



Original Research Article

Menstrual Hygiene among Prison Women in Kathmandu

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ABSTRACT

Objective: The study was conducted to assess knowledge and practice of menstrual hygiene among reproductive aged women in central prison of Kathmandu, Nepal.

Methods: Descriptive cross-sectional study was conducted among reproductive aged (15-49 years) women residing in Central Women Prison, Kathmandu, Nepal. Women imprisoned for at least 6 months and willing to participate in the study were included in the study. Total of 131 women were interviewed using a semi-structured questionnaire. The data was entered in EPI-data and analyzed through SPSS.

Results: Regarding menstruation majority (62.6%) of the respondents heard about it before menarche. Almost sixty percentages of the respondents knew that excessive bleeding lead to anemia. Majority of the respondents (61.9%) took bath daily. Half of the respondents (50.4%) used sanitary pads among all respondents. Almost all of the respondents (98.5%) claimed that they had cleaned genitalia for menstrual purpose. The material used to manage the menstrual blood was significantly associated with respondents educational status; age; previous occupation.

Conclusion: The respondents were aware about menstruation prior to menarche where mother found to be the main source of information. Almost all of the respondents claimed that they had cleaned genitalia for menstrual purpose. Interestingly, most of the prison women found to take bath daily.

Key words: Menstruation, Menstrual hygiene, Prison women

INTRODUCTION

Menstruation is a part of the female reproductive cycle that starts at the time of puberty. The cycle repeats in every 28 days during the reproductive life of a female, from menarche to menopause. The average female menstruation cycle last for three to five days (minimum two day and maximum seven days) every month until pause of menstruation. ^[1] The cycle of menstruation may not be same in every women and the type of menstruation varies from women to

women. It can be light, moderate or painful and the length may not be same among every women. ^[2]

Hygiene during menstruation focuses on health care needs and requisites of women during the period of menstruation cycle. ^[2] Different commercial products for management of menstruation are available like sanitary pads, tampon and cups. ^[3] Menstrual hygiene deals with special issues like use of hygiene products like sanitary pad or home-made clean piece of cotton

cloth which could be reused after washing and drying in the sunlight; frequency that women manage to change the hygiene products; washing of the genital areas. [2,3]

Menstruation is still considered as dirty process in Indian culture and is associated with several practices, which sometimes result in different health problems. [4] Unhygienic menstrual practices may affect the health such as increased vulnerability to Reproductive Tract Infections (RTI's); Pelvic Inflammatory Diseases (PID's) and other complications. [5]

Menstruation is the topic that is often not discussed openly in some society, resulting in women remaining ignorant of the hygienic practices necessary for positive reproductive health. [6] Menstrual hygiene in developing countries have been insufficiently acknowledged problem. Approximately, half of the world's women know from their own experience about how important good menstrual hygiene is to be able to function optimally during menstruation period. [7] However, lack of proper knowledge about personal hygiene and appropriate sanitation may result in different health problems among reproductive aged women. [8]

Although menstruation is considered as a natural physiological process it is linked with several misconceptions and also practices different types of restrictions. The most common being abstaining from religious activities and restrictions to visit religious place. [9,10] Similarly in some societies there is prevalence of restrictions in the daily activities during menstruation such as restriction in bathing, combing hair, entering holy places and dietary restrictions like taboos in consumption of different types of food like rice, curd, milk, onion etc. [11]

Menstruation is the process that needs to be managed socially. If it is not managed properly it may interrupt the social expectations. Menstruation and menstrual

symptoms relate solely to women and yet this fundamental aspect of the female experience has received little attention in the literature on women's imprisonment. As a result, the issue of menstruation among prison women remains veiled in silence. Therefore, the aim of this study is to determine the knowledge and practice of menstrual hygiene among reproductive aged (15-49 years) women in Central Women Prison, Sundhara, Kathmandu.

Objectives

- To determine the socio-demographic characteristics of the respondents.
- To determine the knowledge of the respondents regarding the menstrual hygiene.
- To determine the experiences and practice of menstrual hygiene.
- To measure the association between knowledge of the respondents about menstruation and menstrual hygiene.

