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A STUDY ON THE PREVALENCE OF DYSMENORRHEA AND ITS EFFECT AMONG THE ADOLESCENT GIRLS IN DIBRUGARH DISTRICT, ASSAM

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ABSTRACT

Background: Adolescence is a transitional period from childhood to adulthood characterized by rapid physical, intellectual, emotional and social development. One of the major physiological changes occurring during adolescence in girls is the onset of menarche. Most females experience varying degrees of pain and discomfort during menstruation. Although primary dysmenorrhea is not life-threatening, it can significantly affect the quality of life and in severe cases, may result in functional disability and reduced efficiency. **Aim:** The study aimed to assess the prevalence of dysmenorrhea and its effect among adolescent girls. **Methods:** A cross-sectional research design with a quantitative approach was adopted. The study was conducted among 80 adolescent girls (age group 14-19 years) of BVFCL Model High School, Dibrugarh District, Assam. Study setting was selected using multistage sampling technique and adolescent girls were selected through simple random sampling technique. Four sets of tools used to collect data- Socio-demographic characteristics, menstrual characteristics, prevalence of dysmenorrhea, effects of dysmenorrhea. **Results:** The findings revealed that 66(82.5%) of the adolescent girls experienced dysmenorrhea. Among those who experienced dysmenorrhea, 47(71.21%) reported a moderate effect of dysmenorrhea.

KEYWORDS

Prevalence, Effect, Dysmenorrhea, Adolescent girls and Adolescent Health.

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INTRODUCTION

Adolescent (between the ages of 10-19 years, World Health Organization) is a unique phase of life during which a child goes through tremendous physical, emotional, and social change[1]. Adolescence is the period of transition from childhood to maturity with rapid physical, intellectual, emotional and social growth[2]. Puberty in girls starts with breast development any time between 8 and 13yr. This is followed by appearance of pubic hair and

subsequently menstruation (menarche), occurring at an average of 12.6yr (range 10-16yr). The onset of first menstruation in life is called menarche[3].

Menstrual period is a natural phenomenon which occurs throughout the reproductive years of every woman. Most females experience certain degree of pain and distress during their menstruation period[2]. Dysmenorrhea is a painful/cramping sensation in the lower abdomen often accompanied by other biological symptoms including dizziness, fatigue, sweating, backache, headache, nausea, vomiting and diarrhea all occurring just before or during the menstruation[4]. In approximately 10% of adolescents with severe dysmenorrheic symptoms, pelvic abnormalities such as endometriosis or uterine anomalies may be found[5].

Dysmenorrhea is a cause of frequent short-term work and school absenteeism in women of reproductive age. Approximately 10-15% of females experience monthly menstrual pain severe enough to stop normal daily functions at work, home or school.

Even though primary dysmenorrhea is not a real threat of life but can affect the quality of females' life and in case of severity it might lead to disability and inefficiency. Moreover, dysmenorrhea can cause mental problems in some of the females resulting in their loneliness and reduced participation in different social activities[6].

Dadhich Shibhra *et al*[7] states that Dysmenorrhea is highly prevalent among college-going females in Jhalawar, with early menarche, prolonged cycles, extended bleeding, and family history identified as significant risk factors. These findings underscore the need for targeted menstrual health education, early screening and timely interventions within college health programs.

Due to its importance, different treatments including pharmacological and nonpharmacological treatment approaches such as taking nonsteroidal anti-inflammatory drugs (NSAIDS), herbal, dietary therapies, yoga, meditation and acupuncture have been used to lessen the effects of dysmenorrhea[6].

Therefore, this study aimed to gain a broader understanding of the Prevalence of Dysmenorrhea, its Effect among the Adolescent Girls. The importance of this study is hinged on the need to offer guidance to adolescent girls through imparting education on female reproductive organ and female reproduction in their important phase of life to prevent unnecessary suffering and interruption in their education and daily life.

Objectives

To assess the prevalence of dysmenorrhea

To assess the menstrual characteristics of the adolescent girls

To assess the effect of dysmenorrhea among the adolescent girls

To assess the strategies adopted for relief from dysmenorrheal by the adolescent girls.

