Original Article :

Knowledge and attitude among adolescent boys of age group 13-17 years regarding menstruation in urban Jabalpur, Madhya Pradesh: A study of Central India

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Abstract

Background and Aims:

In India, menstruation is considered a "women's" problem because the majority of studies on the subject only include girls and women. This discussion excludes adolescent boys, which obscures the fact that menstruation is a social epidemiological phenomenon with persistent gender differences. To encourage boys to contribute significantly to women's health, study on their menstrual knowledge, attitudes, and experiences, including socioeconomic aspects, must be conducted. This must be addressed if gender inequalities in adolescent health are to be reduced. Hence the current study is undertaken to investigate the knowledge and attitudes of school-aged adolescent boys in urban Jabalpur toward menstruation, taking into account factors like as family structure, societal behaviours, and cultural influences.

Methods:

Cross-sectional research of 100 males aged 13 to 17 years from Jabalpur, Madhya Pradesh, was carried out using the multistage random sample approach.

Result:

Menstruation was met with a mixture of wonder and embarrassment. Many people were uninformed and lacked proper understanding. Out of 100 males, 48% had good knowledge and 27% had a good attitude toward menstruation. The majority of the children got their information from schools (45%) followed by their parents or their peer group (39%). Most schools do not provide adequate sex education. Boys who have sisters or female acquaintances have more awareness and a positive attitude toward menstruation.

Conclusion:

The study emphasizes the importance of considering not only individual factors but also social dynamics when analysing knowledge, attitudes, and personal group scores. These findings contribute to a more comprehensive understanding of the factors influencing individuals within a social context for improving Indian boys' understanding and beliefs about menstruation and their menstruation-related experiences.

Key words:

Adolescents, boys, menstruation, sex education, taboo

Introduction:

In this transitional age, adolescents (10-19 years) confront a number of sexual and reproductive health (SRH) difficulties. Although around 27% of adolescent girls ("girls") marry; one in every six bear children; and 10% of adolescent boys ("boys") engage in premarital sex, many adolescents lack awareness of healthy behaviours and have unmet treatment needs.[1] In addition to a rural-urban discrepancy in SRH, rigid gender norms exacerbate the effects of SRH results, with only 40% of married girls having health-related autonomy, while 72% of young males reporting that women require their husband's consent for most things in life.[2] Age, gender, exposure to sex education, media exposure, school style, parental supervision, and parents' educational level can all influence SRH(sexual and reproductive health) behaviours and outcomes. Effective communication is one way they can exert influence on (sexual and reproductive health).

Sexual and reproductive health (SRH) communication is often taboo, making it difficult for adolescents to address sensitive issues like menstruation. Menstruation is often a one-way prescriptive process, with girls receiving abrupt instructions from same-sex parents or teachers.[3-8] Indian patriarchal mindsets and sociocultural practices can inhibit menstruation-related communication, but no studies have focused on how these factors affect the health of Indian adolescents.[6] Menstrual hygiene management (MHM) is difficult for women and girls in low-middle income countries and poverty areas due to lack of information, stigma, availability of materials, privacy, and disposal facilities.[9]

Menstrual ideology perpetuates patriarchal societal structures favouring men and boys. Research shows that boys use menstruation to establish dominance, often taunting and criticizing females about their periods. This behaviour is not limited to young guys; more research from the UK suggests that specific taunting leads to jokes about menstruation or menstrual women, often focusing on their uncleanness or disgust, potentially maintaining a patriarchal gender hierarchy.[9]

In India, boys' knowledge about puberty and menstruation is largely based on informal sources, overhearing conversations, and cultural rituals. Some boys learn about menstruation as part of the curriculum, but many feel it is not in-depth or missed out on. Most boys have a mix of curiosity and awkwardness about menstruation, with some lacking accurate knowledge and misinformation. Social and individual-level factors influence boys' experiences, with factors such as private unaided schools, parent education, and teacher comfort

positively influencing boys' knowledge, attitudes, and beliefs.[10] Much of the study on boys, men, and menstruation has found that not only is menstruation not a domain for males, but it is also not a topic with which they are comfortable. Males may need to become advocates for MHM with women in order to affect change and address these concerns, particularly in patriarchal settings. However, little is known about their understanding and attitudes concerning menstruation, which may need to be addressed before they can serve as change agents. Hence, the current study sought to investigate adolescent males' knowledge and attitudes toward menstruation in order to assess their ability to support their'sisters.

