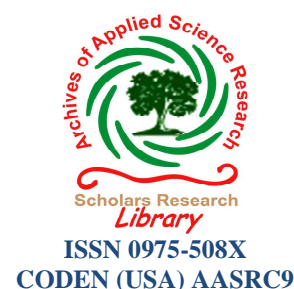




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Determinants of menstrual hygiene practice among unmarried women in India

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ABSTRACT

Of the many goals of MDGs, one is Menstruation a hygiene practice is generally considered as unclean in the Indian society. Isolation of the menstruating girls and restrictions being imposed on them in the family, have reinforced a negative attitude towards this phenomenon. By late adolescence, 75 percent of girls experience some problem associated with menstruation. This paper is dealt with to assess the practices of menstrual hygiene among unmarried women in India, to examine the socio-economic and demographic characteristics of unmarried women in the study areas, to analyze the determinants of SED characters on menstrual hygiene practices. It was observed that only one-fourth the respondents were used properly the Napkins during their menstrual periods but remaining women have practiced to use both locally prepared Napkins and cloth. Though the government and NGOs were involved to create awareness among women about the hygiene practice and health related issues still they are lacking behind in the practices of hygiene. It is very urgent studies are required to evaluate the effects of menstruation-related morbidity to evaluate the efficacy of any therapeutic alternatives.

Key words: Menstruation, unmarried women, Sanitary Napkin

INTRODUCTION

Of the many goals of MDGs, one is Menstruation a hygiene practice is generally considered as unclean in the Indian society. Isolation of the menstruating girls and restrictions being imposed on them in the family, have reinforced a negative attitude towards this phenomenon. The onset of menstruation or menarche is a hallmark of female pubertal development and menstrual disorders are a common. By late adolescence, 75 percent of girls experience some problem associated with menstruation.

There are a number of physical, psychological and emotional symptoms that occur premenstrual and during menstruation. Poor menstrual hygiene in developing countries has been an insufficiently acknowledged problem. In several cultures there are (cultural and or religious) taboos concerning blood, menstruating girls and women and menstrual hygiene [1]. There is gross lack of information on menstrual preparedness and management among adolescent girls, a situation made worse by the shyness and embarrassment with which discussions about menstruation is treated [2]. Menstrual hygiene deals with a woman's special health care needs and requirements during her monthly menstruation or menstrual cycles.

This is the matter to be taken special concern include choosing the best period protection, or feminine hygiene products, how often and when to change her feminine hygiene products, bathing, care of her vulva and vagina, as well as the supposed benefits of vaginal douching at the end of each menstrual period[3]. These ideas still play a role in several cultures, as a result of which women and girls get various restrictions imposed on them during their menstruation period.

Primarily poor personal hygiene and unsafe sanitary conditions result in gynecological problems. Infections due to lack of hygiene during menstruation are often reported. The practice of repeated use of unclean napkins or the improperly dried cloth napkins before its reuse results in harboring of micro-organisms causing vaginal infections [4]. Many young girls in our country may lack appropriate and sufficient information regarding menstrual hygiene, causing incorrect unhealthy behavior during their menstrual period.

Among the unmarried women, there is little information about gynecological morbidity related to menstrual problems in young populations and the impact it has on quality of life. There is a substantial lacuna in the knowledge about menstruation among unmarried women. This is surprising in view of the explicit relation of this issue to menstruation, health and the distribution of all kinds of diseases, which can be reduced considerably by good hygiene. Good hygienic practices such as the use of sanitary pads and adequate washing of the genital area are essential during menstruation.

There is little information about gynecological morbidity related to menstrual problems in young populations[5] Approximately 50% of the world's population knows from their own experience how important good menstrual hygiene is to be able to function optimally during the menstruation period. The necessity to adopt a healthy behavior, which includes appropriate nutrition and appropriate use of medications based on a physician's prescription, was a very important issue. Menstrual disorders were significantly more common in female adolescents who smoke and have suicidal behaviours. Mental health problems are another potentially modifiable risk factor. Depression, anxiety, and disruption of social support networks have been associated with menstrual pain [6].

