

A Cross-Sectional Multisite Study Of The Prevalence Of Psycho-Social Behavior Changes Among School-Age Tribal Girls During Menstruation Around Tamilnadu, India

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Abstract

Menarche marks the transition from girlhood to womanhood in females. Isolation and restrictions during menstruation may lead to negative feelings in girls. The study was conducted to find out the psychosocial behaviour changes among school-age tribal girls during menarche. It is a descriptive cross-sectional study conducted in several tribal schools in the hills surrounding the state of Tamil Nadu. Menarche marks the transition from girlhood to womanhood in females. Isolation and restrictions during menstruation may lead to negative feelings in girls. The study was conducted to find out the psychosocial behaviour changes among school-age tribal girls during menarche. Using the Menstrual Distress Questionnaire, the behavioural and emotional responses of adolescent girls were analysed. This study included 507 teenage girls between the ages of 13 and 18 years old. The subjects' average age was 15.9 years. During the menstrual study, participants exhibited a variety of behavioural modifications. In the study, approximately 33.9% ($p < 0.05$) of participants exhibited moderate behavioural changes in poor school or work performance, while 8% ($p < 0.05$) and 7.4% ($p < 0.05$) of subjects exhibited strongly and 7.4% of subjects severely, respectively. The prevalence of psychosocial behaviour changes among school-aged tribal girls during menstruation requires early intervention and education, according to a study. This could result in a change in how families handle menstruation, which would make their lives easier and improve their quality of life.

Keywords: Tribal, School Students, Mensuration, Psycho-social Behaviour,

INTRODUCTION:

Boys and girls develop a new sense of self during their adolescence. This is a difficult time because it is full of anxiety and new feelings, and it is when girls transition from being girls to becoming women [1]. Menstruation remains a deeply stigmatised issue in many cultures all over the world, and its reality is sometimes kept from girls till the time comes for them to go through it. The body's physical size and shape alter as a consequence of the production of sex hormones. The human body goes through a general growth spurt (the "tall spurt") during adolescence in which the individual grows relatively quickly for a short period of time [2]. These alterations are also associated with behavioural changes. In females, this transitional period is marked by the onset of menarche. In the Indian cultural milieu, society is intertwined with traditions, myths, and misconceptions, especially concerning menstruation and issues related [3]. [4]. Adolescent maturation and transition into adulthood is a significant human phenomenon not only in Indian society but also in societies all over the world. People have a very conservative way of thinking in a society where cultural, religious, and super positional constraints are strong. Girls may experience negative emotions as a result of isolation and restrictions during menstruation. Adolescent girls face significant psychosocial problems during menstruation due to lack of access to clean materials, lack of privacy for changing pads, lack of disposal facilities for sanitary napkins, socio-cultural restrictions, less psychological and social support, poor knowledge about managing pain during menstruation, lack of counselling services, and inadequate information on menstruation and its management, lack of preparation before menarche, menstrual distress, and burden. Previous research indicates that adolescent girls aged 15 to 19 feel ill, depressed, irritable, and miss school

during menstruation. [5]. They were unable to concentrate and pay attention during the school day. Teenage girls were irritable, depressed, anxious, and sad before menstruation; these symptoms worsened during menstruation. [6]. The majority of girls were terrified of the onset of menarche. Worry and sadness were also expressed. [7]. Few university students reported suicidal thoughts [8]. Premenstrual symptoms, depression, irritability, mood swings, a feeling of losing control, and retention were significantly correlated with students who had suicidal thoughts in comparison to women who did not have suicidal thoughts. There appears to be a connection between menstruation and suicidal behaviour. [9]. Before menstruation, adolescents most frequently reported experiencing fatigue, anger, headaches, irritability, fear, and depression. [10]. Few studies reported psychosocial issues such as premenstrual symptoms, sleep disturbances, prolonged bed rest, inability to concentrate on studies, depression, irritability, headaches, malaise, fear, anger, tiredness, foul odour, and anxiety, as well as disruptions in daily routine and missed social activity. [10] [11] [12] [13] [14] [15]. Young women experiencing premenstrual symptoms reported sleeplessness, irritability, exhaustion, headaches, and sleep disturbances. [16] [17]. Many girls were unable to complete home tasks and participate in sports. In addition, dysmenorrhea and menorrhagia increased the likelihood that rural girls would miss school [18]. Sexual activity is a common cause of numerous menstrual issues in adolescents [19]. Teenage girls are relatively unlikely to seek medical assistance for menstrual issues (dysmenorrhea) [20]. Dysmenorrhea and irregular periods were linked to eating habits (like eating junk food or not eating enough), and premenstrual symptoms were linked to not getting enough exercise [21], being overweight, not eating enough, and eating junk food [22].

