

An Exploratory Survey to Assess the Menstrual Characteristics and Prevalence of Dysmenorrhea in College Going Girls

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Abstract: Painful menses in women or dysmenorrhea is a very frequently observed gynecologic problem. The true incidence and prevalence of dysmenorrhea are not clearly established in India. This study was conducted with an objective to assess the menstrual characteristics and prevalence of dysmenorrhea in college going girls in selected University of Gurgaon. Sample of 118 girls who were available and willing to participate in the study were selected by purposive sampling technique. Data was collected from the participants with the help of structured questionnaire to collect the background information, to assess the menstrual characteristics and prevalence of dysmenorrhea among the college going girls. Prevalence of Dysmenorrhea was found to be 79.66 %. Majority of the girls with dysmenorrhea (54.26%) report a menstrual cycle of 22-28 days. Maximum number of dysmenorrhic girls (76.60 %) report 4-5 days of bleeding .Most of the girls (62.77%) with dysmenorrhea reported presence of blood clots in their menstrual flow. Majority (41.49%) of the dysmenorrhic girls reported the presence of physical pre-menstrual symptoms. Majority of the dysmenorrhic girls (63%) reported to experience moderate intensity pain, 21% to have mild pain and 16% reported to experience severe pain during periods.

Keywords: Menstrual characteristics, Dysmenorrhea, Prevalence

1. Introduction

Dysmenorrhea is the most common gynecologic complaint among adolescent and young adult females. Dysmenorrhea may be categorized into two distinct types: primary and secondary. Primary dysmenorrhea is defined as painful menses in women with normal pelvic anatomy, usually beginning during adolescence [1]. Secondary dysmenorrhea is menstrual pain associated with underlying pathology, and its onset may be years after menarche. There is a wide variation in the estimate of dysmenorrhea from studies around the world reporting a range between 28% and 71.7% [2,3]. In similar studies from Turkey, the prevalence of dysmenorrhea has been reported to be between 58.2% and 89.5% [4,5].

The true incidence and prevalence of dysmenorrhea are not clearly established in India. In recent times, George and Bhaduri,[6] concluded that dysmenorrhea (87.87%) is a common problem in India. In Sweden the prevalence was >2-4%.[7] Similar findings had been reported by Jayashree and Jayalakshmi,[8] in rural married women of Andhra Pradesh. Dysmenorrhea has been estimated to be the greatest cause of time lost from work and school in the United States.[9]

As there are limited studies determining the prevalence of Dysmenorrhea among Indian girls , so this study was undertaken to assess the prevalence of dysmenorrhea and to determine the menstrual characteristics among college going girls

2. Materials and Methods

An exploratory survey was conducted in a selected University of Gurgaon, Haryana, India . The study was

performed on a total of 118 girls who were available and willing to participate in the study. The group was homogeneous in terms of age, socio-economic status and dietary background. Participant with history of any endocrine disorders, chronic disease or who had undergone major surgery were excluded from the study.

A brief overview of the nature and purpose of the study was given to the participants of the study and informed consent was obtained from them . Data was collected from the participants with the help of structured questionnaire comprising of 2 sections. Section I comprised of questions to get the background information of the participants and Section II comprised of questions to assess the menstrual characteristics and prevalence of dysmenorrhea among the college going girls. The questionnaire was filled by the participants in presence of the research team.

3. Analysis

The collected data was analyzed using descriptive and inferential statistics.

4. Baseline Characteristics

The average age of the participants was found to be 19-20 years. Around 48.31% (57) were in the age range of 19 to 20 years and 26.27 % (31) were above 20 years. Majority of the participants (79 %) had a normal BMI (18-23 kg/m²), whereas underweight and overweight categories had almost equal distribution with 9 % and 12 %, respectively.

Table 1: Frequency and percentage distribution of sample characteristics, N = 118

S.no.	Sample characteristics	Frequency (n)	Percentage
1.	Age in years :		
a)	<17	1	1%
b)	17-18	29	24.58%
c)	19-20	57	48.31%
d)	>20	31	26.27%
2.	Body Mass Index :		
a)	Under-weight	11	9%
b)	Normal	93	79%
	Over-weight	14	12%

