

Research Article



Impact of Menstrual Health Education: A Community Based Interventional Analytical Study among Rural Women of Eastern Telangana

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ABSTRACT

Menstruation is a natural and physiological process. It's a sign that a woman is healthy. It is very important to follow proper menstrual hygienic practices. Lack of knowledge among women end up with repeated use of unclean menstrual absorbent results in harboring of microorganisms that increases susceptibility to urinary, perineal, vaginal and pelvic infections. Objective of this study is to study the effect of health education on menstrual hygiene among rural women. An interventional study was done by obtaining the baseline data relating to socio-demographic and economic factors, menstrual hygiene practices and symptoms suggestive of RTIs. The subjects were given awareness regarding the physiology of menstruation and menstrual hygiene. The follow up data was collected after a span of 3 months. Awareness about sanitary napkins was given to the subjects. In the baseline data only 38.8% of them were aware whereas 61.2% were unaware, but after the follow up study was done awareness on sanitary napkins among women increased to 100%. Sanitary napkins were used by 16.7% of the subjects in the baseline study which was increased to 24.3% after the follow up. Frequency of changing the absorbent was significantly higher after the follow up 69.8% than the baseline study 58%. Burning was the disposal practice followed by 37% during the baseline study which was increased up to 56.2% after the follow up. Previously only 18.5% of the women practiced drying of homemade reusable cloth in sunlight and after the follow up was done, 25.6% of them started practicing drying of homemade reusable cloth in sunlight. Our study divulges that it is possible to implement a health education programme about menstrual hygiene in rural areas. Proper menstrual hygiene and correct perceptions can protect the women from reproductive health issues. They should be aware about its effect on their forth-coming reproductive health.

Keywords: Menstruation, menstrual hygiene practices, infections, reproductive health.

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INTRODUCTION

Menstruation is defined as periodic discharge of blood from the uterus occurring more or less at regular monthly intervals throughout the active reproductive life of a female.¹ The onset of menstruation is called as "Menarche" and it is the hallmark of female pubertal development and is considered as unclean in India.² A woman is likely to spend more than 1800 days of her life menstruating. In other words, it is approximately 5 years of her life span spent on bleeding.³ As a method of practice to avoid blood stain from becoming evident, women use sanitary pad, locally prepared pad/napkin or more often clothes during the time of menstruation.³

Often methods of management can be unhygienic and inconvenient, particularly in poor settings. In India, between 43% and 88% of girls wash and reuse cotton clothes rather than use disposable pads.⁴ It is surprising to note that around 1% of women in India do not use anything at all during the time of menstruation.³ Genital hygiene is

the major component of women's health and is very important for the protection of reproductive health. Women's care and treatment of their vagina and genital area might affect their vulnerability to sexually transmitted infections (STIs, including HIV) and other sexual and reproductive morbidities.⁵

The strength and consistency of this association, however, are debated as cohort studies have shown conflicting results.⁵ Traditional beliefs during menstruation and hesitation of not discussing the related issues openly has blocked the access to get the right kind of information regarding menstrual hygiene.²

Menstrual Hygiene Management (MHM) is characterized by practices such as the type of absorbent material used, frequency changed, associated body washing, methods of washing, drying and storing reusable pads as well as other contextual factors such as location of menstruation-related changing and washing practices.⁶ Because of lack of knowledge women end up with repeated use of unclean menstrual absorbent results in harboring of microorganisms that increases susceptibility to urinary, perineal, vaginal and pelvic infections.²

Reproductive tract infection (RTI) is defined as the infection of the reproductive (or) genital tract which causes healthy life loss among sexually active women of reproductive age in developing countries. The presence of RTIs (especially ulcer causing STIs) can promote the



acquisition and transmission of the Human Immunodeficiency virus (HIV).⁷ Considering huge burden of RTIs across community based study settings menstrual hygiene practices by reproductive age group women have documented evidence of being a key determinant of RTIs. This is more so in view of vulnerability to health risk, access to treatment.⁸

