

Premenarche Information and Dysmenorrhea in Young Girls

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Abstract

Background: Many girls do not know anything about menstruation before it starts, so find it difficult to cope up. Also disorders related to menstruation are common. Prevalence of dysmenorrhoea has been reported to be around 80%. So this combination of lack of awareness and possibilities of disorders create many problems.

Objective: Present pilot study was carried out to know relation of premenarche awareness of menstruation and reporting of dysmenorrhoea in young girls.

Maternal methods: Present prospective study was carried out in obstetrics gynecology of a rural medical institute in Central, India. Two hundred eighty two girls of nearby schools with easy accessibility from medical institute, willingness of school head masters, parents and girls and also 100 medical and nursing students who gave consent to be part of the study, were interviewed with predesigned questionnaire in local language.

Results: Of the 282 school girls, 171 (60.63%) did not have any pre menarche information. Overall 66% of those who had information from mothers, 72% of those who had from school teachers 100% who learned had from books, etc. and 75% of those who had information from friends, reported dysmenorrhoea. Of 100 medical/nursing students, 86% had premenarche information. From upper economic class 8 of 9 had information from mothers. There was no one from lower economic class, but of low middle class only 2 of 12 got information from mothers who were matriculate. Over 50% girls with no information reported dysmenorrhoea, 63.4% of those who had information from mothers, 67% of those from teachers and all 100% of those who learned from books or friends.

Conclusion: Many girls lacked awareness about menstruation before menarche. Mothers' education rather than economic status, influenced greatly, whether girls received or not received information prior to menarche. Reporting of dysmenorrhoea was affected, whether mothers provided information or friends or it was self-learning. May be schools are best places for providing right information. However school teachers need to know what is to be passed on.

Keywords: Dysmenorrhoea; Premenarche awareness; Person; Education; Economic status

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Background

The onset of menstruation or menarche is the hallmark of female reproductive development. Menstruation, a key function of the reproductive system, is fundamental to the reproductive health. Disorders related to menstruation are common and 75% girls experience some problem associated with menstruation [1].

Delayed, irregular, painful and/or heavy menstrual bleeding are leading reasons for visits of adolescents to health facilities. Dysmenorrhoea is the leading complaint. Some report that 9 out of 10 women suffer from period pain, sometimes crippling [2]. However most of the girls lack awareness about menarche and related issues [3]. For an adolescent, menarche is a significant physical and psychological event. She feels uncomfortable and

the accompanying pain can be very embarrassing and disturbing. In spite of an overall high prevalence, painful menstruation, dysmenorrhoea continues to be paid scant attention. Dysmenorrhoea, painful menstruation, is a common chronic condition that affects a wide range of young women, capable of reducing their quality of life. It indeed has the ability to disrupt a peaceful flow in rhythm and pattern of their executing daily activities. Many studies have shown that the level of knowledge about dysmenorrhoea is unsatisfactory. Adolescents in many countries often lack basic information about puberty, menarche and reproductive physiology. Even in recent past, research in five African countries revealed that, average, 66% of respondents were aware of menstruation before they experienced menarche [4]. Young girls themselves have psychological and social constraints about seeking help. They have many questions and concerns. Especially in rural communities, dysmenorrhoea and other such problems continue to be shrouded in shame and secrecy. Some still regard menstruation, a social taboo. The fears and grievances related to menstruation go unvoiced, unanswered and adolescents suffer. In a study it was revealed that girls were informed of the menarche - their first menstrual cycle, one of approximately 500 over the course of a lifetime and were told to expect "some discomfort", but given no hint that for some this pain would go beyond mild and descend into pretty damn awful [2]. Premenstrual preparation is of great importance for the girls to have a favourable attitude and positive practices towards menstruation [5]. Approximately 52% of the female population (26% of the global population) is of reproductive age, and most of them menstruate each month [6]. However, both communities and systems players have largely overlooked menstrual health.

Objective

Present pilot study was carried out to know the relationship of premenarche awareness about menstruation, and reporting of dysmenorrhea in young girls.