MATERIALS AND METHODS

Descriptive cross-sectional study was carried out to identify the knowledge, practice and experiences of the menstrual hygiene among reproductive aged women residing in Central Women Prison, Sundhara, Kathmandu. Census sampling was used for selection of sample population. All women of reproductive age (15-49 years) who were imprisoned for at least 6 months and willing to participate were included in the study. The total population of the prison was 318 but only 150 women were eligible to participate. Among them only 131 women provided the consent and rest of the 19 women were excluded. Therefore the sample size was 131. Face-to-face interview technique was used for data collection using semi-structured questionnaire.

Statistical Analysis

The collected primary data was first coded using EPI data and then analyzed through SPSS version 16.0 for Windows (Statistical Package for Social Sciences). All the data were presented in the form of table showing frequency and percentage. Chi-squared test was used to measure the association between different variables. A p-value ≤ 0.05 was considered to be statistically significant.

RESULTS

Socio-demographic distribution of the respondents

Table 1: Socio-demographic distribution of the respondents.

Characteristics	Frequency	Percentage
Educational status		
Illiterate	25	19.1
Primary level	43	32.8
Secondary level	38	29.0
More than Secondary	25	19.1
Religion		
Hindu	87	66.4
Buddhist	17	13.0
Christian	27	20.6
Marital status		
Unmarried	35	26.7
Married	83	63.4
Divorced	7	5.3
Widowed	6	4.6
Previous place of residence		
Urban	36	27.5
Rural	95	72.5
Previous occupation		
Home maker	53	40.5
Professional worker	19	14.5
General worker	33	25.2
Student	18	13.7
Unemployed	8	6.1
Age group		
15-19	10	7.6
20-29	42	32.1
30-39	47	35.9
40-49	32	24.4

Table no. 1 depicts the socio-demographic distribution of the respondents. The highest percentage of the respondents (32.8%) had completed the primary level of education. Most of the women were Hindu (66.4%) and were married (63.4%). Nearly three-quarter (72.5%) of the respondents were from rural areas. Majority of the respondents (40.5%) served as a home

maker before coming to the prison and were between 30 and 39 years (35.9%).

Knowledge of the respondents regarding menstruation

Respondents' knowledge regarding menstruation was reflected in table no. 2. Regarding menstruation majority (62.6%) of the respondents heard about it before it started with them. Nearly half of the respondents (48.9%) responded mother to be the main source of information. More than a half of the respondents (58%) responded ageing to be the cause of menstruation and menstrual blood to be impure (82.4%). Majority (45.8%) reported that there was influence of hot or cold food on menses. Regarding common menstrual disorders 40.5% of the respondents reported menorrhoea. Almost all of the respondents (95.4%) claimed that they dried their absorbent in the sunlight and 90.8% knew about regular bathing during menstruation. Additionally 63.4% of the respondents knew that excessive bleeding lead to anemia.

Practice and experiences of menstrual hygiene among respondents

Table no. 3 represents the experience and practice related results during menstrual period where more than a one-third (31.3%) of the respondents experienced regular menstrual cycle. More than one-fifth of the respondents practiced isolation during menstruation and only 16.7% visited holy places during menstruation period. Majority of the respondents (61.9%) took bath daily. It was also found that all of the respondents used pads during period and about half of the respondents (50.4%) used sanitary pads. Additionally, most of the respondents (70.2%) changed clothes or pads less than or equal to three times a day. Almost all of the respondents (98.5%) claimed that they had cleaned genitalia for menstrual purpose and among them 64.3% had cleaned genitalia with water only. Nearly half of the respondents (47.3%) reported adequate

availability of water for menstrual purpose. Regarding any somatic symptoms during menstruation more than a half of the respondents (54.2%) experienced joint and muscular discomfort. Slightly more than a

half of the respondents (50.4%) experienced abdominal pain among psychological symptoms and nearly three fourth (70.5%) claimed to experience abdominal pain among physical problems.

Table 2: Knowledge of the respondents regarding menstruation.