Chronic cervicitis is a very common disease affecting adult women physical and mental health and is predisposing condition for HPV, HIV infection and cervical cancer which is the most common cancer of female.⁹

Poor knowledge and awareness regarding menstruation can be due to low level of education. The accessibility and affordability of sanitary napkins will not completely solve the menstrual related problems (or) genito-urinary illness. Hence, reiteration on adequate changing times of soaked absorbent, adequate number of times of cleaning the external genitalia, sanitary material used for cleaning purpose and method of disposal of used menstrual absorbent, should be given to women. This study is to intensify the effect of health education on menstrual hygiene among rural women.

MATERIALS AND METHODS

Study Design

An interventional study was conducted in Almaipet and Rollapahad villages of Sangareddy district in Telangana, India.

Study Participants

All the subjects who belonged to age group 18-45 years were included in our study. However subjects who were not willing to participate and didn't give the consent were excluded.

Sample size

A total of 281 subjects were included in the study.

Data collection

An interventional study was done to find out the effectiveness of health education in improving knowledge and hygiene practices followed during menstruation among adolescent girls and women. After obtaining Institutional Ethical Committee (IEC) clearance, informed consent was obtained from the subjects. Female subjects aged between 18-45 years were included in the study. Baseline data was obtained using pre designed semi-structured questionnaire which elicits information relating to socio-demographic and economic factors, menstrual hygiene practices and symptoms suggestive of RTIs. After assessing the baseline data of each subject, patient counseling and health education was delivered to them based on their severity and condition through verbal communication and leaflets. The subjects were given awareness regarding the physiology of menstruation and menstrual hygiene along with the importance of using sanitary napkins, proper hand washing techniques,

bathing, washing and drying of undergarments under the sun, proper washing of genital area. Patient counseling was also given on the symptoms suggestive of RTIs and those found severe were advised to visit the nearest hospital if possible.

Follow up data was collected after a span of 3 months using a semi-structured questionnaire which was translated into vernacular language. Data was collected from the subjects on specific parameters for which the needful interventions were done. Statistical interpretations were done by Student Two – tailed t – test using SPSS Software (Version 25).

RESULTS

Table 1: Socio-demographic characters

Parameter		No. of Subjects (N=281)	Percentage (%)
Age group	18-25yrs	95	33.8
	26-35 yrs	134	47.68
	36-45 yrs	52	18.5
Marital status	Married	217	77.2
	Unmarried	64	22.77
Educational status	Illiterate	73	25.97
	Below primary school	139	49.46
	Above primary school	69	24.55
Occupation	Housewife	78	27.75
	Labour	61	21.7
	Agriculture	96	34.16
	Other works	46	16.37
Economic status	Upper class	151	53.73
	Upper middle class	101	35.94
	Middle class	22	7.82
	Lower middle class	07	2.49
	Lower class	00	00

Among 281 patients, about half of the women (47.68%) belonged to the age group 26-35 years and the least (18.5%) were found between 36-45 years. A majority (77.22%) of them were married. In the educational status, (25.97%) of the women were illiterates followed by (49.46%) below primary school, (24.55%) above primary school. In the occupation (27.75%) were house wives (21.7%) were labourers, (34.16%) were agriculture workers and (16.37%) were involved in other works. Most of the women belonged to the upper class (53.73%), followed by upper middle class (35.94%), middle class (7.82%), lower middle class (2.49%) (Table 1).

Table 2: Association between age group and menstrual hygiene practices

Age Group	Total n(%)	P-value
18-25yrs	95 (33.8%)	0.04*
26-35 yrs	134 (47.6%)	
36-45 yrs	52 (18.5%)	



There is an association between age group and menstrual hygiene practices which was statistically significant (Table 2).

There is an association between educational status and menstrual hygiene practices which was statistically significant (Table 3).