The duration and regularity of the menstrual cycle were determined by sociodemographic profile, psychosocial stress, disrupted sleep, strenuous physical activity, and food. [23], [24], [25]. According to multiple studies, the best predictor of menstrual abnormalities is higher stress during menstruation. Menstrual abnormalities are sometimes caused by an unhealthy lifestyle. Menstrual sleep disturbances are connected with increased stress [26]. Teenagers' misconceptions and unsanitary practises during menstruation are caused by a lack of education, insufficient information, a lack of awareness about menstrual difficulties, marginalisation, and shame. Teenage girls in low- and middle-income countries had trouble making friends, self-medicating, and didn't know how to handle their periods well [27].

The majority of studies found that girls were prohibited from participating in school and physical activities such as play, travelling, attending social gatherings, functions, festivals, marriages, worship, food restrictions, entering a temple, kitchen, others' homes, performing household duties, bathing, attending school, touching people and using pooja materials. Activity restrictions vary by culture and geography. In certain southern Indian communities, girls were not even permitted to enter their own homes during menstruation; instead, they were required to sit and relax at the house's entrance. Periods were viewed as unclean and polluted by society. There is a correlation between educational attainment, activity limits, and menstrual practises [28] [29] [30] [31] [32] [33].

Sociocultural practises around menstruation are contingent upon girls' education, attitude, familial environment, culture, and belief [34]. Teenage girls in slum areas face multiple restrictions (such as staying out of the house and separating from family, not touching anyone), not being aware of menarche prior to menstruation, not knowing the cause of bleeding and organs where bleeding occurs, disposing of pads in an open area, and using a shared toilet for changing pads [35]. Prior to puberty, both urban and rural girls were aware of menstruation [36]. In urban regions, the mother was the primary source of menstrual knowledge, but in rural areas, the teacher was the primary source. Regarding the beginning of menarche, urban girls typically reach puberty earlier than rural girls. [37] [38]. Premenstrual symptoms were more prevalent in urban than rural girls, whereas rural girls were more likely to miss school owing to menstrual issues. Urban females menstrual hygiene behaviours were superior to those of their rural counterparts. More urban girls than rural girls use menstrual pads [39]. In terms of awareness of menarche and menstruation, kinds of absorbent utilised, mode of disposal, and cleansing of external genitalia, rural and urban girls differ. The majority of girls in rural and urban areas do not feel the need to seek medical assistance for monthly difficulties and do not receive menstrual hygiene counselling from specialists. However, the majority of them were counselled about menstrual cleanliness by their mothers. The majority of them felt anxious and depressed about their bleeding. [40]

In India, there were two systematic reviews and meta-analyses on adolescent girls' menstrual hygiene. Van et al. (2016) [41] conducted an evaluation of 138 studies published between 2000 and 2015. Outcome measures included menarche awareness, absorbent type, disposal, menstrual hygiene, restrictions, and school absences. Half of them were aware of menarche, many faced restrictions and improper disposal of absorbents, one-fourth were absent from school during their periods, one-third had facilities in schools to change pads, and half of them had toilets at home to change absorbents. During their menses, rural girls faced a lack of water, the absence of a toilet, a lack of privacy, and restrictions on bathing. A systematic review revealed that the majority of studies were surveys, while only a minority employed mixed methodologies and experimental designs. Half of the studies were conducted in schools.

A systematic assessment of 183 out of 1125 papers on menstrual hygiene preparedness in Indian schools published from inception to 2019. Less than half were aware of menarche, teachers were a less frequent source of information, and only half of the schools had separate restrooms for girls [42]. Poor MHM is connected with reproductive tract infections, according to a second systematic study of the impact of menstrual hygiene management on health and psychosocial outcomes. There is substantial evidence that educational interventions promote MHM practises and diminish societal

limitations. [43]. The study was conducted to find out the psychosocial behavior changes among school-age tribal girls during menstruation.

