

**Monitoring menstrual health knowledge,
communication patterns and taboos among
university students in India**

Ashok Kumar¹, Yukti Dhadwal² & Vinit Yadav³

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Abstract

This research paper explores the communication patterns, knowledge, and taboos concerning menstruation among female college and university students in Haryana, India. The study highlights the lack of healthy communication, knowledge, and menstrual education that can have adverse effects on women's health, especially menstrual health. Data was collected through survey methods from 1698 female students pursuing undergraduate or postgraduate degrees from Higher Education Institutions (HEIs) in Haryana. The majority of female participants had basic knowledge about menstruation but lack in-depth knowledge and education. The menstrual communication gap led to taboos and stigmas among the students, indicating that there is a need to improve gender-specific communication in families and higher education institutions. The study emphasizes the need to increase education, awareness, and communication about menstruation, and encourage open conversations to reduce stigma. The research suggests a comprehensive menstrual hygiene communication strategy is required to improve menstrual communication in India.

Keywords: *Communication, Female students, Knowledge, Menstruation, Taboos.*

Introduction

Menstruation is a natural biological phenomenon that affects around 108 billion of the world's population, with India having around 37.5 million menstruating women. Menstruation knowledge, education, and communication are crucial tools for the reproductive health of the young population, especially in the fight against menstrual taboos and myths. A comprehensive menstrual policy is necessary to improve the menstrual health of female students. An effective health communication strategy is required for India to achieve sustainable development goals such as good health and well-being, quality education, and gender equality.

Many cultures and societies have traditionally viewed menstruation as a taboo topic, leading to a lack of open and honest communication. This lack of communication has led to a lack of education and resources for many women, particularly in developing countries (Boratne et al., 2014). It can lead to negative effects on women's health, such as infections, isolation and embarrassment. A study found

that Chinese undergraduates in Hong Kong had negative attitudes towards menstruation, likely due to the traditional Chinese culture and social environment (Finlay et al., 2020). Students are found to have significant misgivings about menstruation and get affected by societal myths and taboos concerning menstrual habits (Wong et al., 2013). The cultural taboos and lack of resources can make it difficult to provide education and resources for menstrual health (Chothe et al., 2014). However, there are also cultures in which menstrual communication is more open and accepted. In those cultures, menstruation is seen as a rite of passage and is celebrated with rituals and ceremonies. It is not viewed as a source of shame or embarrassment, but rather as a natural part of life (Markstrom & Iborra, 2003).

Studies have shown that traditional gender roles can result in unfavourable attitudes, beliefs, and behaviours that can impact how girls manage their surroundings both at school and at home (Gold-Watts et al., 2020). Girls who have been communicated severe taboos reported higher levels of stress about menstrual staining demonstrating the health implications of menstrual communication inequalities (Gundi & Subramanyam, 2019). Women have traditionally viewed menstruation in a negative light, seeing it as something to be hidden and considered unclean (Kaur & Vats 2020) (Hawkey et al., 2021). Research has found that young adolescent girls are not adequately prepared for puberty and menstruation mothers (Ali and Rizvi, 2010). In many parts of India they have limited knowledge about menstruation and face stigma (Coast et al., 2019). There is a lack of discussion opportunities in the social sphere (McCammon et al., 2020). People living in urban areas are more likely to have a higher level of knowledge and positive perceptions about menstruation (Parvin et al., 2021), while those living in rural areas and those with lower levels of education are more likely to have inadequate knowledge about menstrual health and hygiene (Dube & Sharma 2012) (Siabani et al., 2018) (Rastogi et al., 2019) (Bhusal et al., 2020).