Materials and Methods

Present prospective study was carried out in the department of obstetrics and gynecology of a rural medical institute in central, India. Sample size was looked into and tool for collecting information was developed looking at the objectives. Girls of 4 schools near the medical institute, with accessibility from the institute, willingness of school head masters, parents and girls and also one hundred medical and nursing students who gave consent to be part of the study were interviewed with the help of a predesigned questionnaire in local language. Girls were not given questionnaire to fill. The interviewer recorded the answers on the questionnaire. The interviews were conducted during school hours with mutually convenient time and with privacy in the school only. Girls were asked about economic status [7], education of the mother the person who provided information. Details were asked to get needed information.

Results

Out of 282 school girls, 111 school girls had premenarche information about menstruation. Out of them 50 girls (45%)

were provided information by their mothers, 40 (36%) by friends and 18 (16.21%) by teachers. Over all dysmenorrhoea was reported by 79 out of these 111 (71.17%). Of the 171 girls with no premenarche information 69 % reported dysmenorrhoea, 66% of those who had information from mothers, 72% of those who had information from school teachers, 100% who learned from books, etc. and 75% of those who had information from friends (**Table 1**). Of the 78 girls from upper and upper-middle class, only 17 (21.7%) did not have prior knowledge compared to 10 out of 12 (83%) girls from the lower-middle class. Of 61 students of upper and lower-middle class with prior knowledge, 53 (86.88%) had received information from their mothers and only 2 (3.2%) from teachers (**Table 2**). Of 3 girls from upper economic class, two girls' mothers were illiterate or had primary school education and gave no information to their daughters prior to menarche. In lower economic class, of 97 girls, 73 (75.25%) had less educated mothers, only one (1.7%) of them gave premenarche information to her daughter and of the 23 girls with literate mothers, 12(52.17%) gave information to their daughters prior to menarche (**Table 2**). Amongst medical/nursing students there was no one from lower economic class. Overall 86% of the girls had premenarche information from their mothers and 3% from teachers in schools. Of 9 girls of upper class, with literate mothers, 8 (88.8%) had premenarche information from their mothers and of 12 girls of lower-middle class, 9 (75%) mothers had little literacy but did not give any information to their daughters and 3(25%) had literate mothers of whom 2 gave prior information to their daughters (**Table 3**). In medical nursing students also with no prior knowledge, fewer girls reported dysmenorrhea. It was more often when books or friends were the source of information (**Table 4**).

Discussion

Girls' knowledge and understanding of menstrual health is important to ensure their well-being and healthy transition into adulthood. In many parts of the world, girls do not know what menstruation is prior to experiencing menarche [8]. For a young adolescent, menarche is a significant physical and psychological event as it symbolizes her entrance to reproductive life. Many questions and concerns arise regarding the menstrual cycle with which the teenagers are often uncomfortable and may not know whom to turn to for help for the problems they face [8]. For an unprepared girl, the onset of menstruation and the accompanying pain can be a very embarrassing and disturbing situation. In India, especially, dysmenorrhea and other problems related to the menstruation continue to be shrouded in shame and secrecy. Communities regard menstruation as a social taboo. The fears and grievances related to menstruation including dysmenorrhea faced by adolescents go unvoiced and unanswered.

In the present study, information was collected in relation to girls' knowledge about menstruation prior to menarche, source of the information and relationship to reporting of dysmenorrhea. It is surprising and yet not surprising that around 61% school girls did not have any premenarche information about menstruation, 70% of the girls of the lower economic class and 63% of the girls of the upper-middle economic class ($P=0.6$ insignificant difference).

Table 1 Economic status, mothers education and prior information about menarche among school girls.

