

Hemşirelik Öğrencilerinde Premenstrual Sendromun ve Etkileyen Faktörlerin İncelenmesi

Premenstrual Syndrome in Nursing Students and The Affecting Factors

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ÖZ

Giriş ve Amaç: Menstruasyon, kadın hayatının yaklaşık 30-35 yılını kapsayan fizyolojik bir durum olmakla birlikte menstruel dönemde üreme çağındaki pek çok kadını olumsuz etkileyen problemler de görülebilmektedir. Menstrual döneme ilişkin en çok görülen problemler arasında amenore, dismenore, disfonksiyonel uterus kanamaları ve premenstruel sendrom yer almaktadır. Bu araştırma, hemşirelik öğrencilerinde premenstrual sendrom (PMS) görülme sıklığı ve etkileyen faktörlerin belirlenmesi amacıyla planlanmıştır.

Yöntem ve Gereçler: Araştırma, Gaziantep ilinde bulunan bir üniversitede okuyan 319 hemşirelik kız öğrencisi ile tanımlayıcı olarak yapılmıştır. Veri toplama aracı olarak; Tanılama Formu ve Premenstrüel Sendrom Ölçeği (PMSÖ) kullanılmıştır.

Bulgular: Katılımcıların yaş ortalaması 20.16±1.50 olup %75.5'inin gelir durumunun orta seviyede olduğu saptanmıştır. Çalışmada PMSÖ toplam puan ortalamasının 122.20±39.54 (min=44, max=220) olup, PMS prevalansının %63.0 olduğu bulunmuştur. Premenstruel dönemde öğrencilerin %63.3'ünde depresif duygulanım, %39.8'inde anksiyete, %73.0'ünde yorgunluk, %67.1'inde sinirlilik, %48.9'unda depresif düşünceler, %67.7'sinde ağrı, %64.9'unda iştah değişimleri, %56.1'inde uyku değişimleri ve %60.2'sinde şişkinlik yakınmalarının görüldüğü belirlenmiştir. Ayrıca menarş olduklarında öğrencilerin %33.5'inin korktuğu ve %74.0'ünün ise bu durumu ilk olarak annesiyle paylaştıkları belirlenmiştir.

Tartışma ve Sonuç: Çalışmanın sonucunda öğrencilerin yarısından fazlasının PMS yaşadığı ve yaklaşık dörtte üçünün PMS'den kaynaklı yaşam aktivitelerinin olumsuz etkilendiği saptanmıştır. PMS'nin olumsuz etkilerini azaltmak için öğrencilerin PMS'ye yönelik farkındalıklarının artırılması ve sağlık çalışanları bu durumla baş etmede kullanılabilecek yöntemler konusunda öğrencilere eğitim ve danışmanlık hizmeti vermelidir.

Anahtar Kelimeler: Premenstruel sendrom, hemşirelik, menstruasyon

ABSTRACT

Introduction: Menstruation is a physiological event involving 30-35 years of female life, and problems related to the menstrual cycle negatively affect many women in reproductive age. The most common menstrual problems are amenorrhea, dysmenorrhoea, dysfunctional uterine bleeding, and premenstrual syndrome. This study was designed to determine the prevalence of premenstrual syndrome in female nursing students and the affecting factors.

Methods: This descriptive study was conducted with 319 female nursing students studying at a university in Gaziantep between October 2017 and November 2017. Students were surveyed by using the personal information form and Premenstrual Syndrome Scale.

Results: The mean score for the overall scale was 122.20±39.54 and the prevalence of PMS was 63.0%. The analysis of the mean subscale scores in terms of the cutoff point revealed that in the premenstrual period, of the participants 63.3% experienced depressive mood, 39.8% had anxiety, 73.0% had fatigue, 67.1% had irritability, 48.9% had depressive thoughts, 67.7% had pain, 64.9% experienced a change of appetite, 56.1% experienced changes in sleep patterns, and 60.2% had bloating complaints.

Discussion and Conclusion: It was determined that more than half of the students experienced PMS and approximately one-third of them were affected by PMS-related life activities negatively.

