

Research Paper

Measurement of Attitude towards Menstruation amongst Females in Gwalior, India: A Pilot Study

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ABSTRACT

Socio-cultural factors influence females' attitude towards menstruation. Tools used for assessing menstrual attitude have been developed in countries of different cultures and used accordingly. Menstrual Attitude Questionnaire (MAQ) - Indian version by Chandra et al. is a modified and an abridged version of the Menstrual Attitude Questionnaire by Brooks-Gunn and Ruble (1980). Considering the socio-cultural changes that have occurred in the last three decades, this paper's author has adapted and modified the MAQ- Indian version, to assess menstrual attitude as a part of her Doctoral work. Pilot study was conducted in Gwalior city to assess the feasibility of administering the questionnaire in a culture where menstruation is still considered a taboo topic for discussion by many. All the females (n=36) were in the reproductive age group. Findings of the pilot phase are reported in the present paper. Feedback from the participants assured the prospects of conducting the survey at a larger scale in the future.

Keywords: *Menstruation, Attitude towards Menstruation, Females, Gwalior, India*

Socio-cultural variations tend to influence attitudes and beliefs to a great extent (Chaturvedi & Chandra, 1991). Menstruation related practices and rituals are taught to females in their households and are transferred from one generation to another (Ministry of Health and Family Welfare, Government of India, n.d.) Similarly, perceptions and attitudes about menstrual experiences can be influenced largely by how the information is shared within a culture and the strictness with which these practices are followed (Kumar & Srivastava, 2011). Many females seemed to have received instructions about the dos and don'ts related to menstrual practices, the scientific reasons for which may have not been necessarily shared by the instructors, perhaps because they may have not received/remembered the information themselves. Many practices as a result, would be followed in the name of religion, household practices etc. or disregarded as superstition. Some of these practices include socially sanctioned respite from household activities, isolation from the other family members, not entering places of worship, not being allowed to bathe (for some or all the days during menses) or to go out. Culturally sanctioned beliefs and attitudes about the event are reflected, at least to a certain degree, through menstrual

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symptomatology (Brooks, Ruble, & Clark, 1977; Brooks-Gunn & Ruble, 1982). Attitudes regarding menstruation have been found to differ widely between cultures and religions (Chandra, Chaturvedi, & Isaac, 1989; Chandra & Chaturvedi, 1992; Maharaj & Winkler, 2020).

Information pertaining to scientific reasons behind menstrual practices and menstrual hygiene seem to have been available earlier primarily through oral communication, later through medical science, researchers and respective organizations (Joseph, 2020; UNICEF, 2018) and recently through social media too (Fit Tuber, 2023). Personal knowledge and experience, social learning, and cultural beliefs help shape attitude towards menstruation (Wong & Khoo, 2011).

Many socio-cultural changes have taken place in India in the last few decades. Ease of availability of information (or misinformation), shifting of the traditional family system i.e. from joint to nuclear families, greater availability of menstrual products, increased awareness regarding menstruation, rise in female literacy rate and subsequently in the number of working women, and the reduced possibility of following the traditional rituals associated with menses especially in urban areas... leave an interesting question for the present day's researchers- has there been any change in the females' attitude towards menstruation?

REVIEW OF LITERATURE

Many research studies have focussed on menstrual attitude in different ways- such as attitude towards menarche (Tiwari, Oza, & Tiwari, 2006); attitude towards first menstruation through a set of feelings (such as of being scared, indifferent, discomfort or disgust) (Seenivasan et al., 2016) or attitude through a set of experiences (Shoor, 2017); perceptions regarding menstruation (Deo & Ghattargi, 2005; Shanbhag et al., 2012); knowledge, attitude and practices regarding menstruation (Deshmukh, Sandhu, Rachakonda, Kakde, & Andurkar, 2019) etc. Most of these studies were conducted on adolescents and involved the use of self-designed questionnaires or pre-tested scales/questionnaires for which detailed information was not explicitly available in their research papers. Some of the questions in these studies focussed on agreement/disagreement regarding certain practices which may be an indirect way of assessing their menstrual attitude.

One of the earliest available standardized questionnaires to assess menstrual attitude is the Menstrual Attitude Questionnaire created by Brooks-Gunn and Ruble (1980) for the American population. It consists of 33 items which measure beliefs about menstruation, dealing with menstruation and effects on performance both among the respondents themselves and women in general. It has been used widely since then. Later, this questionnaire was adapted and modified or validated by more researchers to suit their cultural population such as for Indian women (Chandra, Chaturvedi & Issac, 1989), Greek women (Bargiota, Bonotis, Garyfallos, Messinis, & Angelopoulos, 2016), Nepalese women (Kawata, Endo, Rai, & Ohashi, 2022) etc.