Material and Methods:

We took great care in terms of ethics and confidentiality because this is a difficult topic to discuss with adolescents, and we followed the protocol approved by the NSCB Institutional Ethics Committee. The survey required verbal approval from responsible people as well as school officials, and it was completely anonymous. We also shared our questionnaire draft with the school administration when they asked. We gained approval from the school officials. We obtained verbal agreement from each participant prior to data collection after explaining the study's goals and method and assuring them of confidentiality and anonymity. We have taken care to follow the ethics process that the ethics committee has approved.

Research setting:

This study was carried out in schools in Jabalpur urban area from Madhya Pradesh state in India.

Study design:

A cross sectional school-based study design was followed for collecting the data from adolescents aged 13 to 17 years using a Semi-structured questionnaire.

Survey sampling and population:

As per the study conducted by Gundi M,Subramanyam MA, the average of the favourable responses (in percentage) was found to be 34.90 (approximately 35) %. [11]As per formula,

$$n = \frac{4pq}{l^2}$$

Where n is the desired sample, p = average of favourable responses in percentage= 35% =0.35, q = 1- p = 1-0.35 = 0.65, l=10 % absolute error = 0.1, the sample size is calculated as follows: n = (4 * 0.35 * (1-0.35)) / 0.01= 91. The highest required sample size with 10% non-response was 100. The study includes school-going boys aged 13-17, who are willing to participate and provide informed consent.

Multi stage random sampling method was employed for the study. Jabalpur urban area is divided into four zones. A list

of schools based on approval by principals was prepared. One school from each zone is selected using simple random sampling method. 25 Research participants to be recruited from different classes (13-17 years) proportionately from each institution based on their voluntary participation. After briefing the study objectives to the participants. Rights of the study participants was briefed and confidentiality of their responses ensured.

Quantitative measures were developed by us based on our conceptual understanding of adolescents' menstruation-related experiences guided by our observations and literature review. As this was a self-administered school-based survey, we designed a questionnaire that was easy to understand and used simple and locally relevant language. The school teachers who reviewed the questionnaire confirmed this. The questionnaire was translated into Hindi; then back-translated into English, and its content validity was checked by language and translation experts. We checked the validity of our survey questionnaire with pilot study on 15 boys, setting alpha at 0.69, and necessary changes were made before its administration. The questionnaire has four sections: demographics (4 questions), Knowledge about menstruation (6 questions), Attitude and beliefs regarding menstruation (5 questions) and Personal experience (4 questions). During data collection, we clarified participants' questions or doubts regarding the survey questions.

Data analysis:

Descriptive statistics of the main variables were computed after data cleaning and labelling. we used binary logistic regression models for analysis. Statistical analysis was done using SPSS version 23. Cross-tabulations, frequencies and graphs were made. Chi-square test was employed to explore the association.

Results:

The mean age of the subjects is 15.42 (SD±1.17) years. Out of the 100 subjects, 70 reported having sisters and 66 reported having a female friend.

Knowledge and Attitude about menstruation:

Out of the 100 subjects, 61 have received formal education. This implies that a significant portion of the sample has a formal educational background. The majority (90) understands menstruation as a physiological condition, indicating a sound awareness among the subjects. 41 subjects are aware that menstrual cycle lasts about a week. A majority of 63 subjects are aware of and knowledgeable about the use of menstrual pads or tampons. More than half (51 subjects) have discussed menstruation with a female family member, suggesting a degree of open-

ness in communication (Table 1, Figure 1)

Table 1:Knowledge, attitude and perception about menstruation:

