

## Original Research Article

# Knowledge, practices and problem towards menstrual cycle with their socio economic status: a comparative study of tribal and non tribal female

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**Received:** 11 April 2020

**Revised:** 12 May 2020

**Accepted:** 14 May 2020

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## ABSTRACT

**Background:** Menstruation is a normal biological process and a key sign of reproductive health. Good hygiene practices are essential during menstruation. The current study was conducted to assess the knowledge, awareness and practices related to menstrual hygiene management and find out the relationship between the socio economic status and age at menarche (AAM) among tribal (Oraon) and nontribal female in Paschim Medinipur, West Bengal.

**Methods:** A field based cross-sectional study was conducted among tribal (Oraon) and nontribal female in Paschim Medinipur, West Bengal. A total of 120 samples (60 tribal and 60 nontribal) were interviewed by using pre-tested structured questionnaire. Data were statistically analyzed using SPSS (ver. 16).

**Results:** The present study shows that the tribal female had poor knowledge about menstruation and menstrual hygiene than the nontribal female. Use of sanitary napkins among the nontribal female (66.7%) where as reverse in case of tribal female (use of cloths 66.7%). Study shows with increasing monthly family income and socio economic status, mean AAM decreases. There was statistically significant difference between the two groups (tribal and nontribal) for all socio economic parameter but not AAM distribution.

**Conclusions:** There is an urgent need to create awareness regarding menstrual hygiene among all the females in the society. The role of teachers and media should be enhanced. This will help in reducing the burden of menstrual related health problem and improve the reproductive health.

**Keywords:** Menstrual hygiene, Age at menarche, Tribal and nontribal female

## INTRODUCTION

The word adolescent is derived from the Latin word “adolescere”, which means to grow into maturity. Menstrual hygiene is a key concern of adolescent health. Still the menstrual hygiene management (MHM) is mostly neglected. Infections due to lack of hygiene during menstruation have been reported in many studies.<sup>1</sup> This study was done to find out the knowledge about menstrual hygiene and hygiene related practices among the tribal and non tribal female. Poor menstrual hygiene

not only affects the physical health, but also the social and mental well-being of the girls and women, thus is a violation of the human right to health.<sup>6</sup>

Starting of menstruation of a particular age group is known as age at menarche (AAM) and is influenced by environmental factors, body mass index, socio economic status, level of education and genetic factors. The menarcheal age is clinically very important in the diagnosis of delayed puberty, pathological and hormonal disorder. AAM is one of the most significant traits, which

is commonly used for retrospective epidemiological studies of female sexual maturation. The average age of menarche has decreased in both developed and developing countries due to improved health and nutrition. Most Indian studies have shown similar trends of decreasing AAM.<sup>2-4</sup> Common menstrual disorders include heavy flow (menorrhagia), unusually light (hypomenorrhea), unusually frequent (polymenorrhea), unusually infrequent (oligomenorrhea) and unusually painful (dysmenorrhea). Dysmenorrhea and pre-menstrual syndrome (PMS) are common menstrual problems experienced by many adolescent girls.<sup>5</sup>

As reported in Census 2011, India is the home to 243 million adolescents contributing to one fifth (21.4%) of India's Population and Adolescent girls constitute to 47 percent of total adolescent population (Census 2011).<sup>8</sup> This study was conducted among tribal (Oraon) and nontribal female in Paschim Medinipur district, West Bengal. Their old traditional occupation of Oraon tribe is agriculture. In present time of Midnapore Oraon are main occupation is Rajmistri and day labour. The Oraons, speak the 'Sadri' language which is a mixed from Bengali and Hindi. Many of them have almost forgotten their own mother tongue 'Kurukh'. They also speak in the local Bengali dialect. All peoples were belonging to Hindu religion. Oraons are divided into a number of exogamous clans. No other social division like sub tribe is found among them. The simple nuclear type of families among the Oraons society. Their house type usually mud wall with thatched, tin, tali and asbestos. These show the presence of many local Hindu cultural traits. Most of the people are illiterate.