MATERIAL AND METHODS

The present study was a cross-sectional study undertaken to assess the prevalence of Dysmenorrhea and its effect among the adolescent girls. The study was conducted at BVFCL Model High school, Dibrugarh District selected through multistage sampling methods. The study was conducted among 80 adolescent girls selected through simple random technique. The adolescent girls were in the age group of 14-19 years. Tools used for data collection includes- tools for assessing socio-demographic characteristics, menstrual characteristics, prevalence of dysmenorrhea, effects of dysmenorrheal. Effect of dysmenorrhea was assessed through a likert scale and responses were scaled as: strongly agree, agree, uncertain, disagree and strongly disagree and were graded as Low (< 31), Moderate (31-53) and Severe (> 53). Data was collected in November 2025 through interview method. Reliability of the tool was tested through Cronbach alpha and was calculated as 0.75 which is considered as acceptable and reliable for research.

RESULTS AND DISCUSSION

In this study, it was observed that the majority of the adolescent girls were in the age group of 14–17 years. Most of the participants had a normal Body Mass Index (BMI), ranging from >15 to <85 percentile and were studying in Classes IX–X. The majority of the participants resided in urban areas, belonged to the Hindu religion and were from nuclear families. Regarding socioeconomic status,

the majority belonged to the upper-lower socioeconomic class. With respect to the educational status of the parents, the majority of the participants' fathers had completed middle school education, while the majority of fathers were engaged in elementary occupations. The majority of the participants reported a monthly family income of ≤ ₹7,988 and majority of the adolescent girls reported having a family history of dysmenorrhea.

Regarding the menstrual characteristics, it was observed that the majority of the adolescent girls, 51(63.8%), had their age at menarche between 12 and 14 years. The majority, 45(56.3%), had a normal menstrual frequency of 24-38 days. Regarding the duration of menstruation, 58(72.5%) had a normal menstrual duration of up to 8 days. The majority, 41(51.25%), reported regular menstrual cycles. Similarly, 41(51.25%) of the participants reported an average amount of menstrual blood flow, the majority, 61(76.25%), reported no intermenstrual bleeding. Regarding the presence of blood clots during menstruation, 26(57.5%) reported that clots were mild and present sometimes.

Among the 80 adolescent girls, 66(82.5%) were found to have dysmenorrhea, indicating a prevalence of 82.5% in the study population.

Among the 66 adolescent girls who reported of having dysmenorrhea, 8(12%) had low effect of dysmneorrhea, 11(17%) had high effect of dysmenorrhea, whereas 47(71%) had moderate effect of dysmenorrheal.

Among the 66 adolescent girls who experienced dysmenorrhea, majority 44(74.254%) did not consult any physician, majority 47(71.21%) did not take any medicine, majority 21(32%) did not adopt any measures such as- apply hot or cold application over abdomen, bed rest, massage of abdomen, acupressure, acupuncture and majority 37(56.06%) do not take any drinks like tea, coffee, aerated and non-aerated drinks.

RESULTS

Table No.1: Frequency and Percentage distribution on Socio-Demographic profile of the adolescent girls (N=80)

S.No	Variables	Categories	No of adolescent girls	Percentage (%)
1	Age in Years	Mid adolescent (14-16)	62	77.5
		Late adolescent (17-19)	18	22.5
2	BMI	Underweight :< 15	14	17.50
		Normal weight: ≥ 15 to < 85	65	81.25
		Overweight: ≥ 85 to < 97	1	1.25
		Obesity: ≥ 97	0	0
3	Class	7th -8th	30	37.50
		9th - 10th	50	62.50
		11th -12th	0	0
4	Place of residence	Semi-Urban	0	0
		Urban	53	66.25
		Rural	27	33.75
5	Religion	Hindu	76	95.00
		Islam	2	2.50
		Christian	1	1.25
		Other	1	1.25
6	Type of family	Nuclear	53	66.25
		Joint	26	32.50
		Extended	1	1.25

