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Research Article

MENSTRUAL PRACTICES OF RURAL SCHOOL GOING ADOLESCENT GIRLS IN VARANASI DISTRICT OF UTTAR PRADESH, INDIA

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ABSTRACT

Background: Poor knowledge related to menstruation and presence of restrictions during menstruation is a common phenomenon.

Objectives: (1) To study the menstrual practices of rural adolescent school going girls. (2) To examine the association of socio-demographic factors with the menstrual practices of respondents.

Study design: An exploratory study with a cross-sectional approach.

Settings and participants: 240 adolescent girls of age 12 to 18 years from government higher secondary schools of Varanasi district.

Statistical analysis: Percentages and chi square test

Results: Mean age at menarche was found to be 13.27 years. Majority of the girls had regular periods of normal duration. Problems like pain in lower abdomen, weakness, backache, lack of concentration and sadness was reported by girls during menstrual periods. The usage of home-made cloth pads was found to be common while most of them reused it. Religious restrictions and segregation during periods were the main practices followed by the families of the respondents. Knowledge of menarche prior to its onset was found to be significantly associated with education, age, family type and mother's education of respondents. Hygiene maintained during periods seemed to be associated with variables such as caste, education, and age.

Conclusions: Comprehensive reproductive health education needs to be emphasized to adolescent girls to ensure a healthy reproductive life for them.

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INTRODUCTION

The second decade of life, i.e. adolescence, is a period of transition from childhood to adulthood and is one of the most crucial stages. It is characterized by major physiological and socio-psychological changes. There is a marked development regarding reproductive biology yet adolescents often lack knowledge of reproductive health issues. This puts them at significant risk of experiencing negative consequences.^[1]

An important milestone during adolescence is the achievement of puberty of which the onset of menarche marks the beginning of a multitude of physiological and psychological changes in girls. Menstruation is not only a symbol of sexual maturity but also one of the girl's future status as a woman. Various factors like cultural and social restrictions, myths and misconceptions are associated with menstruation. Poor knowledge and presence of mistaken beliefs on menstruation was revealed among college going adolescent girls by Savanthe and Nanjundappa.^[2]

The manner in which a girl acquires knowledge about menstruation and its related changes may affect her reaction to the event of menarche. In majority of the cases, girls are generally unaware of the process before the start of menarche and for those who are aware, mothers are the main source of information^{[3][4][5]}. Culturally, the experience of menarche or menstruation is different for adolescent girls in Indian society as compared to the Western world. Topics related to menstruation, sexuality, fertility, etc. are still a 'no-no' in the Indian society and are thus considered a taboo. Due to this, a lot of misconceptions and myths originate which aggravate the mystery of the phenomenon. The present study was planned with an objective of understanding and knowing the menstrual practices of school going adolescent girls in the rural areas of Varanasi district.

MATERIAL AND METHODS

The present research was a community based cross sectional study undertaken in rural areas of Varanasi district. The total

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sample of 240 adolescent girls was calculated as per the following formula:

$$N = \frac{z^2 \times (p \times q)}{e^2} = 222.85$$

Taking the prevalence rate of 17.6% as awareness of physical changes during adolescence (Singh and Singh^[6], the required sample size came out to be 222.85 which was rounded off to 240. Thus the total sample comprised of 240 school going adolescent girls in the age group of 12 to 18 years from Government secondary and higher secondary schools of the district. Four government schools each having more than 100 enrolled girl students at secondary level were identified from four villages randomly from the district. Accordingly, 60 adolescent girls were finally selected from 8th to 12th standards of each school, thus making the total sample size of 240.

A self-structured interview schedule was used for data collection which consisted of background information and sections on practices regarding menstruation. Each participant was contacted separately in the school and the desired information was sought. Data analysis was done through the use of SPSS version 17.0. Chi-square test was used to see the association between menstrual practices of girls and other demographic variables.

RESULTS

The socio-demographic profile of respondents revealed that the average age of girls was 15.5 years with majority of them falling in the age category of 15 to 16 years (45.8%). Most of them were studying in 11th and 12th standards (42.9%) and had joint families (52.1%). Maximum percentage of them had medium-sized families (59.2%) with five to eight members. The caste composition of the families revealed that almost equal percentage of them were scheduled castes (38.8%) and of OBC group (39.2%) while rest were from the general category.

Table 1 gives us the information about the age at which the first menstruation occurred in the respondents. Majority of the girls (63.3%) had menarche between 13 to 14 years of age.

Table 1 Age at menarche of the respondents and knowledge prior to its occurrence

Age (in years)	Frequency	Percentage
Below 11	1	
11-12	60	25.0
13-14	152	63.3
Above 14	27	11.2
Mean Age (with SD)	13.27 (1.03)	
Knowledge of menarche prior to its occurrence		
Yes	51	21.2
Source of information		
Mother	30	12.5
Friends	6	2.5
Sisters	5	2.0
Others	10	4.2

Only 21.2% of the girls were aware of menstruation prior to its onset and for most of them, mothers (12.5%) were the source of information. Knowledge of menarche prior to the onset was found to be significantly associated with the socio-demographic variables such as education and age of sample, family size, family type and mother's educational level (Table 2).