Table 3: Association between educational status and menstrual hygiene practices

Educational Status	Total n (%)	P-value
Illiterate	73 (25.9%)	0.032*
Below primary school	139 (49.4%)	
Above primary school	69 (24.5%)	

Table 4: Impact of menstrual education on rural women

Parameter		Baseline		Follow-up		Percentage change	P value
		No. of subjects	Percentage (%)	No. of subjects	Percentage (%)		
Awareness about sanitary napkins	Aware	109	38.8	281	100	-61.2	0.04*
	Unaware	172	61.2	0	0	61.2	
Type of material used during menstruation	Sanitary napkins	47	16.7	68	24.3	-7.6	2.39
	Homemade disposable cloth	64	22.8	61	21.7	1.1	
	Homemade reusable cloth	131	46.6	119	42.3	4.3	
	Both napkins and reusable cloth	39	13.9	33	11.7	2.2	
Frequency of changing napkin/ cloth in a day	Once	118	42.0	85	30.2	11.8	0.003*
	Twice	163	58.0	196	69.8	-11.8	
Agent used for washing of homemade reusable cloth	Soap and Water	107	62.9	128	75.2	-12.3	3.18
	Water	63	37.1	42	24.8	12.3	
Drying of homemade reusable cloth	Outside the house in sunlight	52	18.5	72	25.6	-7.1	0.03*
	Outside the house without sunlight	67	23.8	82	29.2	-5.7	
	Inside the house	162	57.7	127	45.2	12.5	
Method of disposal of napkins (or) cloth	Pit toilet	98	34.9	64	22.8	12.1	7.28
	Refuse bin	11	3.9	9	3.2	0.7	
	Burning	104	37	158	56.2	-19.2	
	Flush in toilet	56	20.2	42	14.9	5.3	
	Thrown indiscriminately	12	4	8	2.9	1.1	
Washing of external genitalia during menstruation in a day	≤ 2 times	159	56.6	133	47.3	9.3	0.004*
	≥ 2 times	122	43.4	148	52.7	-9.3	

Awareness about sanitary napkins was given to the subjects. In the baseline data only 38.8% of them were aware whereas 61.2% were unaware, but after the follow up study was done awareness on sanitary napkins among women increased to 100% which was statistically significant ($p=0.04$). Sanitary napkins were used by 16.7% of the subjects in the baseline study which was increased to 24.3% after the follow up. Frequency of changing the absorbent was significantly higher after the follow up 69.8% than the baseline study 58% which was statistically significant ($p=0.003$). 62.9% of the subjects used soap and water for washing the homemade reusable cloth which increased up to 75.2% after the follow up data whereas 37.1% of them were using only water during the baseline investigation which gradually decreased to 24.8% after giving awareness (Table 4).

In our study after the follow up was done, woman started practicing drying of homemade reusable cloth in sunlight 25.6%, whereas it was only 18.5% during the baseline study which was statistically significant ($p=0.03$). Method of disposal of the sanitary napkins (or) cloth was the major concern during the study. Burning was the disposal practice followed by 37% during the baseline study which was increased up to 56.2% after the follow up. 34.9% practiced using pit toilet, 3.9% used refuse bin, 20.2% practiced flush in toilet for disposing the used materials and 4% practiced throwing the used materials indiscriminately in the baseline study which changed to 22.8%, 3.2%, 14.9% and 2.9% respectively after the follow up. Washing of genital area during menstruation for ≥ 2 times in a day is about 52.7% after the follow up where it was only 43.4% at the baseline which was statistically significant ($p=0.004$) (Table 4).