Yet, this is an area where hardly realized by in researchers, academicians, programmers and policy makers.. In this context, this study was being designed to assess the prevalence and pattern of menstrual hygiene practices among unmarried women in India which is supposed to contribute to improving the women's health practice toward menstruation.

Objectives

- To assess the practices of menstrual hygiene among unmarried women in India
- To examine the socio-economic and demographic (SED) characteristics of unmarried women in the study areas.
- To analyze the determinants of SED characters on menstrual hygiene practices

MATERIALS AND METHODS

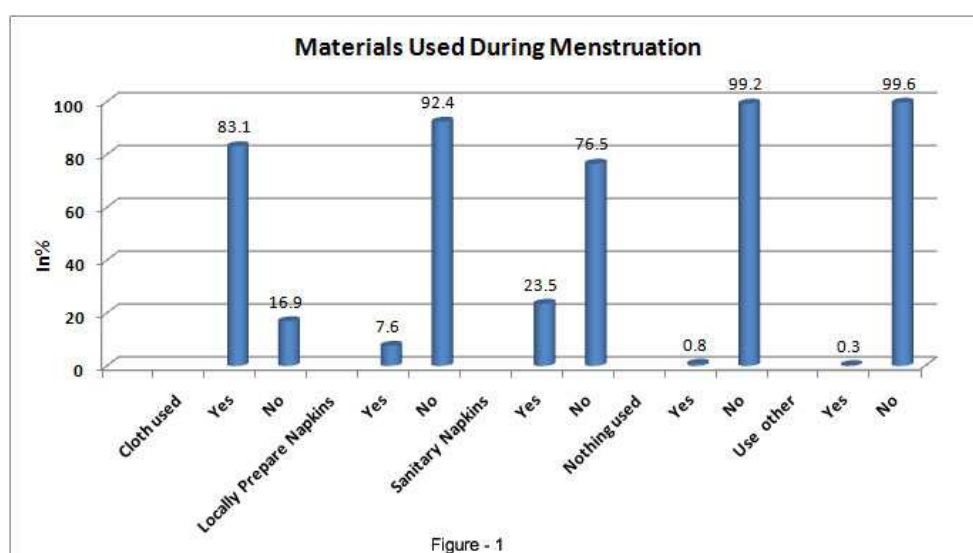
The data for the present study were obtained from the District Level Household and Facility Survey (**DLHS-3**) 2007-08. The total respondents of the selected unmarried women were 36785[7]. The question related to the menstrual hygiene i.e., prevent bloodstains becoming evident-use cloth, prevent bloodstains becoming evident-locally prepared napkin, prevent bloodstains becoming evident-use sanitary napkins, and prevent bloodstains becoming evident-used nothing. Menstrual problems such as problems have/had-no periods, problems have/had-painful periods, problems have/had-frequent or short periods, problems have/had-irregular periods, problems have/had-prolonged bleeding, problems have/had-scanty bleeding, problems have/had-inter-menstrual bleeding, problems have/had-blood cloth, since when the problems were selected. But the last two of the menstrual hygiene were not significant number. Therefore, the first three materials used e during menstrual; hygiene were selected for the analysis.

To find out the association between the dependent variable i.e., menstrual hygiene and menstrual problems experienced by women and predictors chi-square and percentages were used in the analysis. The limitation of the study was that the data was not weighted in the analysis.

Figure-1 shows that the menstrual hygiene practices among women during the menstruation. Of the total 36786 women, 83 percent of the women use cloths to prevent the bloods strains followed by locally prepared napkins and the sanitary napkins with the percentages of 7.6 and 23.5[8].