SES	MOTHERS' EDUCATION	PREMENARCHE INFORMATION						TOTAL
		NO	YES	MOTHERS	Sch Te*	SELF	FRIENDS	
UPPER	Illiterate	1	0	0	0	0	0	1
	Non-matric	1	0	0	0	0	0	1
	Matriculate	0	1	1	0	0	0	1
Total		2	1	1	0	0	0	3
UPP-MID	Illiterate	4	1	0	1	0	0	5
	Non-matric	3	1	0	1	0	0	4
	Matric	0	3	3	0	0	0	3
	Grad & >	0	6	5	0	0	1	6
Total		7	11	8	2	0	1	18
MIDDLE	Illiterate	20	10	1	3	0	6	30
	Non-matric	16	14	2	1	3	8	30
	Matric	6	7	3	2	0	2	13
	Grad & >	2	10	9	1	0	0	12
Total		44	41	15	7	3	16	85
MID-LOW	Illiterate	20	5	0	1	0	4	25
	Non-matric	25	9	1	1	0	7	34
	Matric	5	11	8	0	0	3	16
	Grad & >	0	5	4	1	0	0	5
Total		50	30	13	3	0	14	80
LOWER	Illiterate	26	4	0	0	0	4	30
	Non-matric	35	8	1	5	0	2	43
	Matric	7	15	11	1	0	3	22
	Grad & >	0	1	1	0	0	0	1
Total		68	28	13	6	0	9	96
GRAND TOTAL		171	111	50	18	3	40	282

*Sch Te.: School Teacher

Table 2 Age, prior information about menarche and presence or absence of dysmenorrhoea among school girls with economic status.

SES	AGE (YRS)	PRIOR INFORMATION ABOUT MENARCHE										TOTAL
		No prior knowledge		Mother		School teachers		Self/Books		Friends		
		DP*	DA*	DP	DA	DP	DA	DP	DA	DP	DA	
UPPER	10-15	1	0	0	0	0	0	0	0	0	0	1
	16-19	1	0	1	0	0	0	0	0	0	0	2
Total		2	0	1	0	0	0	0	0	0	0	3
UPP-MID	10-15	1	0	0	4	0	0	0	0	0	0	5
	16-19	5	1	4	0	2	0	0	0	0	0	12
Total		6	1	4	4	2	0	0	0	0	0	17
MIDDLE	10-15	25	13	6	7	4	2	3	0	11	3	74
	16-19	6	0	2	0	0	1	0	0	2	0	11
Total		31	13	8	7	4	3	3	0	13	3	85
MID-LOW	10-15	29	12	7	1	2	0	0	0	6	4	61
	16-19	7	2	5	0	1	0	0	0	4	0	19
Total		36	14	12	1	3	0	0	0	10	4	80
LOWER	10-15	27	21	5	4	4	2	0	0	7	3	73
	16-19	16	4	3	1	0	0	0	0	0	0	24
Total		43	25	8	5	4	2	0	0	7	3	97
GRAND TOTAL		118	53	33	17	13	5	3	0	30	10	282
Total		171		50		18		3		40		
DP no & %		118 (69%)		33 (66%)		13 (72%)		3 (100%)		30 (75%)		

DP: Dysmenorrhoea Present; *DA*: Dysmenorrhoea Absent

Table 3 Economic status, mother’s education and prior information about menarche among medical and nursing students.

SES	MOTHERS EDUCATION	PRIOR INFORMATION ABOUT MENARCHE						TOTAL
		No	Yes	MOTHER	TEACHER			
Upper	Matric	1	1	1	0	0	0	2
	Grad & >	0	7	7	0	0	0	7
Total		1	8	8	0	0	0	9
Upp-mid	Non-matric	1	0	0	0	0	0	1
	Matric	4	11	10	0	0	1	15
	Grad & >	1	15	14	0	1	0	16
Total		6	26	24	0	1	1	32
Middle	Non-matric	7	3	3	0	0	0	10
	Matric	2	20	17	0	0	3	22
	Grad & >	2	13	10	2	0	1	15
Total		11	36	30	2	0	4	47
Lower	Non-matric	9	0	0	0	0	0	9
	Matric	1	2	2	0	0	0	3
Total		10	2	2	0	0	0	12
GRAND TOTAL		28	72	64	2	1	5	100

Table 4 AGE, presence or absence of prior information about menarche among and dysmenorrea medical and nursing students by economic status.