7	Socio economic status	Upper (I)	0	0
		Upper middle (II)	3	3.75
		Lower middle (III)	15	18.75
		Upper lower (IV)	56	70
		Lower (V)	6	7.5
8	Father's Education	Profession or honors	0	0
		Graduate	9	11.25
		Intermediate or diploma	9	11.25
		High school certificate	14	17.50
		Middle school certificate	24	30.00
		Primary school certificate	13	16.25
		Illiterate	11	13.75
9	Father's occupation	Legislators, senior officials and managers	0	0
		Professionals	3	3.75
		Technicians and associate professionals	0	0
		Clerks	0	0
		Skilled workers and shop and market sales workers	5	6.25
		Skilled agricultural and fishery workers	5	6.25
		Craft and related trade workers	15	18.75
		Plant and machine operators and assemblers	11	13.75
		Elementary occupation	38	47.50
		Unemployed	3	3.75
10	Monthly family income	₹ 1,59,586 and above	1	1.25
		₹ 79,756- ₹ 1,59,585	0	0
		₹ 59,795- ₹ 79,755	1	1.25
		₹ 39,830 - ₹ 59,794	4	5.00
		₹ 23,870- ₹ 39,829	7	8.75
		₹ 7989- ₹ 23, 869	18	22.50
		≤ ₹ 7988	49	61.25
11	Family history of Dysmenorrhea	Yes	51	63.75
		No	29	36.25

Table No.2: Frequency and Percentage distribution on Menstrual Characteristics of Adolescent girls (N=80)

S.No	Variables	Categories	Frequency (f)	Percentage (%)
1	Age of menarche (in years)	Less than 9	4	5.0
		9-11	22	27.5
		12-14	51	63.8
		15 and above	3	3.8
2	Frequency	Absent (no period or bleeding)	5	6.3
		Frequent (24 days)	16	20.0

		Normal (24-38 days)	45	56.3
		Infrequent (> 38 days)	14	17.5
3	Duration	Prolonged (> 8 days)	22	27.5
		Normal (upto 8 days)	58	72.5
4	Regularity	Regular variations	51	63.75
		Irregular variations	29	36.25
5	Amount of blood flow	Average	41	51.25
		Heavy	39	48.75
6	Intermenstrual bleeding	None	61	76.25
		Random	19	23.75
7	Presence of clot	Yes, always	23	28.8
		No, never	11	13.8
		Mild, sometimes	46	57.5

Table No.3: Strategies adopted for relief from dysmenorrhea by the adolescent girls N=66

S.No	Strategies	Frequency (f)	Percentage (%)
Which of the following physician you consult when you suffer from pain during menstruation?			
1	Allopathic	4	6.06
2	Homeopathic	2	3.03
3	Ayurvedic	1	2
4	Traditional healer	6	9.09
5	Others. Specify	4	6.06
6	Do not consult any physician	49	74.24
Which of the following medication you take when you suffer from pain during menstruation?			
7	Pain killers	6	9.09
8	Hormonal contraceptives	1	2
9	Supplements like Vitamin D or magnesium	0	
10	Herbal medicines	6	9.09
11	Others. Specify	6	9.09
12	Do not take any medicines	47	71.21
Which of the following measures you carry out when you suffer from pain during menstruation?			
13	Apply hot or cold over the abdomen	14	21.21
14	Bed rest or lying-in prone position	22	33.33
15	Massage the abdomen or listen to music	7	11
16	Apply acupuncture or acupressure to specific areas	0	
17	Others. Specify	2	3.03
18	Do not follow any of the above measures	21	32
Do you take any of the below to relief from menstrual pain			
19	Coffee	1	1.51
20	Tea	17	26
21	Aerated drinks like Coca-Cola, Pepsi, Sprite and Fanta etc	0	0
22	Non aerated drinks like fruit juices, iced tea and water.	4	6.06
23	Any other drinks. Specify	7	10.60
24	Do not take any of the above	37	56.06