Key words: Premenstrual syndrome, nursing students, menstruation

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INTRODUCTION

Menstruation, a physiological phenomenon involving 30-35 years of a life of a woman, may lead to problems which adversely affect many women in their reproductive age.^{1,2} Among the most common menstrual problems are amenorrhea, dysmenorrhoea, dysfunctional uterine bleeding and premenstrual syndrome.^{3,4} Premenstrual syndrome (PMS) is a collection of cognitive, emotional, somatic, and behavioral symptoms that occur 7-10 days before the menstrual cycle, and decrease or disappear with the onset of menstrual bleeding.^{5,6} PMS which can be seen at any age after menarche is an important public health problem that affects one out of every five women, disrupts the mental health of the woman, leads to workforce loss and lowers the quality of life.^{7,8} In a meta-analysis of 9147 women in reproductive age indicated that the prevalence of PMS was 70.8% in the general population and 80.4% among higher education students.⁹ The etiology of PMS is not fully known. However, many biological, psychological, and socio-cultural risk factors, gonadal hormones, and neurotransmitters are thought to be effective in the development of PMS.^{10,11} PMS can manifest itself in up to 150-200 ways. Of these symptoms, the most common ones are anxiety, emotional changes, decreased energy, breast swelling and tenderness, pain in the muscles and joints, uncontrollable anger, increased or decreased appetite.^{12,13} Changes occurring during the PMS periods can cause women to suffer from uneasiness at home, work and school, and to experience economic losses, decreases in academic achievement, deterioration in emotional well-being and quality of daily life, and problems in maintaining social activities.¹⁴⁻¹⁶ There is no definitive treatment for PMS. Symptom-oriented treatment plans are being developed. In the problem-oriented therapy, women are informed about the menstrual cycle, their misbeliefs are corrected, and they are

encouraged to gain exercise habits and to develop their own stress-coping mechanisms so that they can successfully cope with PMS.^{12,13} In this respect, increasing nursing students' awareness of PMS would make them able to inform their peers who have such PMS-related problems about the applications to reduce symptoms related to PMS, to encourage them to put these applications into practice and to gain them PMS-coping skills.

The study was designed to determine the prevalence of PMS in female nursing students and the affecting factors.

MATERIALS and METHODS

This descriptive study was conducted with female nursing students going to Health Sciences Faculty of Gaziantep University between October 2017 and November 2017 to determine the prevalence of PMS among them and the affecting factors.

Sample

Nursing students studying at Gaziantep University comprised the population of the study. No sampling method was implemented in this study. Except for those who were not in the classroom when the study was performed and those who did not agree to participate in the study, all the other students in the study population were included in the study sample. The study was conducted with 319 female nursing students. In the original study, of the 435 questionnaires administered 362 (response rate 83.21%) were returned. However, only 319 of these questionnaires were accepted and used for the analysis.

Data Collection

After the students included in the sample were informed about the purpose of the study and told that participation was voluntary, and that they could withdraw at any time, they were asked to fill in the Personal Information Form and the Premenstrual Syndrome Scale (PMSS).

The Personal Information Form and the PMSS were administered to the students included in the study sample in October-November 2017. It took the participants about 10-15 minutes to fill in the data collection forms. The participants filled in the data collection forms by themselves.

The Personal Information Form developed by the researchers in the light of the relevant literature which includes 15 items questioning various socio-demographic characteristics such as age and income status and characteristics of the menstrual period, and the PMSS used to assess premenstrual syndromes were used as data collection forms.^{8,16-18}

Premenstrual Syndrome Scale (PMSS): The scale was developed by Gençdoğan in 2006 to determine premenstrual symptoms and to assess the severity of the symptoms. The validity and reliability study of the scale was also conducted by Gençdoğan. The 5-point Likert-type scale consisted of 44 items.¹⁷ The Cronbach's Alpha value of the scale was calculated as 0.75. The scale questions the PMS experienced in the last three months. The scale has nine subscales: Depressive mood, anxiety, fatigue, irritability, depressive thoughts, pain, change of appetite, changes in sleep patterns and bloating. The sum of the scores obtained from these nine subscales yields the overall PMSS score. The lowest and highest possible scores to be obtained from the scale were 44 and 220 respectively. The higher the score is the higher the intensity of the PMS symptoms is. While the score exceeding 50% of the highest possible score means that the person has PMS, the score lower than 50% of the highest possible score means that the person does not have PMS.

Statistical Analysis

The study data were analyzed using statistical software SPSS (IBM SPSS Statistics version 22.0). All variables were analyzed using frequencies, arithmetic means, proportions, standard deviations, and percentages. The

Kolmogorov-Smirnov test was used to verify the normality of the distribution. Mann Whitney U Test was used for variables not normally distributed. The chi-square test was used to analyze the categorical variables. Statistical significance was defined with a p value of ≤ 0.05 through all the statistical analyses conducted in the current study.