SES	AGE (YRS)	PRIOR INFORMATION ABOUT MENARCHE										TOTAL
		No prior knowledge		Mother		School teachers		Self/Books		Friends		
		DP	DA	DP	DA	DP	DA	DP	DA	DP	DA	
UPPER	<18-18	0	1	0	0	0	0	0	0	0	0	1
	19-20	0	0	1	1	0	0	0	0	0	0	2
	21-22	0	0	5	1	0	1	0	0	0	0	7
Total		0	1	6	1	0	1	0	0	0	0	9
UPP-MID	<18-18	1	1	2	4	0	0	0	0	0	0	8
	19-20	1	1	3	5	0	0	0	0	0	0	10
	21-22	2	0	8	1	0	0	1	0	1	0	12
	23-24	0	0	0	1	0	0	0	0	0	0	1
Total		4	2	13	11	0	0	1	0	1	0	32
MIDDLE	<18-18	1	1	0	4	0	0	0	0	2	0	8
	19-20	2	2	8	6	0	0	0	0	0	0	18
	21-22	1	1	6	0	2	0	0	0	2	0	12
	23-24	2	1	5	0	0	0	0	0	0	0	8
Total		6	5	19	10	2	0	0	0	4	0	46
LOWER	19-20	3	3	1	0	0	0	0	0	0	0	7
	21-22	0	3	1	0	0	0	0	0	0	0	4
	23-24	1	0	0	0	0	0	0	0	0	0	1
Total		4	6	2	0	0	0	0	0	0	0	12
LOWER	*There was no girl in the lower socio-economic status group											
GRAND TOTAL		14	14	40	23	2	1	1	0	5	0	100
DP no & %		28 (50%)		63 (63.5%)		3 (66.66%)		1 (100%)		5 (100%)		

DP: Dysmenorrhoea Present; DA: Dysmenorrhoea Absent

Even among medical and nursing students 28% of the girls had no prior information but in these girls the economic class divide was evident. Around 22% of the girls from the middle class did not have prior knowledge compared to 83% of the students from the lower-middle class (p=0.0009 significant). Adewunmi [2] reported no prior knowledge of menarche in 16.5% of whites and 9.9% of all blacks. In the present analysis around 70 %, girls did not have premenarche knowledge. Women in the lower socio-economic

strata are likely to be less educated, have less awareness with more inhibitions about discussing such a subject with their daughters in their struggle for survival. Among those school girls who had prior information 45% were given knowledge by their mothers, 36% from friends and 16% received information from teachers in schools. Reporting of dysmenorrhoea in those girls who had no pre menarche information, was 69% and with information it was 71%, 66% of those where mothers were

the source of information, 72% amongst, those where school teachers had informed, 75% when friends passed on information and 100% when it was, self-learning through books.

Among the medical and nursing students 86% of the girls had premenarche information from their mothers and 3% from school teachers. Mothers who were educated upto 10th standard or higher were more likely to give information to their daughters. In lower class 75.25% mothers were either illiterate or had education only upto 4th class. Of whom only 1.7% had given premenarche information to their daughters and of the 23.71% literate mothers, 52.17% gave premenarche information to their daughters. Amongst medical/nursing students, all mothers, in the upper class were literate, 88.88% girls received premenarche information from their mothers and in the lower-middle class, there were 75% mothers with little literacy, none of the girls received premenarche information compared to 66.66% of girls from lower class who received information from their literate mothers. Around 36% of the girls were given information by their peer groups. Overall 50% of girls with prior information reported dysmenorrhoea and 67% with no prior information reported dysmenorrhoea. Further those who had information from mothers 63% and those who received from school teachers 66.66% from friends or books, when self-learning was attempted. 100%. Though numbers are small, there is place for potential flaw in this process and an inherent danger of wrong beliefs and information. In many countries and cultures, subject of menstruation is a taboo, rarely discussed. As a result, girls experience shame and fear that interfere with their ability to manage menstrual health and can impact their overall well-being and working. In a study it was revealed that education on physiological processes of the body was lacking and adolescents were afraid to face menstruation [9]. Debnath et al. [10] also reported significantly higher number (52%) of urban women had knowledge about menstruation before menarche and exhibited much better awareness, which seems to be related to a better socio-economic condition and higher level of formal education. General awareness about menstruation was considerably poor among participants and the practices of menstrual hygiene were far from satisfactory among respondents particularly in rural areas. Researchers at Oxford University recently found that women with painful periods showed increased sensitivity to pain (and lower levels of cortisol, the hormone released by the body in times of stress) throughout their cycles - not just when they are menstruating [2]. In general, parents and teachers are health educators regarding reproductive health issues for girls in order to improve their health attitudes and practices [11,12]. It has also been reported that adolescents in the Eastern Mediterranean Region also have unmet needs and inadequate preparation regarding their reproductive health concerns [13]. This inadequacy was attributed to societal reluctance to discuss matters of sexual nature, taboos and cultural and religious issues [14]. The role of the school in preparing girls for menstruation was unnoticed in this study, and it was recommended to occupy girls with reproductive health scientific information through planned curricula and by well-trained teachers since the responsibility of providing such information could not be restricted only to

