

# Menstrual Hygiene Practices and RTI among ever-married women in rural slum

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## ABSTRACT

**Background:** Considering huge burden of RTI across community based study settings- either iatrogenic or endogenous and not necessarily sexually transmitted, menstrual hygiene practices by reproductive age group women have documented evidence of being a key determinant/ predictor of RTI and bear causal association with key Socio-demographic attributes. This is more so in view of vulnerability to health risk, access to treatment and reduced economical choice for a marginal & disadvantaged population like the 'in-migrants/itinerants'. **Objectives:** 1. To study menstrual hygiene practices of ever-married 'in-migrant' women from Dehradun as a key determinant of reproductive health needs. 2. To establish causal association between menstrual hygiene practices and (i) key socio-demographic attributes & (ii) RTI. **Methodology:** An observational (cross-sectional) study was designed with a probability sample from 5033 ever-married women from 06 'make-shift settlements'/slums along immediate precincts i.e 50 meters into the mainland from the banks of rivers 'Chandrabhaga', 'Ganga', 'Song' and 'Rispana'- all in the district of Dehradun. **Result & Conclusion:** The present study findings revealed that as key determinant of reproductive health needs, menstrual hygiene practices of the study population bore significant statistical association with their (i) literacy status or education (ii) religion (iii) key reproductive tract infection symptoms and (iv) socio-economic status. The findings reinforced the felt need to address knowledge, attitude and practices of the disadvantaged study population by appropriate behaviour change communication, build community & provider capacity and strategies to deliver services at such resource - poor setting keeping in view the four A's of primary health care.

## Introduction:

The marginalization and health of migrant populations are a growing public health concern as they represent one of the most 'at need' groups in the world. The health implications for poor unskilled/semiskilled migrants, both internal and international, in the context of public health as well as in relation to the health of the individual and the existing barriers of access to health services at the host destinations are well documented <sup>(1,2)</sup>. For a mix of biological and social reasons women are more likely to have RTIs, less likely to seek care, more difficult to diagnose & suffer more severe disease sequelae <sup>(3)</sup>.

Considering huge burden of RTIs across community based study settings<sup>(4)</sup> either iatrogenic or endogenous and not necessarily sexually transmitted, menstrual hygiene practices by reproductive age group women have documented evidence of being a key determinant/ predictor of RTI and bearing causal association with key socio-demographic attributes <sup>(5,6)</sup>. This is more so in view of vulnerability to health risk, access to treatment and reduced economical choice for a marginal & disadvantaged population like the 'in-migrants/itinerants' <sup>(7)</sup>

In Uttarakhand, low/semi skilled 'labor selling' migrants—either Internally Displaced Persons (IDPs) or Internal Migrants (IMs) typically inhabit in make shift settlements/ households along the banks of mountainous rivulets as these flow into the Doon valley—'Rispana', 'Song', and 'Chandra-

Bhaga', all in the district of Dehradun <sup>(7,8)</sup>. In view of ample scope of further research with such population living in atypical habitats having distinct demographic attributes and presumed significant reproductive health practices, a study was conducted to ascertain menstrual hygiene practices of ever-married 'in-migrant' women from Dehradun as a key determinant of RH needs; also, establish causal association, if any, between menstrual hygiene practices and (i) key socio-demographic attributes & (ii) RTI

## Material and Methods:

An observational (descriptive) study with a cross-sectional design was employed. A probability sample of 5033 study population ('in-migrants') from 06 'make-shift settlements'/slums (selected by systematic random sampling) was considered, namely, 'Chandrabhaga, Keshavpuri, Rajeev nagar, Rispana nagar, Deep nagar and Adhoiwala along immediate precincts i.e 50 meters into the mainland from the banks of rivers 'Chandrabhaga', 'Ganga', 'Song' and 'Rispana'- all in the district of Dehradun..

Cent per cent (100 %) enumeration of house holds/ettlements or Census was done (Natural sample pyramid) for present community based, cross-sectional survey. A structured, pre designed and pre tested survey instrument

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was administered to all ever-married women, 15-49 years of age from the sampled house-holds (study subjects) and information regarding prioritized reproductive health needs and socio-behavioral determinants of utilization of services from the existing health system was elicited and recorded.

