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Management of menstrual hygiene, practices and perceptions among vulnerable Bhabha women in Madhya Pradesh: A pilot survey

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ABSTRACT

Background: India has the highest proportion of adolescents and the highest adolescent pregnancy and childbirth rate in the tribal segment of the population. Very few studies have focused on the use of sanitary pad and quality of health care as menstrual hygiene practices.

Materials and Methods: The data was collected among 'Bhabha' women who identified as one of the particularly vulnerable tribal groups (PVTGs) in Madhya Pradesh. Towards comparing the use, source, and components of menstrual hygiene practices among adolescents and adult mothers, the sample included adolescent (10-19 years) and adult women 20-49 years of age. The relevant information was collected by trained female investigator with designed questionnaire from the respondents.

Results: Findings revealed that only 22.7% women are using sanitary pad during menstruation period in the studied tribe. It was seen the use of this absorbent (sanitary pad) for menstrual hygiene among the adolescents were found significantly higher (37.5%) than that of adult women (14.3%), whereas, the use of old cotton was found significantly higher (78.6%) among adult women. Awareness on menstrual hygiene about 50% adolescents and 64% adult women believed it is a curse of God. About 25% adolescents and 21.4% adult women believed menstruation is a natural process.

Conclusion: The tribe has underprivileged menstrual hygiene practices owing to low awareness, illiteracy, and poverty. The special IEC education campaign with suitable strategy can be forced to optimum hygiene practices.

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1. Introduction

The menstrual duration is known as 'period or monthly' in India and first attainment of menstruation is called 'menarche'.¹ Menstruation is commonly measured as impure in our Indian society.² In depth, menstruation is a bodily process in which blood flow through the vagina of the uterus starts 1st day and ends in 7th day but generally it is of 5-7 days in all women in each month's rotation of the menstrual cycle.³ At the same time, it is required to keep special attention regarding cleansing

the genitals of blood discharges. Moreover, in this regard women also feel some kind of hesitation in talking openly to any other person on the issues of menstruation due to feeling of embarrassment and helplessness. It is also seen that tribal women are mostly shy and have some cultural, traditional, myths, social stigma or social barriers due to which they feel low confidence to share their menstrual issues with anybody.⁴ The word Kishori or 'Adolescent' is derived from the Latin word 'Adolescer', which literal meaning shows the identity of development in maturity.⁵ According to the World Health Organization (WHO) study, about 20.9% populations of India are adolescents between 10-19 years and the teenage strength is one-fifth of the

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world population. At present, India's total population is 1.21 billion and out of which 253.2 million populations are between 10-19 years of age. According to the study (1996) of water, sanitation, and hygiene (WASH) united; giving special emphasis on health during the menstrual period is now being celebrated on 28th May every year as Menstrual Acquisition Day.⁶ In India, the present status of the sanitation and personal menstrual hygiene is in an execrable condition. A study states that about 71% of girls in India are not provided proper knowledge regarding the menarche and menstrual hygiene practices. In the rural area, only about 2-3% of women are utilizing the sanitary napkins and more than 70% of the families are not having enough money for purchasing sanitary napkins or menstrual materials to give their women. Every year in India, there are about 60,000 cases of cervical cancer deaths due to which various types of dreaded diseases are faced by the women.⁷ Most of the women or girls less prefer to use the sanitary pad/absorbent and mostly old clothes unhygienic menstrual care leads to high prevalence reproductive tract infections (RTI) in our country due to considerably to female morbidity.⁸ Mostly backward areas girls use old clothes during their period, growing susceptibility to RTI's.⁹ In this situation RTI preventable and treatable is accountable for causing grave prominence of the reason many diseases such as sterility, pre-birth infection, ectopic pregnancy, and low weight children during birth, pregnancy wastage, etc.¹⁰ The protected and effectual menstruation hygiene and management is a elicit for enhanced and stronger improvement for women health.