Mothers are considered the most reliable source for young adolescents (Zakaria et al., 2019), although the information provided is not enough to give them the confidence to openly discuss menstruation, avoid feeling ashamed, or break away from the taboos (Jalan et al., 2020). Therefore, educating women about menstruation, and providing them with access to menstrual products and resources is essential. Creating an environment in which open and honest communication about menstrual health is encouraged. Despite the importance of menstrual education and communication, many countries and cultures continue to have a lack of resources and programs dedicated to addressing these issues. Issues (Dube & Sharma, 2012) (Kusuma & Ahmed, 2016). This is particularly true in developing countries, where cultural taboos and lack of resources can make it difficult to provide information related to menstrual health. Most females have inaccurate knowledge about reproductive health (Gaferi et al., 2018). Health education is found to have a positive effect on the knowledge and practices of adolescent school girls regarding menstruation (DeMaria et al., 2020). This study aims to describe the knowledge and behaviour of female students regarding menstruation, including the influence of the environment, parental role in providing menstrual education, and societal rules that

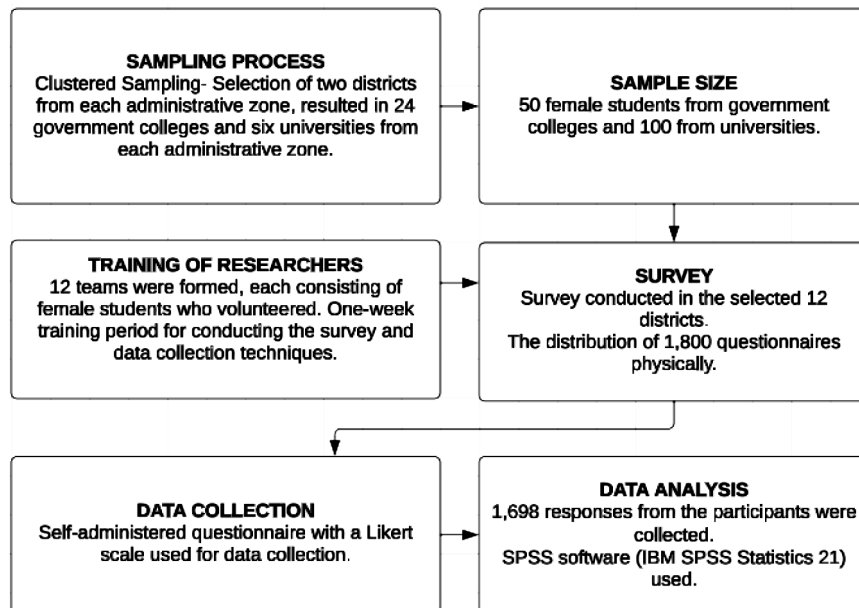
limit conversations. The study uses a qualitative approach and includes pre-field research, fieldwork, data collection and data analysis. The findings provide insights into the current situation regarding menstrual education and communication in the higher institutions of Haryana and highlight the need for open communication within families and communities to ensure that individuals are adequately informed and supported during menstruation.

Objectives of the Study

- To investigate the menstrual health knowledge among female university students, including their understanding of the menstrual process and its awareness.
- To examine communication patterns and taboos surrounding menstruation among female students, exploring the extent to which students engage or adhere to cultural norms.

Material & Methods

For this quantitative study, female students from government universities and colleges in the Haryana state of India were selected as the sampling unit. The participants were exclusively from undergraduate and postgraduate programs and consented to participate.



Sampling and participants

The study used clustered sampling to represent all zones in Haryana, with six administrative divisions included. Two districts were randomly selected from each administrative zone and two colleges and

universities were randomly chosen from each district. A total of 24 government colleges and six universities were selected from each administrative division. The sample size was kept the same for each college, with 50 female students surveyed from government colleges and 100 from universities. A team of researchers was trained and sent to each educational institute for the survey, with a total of 1,800 questionnaires distributed.

Data Collection and Statistical Treatment

Data was collected through a self-administered questionnaire. Responses were collected using a Likert scale. The questionnaire included questions about the participant's knowledge of menstruation, their communication patterns surrounding menstruation, and any taboos or stigmas associated with menstruation. Twelve teams were formed, consisting of female students who volunteered for the research. The students received one week of training on conducting the survey and data collection techniques. The survey was conducted in the selected 12 districts. The collected data amounted to 1,698 responses and was entered into SPSS software (IBM SPSS Statistics 21) for analysis.