The objectives of the study were to assess the knowledge and practices about menstrual hygiene during menstruation among the tribal and nontribal female, to know the menstrual related problem of the studied female, find out the relationship with the socio economic status and monthly family income related AAM of the studied female.

## METHODS

A community based cross sectional study was carried out among tribal (Oraon) and nontribal female of Paschim Medinipur. A predesigned pretested and structural schedule questionnaire was used for the data collection. Data collection was done through personal interview of study subjects by single female investigator. Sample is selected through random sampling. The total 120 female (60 tribal females from 'Oraon Para' and 60 non tribal female from Town Colony), Tantigeria, were taken among 11- 40 years age group. The study was carried out during the period of February to May, 2014. All subjects in the age group of 11-40 years who had attained menarche were included in the study. All subjects in the age group 11-40 years who had not attained menarche and those female had attained menopause were excluded. Females who are unwilling to participate in the study were excluded. Formal ethical approval was obtained

from Department of Anthropology, Vidyasagar University.

The socioeconomic status is assessed by modified Kuppaswami's socioeconomic classification scale.<sup>10</sup> Data was tabulated and analyzed by appropriate statistical methods in SPSS (Statistical Package for Social Sciences) 16.0 version software packages. The data was analyzed for various aspects in terms of frequencies, percentages and means. To know the association between tribal and nontribal female through chi square test.

## RESULTS

The present study concluded that tribal female had poor knowledge of menstruation and menstrual hygiene than the nontribal female. Socio economic and demographic profiles of tribal and non tribal females are presented in Table 1. 11-40 years female are study for this work. 31.7% tribal female are non literate and non tribal females are all literate. Most of the tribal female are house wife (36.7%) in occupation but Day labour, construction labour and domestic worker are also found. 51.7% tribal and 5% non tribal people have monthly family income in between <5000 rupees. 13.3%, 85% and 1.7% tribal female belongs to lower, upper lower and lower middle socio economic status respectively. 21.7%, 11.7%, 61.7% and 5% non tribal female belong to upper lower, lower middle, upper middle and upper socio economic status (according to modified Kappaswamy scale, 2017). Significantly found that most of the tribal female belongs to low socio economic status than the non tribal female. Significant group difference (tribal and nontribal female) found in education, occupation, monthly family income and socio economic status ( $p < 0.001$ ).

Table 2 shows the knowledge, practice regarding menstrual hygiene and health problems about menstruation of the tribal and nontribal female. Statistically significant difference found among the tribal and non tribal female on nature of discharge, use of sanitary napkin during menstrual cycle, menstrual problem and symptoms face during menstrual cycle. Before the menstruation, 78.3% tribal and 71.7% non tribal female had no any concept about menstrual cycle. Use of sanitary napkins among the non tribal female (66.7%) where as the picture of reverse in case of tribal female (use of cloth 66.7%) and 10% female do not use anything. 16.7% tribal and 38.3% non tribal people face the menstrual problem. Only 21.7% tribal and 36.7% non tribal female consult the doctor about menstrual problem. 23.3% tribal and 16.7% nontribal female lost their working day during the menstrual problem.

Table 3 shows the hygiene and health about menstruation of tribal and nontribal female. 38.3% tribal female do not have sanitation facilities but non tribal female have the sanitation facilities. 16.7% tribal and 20% non tribal female skip the menstruation in our studied population. 23.3% tribal and 46.7% non tribal female intake medicine

get relief the pain during the menses. All health and hygiene parameter are found statistically group

differences except length of flow and any months skip the cycle.

