

PREVALENCE OF DYSMENORRHEA AND ITS EFFECTS ON QUALITY OF LIFE AMONG STUDENT NURSES

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ABSTRACT

OBJECTIVES

The objective of this study was to determine the prevalence of dysmenorrhea and its effects on quality of life of nursing students at a nursing school.

METHODOLOGY

A descriptive cross-sectional survey was carried out at one nursing school in Peshawar, Pakistan. A sum of 179 student nurses participated in this research. Censes method was used following the inclusion and exclusion criteria. Approval for conducting this study was obtained from Ethics Review Board of Khyber Medical University. Data was collected by pre tested validated questionnaire WHOQOL BREF scale. SPSS version 22 was used to analyze the data.

RESULTS

The participants average age was 25.58 years. The majority (60.3%) of the participants reported having Dysmenorrhea. A great portion (63.5%) of respondents reported Dysmenorrhea in age group 18-25 years. 63.4% Participants reported Dysmenorrhea among unmarried participants. Participants with Dysmenorrhea had scores in the Generic BSN, PRN, and MSN education categories of 78(64.5%), 21(48.8%), and 9(60%) respectively. There was no correlation between dysmenorrhea and QOL (p-value =.377).

CONCLUSION

Dysmenorrhea is quite prevalent among nursing students, along with severe lower abdomen pain, however there is no correlation between dysmenorrhea and Quality of Life.

KEYWORDS: Student Nurses, Nursing Schools, Quality of Life, Dysmenorrhea, Pain

INTRODUCTION

Dysmenorrhea is defined as intense, uncomfortable cramps in the lower abdomen that can occasionally be accompanied by headache, bloating, diarrhea, and leg pain just before or during the menstrual cycle.¹ 16 to 91% of women who are of reproductive age are affected. Among other gynecological problems, it is regarded as a common gynecological issue among women in reproductive age and approximately 2 to 29% of the women experience severe pain.² There are two types of dysmenorrhea: primary and secondary. When there is no pathogenic consequences, such as Fibroids, Endometriosis, or Pelvic Inflammatory Disorders, Dysmenorrhea is referred to be Primary. Secondary Dysmenorrhea is associated with Fibroids, Endometriosis, or Pelvic Inflammatory Diseases.³ In addition, depending on the level of pain experienced, dysmenorrhea can be categorized as mild, moderate, or severe.⁴ Dysmenorrhea is associated with a variety of complications. The most common associated problems of dysmenorrhea are Irritable Bowel Syndrome, Fibromyalgia, Migraines, and Digestive Symptoms.⁵ Dysmenorrhea has been linked to psychological and

emotional Issues, such as emotional instability, an unfavorable attitude toward sex and menstruation.⁶ Clinical and experimental research, however, has identified its physiological cause, namely prostaglandin formation. The Endometrium's excessive prostaglandin production is the cause of the pain experienced during menstruation.⁷ Women with severe dysmenorrhea and during the first two days of menstruation have increased quantities of prostaglandins in their menstrual secretions.⁸ The severity of Dysmenorrhea is strongly correlated with earlier Menarche, longer Menstrual Cycles, Obesity, Smoking, and Alcohol consumption.⁹ Increased levels of Stress, Worry, Sadness, and Social Network Disturbance can all considerably increase the likelihood of developing Dysmenorrhea.¹⁰ Primary Dysmenorrhea often resolves after childbirth and in the third decade of a Woman's Reproductive life, but it's unclear whether the degree of Secondary Dysmenorrhea has any bearing on its Prognosis.¹¹ Dysmenorrhea is a complex set of symptoms that has an adverse effect on Women's Quality of Life and productivity. Due to menstrual pain, 50% of women missed at least one day of school or work.¹² Girls who have primary Dysmenorrhea

experience acute, Spasmodic Pain that comes and goes, commonly centered in the supra pubic area.¹³ Pain typically starts few hours before and a few hours after the start of monthly Menstruation.¹⁴ The Quality of Life for women may be impacted by all these Dysmenorrhea-related side effects. Poor Quality of Life is experienced by Women who have Dysmenorrhea.¹⁵ According to statistics, Dysmenorrhea can affect as much as 90% of women worldwide or as less as 43%. In Pakistan, girls of reproductive age are unable to carry out their everyday tasks effectively during menstruation for cultural and societal reasons, therefore many choose not to seek medical attention.¹⁶ This study was aimed to determine the prevalence and Impact of dysmenorrhea on quality of life of students nurses. Data on dysmenorrhea's prevalence and quality of life in Pakistan, particularly in Khyber Pakhtunkhwa, are scarce.