Ethical Consideration

Before the study was conducted, approvals were obtained from Gaziantep University Ethical Review Board (No:349) and the hospital where the study was to be conducted. Before conducting the research, the researchers informed the participants about their rights and the purpose of the study. After the participants were told that participation was voluntary, that their credentials will be kept confidential and would not be disclosed to third parties, their consent was obtained.

RESULTS

The mean age of the participants was 20.16 ± 1.50 . In the study, it was found that of them, 75.5% had a moderate-income level and 30.4% were fourth grade students. The mean age of the participants at menarche was 13.60 ± 1.21 . Of them, 33.5% were scared when they had their first menstruation and 74.0% shared this with their mothers first. While activities of daily living were negatively affected in 90.0% of the participants during menstruation, 80.0% of them started to experience negative effects one week prior to menstruation. In order to cope with PMS, of the participants, 32.9% took analgesics, 56.7% applied a warm compress or had a warm shower, 34.5% drank herbal tea, 13.8% exercised, 4.1% visited a doctor and 14.4% consumed protein, vegetables / fruits. The study results showed that 68.0% of the participants' mothers also experienced PMS. The analysis of the results also revealed that there was a statistically significant relationship between the presence of PMS and the participants' year at

school, how they felt when they had their first menstruation, the person to whom they first told that they experienced menarche, negative effects

of menstruation on activities of daily living during menstruation and a week before menstruation (p <.05) (Table 1).

Table 1. Examination of Socio-Demographic and Menstrual Features of the Participants according to PMS Status

Variables	PMS status						X ²	P	
	Yes n	%	No n	%	Total n	%			
Class									
1.class	38	18.9	28	23.7	66	20.7	8.149	.043*	
2.class	57	38.4	24	20.3	81	25.4			
3.class	39	19.4	36	30.5	75	23.5			
4.class	67	33.3	30	25.4	97	30.4			
Income status									
Good	29	14.4	18	15.3	47	14.7	.938	.626	
Medium	150	74.7	91	77.1	241	75.5			
Bad	22	10.9	9	7.6	31	9.7			
Smoking status									
Yes	18	9.0	7	5.9	25	7.8	.941	.332	
No	183	91.0	111	94.1	294	92.2			
Status of alcohol use									
Yes	12	6.0	5	4.2	17	5.3	.443	.506	
No	189	94.0	113	95.8	302	94.7			
How she feels when she has menarche									
Badly-sad	47	23.4	29	24.6	76	23.8	13.487	.019*	
Fear	78	38.8	29	24.6	107	33.5			
Strange	24	11.9	14	11.9	38	11.9			
Nothing	25	12.4	31	26.3	56	17.6			
Normal	16	8.0	11	9.3	27	8.5			
Wonderment-excitement	11	5.5	4	3.4	15	4.7			
Shared with whom when they had their first menstruation									
Mother	149	74.1	87	73.7	236	74.0	9.104	.028*	
Sister	30	14.9	15	12.7	45	14.1			
Relative-friend	17	8.5	5	4.2	22	6.9			
Anyone	5	2.5	11	9.3	16	5.0			
Menstruation cycle									
Irregularly	36	17.9	21	17.8	57	17.9	.001	.980	
Regularly	165	82.1	97	82.2	262	82.1			
Affected by PMS–related daily life activities negatively during menstruation									
Often	68	33.8	10	8.5	78	24.5	30.830	.001*	
Sometimes	121	60.2	88	74.6	209	65.5			
Unaffected	12	6.0	20	16.9	32	10.0			
Affected by PMS–related daily life activities negatively a week before menstruation									
Often	62	30.8	10	8.5	72	22.6	50.661	.001*	
Sometimes	121	60.2	62	52.5	183	57.4			
Unaffected	18	9.0	46	39.0	64	20.1			
Affected by PMS–related daily life activities negatively a week before her mother' menstruation									
Often	18	9.0	8	6.8	26	8.2	3.962	.138	
Sometimes	107	53.2	52	44.1	159	49.8			
Unaffected	76	37.8	58	49.2	134	42.0			
Age	20.21±1.50		20.07±1.51		20.16±1.50		U=	.373	.432
Age of menarche	13.58±1.15		13.63±1.30		13.60±1.21		U=	1.109	.704
Menstruation time (day)	5.7±1.35		5.5±1.44		5.6±1.38		U=	1.122	.274
*p<.05.									

