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Original Article

PREVALENCE OF DYSMENORRHEA AMONG ADOLESCENT GIRLS (14-19 YRS) OF KADAPA DISTRICT AND ITS IMPACT ON QUALITY OF LIFE: A CROSS SECTIONAL STUDY

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ABSTRACT

Background: After menarche many adolescent girls faces problems of irregular menstruation, excessive bleeding, and dysmenorrhea. Of these, dysmenorrhea is one of the common problems experienced by most of the adolescent girls. This study conducted to assess the prevalence of dysmenorrhea and its impact on adolescent girls (14 – 19 yrs)
Objectives: This study was conducted to estimate the prevalence of dysmenorrhea among adolescent girls (14-19yrs) and also to study the various symptoms of dysmenorrhea and its impact on quality of life of adolescent girls.
Materials & methods: This was a cross sectional study conducted from Jan 2011 to May 2011 among 183 Adolescent girls (14-19years) in Schools and colleges Kadapa town using a semi-structured questionnaire.
Results: Out of 183 adolescent girls 119 (65%) are dysmennorhic, 68.4% and 61.2% are from the urban and rural areas respectively. Out of 81 adolescent girls with family history of dysmenorrhea 60 (74.1 %) adolescent girls are dysmennorhic. Sickness absenteeism is seen among 47.9% dysmennorhic girls. Quality of life is significantly reduced among dysmennorhic girls. Almost 73.1% of rural girls rely on self help technique to manage the dysmenorrhea as compare to urban girls(55.2 %)
Conclusions: Dysmenorrhea is a very common problem among adolescent girls; it affects their quality of life. It can be better managed by mental preparation and by appropriate change in lifestyle like regular physical exercise and with assurance to the urban girl.

KEY WORDS – Adolescent girls, dysmenorrhea , sickness absenteeism, quality of life.

INTRODUCTION

The period of adolescence is transition from childhood to adult life along with pubertal development and sexual maturation. During puberty, hormonal, psychological, cognitive and physical changes occur simultaneously

The period of adolescence for a girl is a period of physical and psychological transformation for motherhood.

One of the major physiological changes that take place in adolescent girls is the onset of menarche. After that many girls faces problems of irregular menstruation, excessive bleeding, and dysmenorrhea. Of these, dysmenorrhea is one of the common problems experienced by most of the adolescent girls.

Various studies in India revealed that prevalence of dysmenorrhea varies from 33% to

79.67%.[1-5] However, the true incidence and prevalence of dysmenorrhea are not clearly established in India.

According to studies dysmenorrhea is interrupting their educational and social life.[6] Due to dysmenorrhea sickness absenteeism (28-48%) and perceived quality of life losses are prevalent among adolescent girls. [1-4] In the United States dysmenorrhea has been estimated to be the greatest cause of time lost from work and school.[7]

The present study was carried out to estimate the prevalence of dysmenorrhea and its common symptoms as well as to determine the sickness absenteeism due to dysmenorrhea and to asses the quality of life among the dysmenorrhic girls. This would provide evidence of the severity of the problem in this area.

MATERIALS & METHODS:

This was a cross- sectional study conducted in the schools and colleges present in Kadapa town.. Final year female medical students and a female medico-social worker were trained for this study. Two schools and two colleges randomly selected and from this all the girls who were willing to participate and in the age group of 14-19 years were included in the study. The total sample size was 183. The data were collected from January 2011 to May 2011

The tool developed was a pretested semi-structured questionnaire. The items included were age at menarche, presence and absence of dysmenorrhea, its duration , amount of blood loss, irregularity and symptoms experienced during menstruation, family history, sickness absenteeism & quality of life related questions.

The following criteria were used to define dysmenorrhoea:[8]

- Onset of pain within 6–12 hours after menarche.
- Lower abdominal or pelvic pain associated with onset of menses and lasting for 8–72 hours.
- Lower back pain during menses.
- Medial or anterior thigh pain.

The survey was completed and data was analyzed for the results with percentages and chi-square test applied.

RESULTS

The overall prevalence of dysmenorrhoea was 65.02% (68.4% and 61.2% in the urban and rural areas respectively). The difference in the prevalence of the urban and rural adolescent girls (study subjects) is not significant. (χ^2 =1.03, df1, P >0.05) [Table 1]

Table 1: Prevalence of dysmenorrhea in adolescent girls

Dysmenorrhea	Urban (%) n= 98	Rural (%) n= 85	Total (%) n= 183
Present	67 (68.4)	52 (61.2)	119 (65)
Absent	31 (31.6)	33 (38.8)	64 (35)

Table 2: Age at menarche and dysmennorrhea in adolescent girls

Age at menarche	Dysmenorrhea present (%)	No Dysmenorrhea (%)	Total (%)
<13	25 (71.4)	10 (28.6)	35 (100)
13-14	76 (66.7)	38 (33.3)	114 (100)
>14	18 (52.9)	16 (47.1)	34 (100)

χ^2 = 2.95 , df2 P= >0.05

Findings of Table 2 suggests that participants in the study (study subjects) with the history of early age at menarche had more prevalence of dysmenorrhea but it is statistically not significant. When asked about history of menstrual cycle to girls with dysmenorrhea (dysmenorrhic girls) 11.8% gets irregular cycles and 14.3% experiences heavy flow with duration of menses more than five days. Among dysmenorrhic girls associated symptoms are headache,Vomiting & Diarrhea (18.5%,12.6% & 8.4%) respectively.

