

# Menstrual Disorders and Its Determinants Among Married Women of Rural Haryana

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## ABSTRACT

**Introduction:** Disorders of menstruation are common problems among women. They have several psychological effects on women's health.

**Aim:** This study aimed to estimate prevalence of menstrual disorders, usage of sanitary pads and their determinants among married women in selected villages of rural Haryana.

**Materials and Methods:** A cross-sectional study was conducted during September 2011 in 10 villages of PHC (Primary Health Centre) Mandi, Haryana, using a systematic random sampling technique. Currently married women in the age group of 18-45 years living in study area for more than 1 year were included in the study while those who were pregnant and unable to understand questions were excluded. Informed verbal consent was obtained from all participants.

**Results:** A total of 344 women were interviewed. The mean (SD) age of participants was 28.0 (5.4) years. Majority of women

were housewives (78.8%) and most had education up to middle school (22.7%). Mean (SD) age at menarche was 14.3 (1.2) years. Nearly one-tenth of women had married before 18 years of age. Prevalence of all menstrual disorders was 20.3% and most common disorder was excessive pain. About one fifth reported irregularity of menstrual cycles. Almost half were not using sanitary pads during menses. Menstrual disorders were more common among non-users of contraception (OR=1.7, p = 0.04) and housewives (OR = 2.4, p= 0.03).

**Conclusion:** Disorders of menstruation were fairly common among women surveyed. Usage of sanitary pads was quiet low. Awareness generation among women regarding menstrual problems and Behaviour Change Communication to promote usage of sanitary pads are important measures to reduce related morbidity.

**Keywords:** Menstruation, Menstrual hygiene, Rural India, Sanitary pads

## INTRODUCTION

Menstruation, the hormone induced cyclical changes occurring in the female reproductive tract that begins during adolescence and continues till menopause forms an important aspect of women's health. Menarche, the onset of first menstrual cycle is a significant milestone in women's life [1]. In India, myths and misconceptions that surround such a natural phenomenon are widely prevalent [2]. Hygiene related practices during menstruation are of considerable importance, as they may affect vulnerability to Reproductive Tract Infections (RTIs) [3,4]. Often mothers, elder sisters and friends who could serve as educators on these matters themselves lack the necessary knowledge [5,6]. Society's 'taboo' attitude towards menstruation related issues serve as access barriers to right information.

In India, the reproductive health of non-pregnant women has been often side-lined and its true magnitude less appreciated [7]. Evidence shows that among all gynaecological problems, menstrual disorders are the most common (54%) [8]. Women need easy access to clean, soft, and absorbent sanitary products which can in the long run, protect their health and self-esteem [9]. Menstrual hygiene and management can be linked to achievement of Millennium Development Goals (MDG) two and three [10]. The reason behind this is that in some cultures, many girls are kept at home while they are menstruating, either temporarily or permanently. This along with lack of clean, safe and private sanitation facilities results in their lagging behind in schools which acts as an obstacle in achieving MDG two and three [11].

In India, there is adequate literature on the menstrual health of adolescent girls but studies examining menstruation related issues of married women are relatively scant. In the current study, we intended to address this particular issue and tried to capture menstrual disorders and its determinants among married women of a north Indian village.

The primary aim of this study was to assess knowledge, attitude and practices regarding STI/RTIs among married women of selected villages in rural Haryana, India.

## MATERIALS AND METHODS

This study was a part of larger study which was a community based cross-sectional survey and was conducted during September 2011 in 10 villages, under Primary Health Centre (PHC) Mandi, Panipat District, Haryana. Sample size calculation was done on the basis of prevalence of knowledge of RTI and it came out to be 330, on assuming the prevalence of knowledge of RTI as 8%, absolute precision as 3% and alpha error as 5% [12].

Presently married women, aged between 18 and 45 years, living in the study area for more than one year were considered eligible for the study and those who were pregnant or unable to understand questions and reply appropriately were excluded. Systematic random sampling was done to select the participants. If an eligible participant was not present in the selected house, next house in the street with eligible participant was selected. The study was done as a part of evaluation of service provision and a verbal informed consent was obtained from the participants.

A face-to-face interview was conducted using pre-tested semi-structured questionnaire. The questionnaire was drafted by one of the investigator (VS) and it was pre-tested in one of the village of district Panipat, which was not included in the study. Regularity of menses was defined on the basis of self-perception of participants regarding frequency and/or duration of menstruation.

## STATISTICAL ANALYSIS

Statistical analyses were done using SPSS version 17.0. Results of descriptive analyses were presented as proportions. Bi-variate analysis was done using chi-square test and strength of association was presented as odds ratio with 95% CI.