In the study, the mean score for the overall PMSS was 122.20 ± 39.54 (min = 44, max = 220) and the prevalence of PMS was 63.0%. The mean scores obtained from the subscales were as follows: depressive mood (19.86 ± 7.35), anxiety (16.24 ± 6.88), fatigue (18.17 ± 6.34), irritability (15.16 ± 5.84), depressive thoughts (17.41 ± 7.36), pain (9.07 ± 3.42), change of appetite (9.12 ± 3.82), changes in sleep patterns (8.22 ± 3.43) and puffiness (8.92 ± 3.86). The

analysis of the mean subscale scores in terms of the cutoff point revealed that in the premenstrual period, of the participants, 63.3% experienced depressive mood, 39.8% had anxiety, 73.0% had fatigue, 67.1% had irritability, 48.9% had depressive thoughts, 67.7% had pain, 64.9% experienced a change of appetite, 56.1% experienced changes in sleep patterns, and 60.2% had bloating complaints (Table 2).

Table 2. Distribution of Premenstrual Syndrome Scale Scores

PMSS subscales	Mean±SD	Participants' min-max values	Scale' min-max values	Premenstrual complaints	
				n	%
Depressive mood	19.86±7.35	7-35	7-35	202	63.3
Anxiety	16.24±6.88	7-35	7-35	127	39.8
Fatigue	18.17±6.34	6-30	6-30	233	73.0
Irritability	15.16±5.84	5-25	5-25	214	67.1
Depressive thoughts	17.41±7.36	7-35	7-35	156	48.9
Pain	9.07±3.42	3-15	3-15	216	67.7
Appetite changes	9.12±3.82	3-15	3-15	207	64.9
Sleeping changes	8.22±3.43	3-15	3-15	179	56.1
Puffiness	8.92±3.86	3-15	3-15	192	60.2
Total	122.20±39.54	44-220	44-220	201	63.0

DISCUSSION

In the study conducted to determine the prevalence of PMS among nursing students and factors affecting PMS, more than half of the participants (63.0%) experienced PMS. Consistent with the results of the study, in studies conducted with adolescents in Turkey, the prevalence of PMS was 66.7% in Gaziantep, 62.5% in İzmir, 60.0% in Muğla and 50.2% in Balıkesir. On the other hand, the prevalence of PMS was 67% in India, 75% in Malaysia, 85.5% in Nigeria, 8.8% in Iran, 21.1% in China and 16.4% in the United Arab Emirates.^{7,8,16,19-25} The difference between the prevalence rates in the study and in studies in the other countries of the world is thought to stem from the fact that the studies were conducted with participants from different sociocultural backgrounds and different age groups. In Turkey, due to the fact that mothers, in general, do not inform their daughters accurately about menarche or menstruation and due to misconceptions that the

menstruation is a shame, that it is something that should not be talked about, that menstruating women are dirty and menstrual blood is dirty blood, young girls either lack or have inaccurate knowledge of menstruation, and thus they experience great fear and pain during menstruation.²⁶ In the study, it was observed that 33.5% of the participants experienced feelings of fear when they had their first menstruation and that PMS was more prevalent among them. In their study (2010), Kivrak and Taşgın determined that 52.6% of the students attending physical education and sports college experienced feelings of fear when they had their first menstruation.²⁷ Similarly, in Kısa et al.'s study (2012), 69.6% of the students with negative reactions to having menstruation experienced PMS.¹⁶ A person's knowledge of menarche and experiences of the premenstrual phase determine her attitudes towards menstruation. If attitudes towards and feelings and thoughts about menstruation are negative

and scary, then PMS may become even more severe.²⁸ Studies conducted on the issue have shown that those who experienced PMS shared their menarche experience first with their mothers and were first informed about menarche by their mothers, and that those whose mothers who experienced PMS were more likely to experience PMS.²⁹⁻³¹ In the study, 68.0% of the participants' mothers experienced PMS too and the prevalence of PMS was high among those who shared their menarche experience first with their mothers. In a study conducted in Pakistan, 55.11% of the respondents stated that the main source of their knowledge of menstruation was their mothers.²⁹ In another study, more than half of the students who stated that their mothers had premenstrual complaints experienced PMS.¹⁶ In another study, the prevalence of PMS was high among those whose mothers or sisters had similar complaints (31).