Table:-1 Menstrual Hygiene Practices by Total Number of Respondents in India

Menstrual Hygiene Practices	No. of Respondents N=36786	In Percent
Cloth used		
Yes	30567	83.1
No	6216	16.9
Locally Prepare Napkins		
Yes	2811	7.6
No	33972	92.4
Sanitary Napkins		
Yes	8656	23.5
No	28127	76.5
Nothing used		
Yes	286	.8
No	36497	99.2
Use other		
Yes	122	.3
No	36653	99.6



This indicates that though there are number of programmes introduced by the both government as well as the nongovernmental organizations till unmarried women is not ready to use the sanitary napkins or still it needs to make awareness among women. At this juncture, it is to bring to the notice of the planners, policy makers and researchers. Because, the practice of old customs that using cloths and locally prepared napkins among women may likely to spread reproductive tract infections. The other two methods were not significant so that it is not included in the analysis.

Table:-2 Menstrual Hygiene Practices by Total Number of Respondents and States in India

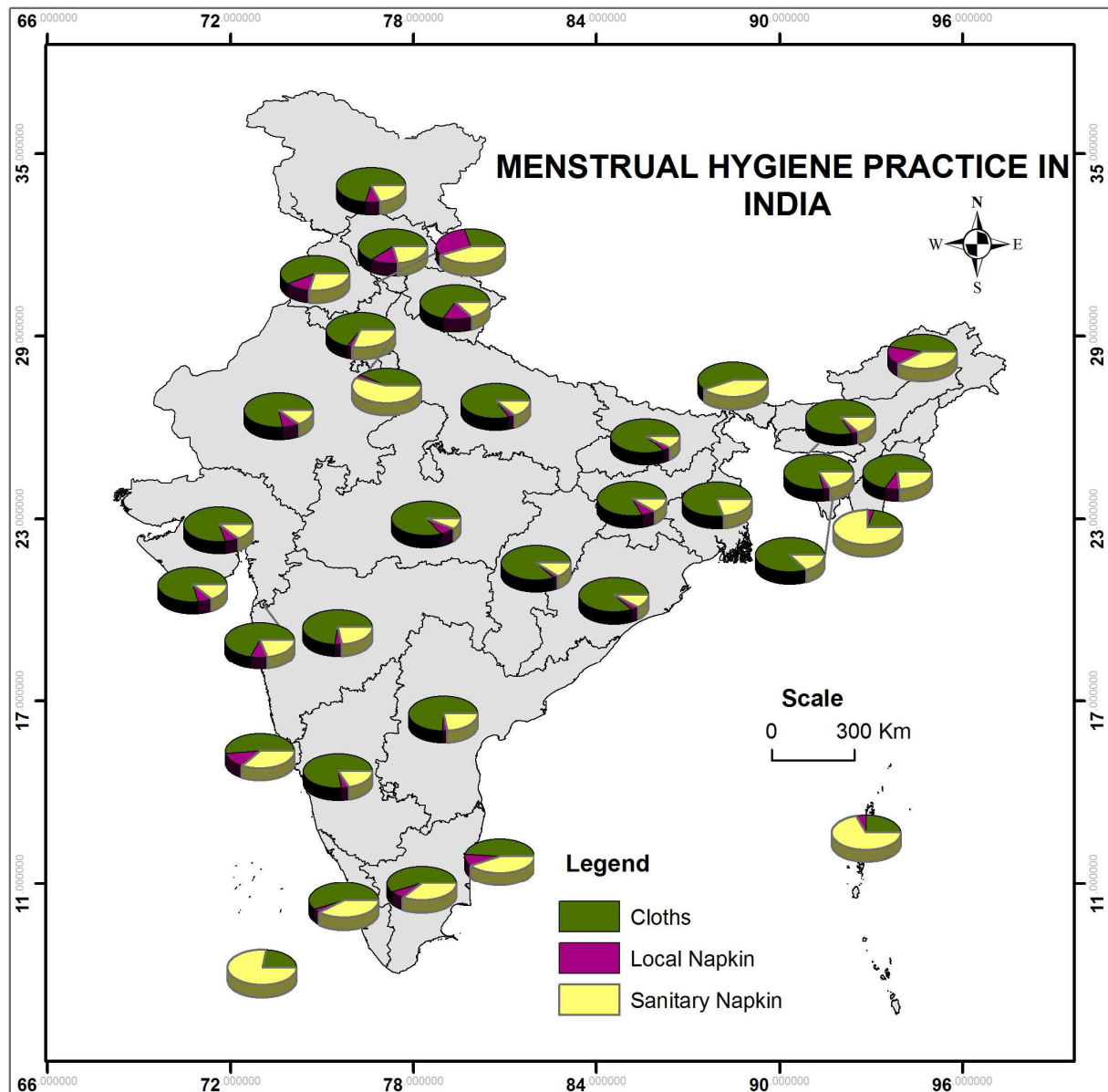
States	Materials Used During Menstruation			Total N=36783