Results

This study surveyed 1698 female respondents, the majority of whom were undergraduates aged between 17 and 20 years old, living in rural areas. 66.4% were studying in college and 33.6% in university, with 70.7% being undergraduates and 22.3% postgraduates. The study revealed that while the majority of participants had some basic knowledge about menstruation, their understanding of its biological and scientific aspects was limited. There was a lack of open communication about menstruation between the respondents and their parents, relatives, and teachers. Taboos and stigmas surrounding menstruation were prevalent, but most respondents did not adhere to them. Female respondents lacked awareness about menstrual health and held onto certain myths and misconceptions. Accessible healthcare resources and support for menstrual health education were lacking. The study emphasizes the need for improved education, open communication, and accessible healthcare resources to dispel myths and provide comprehensive knowledge about menstruation.

Data analysis

Table 1: Demographic Profile of the respondents

Demographic Variable	Number of cases	Percent
Type of Institution		
College	1128	66.4
University	570	33.6
Total	1698	100.0

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Age		
17-20	1094	64.4
21-24	518	30.5
25-28	70	4.1
Above 28	16	0.9
Total	1698	100.0
Education		
UG	1320	77.7
PG	378	22.3
Total	1698	100.0
Mother's Education		
Illiterate	159	9.4
Primary	127	7.5
Middle	323	19.0
Matric	448	26.4
10+2	294	17.3
UG	219	12.9
PG	83	4.9
Others	45	2.7
Total	1698	100.0
Father's Education		
Illiterate	257	15.1
Primary	57	3.4
Middle	140	8.2
Matric	336	19.8
10+2	399	23.5
UG	338	19.9
PG	114	6.7
Others	57	3.4
Total	1698	100.0

Mother's occupation		
Housewife	1137	67.0
Laborer	32	1.9
Private job	52	3.1
Government job	99	5.8
Independent work	117	6.9
Others	190	11.2
No reply	71	4.2
Total	1698	100.0
Father's occupation		
Farmer	446	26.3
Laborer	181	10.7
Private job	190	11.2
Government job	171	10.1
Independent work	327	19.3
Others	327	19.3
No reply	56	3.3
Total	1698	100.0
Residential Area		
Rural	1012	59.6
Urban	686	40.4
Total	1698	100.0

The total number of respondents is 1698, out of which 66.4% were studying at a college and 33.6% were from a university. The majority of respondents (64%) were between the ages of 17 and 20, with 30.5% between the age of 21 and 24. A majority of respondents (70.7%) who participated in the survey were undergraduates, and 22.3% were postgraduates.

The data of the respondent's mother and father on education, qualification, and occupation were

gathered. The findings on the respondents' mother's educational qualification revealed that approximately 10% (9.4%) of the respondent's mother were illiterate. The majority of the mothers' (26.4%) had matriculation. 17.3% of them passed senior secondary, and 19% completed middle education. Only 4.9% of the mothers earned a post-graduate degree, and 12.9% graduated. 2.7% of respondents indicated that their mother did some other courses like ITI, PGDCA, skill training courses, vocational courses, and research degrees (M.Phil. or Ph.D.). The majority of respondents (23.5%) indicated that their father completed higher secondary education, with an equal percentage completing matriculation (19.8%) and graduation (19.9%). 3.4% of the respondent's father falls in the "others" category. The mothers' occupations of the participants show that the majority (67%) of them are housewives. 6.9% of the mothers have their own independent work, like being a tailor, boutique owner, beautician, entrepreneur, businesswoman, and many more. 11.2% were categorised in the "others" category, where respondents didn't clearly mention the occupation of their mother and preferred to write it as clerk, teacher, doctor, nurse, CA, lawyer, etc., without mentioning clearly whether it was private or government-associated; therefore, it was separately interpreted. According to the findings, the majority of respondents' mothers were homemakers. The respondent's father was mostly (26.3%) a farmer. Out of 1698 respondents, 1012 (59.6%) lived in rural locations, and 40.4% lived in urban residential areas. This implies that the female respondents are mostly living in rural settings. The findings show that most of the respondents are undergraduates, aged between 17 and 20 years, and pursuing their graduation. Most of the respondents' mothers have completed high school, while their fathers have completed senior secondary education. The mothers are mostly homemakers, while the fathers are farmers.