For the proper women health care, emphasizing on menstrual hygiene management, the Government of India has provided subsidy on sanitary pads under the scheme of Gandhi Scheme for Empowerment of Adolescent Girls-SABLA program of Ministry of Women and Child Development for the teenager of each rural areas since August 2011. Under the Ministry of Women and Child Development, the SABLA program has covered the adolescent girls, which are creating awareness on menstrual hygiene management as a very important initiative for the improvement in health, nutrition, and empowerment.¹¹ In this concern, ASHA (Accredited Social Health Activist) elaborates to sanitary pad distribution is very poor, they were not satisfied with the supply and the subsidy was given to them. Supply is irregular which is higher for adolescent girls in rural areas.¹² Menstrual hygiene practice is affected by many factors; knowledge, practices and financial problems are some of the major causes that lead to low menstrual hygiene of tribal women. Bharia is a Dravidian-speaking tribal group of Madhya Pradesh and they largely reside in Chhindwara district which is commonly recognized as Patakot, is isolated bowl-shaped and about 400 meters deep in its hilly region. Inside and outside the Patakot, the government health services or

facilities are unreachable because of its lower connectivity to the streamline.¹³ Bharia women of the Patakot valley are mostly illiterate and their socio-economic status is very low. Due to poverty and lack of knowledge regarding the modern medicine services result in under consumption of government health services. This study on the menstrual hygiene issues among vulnerable Bharia tribal women of Madhya Pradesh was conducted to find out the women's health condition concerning menstrual hygiene management, describing its feasibilities and the aim of the study is to describe the hygiene practices among adolescents and adult women in comparative results.

2. Materials and Methods

A pilot survey was conducted among Bharia tribal women of Tamia block of Chhindwara district in Madhya Pradesh. The data was collected during the first week of May 2019 in Bharia tribal women who identified as one of the particularly vulnerable tribal groups (PVTGs) in Madhya Pradesh. A total 22 females above age of 10 years who attained menarche were included as study participants under the specific criteria in terms of menstrual hygiene and health. The eligible women were selected from 6 villages; 3 villages were taken from Inside and 3 were taken from outside of Patakot Valley. The Patakot valley has total 36 villages, 12 villages are situated in inside the valley and remaining 24 villages are situated surrounding the outside valley. The reason behind the selection of equal number of villages was to see the variations in the consideration of health practices, health conditions and geographical conditions of women living inside and outside the valley. Moreover, inside the valley three villages were selected randomly in the view of primitive living standard village and three villages were selected from outside the valley of different locations and approachable adopting with standard sampling technique. Hypothecation of opinion for the comparison of health hygiene status of women who live inside the valley and outside the valley is similar or different. The hygiene practices related data were collected by female trained investigators through conducting interview with the respondents. The survey data were recorded as per women responses on awareness of personal hygiene, its issues, and their knowledge on healthy hygiene during the menstruation period, strong believe and perceptions characteristics. The study has approved by ethics committee of ICMR-NIRTH, Jabalpur. All the data was recorded after explaining about the study and taking the written informed consent from all participants.

3. Results

The findings were presented in five different sections;

3.1. Women's background characteristics as per adolescents and adult

This is an advantage to evaluate the background characteristics of women who participated in the interview on menstrual hygiene and describe it according to their age, education and marital status. The majority of the women (63.7%) belonged to adult women aged between 20 to 49 years while adolescents 36.4% were between 10-19 years of age. Whereas more than half of women (59.1%) were found married including adolescents and adult women. About 31.8% of women were illiterate and 31.8% were educated up to middle school and 36.4% educated high school and above. Respondents' characteristics were classified into three categories based on their present age, marital status and education which are shown in Table 1.

Table 1: Distribution of women's background characteristics

Women Characteristics	No. of women n=22	Percentage (%)
Age of women;		
Adolescent (10-19 year)	08	36.4
Adult women (20-49 year)	14	63.7
Marital status		
Married	13	59.1
Unmarried	09	40.9
Women education		
Illiterate	07	31.8
Educated up to Middle class	07	31.8
Educated up to High school ⁺	08	36.4

3.2. Socio-demographic characteristics of women

The detailed background characteristics of adolescents and adult women are described. As per research data, we have analysed the adolescent girls and adult women with their existing characteristics including her marital status and level of education. The result revealed that all adolescent girls were unmarried; in case of adult women about 93% were married and among the adolescent girls, the level of education was found 25% both in primary school and middle school, whereas 50% were found in high school, higher secondary and above. Level of schooling among adult women was found about 50% illiterate and only about 7% educated up to the primary, 14% were up to middle school and 29% women educated up to high school, higher secondary and above (Table 2).