The reasons for perceived reproductive health needs and ‘gaps’ in related health seeking behavior were identified and addressed through health education, Inter-Personal Communication (IPC) and advocacy with the formal health system. Generated data was collated and analyzed on an appropriate statistical package. The study duration was 01 year.

**Results:**

It can be observed from Table 1 that as many as 605 (62.69%) of study subjects used ‘Fresh cloth’ during menstruation followed by almost equal number of respondents using ‘Sanitary pads’ & ‘Home-made pads’ i.e 127(13.16%) and 132 (13.67%) respectively; another 101(10.46%) respondents, though proportionately insignificant, used ‘Used cloth’. Literacy status or education of the study subjects bore statistically significant & strong relationship (p<0.001) with their menstrual hygiene practices in terms of using material either as ‘Used cloth’, ‘Fresh cloth’, ‘Sanitary pads’ or ‘Home-made pads’ (table 2). Proportion re-using ‘Used cloth’ as menstrual hygiene practice was higher among Muslims (14.42%) than in Hindus (8.34%) and this difference was statistically significant (p<0.05); Hindus were also using ‘Fresh cloth’ & ‘Home-made pads’ proportionately more than Muslims ( Table 2). Further strong causal association (p<0.001) was evident (Table 2) among all categories in menstrual hygiene practice i.e using one or the other type of the material & Socio-e-Economic Status (SES) of study subjects. As regards RTI symptoms i.e. ‘Vaginal discharge’, ‘Itching’, ‘Boils’, ‘Pain abdomen’, ‘Pain during sexual intercourse’, ‘Backache’, ‘Lymph node enlargement’- all too were strongly associated (p<0.001) with menstrual hygiene practices of re-using ‘cloth’( Table 3)

**Table: 1. Distribution of study population by use of cloth during menses**

Menstrual hygiene Practices	No. of Respondents	Percentage
‘Used cloth’	101	10.46
‘Fresh cloth’	605	62.69
‘Sanitary pads’	127	13.16
‘Home- made pads’	132	13.67

**Table: 2. Distribution of study subjects according to social determinants and menstrual hygiene practices.**

Menstrual Hygiene	Literacy		
	Illiterate(n=671)	Literate(n=294)	
Used Cloth	92 (13.71)	13 (4.42)	17.25, p<0.001
Fresh Cloth	492 (73.32)	105 (35.71)	120.97, p<0.001
Sanitary pads	20 (2.98)	110 (37.41)	205, p>0.001
Home-made pads	67 (9.99)	66 (22.45)	25.69, p<0.001
Menstrual hygiene practices	Religion		
	Hindu	Muslim	
	(n=839)	(n=104)	
Used cloth	70(8.34%)	15(14.42%)	4.17, p<0.005
Fresh cloth	530(63.18%)	62(59.62%)	0.65, p>0.05
Sanitary pads	112(14.54%)	18(17.31%)	0.27, p>0.05
Home-made pads	127(15.14%)	9(8.65%)	3.15, p>0.05
Menstrual hygiene practice of using	Socio-economic status		
	Upper class (n=179)	Lower class (n=786)	
	Used cloth	5(2.80%)	
Fresh cloth	71(39.66%)	546(69.46%)	66.77, p<0.001
Sanitary pad	57(31.84%)	68(8.65%)	69.55, p<0.001
Home-made pad	46(25.70%)	88(11.19%)	25.64, p<0.001