Table-2: Menstruation Related Knowledge

Sl. No.	Statement/Response	Not at all		To little extent		To some extent		To a great extent		To extremely great extent		Chi-Square	p-value
		Cases	%	Cases	%	Cases	%	Cases	%	Cases	%		
1	I believe that menstruation is a routine monthly discharge from our reproductive parts after a particular age.	1067	62.84	292	17.20	219	12.90	47	2.77	72	4.2	2071.73	0.0001
2	I think menstruation is a kind of physical malfunction among women.	1332	78.45	108	6.36	114	6.71	75	4.42	69	4.01	3629.65	0.0001
3	I don't agree with people who believe that menstrual fluid is accumulated in and then discharged by ovaries.	545	32.10	177	10.42	287	16.90	290	17.08	398	23.4	227.65	0.0001

4	In my opinion menstruation is a process of getting woman's reproductive system ready to attain fertilization.	1056	62.19	272	16.02	191	11.25	86	5.06	92	5.4	1960.81	0.0001
5	I was aware about menstruation before I got my first period.	412	24.26	331	19.49	317	18.67	174	10.25	464	27.3	143.47	0.0001
6	The recurrent monthly flow of menstruation is an external indication of women's general good health.	522	30.74	724	42.64	217	12.78	81	4.77	154	9.07	875.69	0.0001

Table 2 presents the results of Chi-Square analysis applied to the statements related to knowledge and awareness about menstruation among the female respondents. The findings indicate significant results, as the p-value is 0.0001 for each item of knowledge. It is noteworthy that the majority of respondents (62.84%) lack knowledge about menstruation as they do not agree that it is a natural process of routine monthly discharge from the reproductive parts after a certain age. About 7% of the respondents believed in the natural process of menstruation and possessed knowledge about periods. Additionally, 12.9% of respondents gave a neutral response, indicating their uncertainty about the entire process. The respondents lack awareness about menstruation, suggesting that female graduates from colleges and universities do not consider menstruation as a natural process.

78.45% of respondents disagreed with the notion that menstruation is a kind of physical malfunction among women, indicating that most participants are aware of menstruation as a process rather than a body malfunction. The responses illustrate significant p-value for the item 2.

The results from item 3 indicate a lack of knowledge among participants about the biological aspect of menstruation, as there is no clear majority. The findings from item 4 suggest a lack of awareness about menstruation, as the majority of respondents (62.19%) disagreed with the statement that menstruation is a process of getting a woman's reproductive system ready to attain fertilization. Additionally, only 27.3% of respondents agreed to an extremely great extent with the statement that they had awareness about menstruation before menarche. The Chi-Square value for item 5 is 143.47. Moreover, the responses to statement 6 indicate that most respondents (30.74%) disagreed with menstruation as an indicator of women's good health, whereas 4.77% and 9.07% of respondents agreed to a great extent and an extremely great extent, respectively. The Chi-Square values for the recurrent monthly process of menstruation are 875.69 with a probability level of 0.0001.

Overall, the results from items 1-6 about menstruation knowledge indicate that female students lack knowledge about menstruation, particularly the biological aspects. Therefore, there is a significant need to raise awareness about menstruation and menarche among female students.

Table-3: Menstrual Communication Pattern

Sl. No.	Statement/Response	Never		Rarely		Occasionally		Frequently		Very Frequently		Chi-Square	p-value
		Cases	%	Cases	%	Cases	%	Cases	%	Cases	%		
1	How often you participate in discussion and communication regarding menstruation?	348	20.5	182	10.7	525	30.9	356	21.0	286	16.8	183.92	0.0001
2	How often have you and your mother talked about menstruation?	438	25.8	305	18.0	448	26.4	367	21.6	140	8.2	186.16	0.0001
3	How often have you and your father talked about menstruation?	1165	68.6	190	11.2	166	9.8	95	5.6	81	4.8	2535.75	0.0001
4	How often you receive support in communication from female members?	586	34.5	278	16.4	373	22.0	222	13.1	239	14.1	263.76	0.0001
5	Have you ever received supporting communication from male members?	690	40.6	313	18.4	296	17.4	178	10.5	219	12.9	489.52	0.0001
6	Have you ever received counselling related to menstruation from a healthcare professional?	717	42.2	260	15.3	366	21.6	166	9.8	189	11.1	595.64	0.0001

The table 3 shows Chi-square test on various statements of the communication practices related to menstruation. The findings suggest that there is a significant trend among the respondents towards negligence in menstrual communication practices. The chi-square values for all statements are significant, indicating a strong association between the respondents' communication practices and the various factors related to it.