In a study conducted in Pakistan, a significant relationship was found between the prevalence of PMS and a family history of PMS.²⁹ In the study, the participants had complaints of fatigue, depressive mood, depressive thoughts, pain, irritability, changes in sleep patterns, change of appetite, anxiety and bloating in the premenstrual period. Similarly, in Tarı Selçuk et al.'s study, students in the premenstrual period were observed to have complaints of fatigue, depressive feelings, depressive thoughts, pain, irritability, changes in sleep patterns, change of appetite, anxiety and bloating.⁸ In Eğicioğlu et al.'s study, the most common PMS were angry mood, abdominal bloating, fatigue, breast tenderness, anxiety, headache and social withdrawal.³² In a study conducted with students experiencing PMS, the students had complaints of anger, irritability, fatigue, difficulty in concentrating, mood swings, breast tenderness, general body discomfort, deterioration in activities of daily living or social life and decreased job

performance.²⁹ In their community-based study (2012), Qiao et al. reported that the most frequent complaints in women who experienced PMS were irritability, breast tenderness, depression, abdominal bloating, and anger bursts.²⁵ For a woman who menstruates 12 times a year and has 7 to 10 days of distress every month, which equals a duration of 3 or 4 months a year, menstruation becomes a process which adversely affects her quality of life, school achievement, class attendance, emotional well-being, social activities, family relationships, activities of daily living and performance.^{16,33} In the study, a statistically significant relationship was found between the presence of PMS and activities of daily living affected adversely during menstruation and the week before menstruation. Rizk et al. (2006) found that quality of life, school performance, social interactions and emotional well-being were negatively affected in girls experiencing PMS.²⁰ In their study, Demir et al. (2006) reported that job performance of the majority of the women decreased due to premenstrual complaints.³⁴ Currently, there is no effective medical treatment for PMS. Thus, young girls are trying to cope with these symptoms causing problems in family, school education and social relations by using the methods they themselves have developed.¹⁷ In the study, of the students who were adversely affected by PMS, 32.9% took painkillers, 56.7% applied a warm compress or had a warm shower, 34.5% drank herbal tea, 13.8% exercised, 4.1% visited a doctor and 14.4% consumed protein, vegetables / fruits. In Kircan et al.'s (2012) study, of the participating students, 50.6% slept, 47.6% took painkillers, 29.8% consumed more water and 28.6% consumed vegetable products to cope with menstrual problems.⁷ In another study, of the women experiencing pre-menstrual syndromes, 43.1% took a rest, 42.1% took pain relievers, 10.4% applied a warm compress and 4.2% had exercises to overcome their

complaints.³² In their study, Thu et al (2006) found that the students experiencing PMS exercised, made changes in their sleep patterns and diet, and used non-pharmacological methods to cope with the symptoms.³⁵ In the literature, it is emphasized that young girls should be encouraged to have a well-balanced diet and to apply relaxation methods such as regular exercise, stress management to overcome menstrual complaints.¹⁸

CONCLUSION

The results of the study revealed that more than half of the students experienced PMS. Of the premenstrual syndromes experienced, the most common ones were fatigue, pain, irritability, appetite changes and depressive mood. Premenstrual syndromes were more common in the second- and fourth-grade students, those who had feelings of fear when they had their first menstruation, those who shared their menarche experience first with their mothers, those who had regular periods, those whose activities of daily living were adversely affected during menstruation and a week before menstruation. As the results indicate, PMS negatively affects the social, physical and psychological health of young girls. Therefore, it is recommended that women experiencing PMS should be encouraged to implement pharmacological or non-pharmacological treatment methods such as diet, exercise, hormonal contraceptives, diuretics, acupuncture, plants, vitamins and minerals related to PMS, that training programs should be held to raise their awareness of PMS and that studies with larger samples should be performed on this subject.

Limitations of the Study

There are also several limitations in this study. First, we used a convenience sampling method to include students from only one university, thus the results may not be generalized to other population groups in

various settings. Second selecting convenience samples of females from one major area in a university setting might not accurately represent the female college students. However, it is expected that nursing students have had enough health-related courses to develop behaviors to protect and improve their health status, and gained this level of knowledge to focus more on their own health at the end of the second semester of their studies. Third, the self-report measures are subject to reporting biases.

Conflicts of Interest

None

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