	Cloths (In %)	Locally Prepared Napkins (In %)	Napkins (In %)	
Jammu & Kashmir	80.5	10.7	21.7	2441
Himachal Pradesh	74.5	20.6	26.6	650
Punjab	70.5	16.3	35.2	1564
Chandigarh	35.3	32.4	52.9	34
Uttarakhand	78.7	21.3	16.8	822
Haryana	78.4	3.7	35.9	790
Delhi	46.9	3.0	62.6	401
Rajasthan	86.8	11.5	13.7	1842
Uttar Pradesh	93.0	4.1	14.7	4005
Bihar	93.7	4.3	10.4	1701
Sikkim	74.6	.7	56.1	433
Arunachal Pradesh	66.6	19.3	57.1	1057
Manipur	88.8	12.5	31.2	1150
Mizoram	23.2	4.7	83.5	423
Nagaland	0	0	0	0
Tripura	88.6	0	15.2	132
Meghalaya	85.0	4.7	19.5	555
Assam	92.7	4.3	15.5	2610
West Bengal	87.4	.8	22.8	1624
Jharkhand	89.9	8.3	11.8	1293
Orissa	94.4	4.1	10.8	1132
Chhattisgarh	92.1	2.6	12.2	493
Madhya Pradesh	91.1	8.1	8.5	2812
Gujarat	90.5	8.9	14.3	1298
Daman & Diu	90.3	9.7	15.2	165
Dadra & Nagar Haveli	86.1	13.9	24.8	101
Maharashtra	78.2	5.3	23.8	2132
Andhra Pradesh	80.3	3.4	24.3	951
Karnataka	85.4	5.6	19.7	1429
Goa	57.8	13.0	41.1	192
Lakshadweep	24.8	0	85.0	133
Kerala	76.6	4.4	55.0	756
Tamil Nadu	66.0	7.8	43.3	1269
Pondicherry	61.9	10.6	55.3	235
Andaman & Nicobar Is.	27.8	7.6	77.2	158