The majority (30.9%) of respondents have shown negligence to communication. 21% and 16.8% have shown frequent and most frequent discussion about menstruation respectively. This indicates that less number of respondents have open environment to carry our discussion related to menstruation. 26.4% respondents occasionally talk about menstruation with their mothers and 25.8% never talk about it with their mothers. The results demonstrates that the responses are not in clear majority and there is a lack of open environment for carry out discussions as females are not comfortable to talk about menstruation even with their mothers.

The discussion about menstruation with male counterparts is forbidden and the result clearly implies it. Most of the respondents (68.6%) opined that they never talk about menstruation with their father. The responses to the statement 4 imply majority (34.5%) respondents have never received any support in communication related to menstruation from the female members. A majority of respondents (40.6%) have responded that they have received no support in menstrual communication

from the male members. Statement 5 results indicate that the male members are not being supportive regarding menstrual communication and making the female uncomfortable whenever needed. The responses to statement 6 show that the respondents have received no menstruation-related counselling from the health care professionals. Most of the responses (42.2%) indicate that the females have never received any type of counselling about menstruation from health care professionals. The results about communication practices with male and female counterparts indicate that males are not lending help on the issues of menstrual communication and the discussion is not frequent. The support from female counterparts seems missing and only occasionally the discussion is done. The conservative approach of female members is reflected in the findings. The respondents have hesitation to discuss about menstruation and there is no support from males and females to discuss about it. The health counsellor is providing no support related to guidance on menstruation and therefore, there is a difficulty to conduct better communication among the respondents.

Table-4: Taboos Associated with Menstruation

Sl. No.	Statement/Response	Strongly Agree		Agree		Neutral		Strongly Disagree		Disagree		Chi-Square	p-value
		Cases	%	Cases	%	Cases	%	Cases	%	Cases	%		
1	Women must not enter shrines/temples while having periods.	238	14.0	222	13.1	232	13.7	385	22.7	621	36.6	344.45	0.0001
2	Women in menstruation are susceptible to get possessed by evil spirits.	52	3.1	162	9.5	190	11.2	561	33.0	732	43.1	1000.68	0.0001
3	Menstruating females are impure.	93	5.5	117	6.9	158	9.3	585	34.5	745	43.9	1083.36	0.0001
4	Menstrual blood is dirty.	279	16.4	538	31.7	326	19.2	253	14.9	302	17.8	153.51	0.0001
5	Menstruating females are restricted from doing household chores, entering the kitchen, and serving during periods.	191	11.2	250	14.7	193	11.4	425	25.0	639	37.6	437.38	0.0001
6	I think that cold and sour foods influence the menstrual flow and should be avoided.	438	25.8	610	35.9	265	15.6	166	9.8	219	12.9	391.77	0.0001
7	I believe married women should avoid touching elders and her husband during her periods	112	6.6	176	10.4	163	9.6	565	33.3	682	40.2	818.01	0.0001

Table 4 shows the taboos related to menstruation and how females are breaking the taboos. The chi-square values for all statements are significant, indicating a strong association between the respondents' beliefs and the menstrual taboos. Nearly 60% disagree that it is forbidden for women to enter shrines during their menstrual periods. This indicates that this taboo is not prevalent among the respondents. A

majority of respondents (43.1%) have strong disbelief that menstruating women are susceptible to get possessed by evil. A majority of respondents (43.5%) strongly disagree that menstruating females are impure while, 6.9% strongly agreed to it. Most of the responses show that the respondents overcome the irrelevant beliefs and taboos. Though most respondents do not believe that menstruation is an impure process, majority of them (31.7%) strongly agreed that menstrual blood is dirty. The results show that respondents believe that the blood ejected during menstruation is dirty. This further indicates unclear perceptions among the female students.

