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Original Research Article

Menstrual problems among adolescent girls in Thiruvananthapuram district

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ABSTRACT

Background: Adolescence is a transitional stage extending from 10-19 years characterized by rapid physical, mental and sexual changes. It is also characterized by hormonal changes. As girls attain puberty at this age, they have various problems associated with menstruation. Menstruation is a natural phenomenon and an important indicator of women's health reflecting their reproductive function. However data on experiences of menstruation and it's impact on the health status, quality of life and social integration among women in developing countries is scanty. 75% of girls have one or more problems associated with menstruation.
Methods: A cross sectional study was conducted to estimate the prevalence of menstrual problems among school going students in the age group of 12-17 years. 510 adolescent girls of randomly selected government schools in Thiruvananthapuram district were studied by a pretested semi structured questionnaire.
Results: Mean age of menarche is 12.2. Out of 510 students 352 have normal menstrual cycles (50.1%). 10% have scanty menstruation, 31% have menorrhagia. Majority of girls (84.8%) has one or other menstrual problems. 33% of girls suffer from dysmenorrhea. Among 510 participants 31.6% reported that menstrual problems affects their daily life activities. 14.7% could not attend the class and 12.8% attend the class without taking medication but not participating in any outdoor activities.
Conclusions: Menstrual problems are present in majority of girls in the study group which has some effect on the academic performance and other extracurricular activities in school.

Keywords: Adolescent girls, Menstrual disorders, Dysmenorrhoea, Premenstrual symptoms

INTRODUCTION

Adolescence is a transitional period from childhood to adulthood characterized by rapid physical, mental, and sexual development. Menstruation is a natural phenomenon which is an important indicator of women's health, reflecting their endocrine function. However data on experiences of menstruation and it's impact on health status, quality of life, and social integration among women in developing countries is scanty. Dysmenorrhoea, for example is a common problem, yet it remain poorly understood and is not taken into consideration when assessing adolescent health problems. Dysmenorrhoea is defined as difficult menstrual flow or painful menstruation. About 50-75% of young girls complain of this. This is one of the leading cause of loss school days.[1] Premenstrual syndrome is characterized by mood changes, anxiety and somatic symptoms like backache, breast tenderness. They appear about one week before the onset of menstrual periods and disappear after the appearance of menstrual periods.[2] These symptoms

are reported to be most common reasons for adolescents visiting a gynaecologist. Epidemiological surveys estimated that almost 80% women of reproductive age experience some symptoms attributed to menstruation.[3]

High prevalence of dysmenorrhoea among adolescents (50-70%) especially in the first years of their reproductive life influences their daily activities and can lead to high rates of school absenteeism and is thus a major health problem. Moreover a high prevalence of irregularity of periods if undetected early can lead to polycystic ovarian diseases which are one of the causes of sterility in later life.

Attitudes to menstruation are also poorly understood. Girls frequently report anxiety, fear, anger, confusion, shame, disgust, even depression during their first menstrual experiences. In addition perpetuation of cultural menstrual taboos, messages, such as menstruation as a shameful and dirty situation or as something intimidating, may have direct or indirect negative inferences on the beliefs of girls at menarche and therefore on their future menstrual experiences.

Objective

To study the prevalence of menstrual problems among adolescent school students in Thiruvananthapuram district.

METHODS

A school based cross sectional study to assess the prevalence of menstrual problems. Study population is all high school students of randomly selected Mithrimmala girls high school, Higher secondary school, Pirappancode, Janatha higher secondary school, Thempamood, Attingal girls higher secondary school, Higher secondary school, Kilimanoor. Study period is from 15th June, 2016 to 30th June 2016. A total of 510 students were studied by a pretested semi structured questionnaire. Those who were willing to take part in the study were included. Prior consent is obtained from the school authorities and students participating in the study. Confidentiality of the participants were ensured. SPSS version 16 was used for data analysis. Quantitative variables were expressed in frequency and percentages. Chi square test is used for testing the association between qualitative variables. P-value <0.05 is considered as significant.

RESULTS

Age at menarche ranges from 9 to 14 years. Mean age at menarche is 12.2±1.6. Among the 510 students, 48.4% attained menarche at the age of 12 years and 33.1% at the age of 13 years. Out of the 510 students, 352 have normal menstrual cycles (69.1%), 31% have menorrhagia.

Majority of girls (84.8%) has one or other menstrual problems. Dysmenorrhoa is the most prevalent symptom. 33% of girls suffer from dysmenorrhoea. Among the 510 participants 31.6% reported that menstrual problems affects their daily life activities. 14.7% used to miss the class during menstrual periods. 12.8% attend the class without taking medications but not participating in any outdoor activities. The study also showed that there is no association between age of menarche and menstrual irregularities. Out of the 510 students, 352 have normal menstrual cycles (69.1%) as shown in Table 2.

Table 1: Distribution according to age of menarche.

Age	Frequency	Percentage (%)
9	8	1.6
10	23	4.5
11	47	9.2
12	247	48.4
13	169	33.1
14	16	3.1
All	510	100

Table 2: Interval between consecutive menstrual cycles.

Interval (days)	Frequency	Percentage (%)
<21	102	20
21-40	352	69.1
>40	56	10.9
All	510	100

Table 3: Distribution of students according to duration of menstruation.

Duration of menstruation (days)	Frequency	Percentage (%)
<3	51	10
3-7	301	59.1
>7	158	30.9
All	510	100

Table 4: Problems during menstruation as reported by students.

