

**ASSESSMENT OF FREQUENCY OF DYSMENORRHEA AND ITS IMPACT ON THE  
DAILY LIFESTYLE OF THE FEMALE MEDICAL STUDENTS OF GUJRANWALA  
MEDICAL COLLEGE**

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**ABSTRACT**

**Background:** Dysmenorrhea is characterized by the presence of cramping lower abdominal pain during menstrual period. It is a common gynecological problem in females after the age of menarche and it mostly effects the daily routine life of females during their menstrual period. This study was carried out to evaluate the frequency of dysmenorrhea among young female students of Gujranwala Medical College and to determine its impact on their routine life style. **Method:** An observational cross-sectional study was conducted among 130 female students of Gujranwala Medical College. A self-reporting questionnaire was provided to each participant. Data was entered and analyzed in IBM SPSS version 23. Qualitative variables are expressed as frequency and percentages. Charts and Graphs are also used wherever required. **Results:** Among all the participants 66.92% were having dysmenorrhea. And majority of the participants with dysmenorrhea experienced general physical and psychological symptoms. 94.25% were having abdominal pain, 71.26% were having backache, 70.11% were having depressed mood and 72.41% were having irritability. Participants with dysmenorrhea were also having impact on their academic performance. 31.03% of dysmenorrheic girls skipped lectures while being in college, and 48.27% were not able to stay focused in lectures. 71.26% of dysmenorrheic participants were having disturbed physical activities. Consumption of hot beverages decreased the pain intensity among 86.20% and consumption of cold beverages increased the pain intensity among 78.16% participants. **Conclusion:** Majority of the female students experienced dysmenorrhea and it did not only affect their health and mood but also their academic performance and daily routine life adversely. This issue needs more exploration and education to minimize its adverse effects.

**INTRODUCTION**

Dysmenorrhea, also known as painful periods or menstrual cramps, is cyclical lower abdominal/pelvic pain experienced by the females experienced during first two to three days of the menstrual period.<sup>[1]</sup> It is the most common gynecological problem faced by women of all ages beginning as soon as the menarche sets in.<sup>[2]</sup> According to certain estimates, the prevalence of dysmenorrhea varies widely between 16.8% and 81%.<sup>[3]</sup> It is mainly classified into Primary and Secondary dysmenorrhea.<sup>[4]</sup> Primary Dysmenorrhea is not associated with any underlying pathology and usually begin during adolescence while Secondary dysmenorrhea has some underlying pathology such as pelvic inflammatory diseases, endometriosis, adenomyosis and its onset may be years after menarche.<sup>[5,6]</sup> Pain can be cramping in nature and may or may not radiate towards back. Most of the females also experience nausea, pallor,

depressed mood, anxiety, irritability and disturbed physical activity along with the lower abdominal pain.<sup>[7]</sup>

Based on previous studies, significant risk factors that are associated with dysmenorrhea are low BMI, inadequate sleep hygiene, nutritional deficiencies, smoking, excessive consumption of caffeine, pelvic infections and stressed life style.<sup>[8]</sup> Dysmenorrhea has a negative impact on the daily routine life of the females. It does not only affect their health and mood but also their academic performance, social life and routine physical activities adversely.<sup>[1,6]</sup> Most of the girls do not seek proper medical attention and opt for traditional methods in order to cope with it which may aggravate it further because the causative factor is not taken care of. As this issue has negative impact on females around the globe, it needs more exploration and adequate education should be provided to them to minimize the adverse effects.

Some studies have been conducted in the past in this domain. A study was conducted among Spanish female university students to determine prevalence of dysmenorrhea and its impact on lifestyle in which the prevalence of dysmenorrhea was 74.8%.<sup>[8]</sup> The prevalence of dysmenorrhea among university students in northern Ghana was 83.6% and it was found that it affects the daily activities of 61.2% of respondents.<sup>[9]</sup> In the students of Ankara, prevalence of dysmenorrhea was 84%, in Hispanic females it was 85% and in young Australian women it was 88%, the prevalence varied from 34% to 94% among different countries around the globe.<sup>[10,11,12,13]</sup>

Dysmenorrhea is also a common issue among young female students of Pakistan, adversely affecting their quality of life. A cross-sectional descriptive study was conducted among school going girls in Karachi, Pakistan to determine the prevalence, perceptions and effects of dysmenorrhea in which dysmenorrhea was reported by 78% females and 40% females reported a decline in academic performance.<sup>[7]</sup> There is still relative paucity of data regarding the frequency of dysmenorrhea and its various effects on the daily life females, especially the college/university students. Therefore, this study was conducted to determine the frequency, perception, management and impact on lifestyle of the female students. By exploring this issue and educating young girls about proper life style and health educating measures we can minimize its adverse effects and achieve the milestone of improving the quality of life of females suffering from dysmenorrhea.<sup>[14]</sup>

## METHODOLOGY

**Study Design:** Observational descriptive cross-sectional study.

**Study Population:** Female students of Gujranwala Medical College of age 17 to 24 from all 5 years.

**Study Area:** Our study area was Gujranwala Medical College. It was established in 2010 and is affiliated with Divisional Headquarter/Teaching Hospital, Gujranwala. 500 medical students undergo undergraduate training in the college throughout the year (an average of 100 students each year) producing substantially able medical professionals who are serving humanity in Pakistan as well as around the globe.