METHODOLOGY

Cross-sectional research was conducted at one nursing school in Peshawar. Data was collected in three sections of nursing sciences (BSN, MSN, and Post RN). Overall, 179 female students were recruited in the study using Censes Method. Female students enrolled in INS, KMU and willing to participate in the Research were included to Participate in the Study. Participants with Secondary Dysmenorrhea, Breastfeeding Mothers, or Pregnant Participants were excluded from the Study. The KMU Ethical board approval obtained. The Director of the concerned institute approved the collection of data. Participants were informed of the study's goals and objectives. All of the included individuals confirmed their consent. To determine the association between dysmenorrhea and various categories, the chi-square test was used. The WHOQOL Questionnaire has Total Twenty-Six Questions which cover Quality of Life all aspect such as Psychological, Physical, Social, and Environmental respectively. This Study was conducted in October 2020 to February 2021.

RESULTS

The majority (60.3%) of the participants were having dysmenorrhea while 39.7% were not experiencing dysmenorrhea (Table 1).

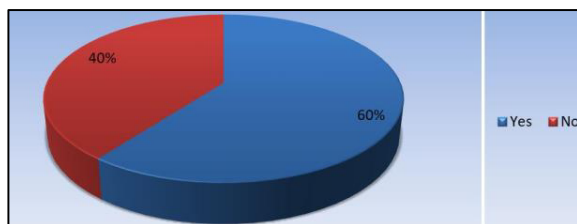


Figure 6: Pie-Chart Depicting Prevalence of Dysmenorrhea

The majority (63.5%) participants reported dysmenorrhea in age group 18-25 years. while in the 26–30 and 31-45-year age categories, 35.3% and 57.1% participants reported dysmenorrhea. 63.4% participants reported dysmenorrhea among unmarried participants. Seventy-eight (64.5%), twenty-one (48.8%), and nine (60%) participants with dysmenorrhea, respectively, fell into the categories of generic BSN education, PRN, and MSN In dysmenorrhea group. Pathan Hindko, Punjabi, Chitrali, and others were recorded as 90 (60.4%), 5 (55.5%), 4 (36.4%), 7 (87.5%), and 2 (100%) correspondingly in the ethnicity. One hundred and five (63.3%) members in the group for dysmenorrhea were Muslims, whereas only three (25%) were Christians (Table 1).

Table 1: Dysmenorrhea and Socio-Demographic Profile of the Participants, n=179.

Items		Dysmenorrh ea N (%)	No Dysmenorrh ea N (%)	P- Value
Age Categories	18-25 age	94(63.5%)	54(36.5%)	0.077
	26-30 age	06(35.3%)	11(64.7%)	
	31-45 age	08(57.1%)	06(42.9%)	
Marital Status	Unmarried	92(63.4%)	53(36.6%)	0.079
	Married	16(47.1%)	18(52.9%)	
Level of Education on	Generic	78(64.5%)	43(35.5%)	0.198
	PRN	21(48.8%)	22(51.2%)	
	MSN	09(60%)	06(40%)	
Geographic Location	Rural	53(68.8%)	24(31.2%)	0.044
	Urban	55(53.9%)	47(46.1%)	
Ethnicity	Pathan	90(60.4%)	59(39.6%)	0.164
	Hindko	05(55.6%)	04(44.4%)	
	Punjabi	04(36.4%)	07(63.6%)	
	Chitrali	07(87.5%)	01(12.5%)	
	Others	02(100%)	0(0%)	
Religion	Islam	105(63.3%)	61(36.7%)	0.015
	Christian	03(25%)	09(75%)	
	Hindu	0(0%)	01(100%)	

Moreover, in the dysmenorrhea among women, 64.9% reported having pain before to menstruation, whereas 47.9% reported none. In addition, 71.3% of women reported experiencing menstrual pain. 71.4% of patients in the dysmenorrhea group reported experiencing nausea or vomiting. Most individuals (70.8%) reported having lower abdomen pain. 73.5% of the participants were reported with lower abdominal pain pointed towards legs. In dysmenorrhea group, all the participants were reported cramps. The majority (79.2%) of the participants in the dysmenorrhea group were described as experiencing lower abdomen heaviness (Table 2).

Table 2: Dysmenorrhea and Associated Problems among the Participants, n=179.

Items		Dysmenorrhea N (%)	No Dysmenorrhea N (%)	P-Value
Lower abdominal Pain	Yes	97(70.8%)	40(29.2%)	<0.05
	No	11(26.2%)	31(73.8%)	
Pain before menses	Yes	85(64%)	46(35.1%)	<0.05
	No	23(47.9%)	25(52.1%)	
Nausea or vomiting during MC	Yes	55(71.4%)	22(28.6%)	<0.05
	No	53(52%)	49(48%)	
Pain during MC	Yes	107(71.3%)	43(28.7%)	<0.05
	No	01(3.4%)	28(96.6%)	
Abdominal pain pointed towards legs	Yes	86(73.5%)	31(26.5%)	<0.05
	No	22(35.5%)	40(64.5%)	
Cramps in abdomen	Yes	108(100%)	0(0%)	<0.05
	No	0(0%)	71(100%)	
Lower abdominal heaviness	Yes	84(79.2%)	22(20.8%)	<0.05
	No	24(32.9%)	49(67.1%)	

With a p-value of 0.377, the QOL and dysmenorrhea are not significantly correlated. Sixty-seven (40.6%) of the participants in the group without dysmenorrhea and 98 (59.4%) of the participants with dysmenorrhea have satisfactory QOL. Dysmenorrhea group ten (71.4%) and No Dysmenorrhea group four (28.6%) both have poor quality of life (Table 3).