METHODOLOGY

Study primer:

It is a descriptive cross-sectional multisite study conducted in several tribal schools in the hills surrounding the state of Tamil Nadu, including the Kalvarayan Hills, Jawadhu Hills, Kolli Hills, Perumparai Hills, Megamallai Hills, Ercaud Hills, Kodaikanal Hills, and Vazhavanthi Nadu Hills. All the samples from the school going girls will be collected conveniently from the awareness program conducted through the school camps located in tribal areas. . The study received approval from the institution's ethics committee.

Sampling:

507 participants will be included in this study according through population proportional manner based on district wise population.

Sample size determined by using formula and 456 was adequate to conduct the study.

$$Z^2 * (p) * (1-p)$$

ss =

$$c^2$$

Where :

Z = Z value (e.g. 1.96 for 95% confidence level)

p = percentage picking a choice, expressed as decimal

(.5 used for sample size needed)

c = confidence interval, expressed as decimal (e.g., .04 = ±4)

The adolescents are 13–18-year-old tribal girls who are enrolled in school. 507 female high school students were selected for this study. Using the Menstrual Distress Questionnaire, the behavioural and emotional responses of adolescent girls were analysed.

Data collection:

The MDQ items corresponded to the premenstrual, menstrual, and postmenstrual phases. In this study, only the behavioural change domain of the Menstrual Distress Questionnaire was considered. The domains of behavioural change include poor school or work performance; napping; staying in bed; remaining at home; avoiding social activities; and decreased productivity. Each item had five options categorised on a 0–4 rating scale. It allows participants to describe their experience and rate the intensity of their experience as follows: no experience of symptoms, Present: mild, present moderate, present strong, present severe Respondents and teachers provided prior written consent for the study The data was recorded and documented.

Statistical analysis:

Statistical analysis of the data was done with SPSS version 20.0 (IBM Corp) software. The mean and standard deviation was charted in the software and student t test was employed. The chi square tests were employed for ranking and scores. A p value of less than 0.05 was considered significant.

RESULT ANALYSIS:

This study included 507 teenage girls between the ages of 13 and 18 years old. The subjects' average age was 15.9 years. During the menstrual study, participants exhibited a variety of behavioural modifications. In the study, approximately 33.9% (p <0.05) of participants exhibited moderate behavioural changes in poor school or work performance, while 8% (p 0.05) and 7.4% (p 0.05) of subjects exhibited strongly and 7.4% of subjects severely, respectively. Consider that. Take naps and stay at home; approximately 15.9% (p< 0.05) of subjects present mildly, whereas 9.8% (p 0.05) of subjects present moderately, and 0.9% (p <0.05) of subjects present severely. Approximately 68.9% (p <0.05) of subjects remained at home during menstruation. Subjects reported mildly 49.1 percent (p< 0.05), moderately 8.8 percent (p 0.05), strongly 4.5 percent (p 0.01), and severely 6.3%. 73.2 percent of respondents (p 0.01) avoided social activities during menstruation. In the case of decreased efficiency, approximately 82.1% (p 0.01) of cases are reported.

Domain	Symptoms	MDQ scoring			Significance		
		0	1	2	3	4	
Behaviour change	I. Poor school or work performance	100 (19.7%)	156 (30.7%)	172 (33.9%)	41 (8%)	38 (7.4%)	P<0.05
	II. Take naps, stay in bed	371 (73.1%)	81 (15.9%)	50 (9.8%)	5 (0.9%)	0	P<0.05
	III. Stay at home	158	249	45	23	32	P<0.05

		(31.1%)	(49.1%)	(8.8%)	(4.5%)	(6.3%)	
	IV. Avoid social activities	136 (26.8%)	226 (44.5%)	81 (15.9%)	32 (6.3%)	32 (6.3%)	P<0.05
	V. Decreased efficiency	91(17.9%)	362 (71.4%)	45 (8.8%)	5 (0.9%)	5 (0.9%)	P<0.05

DISCUSSION:

In the present study, changes in psycho-social behaviour among school-age tribal girls reported various changes during menstruation. These changes were caused not only by the menstruation period but also by other factors such as cultural practice, place of residence, and so on. Several factors are responsible for this, the most important being social prohibition. The negative attitude of parents and teachers toward openly discussing menstruation-related issues had blocked adolescent girls' access to the right kind of information, making other sources of information important for their knowledge, resulting in the spread of inaccurate and partial information.