* Percentages calculated for total respondents of the respective states and material used.

Map 1 depicts that the most of the Indian states respondents practice old methods (i.e., cloths) while, union territory women particularly Andaman and Nicobar and the Lakshadweep used sanitary napkin. It may be concluded that due to the governmental agencies using sanitary napkins were familiar compared to the states of India.

Figure-2 reveals that Orissa leads to use cloth followed by Bihar and Uttar Pradesh with the percent of 94.4, 93.7 and 93.0 respectively. It is interesting to note that Mizoram and Goa experienced with least percent of using cloth during menstruation (23.2 and 57.8 percent respectively). In the present situation, it is to find the solution for least high percent of using cloth during menstruation in those mentioned states in India.

Locally prepared Napkins use was found to be high in the states like Chandigarh, Uttar Pradesh and Himachal Pradesh. But at the same time, Haryana and Chhattisgarh use with least percent of use locally prepared Napkins. The uses of Napkins were found to be high in Mizoram, Sikkim and Arunachal Pradesh by 83.5, 57.1 and 56.1 percent respectively. From the above analysis it was understood that though Mizoram is located at north east parts of India compare to the other states in North East Mizoram was different from others. It may be due to programme implementation by the government and NGOs were effective compare dot the other states in India.



Map 1

Table:-3 Menstrual Hygiene Practices By Socio-Economic and Demographic Characteristics

Socio-Economic And Demographic Characteristics	Materials Used During Menstruation			Total N=36873
	Cloth (In %)	Locally Prepared Napkins (In %)	Sanitary Napkins (In %)	
Type of locality				
Rural	88.8	6.0	17.6	27173(73.9)
Urban	67.0	12.4	40.4	9611(26.1)
Religion				
Hindus	85.0	7.2	20.9	25089(68.2)
Muslims	84.9	6.6	19.6	6283(17.1)
Christians	71.0	7.6	42.6	252(76.9)
Others	73.0	13.6	38.0	2884(7.80)
Caste				
Sc	87.0	6.0	18.4	6113(17.0)
STs	82.6	6.5	26.0	6722(18.7)
No castes/Tribes	77.3	6.4	20.1	12432(34.7)
None of them/ others	50.0	10.9	29.2	10577(29.5)
Level of education				
Illiterates	92.2	2.0	2.0	51(0.2)
Primary	95.4	1.9	5.8	4263(12.7)
Secondary	86.5	6.3	20.5	19457(57.8)
HSc and above	66.7	14.8	44.0	9869(29.3)
Wealth index quintiles				
Poorest	96.7	1.6	5.0	3707(10.1)
Second	95.4	2.7	7.1	5518(15.0)
Middle	92.6	4.3	12.3	7891(21.5)
Fourth	84.7	7.8	24.9	9833(26.7)
richest	61.8	15.2	47.4	9829(26.7)
Age (in years)				
15-18	85.9	6.4	19.8	24433(66.4)
19-24	77.6	10.1	31.0	12351(33.6)
Worked in the past 12 months				
Yes	86.3	6.8	16.3	222(4.2)
No	80.9	8.6	27.3	25000(95.8)
Aware of family life education/sex education				
Yes	80.3	8.7	27.7	26917(73.2)
No	90.7	4.7	12.1	9866(26.8)

*Percentages calculated for total respondents of the respective states and material used

