Arrival Date: 12.03.2024 | Published Date: 31.08.2024 | Vol: 9, Issue: 3 | pp: 363-372 | Doi Number: http://doi.org/10.5281/zenodo.13623548

THE RELATIONSHIP BETWEEN PREMENSTRUAL SYNDROME AND PSYCHOLOGICAL STRENGTH AND EMOTION REGULATORY DISORDER

PREMENSTRUAL SENDROM İLE PSİKOLOJİK SAĞLAMLIK VE DUYGU DÜZENLEME GÜÇLÜĞÜ ARASINDAKİ İLİŞKİ

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ABSTRACT

Objective: The aim of this study was to determine the relationship between premenstrual syndrome, psychological resilience and emotion dysregulation.

Materials and Method: The field of education at the Faculty of Health Sciences and Nursing, affiliated with a public university, created the universe of female modeling. When power analysis was performed, the sample was calculated as at least 671 female students with an error level of 0.05, 80% representation power and 99.9% confidence rate, and the research was completed with 712 participants. "Personal introduction form, "Premenstrual Syndrome Scale (PMSS)", "Brief Psychological Resilience Scale (BPRS)" and "Difficulty in Emotion Regulation Scale (DERS)" were used to obtain the data. Percentage distribution, arithmetic mean, standard deviation, cronbach alpha, pearson correlation analysis were used in statistical evaluation.

Results: The mean age of the participants was 21.69±3.97 years, the mean menstrual cycle (days) was 28.64±6.45, the mean number of days with menstrual bleeding was 5.99±1.37, and 74.16% experienced PMSS. The mean total scores of the participants were 17.96±4.46 for PSS, 43.04±17.10 for DERS and 136.38±40.34 for PMS. In addition, negative, weak, moderate and highly significant correlations were detected with PMSS and all its subscales and KPSS, and positive correlations with the mean scores of DDGS and its subscales ($p<0.01$).

Conclusion: It was determined that psychological resilience decreased and emotion regulation difficulty increased as level of premenstrual syndrome increased.

Keywords: Emotion Dysregulation, Premenstrual Syndrome, Psychological Resilience

ÖZET

Amaç: Bu araştırma premenstrual sendrom ile psikolojik sağlamlık ve duygu düzenleme güçlüğü arasındaki ilişkiyi belirlemek amacı ile yapıldı.

Gereç ve Yöntem: Bir kamu üniversitesine bağlı Sağlık Bilimleri ve Hemşirelik Fakültesi'nde eğitim alan kız öğrenciler araştırmanın evrenini oluşturdu. Power analiz yapıldığında örneklemi, 0.05 yanılma düzeyi, %80 temsil kuvveti ve %99.9 güven oranı ile en az 671 kız öğrenci olarak hesaplandı ve 712 katılımcı ile araştırma tamamlandı. Verilerin elde edilmesinde Kişisel tanıtım formu, Premenstrual Sendrom Ölçeği (PMSÖ), Kısa Psikolojik Sağlamlık Ölçeği (KPSÖ) ve Duygu Düzenleme Güçlüğü Ölçeği (DDGÖ) kullanıldı. İstatiksel değerlendirmede yüzdelik dağılım, aritmetik ortalama, standart sapma, cronbach alfa, pearson korelasyon ve linear regresyon analizi kullanıldı.

Bulgular: Araştırmada katılımcıların yaş ortalamasının 21.69±3.97, menstrual siklus ortalamasının (gün) 28.64±6.45, menstrual kanamalı gün sayısı ortalamasının 5.99±1.37 olduğu ve %74.16'sının premenstrual sendrom yaşadığı saptandı. Katılımcıların toplam puan ortalamalarının KPSÖ için 17.96±4.46, DDGÖ için 43.04±17.10, PMS için 136.38±40.34 olduğu saptandı. Ayrıca PMSÖ ve tüm alt boyutları ile KPSÖ ile negatif yönde, DDGÖ ve alt boyutları puan ortalamalarının pozitif yönde zayıf, orta ve yüksek düzeyde anlamlı ilişkiler tespit edildi ($p<0.01$).

Sonuç: Premenstrual sendrom düzeyi arttıkça psikolojik sağlamlığın azaldığı, duygu düzenleme güçlüğünün arttığı belirlendi.