Problems	Frequency	Percentage (%)
Nil	77	15.2
Dysmenorrhoea	169	33
Breast tenderness, swelling of feet	19	3.8
Pre-menstrual symptoms	69	13.6
Head ache/ joint pain or constipation	67	13
Weakness/ breathlessness/ giddiness	109	21.4
Total	510	100

Majority (59.1%) have normal period of duration of menstruation, 10% have scanty menorrhoea, 31% have menorrhagia as in Table 3.

Table 4 shows that majority of girls (84.8%) has one or other menstrual problems. dysmenorrhoea is the most prevalent symptom. 33% of girls suffer from dysmenorrhoea.

Table 5: Distribution of abnormal vaginal discharge among girls.

Type of discharge	Frequency	Percentage (%)
No discharge	260	50.9
Foul smelling discharge	122	23.9
Yellowish discharge	56	11.0
Greenish discharge	5	1
Frothy discharge	31	6.1
Blood stained discharge	36	7.1
All	510	100

Table 6: Interference with daily activity during menstrual periods.

Interference with daily activities	Frequency	Percentage (%)
No interference	313	61.4
In bed all day	37	7.2
Unable to attend class	75	14.7
Attend class after taking medications but doesn't participate in other outdoor activities	20	3.9
Attend class without taking medications but doesn't participate in other outdoor activities	65	12.8
All	150	100

Among the 510 participants 31.6% reported that menstrual problems affects their daily life activities. 14.7% couldn't attend the class and 12.8% attend the class without taking medications but not participating in any outdoor activities.

Table 7: Association between age at menarche and menstrual regularity.

Age	Menstrual regularity		Total
	Regular	Irregular	
<12	39	39	78
≥12	259	173	432
All	298	212	510

Chi square value= 2.695; degrees of freedom=1; p value=0.101.

Among the 510 participants 178 (35%) complained of passage of clots during menstruation as shown in Figure 1.

Since p-value is >0.05, test is not significant. Hence there is no association between age at menarche and menstrual regularity.

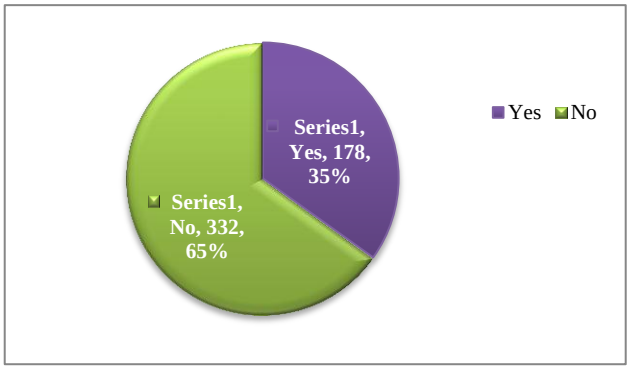

Figure 1: Distribution according to passage of clots.

DISCUSSION

This study covered a group of 510 girls of five schools of Thiruvananthapuram District, Kerala. Regarding the age of menarche mean age of menarche is 12.2 (±1.6) this is comparable with studies conducted by John et al in St. Therisa's school in Pattanamthitta which is also 12.2.[4] Minimum age of menarche in this study group is 9 years and maximum age is 14 years. This can be comparable with another study conducted by Vivek et al in Sangly district of Maharashtra among college going students where mean age of menarche is 13.73.[5] A study conducted by Singh in Lucknow slum area found that mean age of menarche is 13.3 (±1.2).[6] Another study conducted in urban area of Mumbai by Joshi. B. N et al found that mean age of menarche is 10.8.[7] It is known that the onset of menarche has some difference in rural and urban area because of life style changes. Another study conducted by Nair et al in Corporation area of Thiruvananthapuram reported 21.1% of menstrual disorders.[8] Another study conducted by Balasubrahmanian et al among poor unmarried girls in rural Tamil Nadu reported that 84% of girls have normal menstruation.[9] A study conducted in Malaysia menstrual irregularities reported in 37.2%.[10] Regarding the menstrual problems, majority (84.8%) of girls have one or more symptoms associated with menstruation, most prevalent symptom is dysmenorrhoea (33%). Various studies conducted in different areas showed almost similar findings. A study conducted by Rupavani et al among school going girls in Pondichery reported 76.5% of girls reported one or more problems while it is 42.5% in college going girls in Sangly district of Maharashtra.[5,11] 13.6% of the girls complaint of premenstrual symptoms. A study conducted by Priya et al reported 62.2% premenstrual symptoms in their study.[12] In this study excessive bleeding or menorrhagia is found

in 35% of girls. Similar study conducted by Priya showed 11%.[12] Discharge from vagina is next common symptom. 49% of girls had one or the other type of discharge per vagina. Various studies conducted shows comparable results. Bhattacharya et al found 35% of girls with vaginal discharge in their study.[13] In this study14.7% of girls could not attend class every month due to menstrual symptoms. A study conducted by Unniraman et al reported 15.5% of students were absent from schools during menstruation.[14] This sickness absenteeism should affect their academic performance also.

CONCLUSION

Menstrual symptoms among 510 adolescent girls of 5 government schools are found to be dysmenorrhoea, premenstrual symptoms, menorrhagia, irregular periods and oligomenorrhoea. 14.7% of the girls could not attend the classes regularly which may affect their academic performance. These problems are not addressed properly through the existing health programmes.

Suggestions

- Existing adolescent health programs should be implemented in an effective way to address these problems.
- Awareness programs should be conducted by health professionals and teachers through school health programs.
- Teachers should be trained for the effective implementation of health programs of adolescent health.

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