mothers [5]. Qualitative research studies emphasized that girls experienced shame, embarrassment, and discomfort during menstruation because they lacked access to affordable and preferred products, private and safe facilities, and education about menstruation and how to manage it. Community members perpetuate taboos and misconceptions about menstruation that can lead to isolation of girls during their menstruation.

In Ethiopia, 49% of girls reported having no knowledge of menstruation before their first period [9]. Similarly, 32.5% of girls in South Asia [12], 51% of girls in Afghanistan [15] and 82% of girls in Malawi had no knowledge of menstruation premenarche [15]. In Pakistan, 92% of girls and women reported needing more information about menstrual hygiene [6] and 67% of respondents in Ethiopia stated there was no menstrual health related education given in schools [16]. Common challenges include the lack of formal puberty education in school, receiving it too late (post-menarche), and the lack of a safe place or mentor to ask questions about their body throughout puberty. Only 3% of girls in Nepal listed teachers as someone they felt comfortable talking to about menstruation [17], and less than 25% of schoolgirls in Ghana indicated they were very confident talking about menstruation [18]. A survey by MSI found that 1 in 6 parents had not discussed sex education with their children and 1 in 20 said they had no intention of broaching the subject [19]. A study in Kenya found that only 12% of girls would be comfortable receiving the information from their mothers [15]. Community expectations regarding the need to hide and conceal menstruation were reflected in mass media campaigns. In Egypt, 92.2% of the girls accessed menstrual information primarily from mass media [20]. Studies showed that mass media had one of the greatest effects on adolescent's self-conception [21].

Also the barriers are not similar in high and low-resource settings. In some places, menstruation is considered a time of cleansing and menarche is celebrated [22]. Rani et al. [23] did a study to compare the knowledge and attitude regarding pubertal changes among pre-adolescent girls before and after the pubertal preparedness program (PPP) in experimental and comparison group and reported that pubertal preparedness program, were effective in enhancing knowledge and developing favorable attitude among pre-adolescent girls. Sadiq and Salih [24] did a study to determine the level of knowledge of adolescents about menstrual cycles and their practices and reported that the knowledge regarding menstruation was poor in the majority of the girls and mothers were their source of information. Yasmin et al. [25] did a study to assess the knowledge, beliefs and source of information regarding menstruation among the girls of the secondary school and also to identify the status of menstrual hygiene among them and concluded that menstrual hygiene was far from satisfactory among a large proportion of the adolescents [25]. In the study by Wijesiri and Suresh [26], 84% of the study population had dysmenorrhea. Researcher did not find any relation to social health. Dysmenorrhea was found to affect their mental status. It is essential that girls know about menstruation before it occurs. Earlier Johnson [27] reported that 72.7% reported "pain or discomfort" during their periods and there was substantial ignorance or misinformation regarding effective treatment for dysmenorrhea.

Conclusion

The prevalence of school and work absenteeism provides evidence for the continuing importance of dysmenorrhea as a public health problem in this age group. Discussion of effective therapeutic options for dysmenorrhea should be part of routine health care visits for adolescents. It is a matter of great concern that schools have largely neglected this very important aspect of health of young girls. Schools are places where a large number of young receptive minds gather at one place where they can be properly guided, with desired information allaying anxiety

and fears in the minds of young girls. Teachers can be imparted information by health professionals to pass on right information to their students. Preparing adolescent girls for menarche, the onset of menstruation, foundation of reproduction can set an important foundation for overall reproductive health and well-being.

General awareness about cause, organs involved and what happens during menstruation needs to be there. Incorrect information, restrictions, myths and beliefs associated with menstruation can be removed by teachers and parents. This will also help girls to cope up with dysmenorrhoea better.

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