majority (35.2%) of the subjects were not aware about the process and cause of Menstruation before the intervention was made and was further improved during post intervention unlike in the study conducted by **Penakalapati et al.**,^[41]. From the present study it was evident that majority of subjects lacked accurate knowledge and possessed misinformation which is similar to the study conducted by **Gundi M et al.**,^[26] which was later enhanced during the intervention. The majority of study subjects (21.1%) involved in this study had agreed that they were feeling uncomfortable on knowing about Menstruation while subjects were feeling curious in the study conducted by **Thakur MB et al.**,^[38]. In the study, most of the respondents were having poor attitude regarding Menstruation whereas in a study conducted by **Wall LL et al.**,^[35] in Ethiopia, majority of the girls were imposed with cultural restrictions and stigma, shame associated with Menstruation was customary. A few subjects agreed that Menstruation is not a girls-only topic and later after the post intervention majority of subjects (57.23%) was aware it is not a topic to be discussed among just girls which is alike to the study conducted by **Garg s et al.**,^[6]. In our study, a 52.6% of study subject's source of information was family & friends which is in line with the study conducted by **Wong WC et al.**,^[40].

Conclusion

From our study, it was evident that majority of the boys have perceived knowledge regarding menstruation while most of them were unaware of the process and cause of the occurrence. We were able to provide

intervention to improve boys' knowledge regarding menstruation. It was also found that the attitude of boys towards menstruation was poor and it was able to improve post-intervention.

In a nutshell, by imparting proper educational interventional strategies, involving in discussions and conducting various community awareness programs can enhance knowledge and attitude regarding menstruation in the boys.

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Conflicts of interest

There are no conflicts of interest.

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Questionnaire

Dear Respondents,

We would like to request your cooperation to fill this form. In the following questionnaire you may come across the term “**the condition**” which indicates the bleeding cycle.

1. What is the most appropriate term used to represent this condition that women go through?

- Menstruation
- Genital Bleeding
- Periods
- Don’t know

2. Why does a women come across this condition?

- Medicine
- Hormonal Changes at Puberty
- Chronic Disease
- Don’t know

3. How often is this condition observed in a healthy woman?

- Once monthly
- Twice monthly
- Cannot predict
- Don’t know

4. How long is each bleeding cycle in a healthy woman?

- 5-7 Days
- 10-12 Days

- Varies
- Don't know
- 5. At what age does the condition starts?**
- Between 6-8 years of age
- Between 10-14 years of age
- Age 18 & above
- Don't know
- 6. In a healthy woman at what time does this bleeding period stops permanently?**
- 25-35 years
- 45-55 years
- Monthly cycle will remain
- Don't know
- 7. Bleeding is caused by shedding of uterine wall.**
- Yes
- No
- Don't know
- 8. The duration of the period and amount of blood flow is different for each woman.**
- Yes
- No
- Don't know
- 9. What did you feel when you heard about the condition for the first time?**
- Surprised
- Curious
- Regular
- Uncomfortable
- 10. Is it normal for girls to experience pain during the bleeding cycle?**
- Yes
- No
- Not sure
- 11. Is there a necessity to treat the pain associated with bleeding cycle?**
- Yes
- No
- Not sure
- 12. Have you ever been in a bleeding cycle related discussion?**
- Yes
- No
- 13. Have you felt your mother/sister/friends are hiding away from you during their bleeding cycle?**
- Yes
- No
- Not sure

14. Do you think the women must avoid social gatherings during their monthly cycle?

- Yes
- No
- Don't know

15. Is there a necessity to avoid religious ceremonies by the women who are on their monthly bleeding?

- Yes
- No
- Don't know

16. Is it necessary to stay apart from the women who is on her periods?

- Yes
- No
- Don't know

17. Have you ever comforted somebody who's going through the bleeding condition?

- Yes
- No
- Not sure

18. Imagine a situation where a girl comes to you asking some emergency aids as she is going through her period discomfort. Will you help her out in any ways?

- Yes
- No
- Don't know

19. Bleeding cycle is a girls-only topic.

- Yes
- No
- Don't know

20. Women becomes impure while in this condition.

- Yes
- No
- Don't know

21. Have you ever felt sympathy on knowing condition of women?

- Yes
- No

22. From whom/where did you first get the information regarding the condition?

- Family & friends
- Media
- Don't know