Table 2 Association of socio-demographic factors and knowledge of menarche before its onset

Variables	Levels	Awareness of menarche before its onset		Chi-square association
		Yes N (%)	No N (%)	
Education	Below high school	25 (30.8)	56 (69.1)	χ^2 cal = 7.32*, df = 2
	High school	11 (19.6)	45 (80.3)	
	Above high school	15 (14.5)	88 (85.4)	
Age group	12-14 years	21 (33.3)	42 (66.7)	χ^2 cal = 7.82*, df = 2
	15-16 years	20 (18.1)	90 (81.2)	
	17-18 years	10 (14.9)	57 (85.0)	
Family type	Joint	30 (26.0)	85 (79.9)	χ^2 cal = 4.75*, df = 1
	Nuclear	21 (16.8)	104 (83.2)	
	Illiterate	6 (10.5)	51 (89.4)	
Mother's education	Primary	9 (22.5)	31 (77.5)	χ^2 cal = 11.21*, df = 5
	Middle	16 (19.0)	68 (80.9)	
	High school	12 (27.9)	31 (72.0)	
	Above high school	4 (40.0)	6 (60.0)	

* Significant at 0.05 level

The menstrual history of respondents revealed that majority of them had regular periods (62.9%) with three to five days duration and experienced normal flow of blood. Respondents experienced various problems during menstruation (Table 3) among which the most common were pain in lower abdomen (82.5%) followed by weakness/tiredness (77.5%), backache (68.7%), inability to concentrate on work (63.7%), sadness (52%) and body ache (48.3%).

Table 3 Perceived physiological and psychological problems faced by respondents during menstrual periods

Problems	Frequency	Percentage
Physiological		
Pain in lower abdomen	198	82.5
Weakness / tiredness	186	77.5
Backache	165	68.7
Bodyache	116	48.3
Pain in thighs / legs	104	43.3
Psychological		
Sadness / depression	125	52.0
Irritability	117	48.7
Inability to concentration on work	153	63.7
Not wanting to talk	110	45.8

The hygienic practices followed by the respondents seemed to be satisfactory (Table 4) and majority of the participants took bath (62%) and changed their clothes (53.7%) at least once in a day. Most of them washed their undergarments during periods twice in a day (35.8%) and dried their undergarments (40.8%) at a place where nobody could see (preferably in the shade) while 33.7% dried in the sun. They also had a practice of covering their undergarments with other clothes while drying (30.4%). Most of the girls used home-made cloth pads or cotton (68%) as absorbent during their periods. Majority of them changed their pads twice a day (73.7%) and reuse of pads was found to be prevalent in only 22% of the respondents. Chi-square analysis of hygiene scores with age, education and caste of the girls showed a significant association (Table 5). Girls having poor hygiene were found in lower standards, i.e. 8th and 9th classes (14.8% below high school level). Caste was highly significant with the hygiene scores and thus more percentage of respondents who had poor scores came from a background of OBC category.

Table 4 Hygiene maintained during menstrual periods

Aspects of hygiene	Frequency	Percentage
Bathing during periods		
Daily	149	62.0
Twice in a day	71	29.5
No bath	20	8.3
Changing clothes		
Daily	129	53.7
Twice in a day	89	37.0
Do not change	22	9.1
Washing undergarments		
Daily	73	30.4
Twice in a day	86	35.8
As per need	81	33.7
Drying place for undergarments		
In sun	76	31.2
Inside house	8	3.3
Secluded place	98	40.8
In bathroom	23	9.5
Cover while drying	73	30.4
Type of absorbent used		
Home-made cloth pads/cotton	163	68.0
Readymade napkins	122	32.0
Change of napkins		
Once	35	14.5
Twice or more	177	73.7
As per need	24	11.2
Reuse of napkins		
Yes	53	22.1

Table 5 Association of hygiene scores and socio-demographic variables

Variables	Levels	Scores on hygiene maintained during menstruation			Chi-square association
		Low N (%)	Average N (%)	High N (%)	
Age group	12 – 14 years	5 (7.9)	45 (71.4)	13 (20.6)	χ^2 cal = 8.39, df = 4 NS
	15 – 16 years	13 (11.8)	72 (65.4)	25 (22.7)	
	17 – 18 years	3 (4.4)	57 (85.0)	7 (10.4)	
Education	Below high school	12 (14.8)	49 (60.4)	20 (24.6)	χ^2 cal = 10.14*, df = 2
	High school	3 (5.3)	43 (76.7)	10 (17.8)	
	Above high school	6 (5.8)	82 (79.6)	15 (14.5)	
Caste	General	-	35 (66.0)	18 (33.9)	χ^2 cal = 19.87**, df = 4
	SC	7 (7.5)	65 (69.8)	21 (22.5)	
	OBC	14 (14.8)	70 (74.4)	10 (10.6)	

* Significant at 0.05 level
** Significant at 0.001 level

Figure 1 presents the first reactions of respondents at the time of menarche and it can be seen that a major portion of the sample (55%) were nervous, scared (35%) and were uncomfortable (23.3%) some even cried (16.6%) and thought