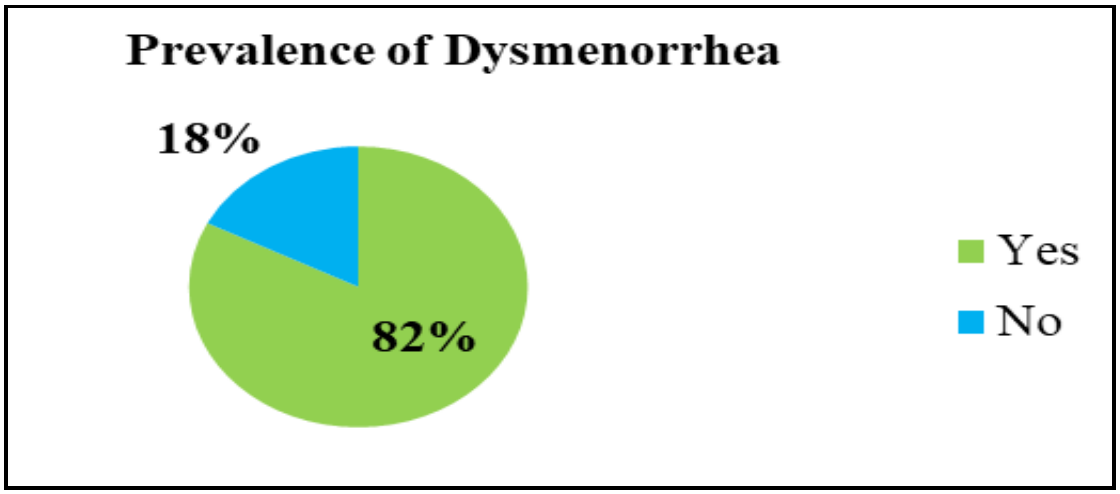


Figure No.1: To assess the Prevalence of Dysmenorrhea among the Adolescent girls, N=80

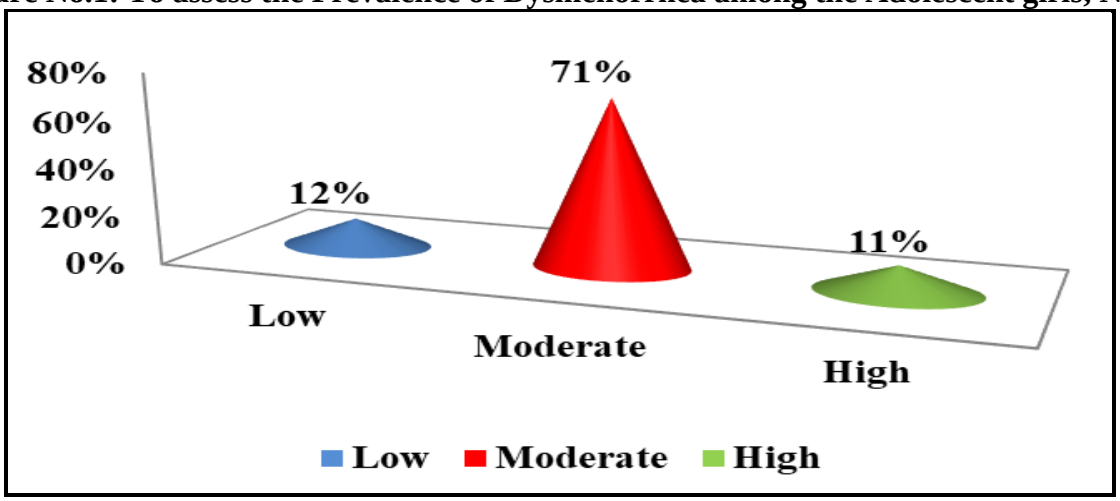


Figure No.2: To assess the Effect of Dysmenorrhea among the adolescent girls, N=66

CONCLUSION

The study concludes that dysmenorrhea is highly prevalent among adolescent girls and has a considerable effect on their physical, emotional and daily functioning**.** Therefore, early identification, appropriate menstrual health education, effective pain-management measures and timely referral for further evaluation are essential. Nurses, teachers, parents and other healthcare professionals have an important role in creating awareness, encouraging healthy menstrual practices, and providing appropriate support to adolescent girls. Addressing dysmenorrhea at an early stage may help reduce its adverse effects and promote better menstrual health and quality of life among adolescent girls.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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