Research gap

The first author of this paper wished to study menstrual attitude of women as a part of her doctoral work. For this Menstrual Attitude Questionnaire- Indian Version by Chandra et al., was modified to suit the needs of the respective population in the current times which may have been influenced by the socio-cultural changes in the last three decades. Hence, it was

decided that a pilot study be conducted to check the feasibility of administering this modified version to a larger sample.

METHOD

Research Objectives:

1. To assess the menstrual attitude amongst females in a small sample using the Menstrual Attitude Questionnaire Indian Version 2023.
2. To check the feasibility of studying attitude towards menstruation using Menstrual Attitude Questionnaire Indian Version 2023 in a large sample for the first author's PhD work.

Sample

While deciding the sample size for a pilot study, the focus should be on understanding the feasibility of participant recruitment or study design and not on providing the appropriate power for hypothesis testing (In, 2017). Generally, a sample size of 30 per group has been recommended (Browne, 1995). Purposive sampling and snowball sampling was used. 50 females in the reproductive age group (18-53 years) from the Gwalior city participated in the study. This included staff and students of Amity University Madhya Pradesh located in Gwalior and some other females in this city. The final sample size was reduced to 36 participants after screening out and removing incomplete forms.

- **Inclusion criteria-** females having regular menstrual cycles at least for the past 6 months.
- **Exclusion criteria-** females who were pregnant/ breastfeeding at the time of this study, and those who were illiterate or belonged to a low socio-economic background.

Research instruments developed/ used

1. **Menstrual Attitude Questionnaire Indian Version 2023:** Menstrual Attitude Questionnaire developed originally by Brooks-Gunn and Ruble in 1980 was modified for the Indian population as reported in Chandra et al. (1989), and Chaturvedi and Chandra (1991) and its abridged and adapted version was named Menstrual Attitude Questionnaire Indian Version. This Indian version had retained 22 items from the original questionnaire with modifications and added 8 new items thus bringing the total number of items to 30. This three-decade old Indian version was modified by the first author of this paper according to the present socio-cultural scenario. During the process of modification, 16 domain experts independently rated the items as 'applicable/not applicable', and if 'requiring modification'. Inter-rater concordance was found to be 90%. Three items which were considered as controversial by the domain experts were removed. The final version retained 27 items and included additional conceptual translation in Hindi to aid in the understanding of these items in English. This final version was termed as Menstrual Attitude Questionnaire Indian Version 2023.
2. **Patient Health Questionnaire (PHQ-9):** The nine-item Patient Health Questionnaire was developed by Kroenke, Spitzer, and Williams (2001) which can be used to screen people for depression. It is a reliable and valid measure of depression severity. No permission is required to reproduce, translate, display or distribute this questionnaire. This questionnaire was used as a screening tool in the present study.

Procedure

Participants were given the survey form in August 2023 which included a consent form, questions regarding demographic details and their menstrual cycle, PHQ-9 as a screening tool and Menstrual Attitude Questionnaire Indian Version 2023. Participants were asked to provide their feedback at the end of the survey form whether they could understand the statements/ items easily and if they would like to suggest/ rephrase any item(s) for better understanding. Instead of asking for the forms to be filled in front of the researcher, they were requested to fill it as per their convenience and return it after 1-2 days. Forms of nine participants whose scores in PHQ-9 were found to be ‘moderate severe’ category or above were not considered. Apart from these, 5 forms were filled incompletely and hence not considered for further analyses. Data was thus analysed for 36 participants statistically using the PSPS Statistical Analysis Software (version 2.0.0-g5b54d1).

Ethical consideration

The current paper is a part of the pre-PhD research work of the first author who wishes to study menstrual attitude as one of the variables and the PhD topic has been approved by Jiwaji University’s Research Degree Committee (RDC). Permission for data collection was taken from Amity University Madhya Pradesh. Consent form was read and signed by the participants in this study. Considering the nature of the topic, participants were handed the survey form in an envelope which was coded, because mentioning one’s name was kept optional.

RESULTS

The participants were mainly under the age of 20 years (55.6%), unmarried (61.1%), Hindus (86.1%), students (58.3%) and were living in nuclear families (63.9%). Roughly half of them (44.4%) had attained menarche before the age of 14 years and vice versa. Only 4 participants (11.1%) thought that they seemed to have problem with their periods. Other details of the sample are mentioned in Table 1.