Anahtar kelimeler: Duygu Düzenleme Güçlüğü, Premenstruel Sendrom, Psikolojik Sağlamlık

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Bu makaleye atıf yapmak için / Cite this article: Özsahin, Z., Guven Santur, S., Yıldırım, E., Yeşilkuş, F., Kaya, Z., Guden, R., Filiz, K., Atilla, H., & Osman, E. (2024). The Relationship between Premenstrual Syndrome and Psychological Strength and Emotion Regulatory Disorder. *Gevher Nesibe Journal of Medical & Health Sciences,* 9(3), 363-372. http://doi.org/10.5281/zenodo.13623548

** This study was presented as an oral presentation at the 9th International 13th National Midwifery Students Congress held in Erzurum between 02-04 November 2023.*

INTRODUCTION

Many women in the reproductive period experience some physical and psychological discomfort before the menstrual cycle (Yonkers et al, 2008). One of the disorders experienced during this period is Premenstrual Syndrome (PMS). It is a combination of psychological, physical and behavioral symptoms that occur during the luteal phase of the menstrual cycle and subside spontaneously after a few days (Gnanasambanthan et al, 2019). PMS affects women's social life, work life, and daily life and reduces their quality of life (Ryu et al, 2015). PMS can cause irritability, sudden mood swings, depression, fatigue, loss of control, impaired concentration, and imbalance in weight gain and loss (Rapkin et al, 2009). The most important symptoms are depressive thoughts, depressed mood, and anger (Uzunoğlu et al, 2019).

The relationship between the frequency of depressive symptoms and psychological resilience is negative (Sağ & Bilican, 2020). Psychological resilience is defined as not being pessimistic in the most difficult situation and having the ability to adapt to new conditions (Çelebi GY, 2020). This power of people who can recover and return to their normal lives even after unwanted events is defined as psychological resilience (Bozdağ F, 2020). Psychological resilience can be affected by factors such as adaptability, self-efficacy, internal balance, perspective on events, and sociability (Eker et al, 2020). Considering that PMS leads to psychological, somatic, and behavioral disorders (Rapkin et al, 2009), it is thought that psychological resilience may be affected by this process. In addition, it is stated that the functional regulation of emotions of people with low psychological resilience may be negatively affected (Zörer & Yorulmaz, 2022). Emotion regulation is the ability to understand and accept the emotions experienced, to direct impulsive behaviors, and to behave as desired even when experiencing negative emotions. In the absence of one of these, difficulties in emotion regulation may occur (Yılmaz et al, 2020.). It is thought that having depressive thoughts and depressive mood at the beginning of the symptoms caused by PMS (Uzunoğlu et al, 2019) may cause difficulty in emotion regulation in people. There exist no studies in the literature examining the relationship between premenstrual syndrome and psychological resilience and emotion dysregulation. Therefore, it is thought that our study will contribute to the literature.

MATERIALS AND METHOD

Type of Research

The research was conducted in relational descriptive type.

Place and time of the research

The research was collected by female students studying at the Faculty of Health Sciences and Nursing of a university in Turkey, between June and July 2023, by researchers via the Google form system.

Population and sample of the study

Female students studying at the Faculty of Health Sciences and the Faculty of Nursing constituted the population of this research. The sample size was determined using the sampling method with known population. The sample of the research was determined with OpenEpi Version 3, a publicly available statistical software. The power analysis showed that sample size needs to be at least 671 students with a bias level of 0.05, 80% representativeness, and 99.9% confidence interval. The research was completed with 712 students who approved of being separated, taking into account possible losses. The inclusion criteria are being 18 years of age and over, having a regular menstrual cycle, not using any medication regularly (psychiatric, oral contraceptive, etc.), while the exclusion criteria are not using any medication regularly (psychiatric, oral contraceptive, etc.) and having a menstrual cycle. creates.

Data Collection Tools

A personal introduction form, the Premenstrual Syndrome Scale (PMSS), the Brief Psychological Resilience Scale (BPRS), and the Difficulty in Emotion Regulation Scale (DERS) were used to obtain the research data.

Personal Introduction Form

In the personal introduction form prepared by the researchers, 11 questions were used to determine the socio-demographic characteristics of the individuals participating in the research (Sağ & Bilican, 2020).