Prevalence of Dysmenorrhea

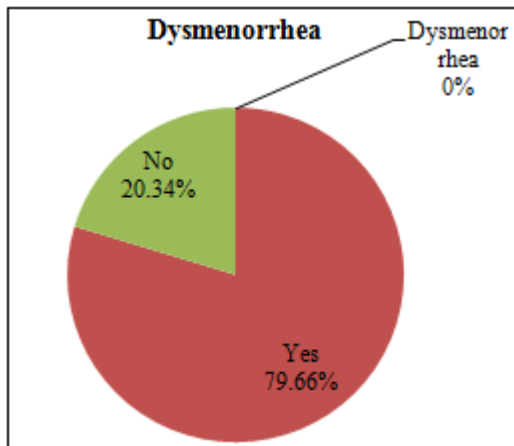


Figure 1: Dysmenorrhea was reported by 79.66 % (94) of the total girls, whereas only 20.34% (24) reported no dysmenorrhea.

Menstrual Characteristics :

Menstrual characteristics of the sample having dysmenorrhea were explored using the questionnaire and frequency , percentage were calculated.

Table 2: Frequency and percentage distribution of Menstrual characteristics of girls with Dysmenorrhea, N = 94

S.no.	Menstrual characteristics	Frequency (n)	Percentage
1.	Length of Menstrual Cycle		
a	22-28 days	51	54.26%
b	29-35 days	35	37.23%
c	> 35 days	8	8.51%
2.	Number of days of Bleeding		
a	<3 days	10	10.64%
b	4 - 5 days	72	76.60%
c	5-7 days	12	12.77%
3.	Presence of Blood Clots		
a	Yes	59	62.77%
b	No	35	37.23%
4.	Pre- Menstrual Symptoms		
a	Physical	39	41.49%
b	Psychological	22	23.40%
c	Both	22	23.40%
d	None	11	11.70%

Findings of Table 2 show that:

Majority of the girls with dysmenorrhea (54.26%) report a menstrual cycle of 22-28 days, where as 37.23 % of them have a menstrual cycle of 29-35 days and 8.51% report to have a menstrual cycle of more than 35 days. Maximum number of dysmenorrhic girls (76.60 %) report 4-5 days of bleeding and few of them reported to have <3 days and 5-7 days of bleeding (10.64% and 12.77% respectively). 62.77% of the girls with dysmenorrhea reported presence of blood clots in their menstrual flow. Majority (41.49%) of the dysmenorrhic girls reported the presence of physical pre-menstrual symptoms, 23.40% of the girls experience psychological pre-menstrual symptoms. 23.40% of the girls reported both physical and psychological pre-menstrual symptoms and 11.70% reported no pre-menstrual symptoms.

5. Characteristics of Pain

Table 3: Frequency and percentage distribution of Pain characteristics of girls with Dysmenorrhea, N = 94

S.no.	Menstrual characteristics	Frequency (n)	Percentage
1.	Onset of Pain		
a	Before menses	20	21.28%
b	Day 1 of Menses	52	55.32%
c	Day 2 or 3 of Menses	22	23.40%
2.	No. of Pain days		
a	1 day	31	32.98%
b	2 days	41	43.62%
c	3 days	18	19.15%
d	More than or equal to 4 days	3	3.19%
3.	Severity of Pain		
a	Severe (7-10)	15	15.96%
b	Moderate (4-7)	59	62.77%
c	Mild (2-4)	20	21.28%

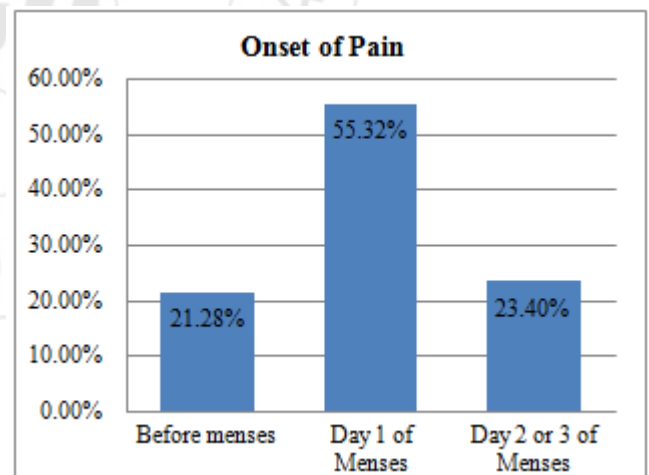


Figure 2: 55.32% of the dysmenorrhic girls had onset of pain on Day 1 of menses , 23.40% on Day 2 or 3 of menses and 21.28% had onset of pain before menses.