Statement 5 has a majority of responses (62.6%) showing disagreement on restrictions for menstruating females from doing household chores, entering the kitchen. The findings for item 5 indicate that most of the respondents abstain from following the restrictions enforced during menstruation. Chi-Square value is 437.38 for item 5. A majority of respondents (35.9%) believed that cold and sour foods influence the menstrual flow. A lesser number of respondents (12.9%) do not believe in it and disagree to statement 6. The p-value is significant at 0.0001 with Chi-Square value 391.77.

Statement 7 is about believes that married women should avoid touching elders and her husband during her periods, to which majority respondents (73.5%) disagreed. The findings suggest that the majority of respondents do not believe in the menstrual taboos and do not follow the restrictions imposed during menstruation. While some taboos still prevail among a small percentage of respondents, the overall awareness and education level among the female students seem to be high. The results highlight the need for more education and awareness programs to eliminate the negative beliefs and taboos related to menstruation.

Discussion

The present study sheds light on the communication patterns, knowledge, and education related to menstrual health among female college students in Haryana, India. The findings of this study reveal a concerning lack of menstrual health knowledge and communication (present study). This study is in line with DeMaria et al. (2020) and Boratne et al. (2014), who also emphasize the need for health education initiatives among adolescent girls, their parents, and teachers to improve menstrual hygiene and dispel myths and misconceptions about menstruation. The study participants were educated graduates and postgraduate students, yet they had limited knowledge and education related to menstruation, indicating a significant gap in their knowledge of this natural process and its functions. This result is consistent with the findings of Sychareun et al. (2020), who found that young adolescent girls are not adequately prepared for puberty and menstruation.

The survey revealed that the respondents lacked knowledge about the biological and scientific aspects of menstruation and were unaware of the natural process and its functioning. The majority of the respondents were aged 17-20 and were from rural areas. This is similar to the findings of Tan et al. (2017) and Rubinsky and Gunning (2020), who found that girls in India follow cultural practices without much questioning, and are affected by societal myths and taboos concerning menstrual habits. The communication about menstruation was lacking among the respondents and their parents, relatives, and even teachers. This is consistent with Das et al. (2020), who found communication disparities related to menstruation among boys and girls, which prevent discussing menstruation. The topic is considered a taboo among both female and male members of society, and there is minimal support for communication and discussion.

However, the study participants disagreed with the belief that menstruation is a curse of God, indicating that they do not consider it a nuisance. The respondents also did not adhere to certain menstrual taboos, such as the belief that menstruating women should not enter shrines or that they are possessed by evil spirits. This is similar to the findings of Wong et al. (2013), who found that many females tended to disagree that menstruation should be kept secret. (present study; Wong et al., 2013).

Conclusion

This research paper sheds light on the concerning lack of communication, knowledge, and menstrual education among female college and university students in Haryana, India. The findings of this study highlight the need to improve gender-specific communication in families and higher education institutions, increase education and awareness, and encourage open conversations about menstruation to reduce stigma and taboos. The study emphasizes the need for a comprehensive menstrual hygiene communication strategy in India, as suggested by the research, to bridge the knowledge gap and reduce menstrual taboos and stigmas. The study's findings can help policymakers, educators, and healthcare professionals in developing effective strategies and policies to improve menstrual health communication, knowledge, and education in India. The study highlights the urgent need to increase awareness, education, and communication about menstruation among female college and university students in Haryana, India, to improve women's overall health and well-being.

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Bio Profile of the Authors:

¹Associate Professor, Department of Journalism and Mass Communication, Central University of Haryana.

Email: drashok@cuh.ac.in

<https://orcid.org/0000-0001-9814-910X>

²Assistant Professor, Chitkara School of Mass Communication, Chitkara University, Rajpura, Punjab

Email: Yuktidhadwal07@gmail.com

³Research Scholar, Institute of Mass communication and Media technology, Kurukshetra University, Kurukshetra, Haryana, India

Email: vinityadav.2011@gmail.com