## RESULTS

A total of 344 married women were interviewed. Their mean (SD) age was 28.0 (5.4) years. Most of the participants (69.4%) belonged to the age group 21-30 years. Approximately one-fourth of all participants had education up to middle school and majority were housewives. Almost equal proportions belonged to nuclear and joint families. Most of the participants (43.9%) belonged to the general category castes. Mean (SD) age of participants at the time of marriage was 18.4 (1.4) years. Approximately one-tenth of the participants got married before the age of 18 years. One out of every three women had 3 or more children. Median (IQR) monthly income of households was Rs. 5000 (3000, 7000) and most had a monthly income of less than Rs. 10000 [Table/Fig-1].

Mean (SD) age at menarche was 14.3 (1.2) years. Only 2.3% of the women had attained menarche after the age of 16 years, rest

	Nos.	Percentage
<b>Age group (years)</b>		
<20	12	3.5
21-25	135	39.2
26-30	104	30.2
31-35	56	16.3
36-40	32	9.3
41 and above	5	1.5
<b>Educational status</b>		
Uneducated	58	16.9
Knows only reading	14	4.1
Primary	67	19.5
Middle school	78	22.7
Secondary	68	19.8
Higher secondary	42	12.2
Graduate	17	4.9
<b>Occupational status</b>		
Housewife	271	78.8
Farmer	25	7.3
Labourer	23	6.7
Others	25	7.3
<b>Family type</b>		
Nuclear family	179	52.0
Joint family	165	48.0
<b>Caste</b>		
General	151	43.9
OBC	123	35.8
SC	70	16.3
<b>Age at marriage (years)</b>		
<18 years	33	9.6
≥ 18 years	311	90.4
<b>Number of children of participants</b>		
0	12	3.5

1	63	18.3
2	163	47.4
3	80	23.3
4	16	4.7
5 or more	10	2.9
<b>Age of husband (years)</b>		
<25	58	16.9
26-30	112	32.6
31-35	82	23.8
36-40	69	20.1
>40	23	6.7
<b>Educational status of husband</b>		
Uneducated	16	4.7
Primary	24	7.0
Middle school	59	17.2
Secondary	146	42.5
Higher secondary	77	22.4
Graduate	22	6.4
<b>Occupation of husband</b>		
Service	132	38.4
Farmer	94	27.3
Labourer	75	21.8
Business	23	6.7
Driver	16	4.7
Army	4	1.2
<b>Household income (Rs.)</b>		
0-5000	214	62.2
5001-10000	99	28.8
10001-15000	14	4.1
>15000	17	5.0
<b>Age at menarche (years)</b>		
≤16	336	97.7
>16	8	2.3

[Table/Fig-1]: Socio-demographic characteristics of participants (N=344)

had attained it between 11 to 16 years [Table/Fig-1]. Almost one out of every five participants (20.3%, 95% CI: 16.4, 24.9) reported at least one symptom of menstrual disorder, the most common being excessive pain during menstruation (72.9%), followed by pain abdomen (12.9%), excessive bleeding (7.1%) and early menses (2.8%). The prevalence of menstrual irregularity was found to be 22.4% (95% CI: 18.3, 27.1). The most commonly used material during menstruation was clean cloth (47.7%) followed by sanitary pads (45.9%), cotton (4.9%) and dirty cloth (1.5%) [Table/Fig-2]. Out of total 344 participants, 190 (55.2%) were using any one contraceptive method, common being tubectomy (22.1%) and copper-T (14.8%).

Presence of menstrual disorder was found to be significantly associated ( $p < 0.05$ ) with occupation and non-usage of contraceptive method. Odds ratios (95% CI) for presence of menstrual disorder for housewives (as compared to those who were involved in some occupation) and for those who did not use any contraceptive method (as compared to those who were using any contraceptive method) were found to be 2.38 (1.09, 5.26) and 1.73 (1.03, 2.95) respectively. Rest of the variables (age at menarche, education of participant, income of household, caste, presence of RTI/STI symptoms) were not found to be significantly associated with presence of menstrual disorders. None of these variables were found to be significantly associated with usage of sanitary pads during menses [Table/Fig-3].

Menstrual disorders	Nos.	(95% CI)
Excessive pain	51	14.8 (11.5, 19.0)
Pain abdomen	9	2.6 (1.4, 4.9)
Excessive bleeding	5	1.5 (0.6, 3.4)
Early menses	2	0.5 (0.2, 2.1)
Others	3	0.9 (0.3, 2.5)
Total	70	20.3 (16.4, 24.9)
<b>Menstrual regularity</b>		
Regular menses	267	77.6 (72.9, 81.7)
Irregular menses	77	22.4 (18.3, 27.1)
<b>Usage of sanitary pads</b>		
Clean cloth	164	47.7 (42.5, 53.0)
Sanitary pads	158	45.9 (40.7, 51.2)
Cotton	17	4.9 (3.1, 7.8)
Dirty cloth	5	1.5 (0.6, 3.4)