Around 73.2% of subjects reported avoiding social activities during menstruation. It may be due to cultural practice. Nowadays, in urban areas of Tamil Nadu, these practises are omitted, but rural areas still follow these practices, particularly in tribal areas.

Several other studies have also reported restrictions on daily activities, such as not being allowed to take a bath, change clothes, comb hair, or enter holy places. Apart from these, dietary restrictions like taboo on consumption of foods like rice, curd, milk, lassi, potato, onion, sugarcane etc. during the menstrual period are also imposed. [1]. The restriction of physical activities could be due to the fact that physical activities such as running and manual labour result in increased blood loss. To prevent excessive blood loss, girls may be subjected to restrictions. However, there is no scientific basis for restrictions on touching others, playing games, entering temples and other people's homes, and attending social functions. Another reason may be to avoid discomfort in such locations and activities where these restrictions may be implemented. However, these restrictions have some advantages in terms of preventing menstrual discomfort. However, in the majority of places, these restrictions were blindly enforced on adolescents. These restrictions may be suggested but cannot be enforced. There are a few adolescent girls [10]. Along with cultural constructs that lead to the formation of a certain preconception, the reaction to menstruation also depends upon awareness and knowledge about the subject. Several behavioural changes were reported during menstruation by study subjects. This could be because less than 40% of the subjects thought it to be a natural phenomenon. More than 7% of the subjects related menstruation to a curse. This showed that there are substantial lacunae in the knowledge of menstruation among adolescent girls. A study on menstruation was conducted by a team of researchers from Anna University in which 12–14-year-old adolescent girls were assessed for their knowledge of menstruation. Several research studies have also revealed this gap and shown that there is a low level of awareness about menstruation among girls when they first experience it. The researchers also found that most of the subjects had misconceptions about menstruation, despite the fact that they had experienced it [44] [45][46]

In India, across cultures, the majority of families impose restrictions during menstruation. According to a number of studies, adolescent girls are prohibited from engaging in certain physical activities, including housework, attending social functions, worshipping, touching people and pooja materials, entering temples, kitchens, playing outside, travelling, and bathing. During menstruation, the majority of people observe some form of taboo, with half avoiding holy places and religious events and a small minority prohibited from doing kitchen work [44]. Some peculiar misconceptions were widely prevalent, including that placing a broomstick, neem leaves, or footwear around a menstruating girl's wound would prevent the entry of evil spirits; that excessive sweet intake would cause heavy bleeding; that menstrual blood was dirty; and that sleeping on a bed during menstruation was forbidden [47] [48] [49]. Vannucinni et al have described the tool of distress questionnaire which is validated and used in our study.[50]. There are other modes of therapy like yoga[51] in depression which needs to be promoted in countries like us. In order to prevent reproductive tract infections, menstrual hygiene is of paramount importance (RTI). In India, inadequate menstrual hygiene is one of the leading causes of the high prevalence of RTIs among adolescents, and their sexual health needs are largely unmet. The Indian government has announced a new programme to provide rural adolescent girls with sanitary napkins. Through ICMR projects, Medical Camps, Primary Health Centres, and Anganwadi, the government is raising awareness and teaching people about menstruation and its myths and facts.

CONCLUSION:

The prevalence of psychosocial behaviour changes among school-aged tribal girls during menstruation requires early intervention and education, according to the study. Without help, teenagers with abnormal psychosocial behaviour may develop, among other things, mood disorders, anxiety disorders, or problems controlling their impulses. Knowledge of the cultural structure of the community and appropriate education will aid in the improvement of menstrual knowledge. This could result in a change in how families handle menstruation, which would make their lives easier and improve their quality of life. Based on the findings of our study, we recommend that school administrators hold at least one menstruation-related session per week with parents. They can invite different experts at different times to address the crucial issues. Teachers should not only talk about certain issues in class but also tell students where they can find accurate information from reliable sources.

CONFLICT OF INTEREST:

The authors disclose that there is no conflict of interest.

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Ethical approval yes

Contributorship – SE- concept and communication. SE – design, SV – concept and data collection, analyses help. H, SH – data collection

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