3.3. Outlines of menstrual hygiene practices and awareness

Awareness of menstrual hygiene practices and their first experiences of menstruation are shown in Table 3. About

Table 2: Distribution of socio-demographic characteristics of adolescent and adult women

Existing characteristics	Adolescent (%) n=8	Adult women (%) n=14	Total (%) n=22
Marital status			
Married	00(0.0)	13(92.9)	13(59.1)
Unmarried	08 (100.0)	01 (7.1)	09(40.9)
Education			
Illiterate	00(0.0)	07(50.0)	07(31.8)
Primary	02(25.0)	01(7.1)	03(13.6)
Middle	02(25.0)	02(14.3)	04(18.2)
High school ⁺	04(50.0)	04(28.6)	08(36.4)

50% of adolescents and 64% of adult women believed menstruation is a curse of God. Out of 22.7% women, 25% of adolescents and 21.4% of adult women believed that it is a natural process. Regarding the awareness on age at menarche (12-13 years), about 62% of adolescents were reported whereas 64% reported by adult women. About 25% of adolescents and 21% of adult women reported the age of menarche (14-15 years). Source of information about menarche 75% adolescent girls learned from mother while it was found 71.4% in adult women which were lower as compared to adolescents. About sharing the first experience of the menstrual period with classmates was found 50% significantly higher among adolescents. It is also found 50% with teachers in adolescents who are lower as compared to 93% in adult women given Table 3.

3.4. Absorbent using during the menstrual period

Women's awareness, absorbent using, disposing and reason for not using sanitary pad during the menstruation period are shown in Table 4. About 37.5% of sanitary utilization was found higher among adolescents and it is lower 14.3% among adult women. The use of old cotton during the period was found higher 78.6% among adult women while it was lower 25% among adolescents. Disposing the used absorbent in the outside of school/village was found 37.5% among adolescents and it was found higher 50% among adult women. The majority of cleaning of the genital area with soap & water was found higher 75% among adolescents and it was found lower 71.4% in adult women and it was found only water 25% among adolescents and 28.6% in adult women. Out of the 15(68.2%) women (3 adolescents & 12 adult women) are not using sanitary pad during the menstruation period. The analysis revealed the reason for not using sanitary pad was found 66.7% lack of knowledge in the adolescent as compared to a higher 83.3% in adult women. Further 33.3% of adolescents reported high cost/value as a reason and it is lower 16.7% in adult women.

Table 3: Parameters of menstrual hygiene practices

Parameters	Adolescent n (%)	Adult women n (%)	Total n (%)	χ^2 - Statistics
Knowledge of menstruation				
Physiology process	00(0.0)	01(7.1)	01(4.5)	χ^2 cal=1.97
Curse of God	04 (50.0)	09 (64.3)	13 (59.1)	χ^2 tab=7.81
Natural	02 (25.0)	03 (21.4)	05 (22.7)	df=3
Don't know	02 (25.0)	01 (7.1)	03 (13.7)	
Knowledge of menarche age				
12 to 13 years	05 (62.5)	09 (64.3)	14 (63.6)	χ^2 cal=0.04
14 to 15 years	02 (25.0)	03 (21.4)	05 (22.7)	χ^2 tab=5.99
>15 to above	01(12.5)	02 (14.3)	03 (13.6)	df=2
Source of information before menarche				
Mother	06(75.0)	10(71.4)	16 (72.7)	χ^2 cal=0.39
Sister	00(0.0)	01(7.1)	01(4.5)	χ^2 tab=5.99
Friend & other relatives	02(25.0)	03(21.4)	05 (22.8)	df=2
Sharing first menstrual experiences with				
Classmates	04 (50.0)	01 (7.1)	05 (22.7)	χ^2 cal=5.32*
Teacher/Other	04 (50.0)	13(92.9)*	17(77.3)	χ^2 tab=3.84 df=1

*significant at $p < 0.05$ **Table 4:** Menstrual hygiene practices among adolescent and adult women

Menstrual hygiene practices	Adolescent n (%)	Adult women n (%)	Total n (%)	χ^2 -Statistics
Type of absorbent used				
Sanitary	03(37.5)*	2(14.3)	05(22.7)	χ^2 cal=6.04*
Old cotton	02(25.0)	11(78.6)*	13(59.1)	χ^2 tab=5.99
Sanitary& new cotton	03(25.0)	01(7.1)	04(18.2)	df=2
Disposing area				
Outside the school/ village	03(37.5)	07(50.0)	10(45.4)	χ^2 cal=0.68
Burn	03(37.5)	03(21.4)	06(27.3)	χ^2 tab=5.99
Covering in soil	02(25.0)	04(28.6)	06(17.3)	df=2
Cleaning of the genital area from				
Only water	02(25.0)	04(28.6)	06(27.3)	χ^2 cal=0.03
Soap & water	06(75.0)	10(71.4)	16(72.7)	χ^2 tab=3.84 df=1
Reasons for not using a sanitary pad				
Lack of knowledge	02(66.6)	10(83.3)	12(80.0)	χ^2 cal=2.02
High cost	01(33.3)	02(16.7)	03(20.0)	χ^2 tab=3.84 df=1