Premenstrual Syndrome Scale (PMSS)

It is a Likert-type scale with 44 questions and five options (Never, Very little, Sometimes, Frequently, Continuously), created by Gençdoğan, that measures the degree of discomfort experienced during the premenstrual period. In the scoring of the scale, "Never" item is evaluated as 1 point, "Very rarely" item as 2 points, "Sometimes" item as 3 points, "Frequently" item as 4 points and "Always" item as 5 points.The scores obtained from the total of nine sub-dimensions of the scale: 1. Depressive Affect, 2. Anxiety, 3. Fatigue, 4. Irritability, 5. Depressive Thoughts, 6. Pain, 7. Appetite Changes, 8. Sleep Changes and 9. Bloating. The total score of PMSS is calculated with . The application of the PMSS is evaluated retrospectively by considering that the participant is "within one week before menstruation". In the reliability study of the scale, Gençdoğan (2006) calculated the Cronbach's alpha coefficient of the scale as 0.75 and the correlation coefficient was 0.71 in the test-retest analysis. In the validity study, a comparison was made with a similar scale and the correlation between the scales was determined as 0.72. The factor analysis revealed a nine-factor structure and these factors accounted for 71% of the total variance. This factor structure was said to be mostly appropriate to the phenomenological structure in DSM-IVR. The lowest score that can be obtained from the PMSS is 44 and the highest score is 220. As the total score obtained increases, the intensity of premenstrual syndrome is expressed as greater (Gençdoğan 2006). For this research, the Cronbach alpha value of the scale was calculated as 0.77.

Brief Psychological Resilience Scale (BPRS)

Brief Psychological Resilience Scale (BPRS) was developed by Smith et al. to determine the person's psychological resilience status and level. (2008). BPRS is a scale consisting of 6 questions in a 5-point Likert model. The scale includes questions calculated in reverse, and the high scores obtained after these questions are translated and calculated indicate a high level of psychological resilience. The reliability of the scale was determined by internal consistency and test-retest methods. After these calculations, internal consistency reliability coefficient values between 80% and 91% were obtained. The test-retest reliability coefficient was found to be between 62% and 69%. For the validity of the scale, the relationships between BPRS and other scales were examined and analyzed. As a result of this analysis, positive significant relationships were identified between BPRS and ego resiliency, optimism, life goals, social support, positive coping strategies and positive emotions. Negative significant relationships were detected between BPRS and pessimism, depression, anxiety, negative emotions, perceived stress and negative coping strategies. For this research, the Cronbach alpha value of the scale was found to be 0.77.

Difficulty in Emotion Regulation Scale-Short Form (DERS-16)

The scales, which are the shortened formula of the Emotion Regulation Difficulty Scale (DERS) (Gratz and Roemer, 2004), were adapted by Bjureberg et al. (2016). DERS consisted of 16 questions and 5 sub-dimensions: general, initiative strategies and non-acceptance. Its validity and reliability were adapted to Turkish by Yiğit et al. (2017). The internal cost of the scale was determined as 92%, and the internal performance coefficients of its sub-dimensions were observed to be between 78% and 87%. The test-retest reliability of the scale created in Turkish was calculated as 85%, and the two-half test reliability was calculated as 88%. For this study, the Cronbach alpha value of performance was calculated as 0.77.

Data Collection

Data were collected by researchers via Google form. This form has been prepared to be filled out after receiving approval from the participants. The survey form of this study was filled out digitally by the participants and the answers were digitally archived. It took the participant approximately 10 minutes to answer the questions in the survey.

Statistical Analysis

SPSS 25.0 package program was used to code and evaluate the data. Whether the variables were suitable for normal distribution or not was calculated based on Skewness and Kurtosis Skewness and Kurtosis coefficients between -1.50 and +1.50. It was understood that the data was suitable for normal distribution. In statistical evaluation; percentage distribution, arithmetic mean, standard deviation, Cronbach's alpha, Pearson correlation and linear regression analysis were used. In the study, values at $p<0.05$ were considered statistically significant.

Ethical Aspects of the Research

Permission was received from Inonu University Institute of Health Sciences Non-invasive Clinical Research Ethics Committee (Decision no: 2023/4603) to conduct the research. Written consent was obtained from the institutions where the research was conducted. Participants were informed about the research and volunteers were included in the study. All researchers have confirmed that they will comply with the Declaration of Helsinki.

RESULTS

Sociodemographic and menstrual cycle characteristics of the study participants are given in Table 1. The average age of the participants was 21.69±3.97, and the average age at menarche was 13.26±1.69. 95.4% of the participants were single, 78.8% had a nuclear family type, 82.5% did not work in any income-generating job, and 57.2% lived most of their lives. It was determined that the economic status of 76.8% of the people living in the province was at a medium level. It was determined that the average menstrual cycle of the participants was 28.64±6.45, the average number of days with menstrual bleeding was 5.99±1.37, and 74.16% experienced PMS.