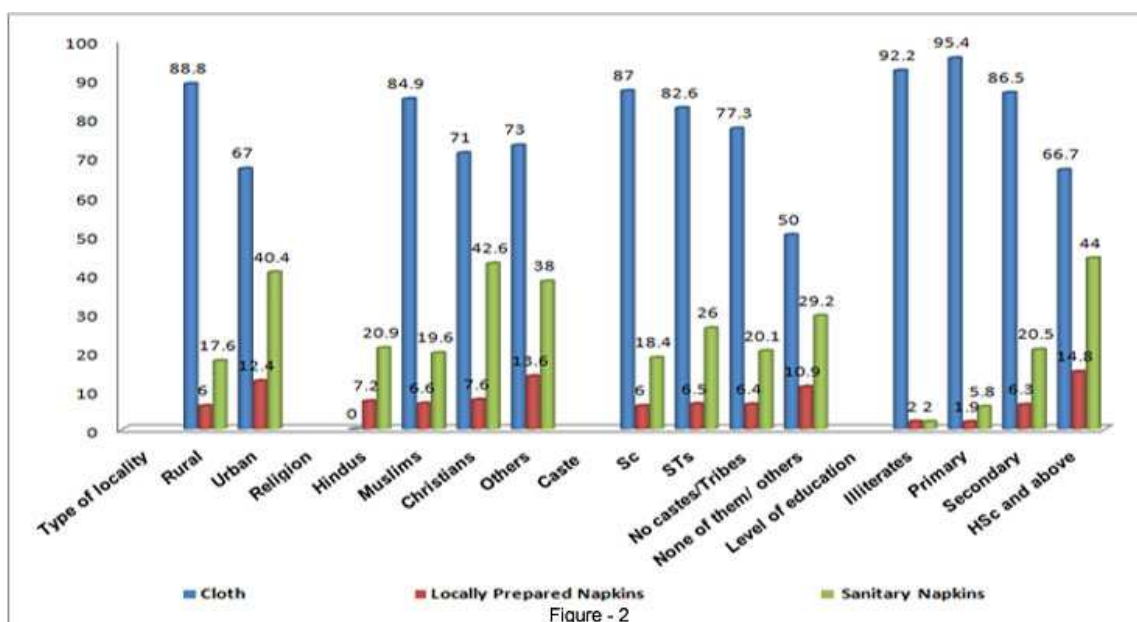
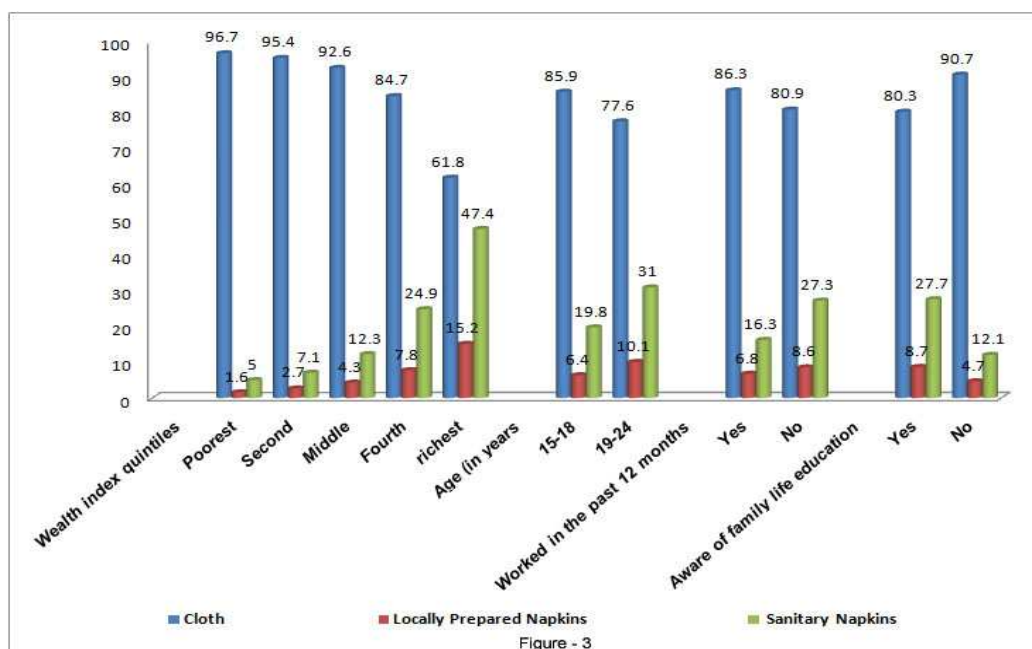


Figure-2 and 3 shows the socio-economic and demographic characteristics with menstrual hygiene practices in the study area. Of the total respondents one third were found in rural area and remaining one fourth were in urban.[9]. Those who use napkins were in urban areas with 40 percent but the other two materials were more in rural areas. One third of the respondents were fall on SC/STs among the SC/STs comparatively STs were used Napkins compared to the Sc there it is to have further investigation on this either it is due to the programme implemented in the areas of STs or Sc people do not use available facilities. The age wise and material used in during menstruation was that at the lower ages women use cloth compared to the other materials when age increases use of Napkins had positive correlation. As the general expectation of the researcher, the level of education and materials used among unmarried women negatively and positively associated with use of cloth and napkins.



Napkins usage and wealth index and worked in the past 12 months had positive correlation and opposite to cloth use but at the same time, aware of family life education/sex education lay a major role and therefore those who had family life education/sex education there was decrease of cloth use among unmarried women in India.