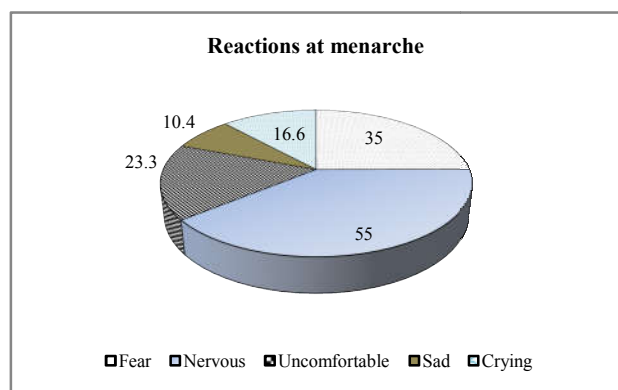


Figure 1 First reactions of respondents at the time of menarche

that they might have been hurt, as was narrated by a 14 year old student, “*mujhe kya ho gaya tha pata nahi, bus khoon aa raha tha. Mujhe laga ki badi bimari ho gayi hai*” (I don’t know what had happened to me, only blood was coming out. I thought I had some big disease). About 90% of the girls had religious restrictions which mainly consisted of not touching idols or performing *puja* during periods (Table 6). It was disheartening to see that around 39% of the sample were segregated and were not allowed to touch anybody or anything in their houses during their menstrual periods. About 40% of the girls were not allowed to enter kitchen and were refrained from kitchen work.

Table 6 Restrictions imposed on respondents during menstrual periods

Restrictions	Frequency	Percentage
Religious	217	90.4
Household	38	15.8
Refrain from kitchen work	96	40.0
Segregated	93	38.7
Washing hair/bath	54	22.5

DISCUSSION

Menstruation is one of the significant and important events in a girl’s life. In the present study, majority of the respondents attained menarche between 13 to 16 years and the mean age was found to be 13.27 years. This is consistent with the findings of other studies^{[7][8][6]}. A lot of secrecy is maintained in discussing topics, such as menstruation, in many cultures and awareness regarding menarche before its onset is generally low in most of the societies. Less than a quarter of respondents were aware about menarche prior to its occurrence in the present research. Many studies had similar findings where adolescent girls hardly knew about the phenomenon of menstruation before it actually happened^{[2][7][9]}. This lack of information can be attributed to the veil of secrecy that surrounds menarche and unwillingness of the caregivers (especially mothers) to talk about such changes with their daughters.

Significant association between age, education and family type and awareness of menstruation was found in the present study. This meant that girls who were in the secondary level of education and above were better informed about menarche as compared to the younger age group girls who were in middle level of education (8th and 9th classes). Similar results were obtained by other studies^{[7][9]} where the education seemed to be closely associated with awareness of menarche.

With the commencement of menarche lot of problems arises which may disturb the health outcome of girls. The most common complaint by respondents during menstruation was pain in lower abdomen and sadness and this is validated by the findings of various researches^{[2][11][12][13]}.

Safe hygienic practices during menstruation are one of the important determinants of reproductive morbidity in women. The kind of absorbent material used during menstruation is of prime concern as reusing them would result in infections. The present study revealed that although most of the sample used home-made cloth pads, the practice of reusing them was found in less than a quarter of them. The findings are in consistent with other studies^{[4][13]} who found that usage of old clothes as pads were a common practice. Another significant practice of

drying undergarments during periods by covering them was identified in the study. This practice is common in many areas and may be considered as a health hazard for girls as the clothes may not be completely dry and thus poses a risk of fungal infection due to use of damp panties. Tarhane⁽¹⁵⁾ conducted a study in which it was reported that majority of the girls dried their clothes in house corners.

Beliefs and restrictions during menstruation seem to be present in the Indian set-up where women are restricted in various areas of household work^{[16][17]}. Some of the common restrictions, as revealed by a recent study, during menstruation were food related, or cooking, touching people, exercise, playing and household work^[18]. Similar findings have been reported in the present study where the restrictions were mainly related to religious, household and segregation from others. These age-old restrictions are coming from generations and without any scientific reasons are being followed which inculcate a feeling of negativity for being a woman. It is because of religious and social traditions or taboos that menstruation may be looked on as more than just a physiological phenomenon^[19]. Fear and nervousness were the common reactions reported by the respondents at the time of menarche. These kinds of reactions are evidences of neglect in terms of knowledge which the girls were supposed to get from their mothers after which they would not have reacted in the above mentioned way of shock and surprise. Similar kinds of reactions especially, fear was reported by majority of the respondents in other studies^{[14][20]}.

CONCLUSION

The study reported less awareness about menstruation and prevalence of various restrictive practices among rural adolescent girls. Prevalence of usage of home-made absorbent material during periods was common. The study highlights the need for educating girls in coordination with schools and mothers. It also points towards the need for reproductive health information to be provided and emphasized to the adolescent girls as well as their mothers so that they could discuss sensitive issues with their daughters. This hints at a formation of a comprehensive family life education system that could be given to the families.

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