Table 1. Some Characteristics of the Participants Regarding Sociodemographic and Menstrual Cycle (n=712)

Variables	**Avg±SD**	
Age	21.69±3.97	
Age of Menarche	13.26±1.69	
Menstrual cycle cycle (days)	28.64±6.45	
Number of days with menstrual bleeding	5.99±1.37	
What is your family type?	**n**	**%**
Nuclear family	554	77.8
Extended family	134	18.8
Broken family	24	3.4
Are you working in a job that generates income?		
Yes	82	11.5
No	630	88.5
Where do you spend the majority of your life?		
Province	407	57.2
District	178	25.0
Bay	127	17.8
What is your marital status?		
Single	679	95.4
Married	33	4.6
How do you evaluate your economic situation?		
High	158	22.2
Middle	547	76.8
Log	7	1.0
PMS status		
There is	528	74.16
None	184	25.84
Total	**712**	**100**

Avg: average; SD: standard deviation

The lowest and highest scores and mean scores that the participants received from the scales and subscales are given in Table 2. The total BPRS score average of the participants is 17.96±4.46. Emotion Regulation Difficulty Scale total score average is 43.04±17.10, "Openness" subdimension average score is 5.53±2.34, "Goals" subdimension average score is 9.20±3.46, "Impulse" subdimension average score is 7.73±3.56, "Strategies" subdimension average score is 13.27. ±5.86, the mean score of the "Disapproval" subscale is 7.27±3.58. Premenstrual Syndrome Scale total mean score is 136.38±40.34, "Depressive Affectiveness" subdimension mean score is 23.18±6.97, "Anxiety" subdimension mean score is 18.67±7.36, "Fatigue" subdimension mean score is 20.19±6.30, "Irritability" subdimension mean score is mean 16.61±5.79, "Depressive Thoughts" subdimension mean score 20.78±8.00, "Pain" subdimension mean score 9.50±3.54, "Appetite changes" subdimension mean score 9.22±3.67, "Sleep changes" subdimension mean score 9.12± 3.48, "Bloating" subdimension mean score is 9.07±3.72.

Table 2. The Lowest and Highest Scores and Mean Scores of the Participants on the Scales and Subscales are g-Given in Table 2.

Variables	Avg±SD	Minimum/maximum points that can be obtained	Min/max points received
BPRS total	17.96±4.46	6-30	6-30
DERS total	43.04±17.10	1-64	16-80
Openness	5.53±2.34	0-8	2-10
Purposes	9.20±3.46	0-12	3-15
Impulse	7.73±3.56	0-12	3-15
Strategies	13.27±5.86	0-20	5-25
Disapproval	7.27±3.58	0-12	3-15
PMSS Total	136.38±40.34	44-220	44-220
Depressive Affect	23.18±6.97	7-35	7-35
Anxiety	18.67±7.36	7-35	7-35
Tiredness	20.19±6.30	6-30	6-30
Irritability	16.61±5.79	5-25	5-25
Depressive Thoughts	20.78±8.00	7-35	7-35
Pain	9.50±3.54	3-15	3-15
Appetite Changes	9.22±3.67	3-15	3-15
Sleep Changes	9.12±3.48	3-15	3-15
Swelling	9.07±3.72	3-15	3-15

Avg: average; SD: standard deviation, PMSS; Premenstrual Syndrome Scale, BPRS; Brief Psychological Resilience Scale, DERS; Emotion Regulation Difficulty Scale

The relationship between the PMSS, the BPRS, and the DERS is given in Table 3. It was determined that PMSS and all its sub-dimensions had a weak, moderate, and highly significant relationship with the mean score BPRS in a negative direction and with the mean scores of DERS and its sub-dimensions in a positive direction ($p<0.01$). It was determined that psychological resilience decreased and emotion regulation difficulty increased as PMSS values increased.