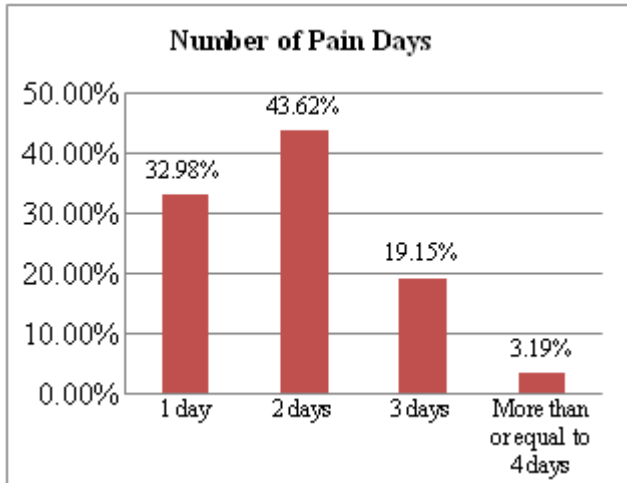


Figure 3: 43.62% of the dysmenorrhic girls reported to have pain for 2 days, 32.98% for 1 day, 19.15% for 3 days and 3.19% for more than or equal to 4 days respectively

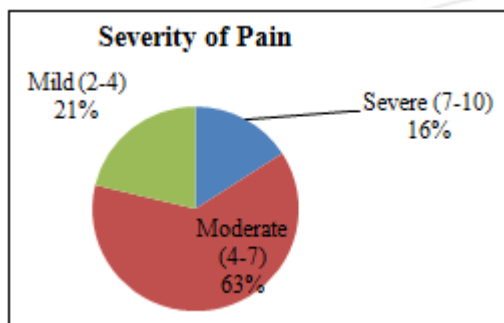


Figure 4: 63% of the dysmenorrhic girls reported to experience moderate pain, 21% to have mild pain and 16% reported to experience severe pain during periods.

6. Discussion

It is estimated that prevalence of dysmenorrhea varies from 20% to 95%. [10,11] The results of the present study confirms the same, as dysmenorrhea was seen in majority of the young girls (79.66%). Similar high prevalence (67.2%) was reported by Sharma *et al.*, [12] and Harlow and Park (71.6%). [13]

Average length of menstrual cycle was reported to be 22-28 days in majority (54.26%) of girls. Normal length of the cycle is considered as 21-35 days. [14]

According to the study majority (76.60 %) of the dysmenorrhic girls had bleeding for 4-5 days, 12.77% and 10.64% had bleeding for 5-7 days and less than 3 days respectively. The finding correspond to the findings of the study done by Kural MoolRaj, *et al* , according to which 74% dysmenorrhic girls experience bleeding for 4-5 days and 19.9% for 5-7 days and 5.7% for <3 days. [15]

The present study shows that majority of the dysmenorrhic girls agreed for the presence of clots in their menstrual blood. The similar findings were revealed by the study conducted by Kural MoolRaj [15]

The present study reports a presence of pre-menstrual symptoms in majority of girls with dysmenorrhea . An

Indian study in 2012 also reported similar symptoms like irritability, breast pain, emotional disturbances etc. [16,17]

It has been found in the present study that maximum (55.32%) of the girls experienced pain on Day 1 of cycle, 21.28% before menses and 23.40% on Day 2 or 3 of menses. Similar findings were obtained by Kural MoolRaj, *et al* in his study on the menstrual characteristics of college going girls. The study revealed that majority of girls (61.5%) have reported onset of pain on day 1, 23.5% reported prior to menses cycle remaining, 14.2% stated on either day 2 or 3 and only 0.8% of the girls have said even after cessation of menses. [15]

In our study, it was revealed that 21.28%, 62.77% and 15.96% of girls had mild, moderate and severe pain, respectively. In a study conducted by Ortiz in 1539 students of Mexican University, author concluded that dysmenorrhea was mild in 36.1%, moderate in 43.8% and severe in 20.1%. [18] Maitri shah *et al.*, have found that 18%, 40% and 42% of students had mild, moderate and severe pain (dysmenorrhea), respectively. [19]

7. Conclusion

Dysmenorrhea is found to be highly prevalent among college going girls. Majority of the girls suffer from moderate intensity pain and also experience pre-menstrual symptoms. It affects the quality of life of girls to a great extent. The magnitude and intensity of problem demands appropriate intervention through education and change in lifestyle .

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