**Table 1: Socio economic and demographic profile of tribal and nontribal female.**

Socio economic and demographic profile	Tribal female		Nontribal female		Chi square test ( $\chi^2$ )
	Frequency	Percentage (%)	Frequency	Percentage (%)	
Age distribution (11 to 40 years) of studied population					
Age (in years)					
11-20	31	51.7	19	31.7	$\chi^2=5.57^{NS}$ df=2, p=0.062
21-30	23	38.3	29	48.3	
31-40	6	10.0	12	20.0	
Total	60	100	60	100	
Education distribution of studied population					
Non literate	19	31.7	0	0	$\chi^2=63.31^{***}$ df=4, p=0.000
Can sign	4	6.7	0	0	
Primary	11	18.3	4	6.7	
Upper primary	19	31.7	7	11.7	
Above	7	11.7	49	81.7	
Total	60	100	60	100	
Occupation of studied population					
Student	16	26.7	31	51.7	$\chi^2=27.71^{***}$ df=8, p=0.001
Housewife	22	36.7	15	25.0	
Day labour	3	5.0	0	0	
Construction labour	7	11.7	0	0	
Domestic worker	9	15.0	6	10.0	
Govt. job	0	0	4	6.7	
Non govt. job	0	0	3	5.0	
Nothing	3	5.0	0	0	
Others	0	0	1	1.7	
Total	60	100	60	100	
Monthly family income of studied population					
1000-5000	31	51.7	2	3.3	$\chi^2=86.27^{***}$ df=3, p=0.000
5001-10000	29	48.3	11	18.3	
10001-20000	0	0	17	28.3	
>20000	0	0	30	50.0	
Total	60	100	60	100	
Socio economic status of studied population					
Class I (upper)	-	-	3	5.0	$\chi^2=75.06^{***}$ df=4, p=0.000
Class II (upper middle)	-	-	37	61.7	
Class III (lower middle)	1	1.7	7	11.7	
Class IV (upper lower)	51	85.0	13	21.7	
Class V (lower)	8	13.3	-	-	

\*\*\*means p<0.001, NS=Not significant.

**Table 2: Knowledge, practice and problem about menstruation of tribal and non tribal female.**

Concept before menstruation	Tribal female		Nontribal female		Chi square test ( $\chi^2$ )
	Frequency	Percentage (%)	Frequency	Percentage (%)	
Concept before menstruation period of studied population					
Yes	13	21.7	17	28.3	$\chi^2=0.71^{NS}$ df=1, p=0.399
No	47	78.3	43	71.7	
Total	60	100	60	100	
Type of discharge of studied population					
Less	8	13.3	8	13.3	$\chi^2=1.32^{NS}$ df=2, p=0.518
Moderate	37	61.7	42	70.0	
Profuse	15	25	10	16.7	
Total	60	100	60	100	

Continued.

Concept before menstruation	Tribal female		Nontribal female		Chi square test ( $\chi^2$ )
	Frequency	Percentage (%)	Frequency	Percentage (%)	
Nature of discharge					
Fluid	43	71.7	22	36.7	$\chi^2=14.80^{***}$ df=1, p=0.000
Clot & Fluid	17	28.3	38	63.3	
Total	60	100	60	100	
Use Sanitary napkin during menstrual cycle					
Cloth	40	66.7	20	33.3	$\chi^2=25.19^{***}$ df=2, p=0.000
Sanitary napkin	14	23.3	40	66.7	
Nothing	6	10.0	0	0	
Total	60	100	60	100	
Any menstrual problem of tribe and non tribes in female					
Yes	10	16.7	23	38.3	$\chi^2=7.06^{**}$ df=1, p=0.008
No	50	83.3	37	61.7	
Total	60	100	60	100	
Any symptoms face before menstrual cycle					
Yes	29	48.3	30	50.0	$\chi^2=0.03^{NS}$ df=1, p=0.855
No	31	51.7	30	50.0	
Total	60	100	60	100	
Any symptoms face during menstrual cycle					
Yes	34	56.7	45	75.0	$\chi^2=4.48^*$ df=1, p=0.034
No	26	43.3	15	25.0	
Total	60	100	60	100	
Medical consultation regarding the menstrual problem					
Yes	13	21.7	22	36.7	$\chi^2=3.27^{NS}$ df=1, p=0.071
No	47	78.3	38	63.3	
Total	60	100	60	100	
Working day lost					
Yes	14	23.3	10	16.7	$\chi^2=0.83^{NS}$ df=1, p=0.361
No	46	76.7	50	83.3	
Total	60	100	60	100	

\*means  $p<0.05$ , \*\*means  $p<0.01$ , \*\*\*means  $p<0.001$ , NS=Not significant.