**Sampling Technique:** Non-probability convenient sampling.

**Study Duration:** One month (May 2019-June 2019).

**Sample Size:** 130 female students with anticipated response rate of 80% and 7.5 margin of error.

**Data Collection Procedure:** After the approval of institution's ethical committee, No Objection Certificate (NOC) was taken from the Head of the departments of respective departments in each year. The importance and objectives of the research were explained to the participants. Any doubts in the questionnaire were cleared. Participants were given an option of acceptance or refusal to participate in the survey. After taking their informed consent, the questionnaire was distributed, and

the students were given a daytime to fill the questionnaire and hand it over to the Principal author the following day.

**Data Collection Tool:** A self-designed questionnaire was used consisting of four main parts. First part contained 4 questions on demographic variables and 7 Multiple Choice Questions (MCQ's) regarding menstrual hygiene and management. Second part contained 11 questions regarding effects of dysmenorrhea on physical health and 7 questions regarding effects on psychological health. Third part contained 5 questions regarding effects on Academic performance and fourth part contained 10 questions regarding effects on Life style and physical activities. In those questions, respondents were asked whether or not they experience the mentioned symptom.

**Data Analysis:** The data was entered and analyzed in IBM SPSS statistics version 23.0. data was analyzed using descriptive statistics. Percentages and frequencies were calculated for qualitative variables while the quantitative variables were expressed as mean +/- standard deviation.

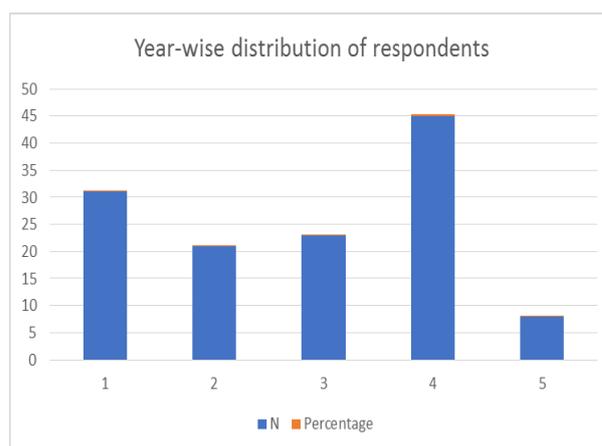
## RESULTS

The overall response rate was 100%.

The mean age of the respondents was 20.82 +/- 1.45 (maximum age=24, minimum age=17). Mean Age at Menarche was 12.96 +/-1.63 (maximum age=16, minimum age=9). The mean Duration of Menstrual Period was 5.85 +/- 1.18. The year-wise distribution of respondents is given in the graph 1.

The responses given to the questions on menstrual hygiene and management are given in table 1.

Out of 130 participants 66.92% (87/130) had dysmenorrhea. The impact of dysmenorrhea on life style was determined among 87 participants with dysmenorrhea. The Responses given to the questions on effects of dysmenorrhea on physical health, psychological health, academic performance and lifestyle and physical activities are given in table 2.



Graph 1: Year-wise distribution of respondents.

**Table 1: The response given to the questions on menstrual hygiene and management.**

Question	Option	N(percentage)
Is your menstruation regular?	Yes	109(83.84%)
	No	21(16.15%)
How many pads do you soak per day?	Less than 3 pads	81(62.30%)
	3-5 pads	48(36.92%)
	More than 5 pads	1(0.76%)
What product do you use during menstruation?	Sanitary Pads	122(93.84%)
	Home-made napkins	8(6.15%)
Do you have painful menstruation?	Yes	87(66.92%)
	No	43(33.07%)
What is the duration of Pain?	1 day	25(28.73%)
	2 days	54(62.06%)
	3 days or more	8(9.19%)
Do you use any analgesic for pain management?	Yes	35(40.22%)
	No	52(59.22%)
When is the onset of Pain?	1 <sup>st</sup> Day	75(86.20%)
	2 <sup>nd</sup> Day	12(13.79%)
	3 <sup>rd</sup> Day	0(0%)