Table: -4 Menstrual Hygiene Practices by Menstrual Problems among Unmarried Women

Menstrual Problems Experienced	Menstrual Hygiene Practices		
	Cloth N=30567	Locally Prepared Napkins N=2811	Sanitary Napkins N=8656
Problem have/had no period	1255 (85.8)	142 (9.7)	286 (19.6)
Problem have/had painful period	25599 (83.4)	2432 (7.9)	7124 (23.2)
Problem have/had frequent or short period	1729 (86.5)	176 (8.8)	410 (20.5)
Problem have/had irregular period	5057 (82.7)	415 (6.8)	1641 (26.8)
Problem have/had prolonged bleeding	2010 (87.1)	183 (7.9)	501 (21.7)
Problem have/had scanty bleeding	1781 (82.9)	100 (4.7)	467 (21.7)
Problem have/had inter menstrual bleeding	466 (84.6)	47 (8.5)	129 (23.4)
Problem have/had blood clots	1880 (85.6)	133 (6.1)	539 (24.5)

Figures in Parenthesis are percentages

The above Table-4 show that the menstrual problems among unmarried women in India in general. Of the total 36783, those who used cloth as the materials used during menstruation they had prolonged bleeding and followed by had frequent / or short period with 87.1 and 85.8 percent respectively. But, at the same time those who used Napkins they experienced have/ had irregular periods and have/had blood cloths as the major problems among the unmarried women in India.

Table: 5 Logistic Regression Fitted Model for Determinants of Menstrual Hygiene Practice (Napkin used-1, other than napkin used-0)

SED Characteristics	B	S.E.	Exp(B)
Type of locality			
Rural			
Urban (1)***	.487	.032	1.627
Caste			
SC***			
ST(1)***	.716	.124	2.045
Non Tribe(2)	.096	.129	1.101
None of them (3)***	.418	.155	1.519
Education			
Illiterates***			
Primary(1)**	2.293	1.018	9.905
secondary(2)***	1.725	.074	5.612
Degree+(3)***	.665	.032	1.944
Religion***			
Hindus			
Muslims(1)	.626	.049	1.870
Christians(2)	.648	.059	1.911
others(3)	-.507	.067	.602
Age in Years			
15-18			
19-24 (1)***	.081	.030	1.084
Type of house			
Katcha			
Semi pacca(1)	.106	.050	1.111
Pacca(2)	.074	.036	1.077
Aware of family lie/sex education			
Yes			
No (1)***	-.434	.038	.648
Worked in the past 12 months			
Yes			
No	.996	.050	1.233
Wealth index quintiles****			
Poorest			
Poor(1)	-.278	.097	.758
Middle(2)	-.726	.090	.484
Richer(3)	-1.384	.091	.251
Richest(4)	-2.027	.095	.132
Constant	.736	.171	2.087

-2 log likelihood 31100.387^a *** <.01, **<.05 percent level of significance

The results of binary logistic regression (Table-5) shows that except type of house, worked in the past 12 months other variables were significantly associated with the dependent variable. It was observed that 62 percent of urban women were using sanitary napkins compare to the rural women. The analysis showed that there was positive association between use of sanitary napkins and education [10]. It was observed from the table that wealth index inequalities and napkins use were negatively associated and compared to the poorest; the richest women .132 times less than poorest women.

CONCLUSION

The above results demonstrated considerable menstrual hygiene practices and related problems among unmarried women, with important effects on the quality of life in India. It was observed that only one-fourth of other respondents were used properly the Napkins during their menstrual periods but remaining women have practiced to

use both locally prepared Napkins and cloth. Though the government and NGOs were involved to create awareness among women about the hygiene practice and health related issues still they are lacking behind in the practices of hygiene. Therefore the existing programme should be geared to achieve the better health among and at least maintain their health among women so that it may help to attain the MDGs in 2025. In conclusion, there is highly significant menstrual hygiene practices and morbidity among young unmarried, which has a substantial impact on their academic and social life. Further it is very urgent studies are required to evaluate the effects of menstruation-related morbidity to evaluate the efficacy of any therapeutic alternatives.

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