**Table 3: Hygiene and health about menstruation of tribal and non tribal female.**

Hygiene and health about menstruation	Tribal		Nontribal		Chi square test ( $\chi^2$ )
	Frequency	Percentage (%)	Frequency	Percentage (%)	
Length of period					
3 day	12	20.0	7	11.7	$\chi^2=7.68^{NS}$ df=3, p=0.104
4 day	19	31.7	10	16.7	
5 day	15	25.0	25	41.7	
> 5 day	14	23.3	18	30.0	
Peak discharge day					
1 <sup>st</sup> day	17	28.3	3	5.0	$\chi^2=12.39^{**}$ df=2, p=0.002
2 <sup>nd</sup> day	41	68.3	52	86.7	
3 <sup>rd</sup> day	2	3.3	5	8.3	
Any months skip					
Yes	10	16.7	12	20.0	$\chi^2=0.22^{NS}$ df=1, p=0.64
No	50	83.3	48	80.0	
Frequency of change pads during menstrual cycle/day					
0	6	10.0	0	0	$\chi^2=18.67^{**}$ df=6, p=0.005
1	10	16.7	2	3.3	
2	25	41.7	30	50.0	
3	9	15.0	21	35.0	
4	7	11.7	6	10.0	
5	1	1.7	1	1.7	
6	2	3.3	0	0	

Continued.

Hygiene and health about menstruation	Tribal		Nontribal		Chi square test ( $\chi^2$ )
	Frequency	Percentage (%)	Frequency	Percentage (%)	
Have sanitation					
Yes	23	38.3	-	-	$\chi^2=53.49^{***}$ df=1, p=0.000
No	37	61.7	60	100	
White discharge					
Nil/ None	14	23.3	5	8.3	$\chi^2=9.45^*$ df=3, p=0.024
Less	27	45.0	25	41.7	
Moderate	11	18.3	24	40.0	
Profuse	8	13.3	6	10.0	
Time of white discharge					
Before	24	40.0	22	36.7	$\chi^2=18.28^{***}$ df=4, p=0.001
After	9	15.0	2	3.3	
Often	5	8.3	20	33.3	
Always	8	13.3	11	18.3	
None	14	23.3	5	8.3	
Any medicine intake get relief					
Yes	14	23.3	28	46.7	$\chi^2=7.18^{**}$ df=1, p=0.007
No	46	76.7	32	53.3	

\*means  $p<0.05$ , \*\*means  $p<0.01$ , \*\*\*means  $p<0.001$ , NS=Not significant.

**Table 4: Age at menarche distribution of tribal and non tribal female.**

Age at menarche	Tribal female		Nontribal female		Chi square test ( $\chi^2$ )
	Frequency	Percentage (%)	Frequency	Percentage (%)	
11	3	5.0	5	8.3	$\chi^2=3.50^{NS}$ df=6, p=0.744
12	19	31.7	18	30.0	
13	18	30.0	23	38.3	
14	14	23.3	11	18.3	
15	2	3.3	2	3.3	
16	3	5.0	1	1.7	
18	1	1.7	-	-	
<b>Total</b>	60	100	60	100	

NS=Not significant.

**Table 5: Socio economic status (modified Kuppuswamy's scale) wise mean age at menarche of tribal and non tribal female.**

Socio economic status	Mean age at menarche		
	Tribal	Nontribal	Combined
<b>Class I (upper)</b>	-	12.33	12.33
<b>Class II (upper middle)</b>	-	12.73	12.73
<b>Class III (lower middle)</b>	12.0	13.14	13.0
<b>Class IV (upper lower)</b>	13.08	13.08	13.08
<b>Class V (lower)</b>	13.50	-	13.50

**Table 6: Monthly family income wise mean age at menarche of tribal and non tribal female.**

Monthly family income	Mean age at menarche		
	Tribal	Nontribal	Combined
<b>1000- 5000</b>	13.20	12.50	13.17
<b>5001-10000</b>	12.88	13.18	13.0
<b>10001- 20000</b>	-	12.65	12.65
<b>&gt;20000</b>	-	12.83	12.83
<b>Total</b>	13.12	12.83	12.98



The AAM ranged from 11 to 18 years in tribal and 11 to 16 years in non tribal female. Most of the studied female AAM 12, 13 and 14 years in both communities (Table 4). Table 5 shows the socio economic status wise mean AAM of the tribal and non tribal female. Socio economic status increases than the mean AAM also decreases of the both community (except class IV of the non tribal female). Table 6 shows that monthly family income wise mean AAM of the both community. Monthly family income increases that the mean AAM decreases in tribal female but fluctuated in non tribal female.