	Characteristics of subjects	Frequency of positive responses(%)
Knowledge regarding menstruation	Received formal education	61
	Understanding regarding menstruation	
	Disease	7
	Physiological condition	90
	Don't have knowledge	3
	Duration of menstrual cycle	
	Less than a week	32
	About a week	41
	More than a week	25
	Don't have knowledge	2
	Know about use of menstrual pad or tampon	63
	Discussed menstruation with female family member	51
Attitude regarding menstruation	**Conversation about menstruation**	
	Comfortable	36
	Uncomfortable	24
	Curious	12
	Embarrassed	20
	Indifferent	8
	Menstruation as a natural process	81
	Reason behind menstruation	
	To clean their bodies	26
	For reproduction	40
	Don't have knowledge	34
	Women should not be restrained from cooking/ visiting places of worship/outdoor activities	55
	Women should be supported during periods	87
	Boys should be educated about menstruation	72
Personal experiences regarding menstruation	Never made fun of a girl because of menstruation	82
	Helped a female during her periods	73
	Witnessed women facing discrimination	69

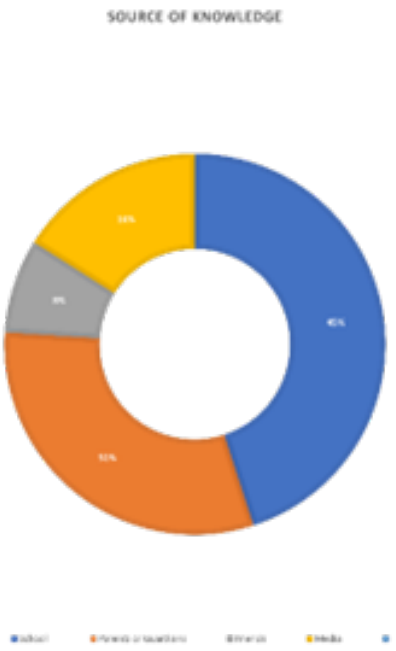


Figure 1:Source of Knowledge about Menstruation:

Attitude regarding menstruation:

A large majority (81) views menstruation as a natural and normal physiological process.40 subjects' associate menstruation with reproduction while 26 subjects believe menstruation is for cleaning their bodies and 34 subjects lack knowledge about the reasons behind menstruation. 55 subjects support the idea that women should not be restricted from these activities during menstruation. An overwhelming majority (87) believes that women should be supported during their menstrual periods. A considerable number (72) of subjects express the belief that boys should receive education about menstruation (Table 2, Figure 2,3)

Table 2:Attitudes and Beliefs about menstruation

Variables	P value	Significance
Knowledge		
Having sisters	0.030	Significant
Having female friends	0.000	Significant
Annual shift	0.000	Significant
Attitude		
Having sisters	0.026	Significant
Having female friends	0.000	Significant
Annual shift	0.028	Significant
Personal experience		
Having sisters	0.017	Significant
Having female friends	0.239	Insignificant
Annual shift	0.287	Insignificant

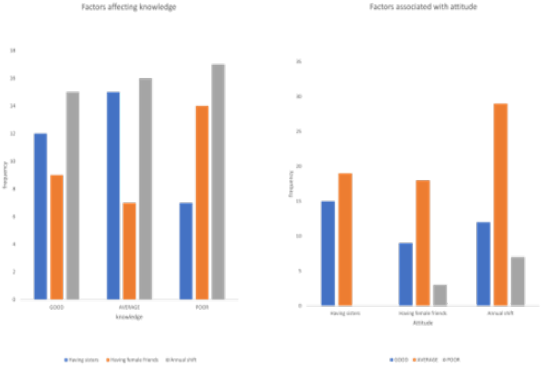


Figure 2: Knowledge and Attitude regarding menstruation:

Personal experiences regarding menstruation:

A significant majority (82 out of 100) of the subjects claim to have never made fun of a girl because of menstruation. A considerable number (73 out of 100) of subjects report helping a female during her periods.69 subjects claim to have witnessed women facing discrimination related to menstruation Table 3.Association of knowledge, attitude and personal experience and social connections are shown in Table 4.