**[Table/Fig-2]:** Prevalence of menstrual disorders, menstrual irregularity and usage of sanitary pads (N=344)

Variable	Menstrual problems		Usage of sanitary pads	
	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value
Age at menarche, >16 years	1.31 (0.26-6.65)	0.67	0.85 (0.21-3.44)	1.00
Education of participants, less than or up to middle school	0.74 (0.37-1.46)	0.42	1.44 (0.85-2.45)	0.18
Occupation of participants, housewife	2.38 (1.09, 5.26)	0.03	0.84 (0.50-1.41)	0.60
Income of household, ≤Rs 5000	1.31 (0.75-2.28)	0.41	1.30 (0.84-2.01)	0.27
Caste of participants, OBC or SC	1.42 (0.83-2.44)	0.23	1.25 (0.81-1.91)	0.32
Contraceptive method, not using any contraceptive method	1.73 (1.03-2.95)	0.04	1.19 (0.78-1.83)	0.44
RTI/STI symptom, present	0.95 (0.57-1.62)	0.89	0.83 (0.54-1.28)	0.44

**[Table/Fig-3]:** Determinants of menstrual problems and Usage of sanitary pads  
Note: Reference category: ≤16 years, more than middle school, involved in some occupation, >Rs. 5000, general category caste, using any contraceptive method, absence of RTI/ STI symptom

## DISCUSSION

Roughly, menstruation occupies 3 days a month for nearly 30 years of a woman's life. Therefore a key priority for them is to have the necessary knowledge, facilities and cultural environment to deal with menstruation hygienically and with dignity [13]. Studies in India have focussed mainly on adolescent girls, whereas our study has highlighted issues of the married women [14,15].

In our study mean age of participants was 28 years. Most of the participants (69.4%) belonged to the 21-30 years age group and almost one-fourth of them had upto middle school education. Majority of the participants were housewives and belonged to either nuclear or joint families. The median monthly household income was Rs. 5000.

The age at menarche reported in our study is consistent with the findings of other studies [14-17] and mean age at marriage was consistent with the findings of NFHS-3 [18]. The present study showed that more than half of the participants were not using sanitary pads during menstruation, which is frequently associated with complications. A study done in Andhra Pradesh had reported that the usage of sanitary pads among married women and young adolescent was 20.5% [19]. Studies in Africa have found that use of sanitary pads was as low as 18% amongst Tanzanian women with the rest using cloth or toilet paper [20]. Studies on Nigerian school girls have found that 31% to 56% of them were using toilet tissues

or clothes in menstruation as opposed to menstrual pads [21,22]. Studies in India have found that around 43 to 88% of girls were using cotton cloth rather than disposable pads which is similar to the prevalence of usage of clean cloth found in our study (47.7%) [23,24]. However, these studies differed in terms of time period, study design and socio-demographic characteristics of the study population.

In the year 2013, Government of India launched the "Scheme for promotion of menstrual hygiene among adolescent girls in rural India" through Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH-A) strategy. This scheme promotes better health and hygiene among adolescent girls (aged 10 to 19 years) in rural areas. Through this high quality and safe sanitary products are given to the girls and environmentally safe disposal mechanisms are made available. Sanitary pads branded as 'Free days' are being provided under National Rural Health Mission (NRHM). These pads are being sold to adolescent girls by Accredited Social Health Activist (ASHAs) at the rate of Rs. 6 for a pack of 6 pads [25]. Currently, no such scheme for promoting the use of sanitary pads during menstruation is available for the married women.

Dysmenorrhea was the commonest menstrual problem reported in our study (72.9%). This was similar to other study results [14-16,23,26-28]. Menstrual disorder was found to be significantly associated ( $p < 0.05$ ) with being a housewife and non-usage of any contraceptive method. Several studies show that oral contraceptive pills can significantly reduce the incidence and severity of dysmenorrhea by inhibiting ovulation and reducing prostaglandin levels [29-32].

The strength of this study lies in the fact that this was a random sample and a community based study, so the results of the study reflects a clear picture of the problems present at the community level and can be generalized.

## LIMITATION

Since, this study objective was part of a larger study on women's health, there were a few limitations. We could not study the anaemia status and examine its association with the menstrual problems. Studies had shown positive association between menstrual flow and anaemia [33]. Similarly, factors determining usage of sanitary pads including socio-cultural perspectives of the women and their family members could not be assessed, which could have provided us a better understanding of the issue. Also, hygiene during menstruation is determined by many other factors along with usage of sanitary pads, like cleaning perineum frequently, frequency of changing pads, and cleaning hands after changing pads. These components were not explored in this study.

## CONCLUSION

It can be stated that married women in the villages of rural Haryana have a significant burden of menstrual disorder and the usage of sanitary pads was quiet low. Awareness on menstrual disorders and benefits of sanitary pads has to be increased through a population approach. Schemes promoting the use of sanitary pads in adolescent girls should be extended to married females as well. Further studies are required to explore the factors associated with the usage of sanitary pads and to study the complete spectrum of menstrual hygiene practices to have a better understanding of the issue.

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