## DISCUSSION

The present study clearly indicated the mean AAM of all respondents (tribal and nontribal female) was 12.98 years. The age of onset of menstruation in tribe (Oraon) varies from 11 to 18 years with the average age is 13.12 years and non tribe varies 11 to 16 years with the average age is 12.83 years. In a descriptive cross-sectional study conducted among rural and urban adolescent girls, Dasgupta et al found mean age of menarche as 12.8 years.<sup>14</sup> Mean age of menarche in the present study corresponded with that of above studies. This study mainly focused on association between AAM and socio economic parameters. Also found the significance difference between tribal and non tribal female on the basis of socio economic parameters, menstrual health and hygiene.

During 2014 UNICEF showed that in Tamil Nadu, 79% girls and women were unaware of menstrual hygiene practices and the same was 66% in Uttar Pradesh, 56% in Rajasthan and 51% in West Bengal.<sup>7</sup> In present study before the menstruation, 78.3% tribal and 71.7% non tribal female had no any concept about menstrual cycle.

AAM in different socio-economic groups was studied according to modified Kuppaswamy Scale. This study shows that general improvement in socioeconomic conditions has resulted in the early onset of menses. Many studies found that the factor affecting menarche, socioeconomic class had a statistically significant association with age of menarche. There is a decreasing trend in mean age of menarche on moving from lower to higher socio-economic class.<sup>11,12</sup> The study by ICMR (1972) reveals decline in AAM with increase in per capita income of the family.<sup>13</sup>

In a country like India, the problems of non-literacy, improper health education, gender disparity, 'culture of silence' and lack of governmental initiative to address this group have resulted in poor reproductive health condition of adolescent females.<sup>9</sup> In the practices aspect, in our study 23.3% tribal and 66.7% non tribal female used sanitary pads during menstruation whereas a study conducted in West Bengal, Pondicherry and Uttarakhand shows only 11.25%, 94.8% and 34.8% of girls used sanitary pads respectively.<sup>14</sup>

## CONCLUSION

The knowledge and practice about menstruation is not adequate among the tribal and Nontribal female. However, one of the major limitations of the present study is the small sample size from a limited area of study. Further studies are needed among a larger sample for effective planning. Urgent steps are needed to improve socio-economic conditions by income generating activities such as an employment guarantee scheme, food for work programme, etc. Perhaps the most meaningful suggestion for future consideration is to conduct this research as a longitudinal study. Finding out the status of awareness and practice of menstrual hygiene will be helpful in planning a health education program for the population. Knowledge of the AAM will help the government to design and implement programmes about reproductive health of women, to set laws about age at marriage, family planning, etc. and to decide the appropriate age at which the topics like the sex education, contraception and sanitary practices can be incorporated in schools.

## ACKNOWLEDGEMENTS

All subjects who participated in the study are gratefully acknowledged. Special thanks to Prof. Kaushik Bose supervise this work. Department of Anthropology, Vidyasagar University, is acknowledged for instrumental support and partial financial assistance provided by UGC-SAP-DRS-I.

*Funding: Financial assistance provided by UGC-SAP-DRS-I. Anthropological Survey of India is also acknowledged for the financial support to BM in the form of Senior Research Fellow (ID No.: HQ/SRF/02)*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Department of Anthropology, Vidyasagar University*

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**Cite this article as:** Dey J, Mahapatra B. Knowledge, practices and problem towards menstrual cycle with their socio economic status: a comparative study of tribal and non tribal female. *Int J Community Med Public Health* 2020;7:2381-7.