Table 3. Differences Between PMSS Total and Subscale Score Averages and BPRS and DERS Score Averages

PMSS Total and Sub-dimensions	r/p value	BPRS total	DERS total	Openness	Purposes	Impulse	Strategies	Disapproval
Depressive Affect	r	-.415*	.717*	626*	.614*	.674*	.692*	.613*
	p	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**	**.000**
Anxiety	r	-.346	.609*	.569*	.491	.580	.576*	.536*
	p	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**
Tiredness	r	.348*	.620*	.559*	.570*	.571*	.590*	.504*
	p	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**
Irritability	r	-.340*	.605*	.528*	.509*	.609*	.583	.482*
	p	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**
Depressive Thoughts	r	-.376*	.642*	.608*	.554*	.597*	.615*	.517*
	p	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**
Pain	r	-.255*	.478*	.419*	.409*	.466*	.449*	.411*
	p	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**
Appetite Changes	r	-.154*	.358*	.316*	.311*	.336*	.337*	.310*
	p	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**
Sleep Changes	r	-.303*	.537*	.490*	.461*	.493*	.501*	.487*
	p	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**
Swelling	r	-.184*	.417*	.325*	.353*	.405*	.389*	.392*
	p	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**
PMSS Total	r	-.393*	.707*	.634*	.606*	.671*	.674*	.599*
	p	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**

Pearson correlation * The correlation is significant at p<.001 level, Avg: Average; SD: Standard Deviation, PMSS; Premenstrual Syndrome Scale, BPRS; Brief Psychological Resilience Scale, DERS; Emotion Regulation Difficulty Scale

The results of the Linear Regression Analysis on the Prediction of PMSS via the mean scores of BPRS and DERS are given in Table 4. As a result of the analyses, it was determined that premenstrual syndrome significantly predicted the BPRS total score in a negative direction, while DERS significantly predicted it in a positive direction, and the models established were statistically significant. When the R2 values of the models were examined, it was seen that 15.4% of the variance in the overall BPRS and 50% of the DERS could be explained by premenstrual syndrome. Based on the equations that can be established regarding the regression models, a 1-unit increase in the premenstrual syndrome scale score causes a 39.3% increase in the BPRS score and a 70.7% increase in the DERS score. When the t-test results regarding the significance of the regression coefficients were analyzed, it was found that premenstrual syndrome had a significant and negative effect on psychological resilience and a significant and positive effect on difficulties in emotion regulation.

Table 4. Linear Regression Analysis Results Regarding the Prediction of PMSS on BPRS and DERS-16 Score Averages

Scales		B	t	*β*	R^2	F	p
PMSS	**BPRS**	-.3.556	-11.379	-.393	.154	129.471	**.000**
	DERS-16	1.670	26.642	.707	.500	51.388	**.000**

PMSS; Premenstrual syndrome Scale, B; Unstandardized Beta Coefficient, β; Standardized Beta Coefficient, R2; Explanatory Coefficient, *p1<0.05; t test result for the significance of regression coefficients and F test result for the significance of the mode

The results of the Linear Regression Analysis on the Prediction of PMSS via the mean scores of BPRS and DERS are given in Table 4. As a result of the analyses, it was determined that premenstrual syndrome significantly predicted the BPRS total score in a negative direction, while DERS significantly predicted it in a positive direction, and the models established were statistically significant. When the R2 values of the models were examined, it was seen that 15.4% of the variance in the overall BPRS and 50% of the DERS could be explained by premenstrual syndrome. Based on the equations that can be established regarding the regression models, a 1-unit increase in the premenstrual syndrome scale score causes a 39.3% increase in the BPRS score and a 70.7% increase in the DERS score. When the t-test

results regarding the significance of the regression coefficients were analyzed, it was found that premenstrual syndrome had a significant and negative effect on psychological resilience and a significant and positive effect on difficulties in emotion regulation.

DISCUSSION

PMS is an important factor that negatively affects psychological resilience and emotion regulation difficulties. The physical and emotional symptoms caused by PMS can complicate women's emotional state and ability to regulate emotions. This may cause women to have more difficulties in their daily lives and have higher levels of anxiety and depression (Khodakarami et al, 2023). In this study, the relationship between PMS, psychological resilience, and emotion regulation difficulties was determined and is discussed in line with the relevant literature.

Our research participants consisted of university students. In Iran, the effect of psychological resilience counseling on adolescents with PMS was evaluated with similar motivation to our research topic (Babakhani et al, 2022). Again, the role of emotional regulation on PMS and quality of life was investigated with university students with similar motivation (Elazar et al, 2023). In different studies with similar qualifications, our study findings may show similarities or differences in terms of the mean age of the participants and some descriptive data and the group studied (Table 1).