Characteristics	Frequency	Percentage
Heard about menstruation		
Yes	82	62.6
No	49	37.4
Main source of information		
Mother	64	72.7
Sister	8	9.1
Relative/Friends	8	9.1
Media	8	9.1
Main cause of menstruation		
Ageing	76	58.0
Hormones	43	32.8
Curse	1	0.8
Enzymes	1	0.8
Don't know	10	7.6
Do you think menstrual blood is impure?		
Yes	108	82.4
No	19	14.5
Don't Know	4	3.1
Is there influence of hot or cold food on menses?		
Yes	60	45.8
No	56	42.7
Don't Know	15	11.5
Common menstrual disorders*		
Menorrhoea (Heavy flow)	53	40.5
Hypomenorrhoea (Light flow)	35	26.7
Polymenorrhoea (Menses within 28 days)	7	5.3
Oligomenorrhoea (Usually infrequent)	20	15.3
Dysmenorrhoea (Usually painful)	38	29
Don't Know	8	6.1
Where do you think you should dry your absorbent?		
In the sunlight	125	95.4
In the Shadow	4	3.1
Don't Know	2	1.5
Do you think we should bath daily during menstruation?		
Yes	119	90.8
No	12	9.2
Does excessive bleeding during period lead to anemia?		
Yes	83	63.4
No	13	9.9
Don't know	35	26.7

Association between materials used to manage menstrual blood versus education, age, previous occupation

Table no. 4 reflects the association of material used to manage menstrual blood with education, age, and previous occupation respectively. The material used to manage the menstrual blood was significantly associated with prisoner's

educational status ($p < 0.001$). Also, the association between women's practice of material use during menstruation and age was found to be statistically significant ($p < 0.05$). Likewise, material used by the respondents during menstruation also showed the significant association with their previous occupation of the women ($p < 0.05$).

Table 3: Practice and experiences of menstrual hygiene among respondents.

Characteristics	Frequency	Percentage
Do you have your regular menstrual cycle?		
Yes	65	31.3
No	66	68.7
Do you practice isolation during menstruation?		
Yes	30	22.9
No	101	77.1
Do you visit holy places during menses?		
Yes	15	16.7
No	116	83.2
Do you take bath during menstruation?		
Yes	126	96.2
No	5	3.8
Distribution of women regarding practice of taking bath during menstruation		
Daily	78	61.9
During First three days	28	22.2
After first 3 days	17	13.5
Alternate days	3	2.4
Do you use pads during period?		
Yes	131	100
No	0	0
What is the material you use in pad?		
Sanitary pads	66	50.4
Reusable clothes	65	49.6
How often do you change clothes or pads in a day during menstrual period?		
Three or less times a day	92	70.2
More than 3 times a day	39	29.8
Do you clean genitalia for menstrual purpose?		
Yes	129	98.5
No	2	1.5
If yes, what you use while cleaning the genitalia?		
Only water	83	64.3
Soap and Water	24	18.6
Water and antiseptic	22	17.1
Adequate availability of water for menstrual purpose?		
Yes	62	47.3
No	69	52.7
Have you experienced any somatic symptoms during period in prison? *		
Sleeping problems	28	21.4
Hot flushes/Sweating	6	4.6
Joint and muscular discomfort	71	54.2
No any	38	29.0
Have you experienced any psychological symptoms during period in prison?*		
Physical or Mental exhaustion	66	50.4
Depressive mood	13	9.9
Irritability	12	9.2
Anxiety	12	9.2
No any	40	30.5
Do you have any physical problems during menstrual cycle?*		
Abdominal pain	91	70.5
Nausea and Vomiting	35	27.1
Weakness	9	7.0
White discharge	16	12.4
No any	17	13.0

*Multiple Response Question

DISCUSSION

The study revealed that highest proportions of the respondents were between 30 and 39 years, this contrasts the findings from previous research. [12] It was also observed that most of the women had completed primary level of education. Most

of the respondents were married and belonged to Hindu religion. However, more than half of women were from rural areas of Nepal. Therefore, their diverse-cultural backgrounds and upbringing was expected to influence their knowledge, experiences and practices regarding menstruation.

Table 4: Association between materials used to manage menstrual blood versus education, age, previous occupation.