Table No. 1 Descriptive Statistics (n=36)

Variable		n	(%)
Age	Up to 20 years	20	55.6
	Above 20 years	16	44.4
Marital Status	Unmarried	22	61.1
	Married	12	33.3
	Divorced	1	2.8
	Widowed	1	2.8
Children	Have children	10	27.8
	No children	26	72.2
Educational status	12 th pass	1	2.8
	Undergraduate	19	52.8
	Graduate	2	5.6
	Post Graduate	6	16.7
	PhD	8	22.2
Religion	Hindu	31	86.1
	Muslim	2	5.6
	Jain	2	5.6
	Sikh	1	2.8
Occupation	Student	21	58.3
	Employed	13	36.1
	Not employed	2	5.6

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Variable		n	(%)
Family Type	Joint	13	36.1
	Nuclear	23	63.9
Socio-economic status ^a	High	3	8.3
	Medium	33	91.7
Age of Menarche	Before 14 years	16	44.4
	After 14 years	20	55.6
Duration of flow	Up to 4 days	22	61.1
	5 or more days	14	38.9
Problem with periods	Yes	4	11.1
	No	32	88.9
Menstrual cycle (days)	28 days or less	25	69.4
	More than 28 days	11	30.6

a. As per the suggestion received from the domain experts at the time of modification of this questionnaire, females from the lower socio-economic status were not approached for the data.

Mean scores, SD and percentage frequency distribution of agreement categories have been mentioned item wise in Table 2. Those who had scored 1 or 2 on an item were considered to have ‘strong disagreement’ with that item. Likewise, a score of 3 was considered an in-between score and thus categorized as ‘neutral’; and scores of 4 or 5 were considered as indicating ‘strong agreement’ with that respective item.

Table No. 2 Mean, SD and Percentage Frequency Distribution of Agreement Categories, on the items of Menstrual Attitude Questionnaire Indian Version 2023

Item	Mean	SD	Strongly Disagree (%)	Neutral (%)	Strongly Agree (%)
1. Women are more tired than usual when they are menstruating.	4.19	0.89	5.6	13.9	80.5
2. Menstruation is symbolic of womanhood.	3.92	1.23	13.9	11.1	75.0
3. I expect extra consideration from my friends and relatives when I am menstruating.	3.94	1.07	11.1	16.7	72.2
4. Men have a real advantage in not having the monthly interruption of a menstrual period.	4.08	1.20	11.1	16.7	72.2
5. Women need not pay attention to cramps occurring during menstruation.	2.94	1.41	41.7	22.2	36.1
6. It is wise to avoid certain activities during menstruation.	3.78	0.93	8.4	22.2	69.4
7. Premenstrual tension / irritability is only psychological.	2.86	1.36	41.6	27.8	30.6
8. Changes during menstruation are similar to other physiological changes in the body.	3.06	1.15	36.1	30.6	33.3
9. Only grumbling and complaining women attribute their irritability to the approaching menstrual period.	2.64	1.13	47.1	30.6	22.3
10. My menstrual period affects my	2.94	1.55	50.0	8.3	41.7

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performance on intellectual tasks.					
11. I hope it will be possible some day to get a menstrual period over within a few minutes.	3.00	1.39	38.9	27.8	33.3
12. I feel as fit during menstruation as I do during any other time of the month.	2.31	1.21	66.7	8.3	25.0
13. The only thing menstruation is good for is to let me know that I am not pregnant.	3.67	1.26	22.2	25.0	52.8
14. Women have to accept it as fate if they do not perform well during menstrual periods.	2.47	0.94	50.0	36.1	13.9
15. Women should not be criticized in case they get upset easily before or during their menstrual period.	4.03	0.94	5.6	16.7	77.7
16. Menstruation does not interfere with my usual activities.	3.14	1.22	27.8	27.8	44.4
17. Menstruation is an example of periodicity (rhythmicity) which occurs in all aspects of life.	3.64	0.90	11.1	30.6	58.3
18. I do not notice the minor physiological effects of my menstrual period.	3.33	1.15	27.8	19.4	52.8
19. I am more easily upset during my premenstrual or menstrual periods.	3.56	1.13	22.2	19.5	58.3
20. In some ways I think I enjoy my menstrual period.	2.19	1.14	61.1	25.0	13.9
21. The recurrent monthly flow of menstruation is an external indicator of a women's general good health.	4.36	0.72	2.8	5.6	91.6
22. Women should not use menstrual distress as an excuse.	3.25	1.34	22.2	27.8	50.0
23. I get the feeling that I am impure or unclean during my menstrual period.	2.17	1.34	61.1	22.2	16.7
24. I think I feel left out from my usual activities during my menstrual periods.	2.81	1.41	44.5	19.4	36.1
25. It is preferable if the men in my household performed the domestic tasks during my periods.	3.69	1.21	11.1	33.3	55.6
26. Men should be more tolerant of a woman during her premenstrual period.	4.28	0.78	2.8	11.1	86.1
27. I would not like it if the women in my household made a fuss over me just before or during my periods.	3.67	1.01	5.6	38.9	55.5

It can be seen that most of the females had strong agreement with items 1, 2, 3, 4, 15, 21 and 26. Notably, 91.6% of them strongly agreed with the item 21 that recurrent monthly flow of menstruation is an external indicator of a women's general good health. 80.5% of them

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agreed that they were more tired while menstruating. 75% considered menstruation to be symbolic of womanhood. 72.2% expected extra consideration from their friends and relatives while having periods. A similar percentage of females felt that men were in an advantageous position because of not having to go through this monthly interruption. 77.7% agreed that they should not be criticized in case they get upset easily before or during their menstrual period; and 86.1% expected men to be more tolerant of a them during periods.