Table 3: Family history of dysmenorrhea and prevalence of dysmenorrhea

Family History	Dysmenorrhic (%)	Non Dysmenorrhic (%)	Total (%)
Present	60 (74.1)	21 (25.9)	81 (100)
Not present	59 (57.8)	43 (42.2)	102 (100)

χ^2 = 5.23 , df1 P = <0.05

Prevalence of dysmenorrhea was significantly more among the girls with family history of dysmenorrhea.[Table 3]

Majority of the dysmenorrhic girls are experiencing disgusted(81.5%), irritability(70.6%), emotional instability (44.5%), loss of interest in regular work (61.3%), disturbed sleep (55.5%) & reduced appetite (52.1%) during menstrual period , these experiences are significantly less in non dysmenorrhic girls.

Table 4 clearly shows that Sickness absenteeism is significantly more among dysmenorrhic girls than non dysmenorrhic girls during menstrual period.

Table 4: Sickness absenteeism among dysmennorhic and non dysmennorhic girls

Sickness absenteeism	Dysmenorrhic (%) n= 119	Non Dysmenorrhic (%) n= 64
Present	57 (47.9)	13 (20.3)
absent	62 (52.1)	51 (79.7)

$\chi^2 = 13.41$ df 1, $P < 0.001$

Table 5: Quality of life loss among dysmenorrhic and non dysmenorrhic girls

Quality of life characteristics	Dysmenorrhic n= 119(%)	Non Dysmenorrhic n= 64(%)	χ^2	P
Reduced Levels of confidence at work	64 (53.8)	22 (34.4)	6.29	< 0.02
Poor Work satisfaction	21(17.6)	2 (3.1)	6.72	< 0.01
Loss of Concentration level	71 (59.7)	18 (28.1)	16.57	< 0.001
Poor personal relationships	63 (52.9)	15 (23.4)	14.81	< 0.001
Decreased physical activity	29 (24.3)	2 (3)	13.35	< 0.001

Table 5 shows that quality of life is significantly affected among dysmenorrhic girls. For the management of dysmenorrhea 73.1% of rural girls are relying on self help technique as compared to 55.2% of urban girls and only 26.9 % of rural girls are using medication as compared to 44.8% of the urban girls which is statistically significant ($\chi^2 = 4.0$, df 1 , $P < 0.05$)

DISCUSSION

The findings of the present study showed a high prevalence of dysmenorrhea, that is, 65.02% among adolescent girls of Kadapa district, Similar findings were reported by Sharma P, Malhotra C, Taneja DK etal (67.2 %) [4] ,Sharma M and Gupta S. (67%) [9] , Mckay and Diem (67%), [10] Sundell G, Milsom I, Andersch B. (67%),[11] Jayashree R, Jayalakshmi VY. (74%),[12] and Harlow and Park (71.6%). [13] Comparatively lower prevalence had been reported by Sharma A, Taneja DK, Sharma P, et al (33%), [1]Nag (33.84%),[14] Singh MM, Devi R, Gupta SS. (40.7) [2]

Dysmenorrhea seems to be Familial problem similar conclusion made by Avasarala AK and Panchangam S.in their study. [3]

Sickness absenteeism is significantly more among dysmenorrhic girls similar finding observed by Avasarala AK and Panchangam S. [3] and Weissmen AM, Hartz AJ, Hansen MD, et al.[15] Sickness absenteeism because of dysmenorrhoea causes wastage of millions of dollars in the U.S.A. as per the Bergsjo's study [16]

The quality-of-life during dysmenorrhoea is comparatively poor among dysmenorrhic girls; loss of physical activity and work satisfaction, personal relationships, confidence & concentration at work also suffers. This clearly indicates that dysmenorrhoea is disturbing their life more when compared with the lives of the non dysmenorrhic girls. The restricted activity, regular work and relationship seen in this study is also found by Avasarala AK and Panchangam S.[3] and Adeyemi AS and Adekanle DA.[8]

The girls in urban areas cannot cope up dysmenorrhoea and they have resorted to medication as also shown by El-Gilany AH, Badawi K, El-Fedawy S. [17]and Awasarala AK and Panchangam S.[3] On the contrary, the girls in the rural areas are adapting to the situation by endurance and managing the problem without drugs to a large extent. They are using self help techniques such as cold baths, lying supine, hot fomentation, home remedies like eating Fenugreek etc.

To conclude, this study confirmed that dysmenorrhoea is a very common problem

among adolescent girls, and they experience a number of physical and emotional symptoms associated with dysmenorrhea and it also affects their quality of life. It can be better managed by mental preparation and by appropriate change in lifestyle like regular physical exercise. The urban girls should be reassured that their problem is likely to be short lived and can be managed by some self-help techniques, indulging in work rather than seeking drugs.

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