When the PMSS total score of the participants was compared with reports in the literature, in which the effect of acupressure and yoga on PMS (Küçükkelepçe et al, 2021), the relationship between PMS and adverse childhood experiences (Özşahin et al, 2022), the effect of education based on the health belief model on PMS (Küçükkelepçe et al, 2021), and the effect of PMS on quality of life (Goker et al, 2015) have been examined in Turkey, PMSS total scores were similar, and this similarity is considered to be due to the fact that they were conducted in similar populations. When studies with similar motivation to our study conducted in different cultures were examined, it was observed that PMS total scores were lower than our research findings in many studies examining the effect of aerobics and yoga on PMS (Vaghela et al, 2019), the effect of nutrition therapy on PMS (Siminiuc & Turcanu, 2023), and the effect of aromatherapy on PMS (Heydari et al, 2019). This difference is considered to be due to environmental factors, genetic differences, or ethnicity differences.

In our research findings, there was a statistically significant negative correlation between PMSS sub-dimension and total score and BPRS total score in all sub-dimensions except fatigue sub-dimension (Table 3, $p<.001$). Khodakarami et al. examined the effect of cognitive behavioral counseling on PMS and psychological resilience and found that PMS and psychological resilience were correlated and the intervention was effective (Khodakarami et al, 2023). In another study examining the psychological resilience of women with PMS and its differentiation according to family environments, it was determined that the psychological resilience of women with PMS was lower (Kamboj & Sran, 2018). In a different study, a relationship between PMS and mental health was found (Fukushima et al, 2020). A study conducted in western Turkey found that PMS negatively affected mental health (Uzunoğlu & Aktan, 2019). This is thought to be due to hormonal factors. The results obtained from the study are similar to the relevant studies in the literature.

The relationship between PMS total and subscale mean scores of the participants and DERS was found to be positive and statistically significant (Table 3, $p<.001$). In a study conducted in different cultures by Wu et al. examining the relationship between PMS and emotional dysregulation, it was determined that there was a significant relationship between PMS and emotional dysregulation (Wu et al, 2016). In another study conducted with Israeli students, it was found that participants with PMS had more emotion regulation difficulties than the control group (Reuveni et al, 2016). The finding obtained in this study is similar to the ones reported in relevant literature. The fact that the results of the studies are similar despite being conducted in different cultures may be due to the fact that physical, hormonal, and emotional factors cause PMS symptoms. The findings of studies conducted in different cultures support the existence of similar PMS symptoms in individuals living in various geographies and societies. This similarity is based on a complex network of interactions that are physiologically associated with hormonal changes affecting emotional states. In addition to hormonal fluctuations, these studies suggest that various variables such as stress, dietary habits, genetic factors, and psychosocial factors are effective on PMS symptoms (Çevik & Sultan, 2021; Özkan & Koç, 2020; Reuveni et al. 2016; Wu et al. 2016).

In addition, as a result of the analysis, a 1-unit increase in the premenstrual syndrome scale score causes a 39.3% increase in the BPRS score and a 70.7% increase in the DERS score. This finding shows that premenstrual syndrome is an effective variable in decreasing psychological resilience and increasing emotion regulation difficulties.

Limitations of the Study

Since the study was conducted among university students, it cannot be generalized to older women. The high sample size is one of the strengths of the study.

CONCLUSION AND RECOMMENDATIONS

In conclusion, our research findings revealed that premenstrual syndrome had a negative effect on psychological resilience and difficulties in emotion regulation. As the level of PMS increased, psychological resilience decreased and difficulties in emotion regulation increased. In line with the results obtained, it was determined that women with PMS need support in terms of psychological resilience and emotion regulation. In this context, it may be recommended to plan and implement midwifery interventions including information transfer on various methods such as lifestyle changes, psychological support, alternative therapies and, drug treatment that can reduce the severity of premenstrual syndrome and contribute positively to women's psychological health.

Acknowledgements

We thank the young girls who agreed to participate in the study.

Conflict of interest

The authors have no funding or other conflicts of interest to disclose.

Author Contributions

The main idea of the study was detemined by ZÖ, ZK and RG. Conceptualization: FY and HA. Methodology: EY and KF. Software: ZÖ and SGS. Data collection: ZK, RG, HA, KF and EO. Writing- Original draft preparation: EY and FY. Visualization: EY and EO. Investigation: ZÖ and SGS. Supervision: EY. Writing- Reviewing and Editing: ZÖ and EY.

Funding

The financial support for this study was provided by the investigators themselves.

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