Table 3:Personal experiences regarding menstruation:

Sl.no.	Characteristics of subjects	Frequency N=100
1.	Never made fun of a girl because of menstruation	82
2.	Helped a female during her periods	73
3.	Witnessed women facing discrimination	69

Table 4:Association of knowledge, attitude and personal experience and social connections:

Variables	Good	Average 0	Poor	P value
Knowledge				
Having sisters	7	29	34	0.030
Having female friends	4	21	41	0.000
Annual shift	1	20	31	0.000
Attitude				
Having sisters	12	34	24	0.026
Having female friends	6	33	27	0.000
Annual shift	9	23	20	0.028
Personal experience				
Having sisters	34	34	2	0.017
Having female friends	23	38	5	0.239
Annual shift	25	25	2	0.287

Discussion:

There is currently a scarcity of literature investigating male knowledge, and viewpoints on menstruation hygiene are primarily derived from women and girls' narratives. Even fewer research has explicitly investigated MHM in men. The current study contributes to this little body of information by collecting primary data from adolescent schoolboys.

Assessing the knowledge about menstruation, we discovered that many boys (10%) struggled to understand menstruation due to the surrounding secrecy and the scant information they had access to, much of which was false or was cobbled together incorrectly. Even though 90% was aware that menstruation is a natural process, 7% expressed a lack of awareness about menstruation and ideas such as menstruation being a bodily "disease" similar to findings of the study conducted by Mason et al.[10] Further study done by Gundi et al reveals only 31.2 % had a basic knowledge about natural process of menstruation,[11] while our study revealed it as 52%. Communication and sources of knowledge are diverse, with over half discussing menstruation with family in contrast to the findings of similar studies,[10,12] where they relied more on peers, teachers and media.

Our study reveals that the 64% of participants face resistance against discussing menstruation, corroborating with previous findings.[12] This has also been reported in studies conducted with adolescents in Taiwan and Rwanda.[13,14] Majority of participants was against restricting women from religious and outdoor activities in contrary to previous studies.[11] Education within the school curriculum for boys throughout their formative years, when they are ready to learn and the material may be handled, appears to be critical. The current study raises concerns about the apparent lack of education acquired by boys, which a sub-

stantial percentage believes in, showing potential for breaking societal taboos. Although the Adolescence Education Programme (MHRD 2020) is part of the curriculum, teachers appear to have neglected or skipped over it. Most teachers lack formal training or norms for teaching such sensitive subject, and may require specific capacity building to properly transfer information.[10,15] In another Indian study based in West Bengal, boys also requested menstruation to be included in the school curriculum.[16] Diverse attitudes and beliefs suggest the need for initiatives to destigmatize menstruation and promote open conversations.

Personal experiences show that most individuals exhibit positive behaviours, promoting empathy and understanding. However, witnessed discrimination is prevalent, around 31% denies it, indicating the need for broader societal change. It was interesting to correlate this with study done by Mason et al.[10] Key takeaways and recommendations include targeted educational initiatives, promoting open conversations, inclusive education, stigmatization efforts, behavioural change initiatives, and multi-channel awareness.

The study further analysed the relationship between knowledge, attitudes, personal experiences, and social connections in a dataset. Key findings revealed a significant association between knowledge regarding menstruation and female friends and sisters, suggesting that individuals' knowledge is related to the presence or absence of these social connections. Age group also showed a significant association, suggesting that knowledge levels may vary across different classes.

Attitude towards menstruation was found to be influenced by the presence or absence of these social connections, suggesting that attitudes may vary across different age groups. No significant association was found between personal experiences and female friends, suggesting that personal experiences are not strongly influenced by the presence or absence of female friends. However, there was a significant association between personal experiences and sisters, suggesting that personal experiences may be influenced by the presence of sisters in an individual's social network.

The study emphasizes the importance of considering both individual factors and social dynamics when analysing knowledge, attitudes, and personal experiences of boys regarding menstruation and menstruating girls and women. This contributes to a more comprehensive understanding of the factors influencing individuals within a social context. Further qualitative research may be necessary to delve deeper into the underlying reasons for these associations.

Conclusion:

The study emphasizes the importance of considering social ties in measuring knowledge, attitudes, and personal experiences. It suggests targeted treatments and educational practices that consider social dynamics' impact on individual outcomes. Qualitative research can help understand the underlying causes of observed relationships. The study recommends further research to understand the nature of associations, examine elements influencing knowledge acquisition, attitudes, and personal experiences in different social contexts, and identify potential causal factors causing differences in knowledge and attitudes across age groups.

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