Frequency of changing napkin/cloth in a day:

The level of significance at 95% confidence intervals and standard deviation are as follows:

Two tailed t test:

t=19.84, df=1

P value (two tailed)	0.003
P value	*
Significant (alpha=0.05)?	Yes
SD	90.51
95% confidence interval	430.8 to 2077

Awareness about sanitary napkins:**Two tailed t test:**

t=2.846, df=7

P value (two tailed)	0.044
P value	*
Significant (alpha=0.05)?	Yes
SD	49.62 to
95% confidence interval	0.6661 85.05

Drying of homemade reusable cloth:**Two tailed t test:**

t=2.592, df=5

P value (two tailed)	0.033
P value summary	*
Significant (alpha=0.05)?	Yes
SD	54.57 to
95% confidence interval	2.778 89.22

Washing of external genitalia during menstruation in a day:**Two tailed t test:**

t=3.552, df=6

P value (two tailed)	0.004
P value summary	*
Significant (alpha=0.05)?	Yes
SD	34.97
95% confidence interval	2.778 to 82.92

DISCUSSION

The present study demonstrates that the practices regarding menstrual hygiene and practices were not satisfactory before implementation of the programme. Hygiene practices during menstruation are very important as poor hygiene affects health of a woman by increasing

vulnerability to infections of the reproductive tract, urinary tract and peritoneum.

Awareness about sanitary napkins was given to the subjects. In the baseline data only 38.8% of them were aware whereas 61.2% were unaware, but after the follow up study was done awareness on sanitary napkins among women increased to 100%. Sanitary napkins were used by 16.7% of the subjects in the baseline study which was increased to 24.3% after the follow up. This is compared with the study done by Syed Emdadul Haque et.al.¹⁰ where only 22.4% of girls used sanitary napkins after the health intervention was done. Dissimilar to our findings, one study in South India which was done by Omidvar S et.al.¹¹ showed higher proportion 68.9% of young females using disposable pads during menstruation.

Frequency of changing the absorbent was significantly higher after the follow up 69.8% than the baseline study 58%. This is compared with the study done by Iswarya et.al.¹² in which the frequency of changing napkins after the follow up was 86%. 62.9% of the subjects used soap and water for washing the homemade reusable cloth which increased up to 75.2% after the follow up data whereas 37.1% of them were using only water during the baseline investigation which gradually decreased to 24.8% after giving awareness.

Method of disposal of the sanitary napkins (or) cloth was the major concern during the study. Burning was the disposal practice followed by 37% during the baseline study which was increased up to 56.2% after the follow up. 34.9% practiced using pit toilet, 3.9% used refuse bin, 20.2% practiced flush in toilet for disposing the used materials and 4% practiced throwing the used materials indiscriminately in the baseline study which changed to 22.8%, 3.2%, 14.9% and 2.9% respectively after the follow up.

Drying of undergarments was one of the major parameter involved in the study. Women who dry their undergarments away from the sunlight are prone to many infections which ultimately increase the morbidity rate. In our study after the follow up was done, woman started practicing drying of homemade reusable cloth in sunlight 25.6%, whereas it was only 18.5% during the baseline study. This is almost similar to the study done by Singh et.al.¹³ in Uttarakhand which revealed that 36.3% of them were practicing sun drying of their undergarments. A study done by Iswarya et.al.¹² also showed that significant proportion of girls dried their undergarments in sunlight after the follow up 82% compared to baseline 75%.

Good hygiene practices such as use of sanitary napkins and adequate washing of genital area are essential during menstruation. Washing of genital area during menstruation for ≥ 2 times in a day is about 52.7% after the follow up where it was only 43.4% at the baseline. This is similar with the study done by Iswarya et.al.¹² where number of students washing genitals every time after using the toilet was 30% at baseline to 66% after the follow up.



CONCLUSION

Our study divulges that it is possible to implement a health education programme about menstrual hygiene in rural areas. The provided health education improved the knowledge on menstrual hygiene practices among women. Proper menstrual hygiene and correct perceptions can protect the women from reproductive health issues. They should be aware about its effect on their forth-coming reproductive health. At the community level, the mothers of young girls should be educated about the appropriate puberty hygiene, and be empowered with the necessary skills to communicate with and transfer the obtained information to their children. Hence, the role of clinical pharmacists were crucial in the study to create awareness among the rural women population and improve their quality of life through proper menstrual health management.

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