**Table 2: The response given to the questions on Effects of Dysmenorrhea on Health.**

Effects on Health	N(Percentage)	
	Yes	No
<b>Physical Symptoms</b>		
Abdominal Pain	82(94.25%)	5(5.74%)
Backache	62(71.26%)	25(28.73%)
General body aches	51(58.62%)	36(41.37%)
Spasmodic Pain	51(58.62%)	36(41.37%)
Mastalgia	24(27.58%)	63(72.41%)
Nausea/Vomiting	18(20.68%)	69(79.31%)
Diarrhea	25(28.73%)	62(71.26%)
Constipation	16(18.39%)	71(81.60%)
Cold Sweats	28(32.18%)	59(67.81%)
Hot Flashes	31(35.63%)	56(64.36%)
Pallor	51(58.62%)	36(41.37%)
<b>Psychological Symptoms</b>		
Depressed Mood	61(70.11%)	26(29.88%)
Anxiety	52(59.77%)	35(40.22%)
Irritability	63(72.41%)	24(27.58%)
Difficulty in concentrating	49(56.32%)	38(43.67%)
Disturbed Sleep	43(49.42%)	44(50.57%)
Forgetfulness	23(26.43%)	64(73.56%)
Tension	41(47.12%)	46(52.87%)
<b>Effects on Academic Performance</b>		
Attend college during menstruation	70(80.45%)	17(19.54%)
Skip lectures while being in college	27(31.03%)	60(68.96%)
Able to stay focused in lectures	45(51.72%)	42(48.27%)
Able to study efficiently for tests	45(51.72%)	42(48.27%)
Perform well in tests and academics	53(60.91%)	34(39.08%)
<b>Effects on Life Style</b>		
Disturbed physical activities	62(71.26%)	25(28.73%)
Consumption of cold/soft drinks increases pain intensity	68(78.16%)	19(21.83%)
Consumption of hot beverages decreases pain intensity	75(86.20%)	12(13.79%)
Interferes with travelling in car	38(43.67%)	49(56.32%)
Interferes with your social life	36(41.37%)	51(58.62%)
Interferes with your balance to stand for long time	57(65.51%)	30(34.48%)
Have limitations in sitting into a chair	44(50.57%)	43(49.42%)
Have limitations in lifting anything	49(56.32%)	38(43.67%)
Others express irritation towards you because of your pain	23(26.43%)	64(73.56%)
Others take over your chores	35(40.22%)	52(59.77%)

## DISCUSSION

Dysmenorrhea is painful menstrual period commonly experienced by females and it is may or may not be associated with depressed mood, disturbed physical activity, nausea, vomiting and decreased concentration.<sup>[7]</sup> It has a negative impact on academics, social and routine lifestyle of the females. This study was therefore carried out to evaluate the frequency of dysmenorrhea and its impact on the lifestyle of female students.

In our study dysmenorrhea was reported by majority of the participating females accounting to 66.92% of the females. In a similar study conducted in the past in Ethiopia the prevalence of dysmenorrhea was 66.8% which is comparable with that of our study.<sup>[15]</sup> While a study conducted in Egypt reported the prevalence of about 90.4% which is much higher than that of the present study.<sup>[16]</sup> This variation can be due to disparity in the perception of pain, different life styles of the respondents, genetic variation and unavailability of universally accepted definitions of dysmenorrhea and pain.<sup>[16]</sup>

Regarding the sites of the pain, in our study, 94.25% females reported abdominal pain, 71.26% reported backache and 58.62% reported general body aches. According to a study conducted in Palestine, 77.5% reported supra-pubic pain and 49% reported back pain.<sup>[1]</sup> In another study conducted in India 50.8% reported lower abdominal pain, 18.4% reported back pain and 23.1% reported pain at different sites.<sup>[17]</sup> These percentages are much less than that of reported by our respondents.

In our study, depressed mood was reported by 70.11% females, difficulty in concentration by 56.32% and disturbed sleep by 49.42% females. These are dangerously high percentages and these symptoms surely have negative impact on the individual. According to a previous study conducted in Saudi Arabia 80.8% respondents reported depressed mood, 50.9% reported reduced concentration and 54% reported disturbed sleep; these results are comparable with the results of our study.<sup>[18]</sup> In contrary to our results Usman et al. reported 41.2% depressed mood in a previously conducted research in Egypt.<sup>[16]</sup>

In our study, 48.27% respondents were unable to stay focused in lectures and 39.08% were unable to perform well in academics, in a similar study 34.5% students were having difficulty in concentration during class<sup>[15]</sup> and in another study 31.1% respondents were having decreased academic performance.<sup>[19]</sup>

In our study the presence of dysmenorrhea resulted in disturbed physical activity of 71.26% respondents while in contrary, a research reported decreased physical activity of 22.5% respondents.<sup>[19]</sup>

In our study 86.20% participants reported decrease in pain intensity after consumption of hot beverages while in another study 46.4% females consumed coffee and 53.9% consumed Tea in order to decrease the pain intensity.<sup>[8]</sup> In contrary to our results 34.4% respondents consumed coffee and tea to decrease the pain intensity in another research.<sup>[20]</sup>

A limitation of our study was that it did not separate the frequency of different symptoms according to the severity of pain which was done in many studies conducted, in past, in this domain. It is therefore recommended that a study be conducted in future which may also target these shortcomings and help study this domain in further detail.

## CONCLUSION

In this study majority of the female students experienced dysmenorrhea and its associated symptoms and it did not only adversely affect their academics and social interactions but also the overall quality of life. There is a need to reduce the communication gap between females, their families and health professionals in order to address this issue properly. This issue needs more exploration and education to minimize its adverse effects among young female students and to promote their quality of life. Awareness seminars should be conducted in colleges and hostels in order to educate the females about the severity of problem and its prevention techniques.

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