*significant at $p < 0.05$

3.5. Believe and perception of menstrual hygiene

A total of 8 adolescent girls and 14 adult women, among all adolescent girls and adult women about 87.5% of adolescents and 64% of adult women knew about sanitary pad whereas 12.5% out of total adolescent girls and 35.7% in adult women did not know about the sanitary napkin/pad. About < 25 days of menstrual cycle were reported by 21.4% adult women and 78.6% adult women were told 25-28 days. Table 5 clearly shows that 2 to 7 days normal regular bleeding, maximum 92.9% adult women responded and adolescents reported 75.0% and it is also found that only 25% adolescent girls more than 7 days bleeding whereas

62.5% adolescent girls and 85.7% in adult women were found in the drying of washed reusable clothes that is hidden under the other clothes. In detail, all respondents used hand wash after toilet whereas, a 100% higher majority among adolescents and 85.7% in adult women used soap to wash their hands after the toilet, and 14.3% adult women used soap and ash/dust.

Among the different observed methods of drying of reusing clothes after washing, the highly used method that is hidden under other clothes was observed lower 63% in the case of adolescent women and 86% in the case of adult women. About 37.5% higher adolescent women

Table 5: Personal health of menstrual hygiene and perception among adolescent and women

Existing characteristics	Adolescent n(%)	Adult women n(%)	Total n (%)	χ^2 - Statistics
Knowledge of sanitary pad				
Yes	07(87.5)	09(64.3)	16(72.7)	χ^2 cal=1.38
No	01(12.5)	05(35.7)	06(27.3)	χ^2 tab=3.84 df=1
Knowledge of menstruation cycle				
< 25 days	00(0.0)	03(21.4)	03(13.6)	χ^2 cal=1.98
25-28 days	08(100.0)	11(78.6)	19(86.4)	χ^2 tab=3.84 df=1
Normal regular menstrual bleeding				
2 to 7 days	06(75.0)	13(92.9)	19(86.4)	χ^2 cal=1.38
>7 days	02(25.0)	01(7.1)	03(13.6)	χ^2 tab=3.84 df=1
Drying of wash reusing clothes				
Hidden the under clothes	05(62.5)	12(85.7)	17(77.3)	χ^2 cal=1.56
Not applicable (pad-users)	03(37.5)	02(14.3)	05(22.7)	χ^2 tab=3.84 df=1
Home toilet facility				
Yes	08(100.0)	11(78.6)	19(86.4)	χ^2 cal= 1.98
No	00(0.0)	03(21.4)	03(13.6)	χ^2 tab= 3.84 df= 1
The material used for hand washing after toilet				
Soap	08(100.0)	12(85.7)	20(90.9)	χ^2 cal=1.26
Soap & ash/dust	00(0.0)	02(14.3)	02(9.1)	χ^2 tab= 3.84 df= 1

as compared to 14.3% of adult women are pad users. Knowledge of home toilet facility was common in both cases that are 100%. In this concern, all of the adolescent women used soap for hand washing after the toilet whereas 86% of adult women used soap and 14.3% of adult women used soap and ash/dust after the toilet (Table 5).

4. Discussion

The study has focused on women menstrual hygiene practices in the vulnerable segment of the population. The level of knowledge of the menstrual process, it is observed that 50.0% of the adolescent was reported as the curse of God while it was observed higher (64.3%) among adult women. Menstruation is a physiological process reported by 7.1% adult women so; we observed that they did not have proper knowledge regarding the cause of menstruation. About 75% of adolescents aware of the mother and it is 71.4% in adult women. In this regard, the study of Deshpande et al in 2018 found that 76% of girls did not know about menstruation before menarche whereas 84% of girls came to know about it from their mother. Only 20% girls believed that the cause of menstruation is a physiological process that was very lower to 76% girls who were not aware of anything about it.¹⁴ We had also found

that among studied women, about 72.7% of women got the knowledge regarding menarche from their mothers, which was very high as compared to friends & relatives (22.8%), sisters (4.5%). A mother as a first informant resulted in 75% of girls aware of the mother and the group of adult women, it was 71.4%. In a similar study of Patle et al in 2014 which was conducted at Nagpur in 2014, also found that mothers were the first informers for the 71.33% of adolescent girls which was also supported by Paria et al, 2014 that before menarche mother was the first informants of 76.84% respondents.^{15,16}