Table 4: Association among Quality of life and Dysmenorrhea, n=179

QOL	Dysmenorrhea	No Dysmenorrhea	Total	P-Value
Good QOL	98(54.7%)	67(37.4%)	165(92.1%)	0.377
Bad QOL	10(5.6%)	04(2.2%)	14(7.8%)	
Total	108(60.3%)	71(39.6%)	179(100%)	

DISCUSSION

A total of 179 participants from one nursing school participated in this cross-sectional study, which was conducted to evaluate the quality of life in females with dysmenorrhea. Out from these 179 participants, 60.3% have dysmenorrhea and 39.7% do not. However, in a different study, the results were completely different, with 83.6% having dysmenorrhea and 16.4% not having it.¹⁷ Another study in the same context revealed that 69% of people have dysmenorrhea.¹⁸ According to a study conducted in Ethiopia, 69.26% of participants there reported having dysmenorrhea, which supports the findings of the current study.¹⁹ Our study found no significant difference in QOL between the groups with and without dysmenorrhea; the good QOL in the dysmenorrhea group was 59.4%, while the bad QOL was 71.4%. These findings are almost identical to those of a study conducted in 2019 at a university in Spain.

(19). Additionally, there was no noticeable difference in the means between the two groups in the areas of physical, psychological, social, and environmental factors. In our study, there were 63.4% of unmarried participants and a lower percentage of 47.1% of married participants reported dysmenorrhea. 64.5% of the general population had dysmenorrhea as stated. Similar to other studies, which had more participants, 85.9% of them were single and had dysmenorrhea.²⁰ There was a considerable difference in the percentage of women reporting menstrual cycle pain between the two groups. In the dysmenorrhea group, 71.3% of women experienced menstrual cycle pain, whereas just 3.4% reported no menstrual cycle discomfort. 46.2% of 763 participants in a survey stated that they always having pain in menstruation.²¹ In contrast to the 53 participants who reported no such issues, 55 participants (71.4%) reported experiencing nausea, vomiting, and diarrhea during their menstrual cycle. Similar to the current study, nausea and diarrhea was reported among 18.2% and 29.5% participants.²² Similarly, a recent study in the dysmenorrhea group noted nausea of 30.4%, vomiting of 11.3%, and diarrhea of 17.1%.¹⁸ There was a significant difference because the p value is less than 0.05 in the lower abdomen discomfort between the groups with and without dysmenorrhea; in the dysmenorrhea group, 70.8% had lower abdominal pain and 26.2% had none. In a study, the group of individuals with dysmenorrhea experienced lower abdomen pain in 98% of cases.¹⁵ With regard to variable lower abdomen discomfort pointing towards the legs, there was a noteworthy difference between the two groups. In the group with dysmenorrhea, 73.5% reported having this sort of pain, while 35.5% reported none. In a related study, only 12% of individuals reported having pain that was directed towards their leg.²¹ One hundred and eight (100%) of the participants in the group with dysmenorrhea reported having cramps, compared to the 100 percent of participants in the group without dysmenorrhea who said they had none. The lower abdomen heaviness between the two groups was also significantly different, with 79.2% of participants in the dysmenorrhea group reporting lower abdominal heaviness. Supporting current findings of the study, a study reported that 96% participants with dysmenorrhea experience pain and 81% experience heaviness in their abdominal area.²³ Patients with and without dysmenorrhea were not significantly different in terms of quality of life in the current study. A study reported totally different findings and reported that the women experience reduced quality of life with dysmenorrhea.²⁴ Similarly, another study also reported impacted quality of life with dysmenorrhea.²⁵

LIMITATIONS

The article may have a limited sample size, which may not be representative of the overall population of student nurses with primary dysmenorrhea.

CONCLUSIONS

Dysmenorrhea is very common among nursing students, along with severe lower abdomen pain, although there is no correlation between dysmenorrhea and quality of life. Unmarried was discovered to have minimal but substantial risk factor for dysmenorrhea. Improved health education can minimize the effects of dysmenorrhea and can improve quality of life in dysmenorrhea. Therefore, it is recommended that health education, personal hygiene should be improved to minimize the effects of Dysmenorrhea, and Dysmenorrhea topic should be added in schools and colleges curriculum.

CONFLICT OF INTEREST: None

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