Agreement levels seemed to be roughly equally divided for Item 5- Women need not pay attention to cramps occurring during menstruation. Similar trend was seen for item 7. Scores were nearly equally divided in the three agreement categories for items 8 and 11.

Participants appeared to have a rather polarising view for item 10 – ‘My menstrual period affects my performance on intellectual tasks’ with nearly half of the sample either strongly disagreeing or agreeing with it.

Strong disagreement was found to a large extent for items 12 and 20 where a similar trend in menstrual attitude can be observed. 66.7% did not agree feeling as fit during menstruation as they did during any other time of the month. Likewise, 61.1% did not quite think that they enjoyed their menstrual period. Interestingly, 61.1% females disagreed with feeling impure or unclean during their menstrual period.

DISCUSSION

Socio-cultural changes in India such as increased literacy rate in females, greater awareness about menstruation and better availability of menstrual products may have brought about a change in the way females approach the concept of ‘menstruation’ these days.

Participants seemed to have strong agreements for the statements associated with changes related to physiology and emotions. They agreed regarding being wise in deciding which activities were more appropriate during the menstrual period and expected extra consideration from others during that time.

Even though the concept of impurity seems to prevail in the Indian culture, many females did not seem to feel impure or unclean during their menses. In general, females felt that their feelings of fitness go down during that phase of the cycle, and that they do not tend to think that they enjoy their periods.

Participants seemed to have roughly divided views when it came to paying attention to cramps occurring during menstruation. One way of understanding this could be the fact that menstrual cycles tend to take a few years to regularize after the onset and that could lead to unpleasant experiences, one of them being cramps. Considering this phase to be a temporary one, one may be inclined towards ignoring the pain in the hope of having (less) unpleasant experiences soon. Generally, at this stage, female adolescents are advised by their mothers and elderly women to bear the pain because this may prepare them mentally to bear the labour pain while giving birth to their offspring in future. Considering the fact that nearly half of the participants were under the age of 20 years, perhaps this could be a relatable explanation. Another viewpoint could be that females are more encouraged in the present times to speak about their uncomfortable experiences as against in the past. Many awareness programmes and discussions are conducted through educational institutions, social media platforms, etc. This could have led to more people acknowledging their pain and seeking help through medical professionals. This roughly divided view seemed to resonate with the

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agreement levels for the statement- ‘Premenstrual tension / irritability is only psychological’.

Participants had nearly equally divided views for the statements- ‘Changes during menstruation are similar to other physiological changes in the body’, and ‘I hope it will be possible some day to get a menstrual period over within a few minutes.’ A possible explanation for this could be the fact that even though menstruation is a physiological change; it may not be experienced the way other physiological changes are experienced, and that subjective experiences vary too. Apart from these possibilities, the hope of getting a menstrual period over in a short span includes an element of wishful thinking, and participants’ view may have been divided between their wishful and practical aspect of thinking.

In general, participants appeared to be more aware of their needs and more welcoming of the changes that may help them have better experiences. This could be so because rituals pertaining to social exclusion and rest during menses is practically more possible in joint families. Increase in the number of nuclear families implies less females in each house and therefore lesser opportunities to substitute the household work.

As per the feedback provided by the participants, all of them could understand the items easily. No participant reported discomfort while answering the questionnaire. Additionally, one participant mentioned the following in the feedback section of the survey form- “It's just periods! Let's not consider it a taboo topic, which needs to be discussed in closed room to only women. Let's talk about it in front of men too. They need to have knowledge about it as much as we women do. It's not taboo, it's normal.”

Limitations

Even though it was not mandatory for the participants to mention their names and the assurance was provided by the researcher regarding maintaining confidentiality of their data, yet considering the sensitive nature of this topic, the possibility of acquiescence bias, social desirability bias cannot be ruled out completely.

Implications of research

It may be interesting to see the outcome of the study when carried out at a larger level during the researcher’s PhD main data collection phase. Understanding females’ attitude towards menstruation may be helpful in developing educational interventions and strategies to make the females’ attitude more positive towards menstruation.

CONCLUSION

The purpose of this pilot study was to check the feasibility of using the Menstrual Attitude Questionnaire Indian Version 2023 for the first author’s PhD work. Findings of this pilot study and the feedback received from the participants indicated the feasibility for the same.

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Conflict of Interest

The author(s) declared no conflict of interest.

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