**Table 3. Distribution of study subjects according to menstrual hygiene and RTI/STI**

Symptoms of RTI/STI	Menstrual hygiene practice (n=965)				
	Used cloth (n=101)	Fresh cloth (n=605)	Sanitary pads (n=127)	Home-made pads (n=132)	
Vaginal discharge	88(87.13%)	137(14.19%)	27(2.79%)	21(2.17%)	80.4, p<0.001
Itching	46(45.54%)	86(8.91%)	14(1.45%)	11(1.13%)	82.06, p<0.001
Boils	20(19.80%)	37(3.83%)	9(0.93%)	3(0.31%)	83.34, p<0.001
Pain lower abdomen	54(53.46%)	95(9.84%)	18(1.86%)	19(1.96%)	94.84, p<0.001
Pain during sexual intercourse	42(41.58%)	95(9.84%)	20(2.07%)	18(1.86%)	86.63, p<0.001
Backache	73(72.28%)	104(17.19%)	17(2.79%)	25(2.59%)	85.57, p<0.001
Lymph-adenopathy	3(2.97%)	11(1.81%)	2(0.20%)	0(0%)	83.15, p<0.001

**Discussion:**

Analogous study by Roy D at rural Wardha (6) observed that 83.6% women used ‘Reused cloth’ during menstruation, followed by 15.6% using ‘Fresh cloth’, and a mere 0.7%.using ‘Home –made pads’ & ‘Sanitary pads’. It is interesting to note that menstrual hygiene practices by the respondents of the present study are appreciably better than that in the above cited reference; of the probable reasons, state & public-private initiatives in RCH with

effective components of BCC & secondary/tertiary prevention especially of RTI/STIs among disadvantaged people at far outreaches, may explain this relatively favorable menstrual hygiene practice.

It is by now reasonably established that reproductive health practices of genital/menstrual hygiene, sexual behavior (in terms of number, type, frequency, sero-status etc of partners) and behavior related to blood & blood products – that potentially can result in RTI/STIs (as either endogenous, iatrogenic RTIs or STDs) & HIV/AIDS, are definitely and positively influenced by literacy (8). Garg S *et al* in their study at an urban slum from Delhi and Roy D from rural Wardha had observations similar to the present study and found significant association between education and ‘Use of cloth’ during menstruation (5, 6). Community based studies from Egypt (9), India (10) & Bangladesh (11) found an inverse variability of RTI prevalence with level of literacy of reproductive age group women. RCH practices including menstrual hygiene practices predisposing to endogenous/iatrogenic RTI would be expected to bear an inverse variability with literacy level, particularly in settings like the present one having fairly high proportion of illiterate respondents.

In the present context, menstrual hygiene practice of reusing ‘Used cloth’ was found to bear significant association ( $p < 0.05$ ) with religion, respondents from the dominant i.e. Hindu community executing better menstrual hygiene practices; however, though evidence of similar association could not be found elsewhere in the published literature, many of the studies had Hindus as almost exclusively dominant of the communities (10, 12). Besides, Bali & Bhujwala found an association between RTI and Hindu lower caste (13).

Likewise, no community based study was available that had considered finding causal association between SES and menstrual hygiene practices of using types of ‘cloth’/‘pads’. Yet in view of multiple and convincing evidence of significant association between RTI & socio-economic status from similar study settings (13, 14, 15) the findings of the present study cannot be underestimated. i.e. women of an itinerant/immigrant population, living on subsistence and doing essentially unskilled errands for no fixed wages, might not justifiably ‘afford’ sanitized material from the market, besides not being able to knowledgeably use available resource i.e. fresh or sundried cloth.

Previously cited analogous studies from urban Delhi slums & rural Wardha (5, 6) too had found statistically significant association between poor menstrual hygiene (‘re-use’ of ‘cloth’) and key RTI syndromes. Practice of such behavior and its possible role in RTIs had been discussed by Wasserheit (11). Association of hygienic practices & RTI was also studied by Bali & Bhujwala (13). In the present study context, though more than 60% of the respondents reported relatively favorable practices, considerable number was not using appropriate sanitized material thus making them vulnerable to contracting either endogenous or iatrogenic RTI.

### Conclusion:

The findings re-enforced the felt need to address KAP of the disadvantaged study population by appropriate BCC, build community & provider capacity and design appropriate strategies to deliver services at such resource - poor setting keeping in view the four A’s (i.e. availability,

accessibility, acceptability & affordability) and principles of primary health care.

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