However, in their study which was conducted at Mangaluru, Karnataka in 2018, observed that the main source of information about menarche and menstruation to the respondents were their mothers (63.17%) followed by sisters (24.08%) while friends, teachers and media accounted for remaining cases.^{17,18} Reciprocally, also found that 42% of the girls had awareness about the menstruation before their menarche, the main source of knowledge was mother and sister (45%) which were very low as compared to our present study's responses where we found that 72.7% women first knew about menstruation from their mother.^{19,20} Our study reported that 40.9% of women were using hygienic menstrual practices; 22.7% were using only sanitary pad and 18.2% were using sanitary pad with new

clothes (New Cotton), whereas 59.1% women were using only old clothes which are unhygienic menstrual practices and found higher from 35.55% of girls who were using old clothes.²¹ These responses were high as compared to the studies where they found that only 11.25% and 26% of girls whereas, studied that 50% of girls higher respectively were using sanitary pads during their menstruation period.^{22–24} A study conducted in two Government Higher Secondary Girls' Schools in a rural area of Chinsurah Mogra Block of Hooghly District in West Bengal and found that majority of the study population (47.9%) used both sanitary napkin with clothes and 20.8% girls used only sanitary napkins whereas 31.3% girls used only clothes.²⁵ In our study, we have observed that most of the women knew about the age of menarche and menstrual cycle whereas 13.6% women had no such knowledge about menstruation. It can be also seen in a similar study that was conducted by higher 29% girls did not know about menstruation as compared to our study.²⁶ In the cleaning of the genital area, it was found that 25% adolescents and 28.6% adult women were using only water and it is also reported regarding developed genital tract infections due to using of reused clothes which were used by 66% of respondents, was unsatisfactory.²⁷ It is also seen that in a similar finding of Udayar et al study which was conducted in 2016, 82.9% women were using only water for cleaning the external genital area. Findings of our study have shown that, 2–7 days as normal regular bleeding period as utmost 92.9% adult women reported while it was 75.0% among adolescent girls. However, 62.5% of adolescent girls and 85.7% adult women were found in the drying of washed reusable clothes hidden under the other clothes. Disposing the used absorbent materials outside of school/village was found 37.5% among adolescents and it was found higher 50% among adult women. It is also observed regarding menstrual bleeding and drying the used materials in the similar finding of previous study, duration of the menstrual bleeding in each cycle was reported 86.3% for 2 to 6 days and among those who were drying the used absorbent, 14.3% were drying it under sunlight and 58.0% of them were throwing the absorbent materials in dustbin.²⁸

5. Conclusion

The findings of the study revealed that poor menstrual hygiene practices and awareness of the issues among vulnerable Bharia tribal women. It has a lot of factors behind the reason as poverty, illiteracy, difficult geographical situation and accessing the medical shop, etc. in detail they are using old clothes because of their poor economic condition and illiteracy. In summary, women are found doing unhygienic menstrual practices as they can't afford the cost of sanitary pads/napkins and old clothes are easily available in the houses. They live in a hilly region which is very far away from the mainstream of the country. A SABLA scheme which is already covering the supply of

sanitary pad to adolescent in rural areas may be extended to frequent distribution in their areas for better health of the vulnerable community. The tribes have under-maintained menstrual hygiene performs due to low awareness, illiteracy and poverty, etc. A suitable IEC education campaign which is culturally acceptable among the tribes with a suitable strategy may be launched to create awareness among the women and adolescents for gaining optimum hygiene practices.

6. Conflict of Interest

The author has no conflict of interest.

7. Author Contribution

Dr. Dinesh Kumar: Conceptualization of work, analyses the data and editing the manuscript. Ms. Poonam Vaiyam: Collection of data, draft formation, and tabulation. Ms. Ravikanta Singh Thakur: Collection of data, draft finalization. All the authors are unanimously agreed for publication.

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