Characteristics	Material used to manage menstrual blood				P-value*
	Special Pad		Reusable Pad		
	Frequency	Percentage	Frequency	Percentage	
Education					<0.001
Illiterate	5	7.6	20	30.8	
Primary	14	21.2	29	44.6	
Secondary	25	37.9	13	20.0	
More than Secondary	22	33.3	3	4.6	
Age					0.029
15-19	8	12.1	2	3.1	
20-29	26	39.4	16	24.6	
30-39	20	30.3	27	41.5	
40-49	12	18.2	20	30.8	
Previous occupation					0.009
Housewife	18	27.3	35	53.8	
Professional worker	13	19.7	6	9.2	
General worker	17	25.8	16	24.6	
Student	14	21.2	4	6.2	
Unemployed	4	6.1	4	6.2	

* χ^2 -test p-value at 5% level of significance.

It was evident that most of the women heard about menstruation before menarche which was in line with previous study conducted in Delhi. [12] Therefore, the prior awareness about the menstruation was high among the prison women. Similar to the study as reported earlier, [12] mothers continued to be the sole and trusted source of information regarding menstruation. The reason behind this might be the intimacy with their mother. Most of the respondents believed menstrual blood to be impure which is different to the findings from previous research in Egypt. [13] The reason behind it might be the cultural setting of developing countries like Nepal where menstruation is still regarded as dirty process and a neglected issue. Nearly half of the prisoners responded that there is influence of hot and cold food in the menstrual flow which was in contrast to the study conducted among Egyptian girls. [13] The probable reason could be the difference in socio-cultural background and life style of the two countries. Similarly, more than half of the women responded that excessive bleeding lead to anemia. It was consistent to the prior research in Egypt where 80% women responded that excessive bleeding leads to anaemia. [13]

The hygienic practice during menstruation has substantial importance because they influence the health status of the women by increasing their susceptibility to infections like urinary tract infection and infection of the perineum. [14, 15] Therefore the type of absorbent used is of primary importance as reuse of the absorbent can cause infection if it not properly cleaned and stored. [15] It was observed that only half of the women used sanitary pads and other half used reusable clothes, this was consistent with the previous study. [9,12] The rationale behind this could be the extra expenses on pads, economic constraints of the prisoners and unavailability of the pads at the proper time. Very few women used soap and water to wash their genitalia; this however was different to the findings from previous study conducted at India where 58.18% of the women used soap and water. [10] Interestingly, almost all respondents bathed daily during menstruation. The prison women's own concern about personal hygiene might be the reason behind this result. Very few women practiced isolation in the prison. However, almost all didn't visit holy places during menstruation. This indicated that abstaining from religious

activities was seriously followed by the women in Nepal.

More than 60% of the women reported dysmenorrhea to be a common problem. It was concurrent to the findings reported from prison in England where 58% of them reported painful menstruation. The probable reason behind it could be lifestyle, hormonal irregularities and stress. In the present study 68.7% women reported to have irregular menstruation which was different from the study conducted among prisoner in England as only 31% women reported to have irregular periods. ^[16] Age factor could be the probable reason for irregular menstruation. Similarly, most of the respondents reported to have physical, mental exhaustion and abdominal pain which was in line with the previous study among reproductive aged women. ^[12]

Significant association between education and use of material to manage the menstrual blood was found. It was similar to prior research conducted in rural slum in India. ^[17] As expected there was significant association between age and use of material to manage menstrual blood. Similarly, there was also significant association between previous occupation and material used to manage menstrual blood.

As few studies have been conducted about the menstrual hygiene in prison setting, conducting such study in prison setting is itself one of the strength of the study. Further analytical studies can be conducted regarding menstrual hygiene in prison in order to add the knowledge on this subject. Additionally, qualitative techniques of data collection like focused group discussion and in-depth interview can be conducted to get in-depth information about the respondents.

CONCLUSION

Women of all reproductive age-group were included in this study, which

provided insight regarding the knowledge and practices of women about the menstrual hygiene. Respondent's mother was found to be the main source of information. Interestingly most of the prison women found to take bath daily. Significant association was found between education, age, previous occupation and material use during menstruation.

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