

Factors influencing premenstrual syndrome in nursing students



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ABSTRACT

The purpose of this study is to examine the menstrual attitude, resilience, and premenstrual syndrome (PMS) of nursing students, and to identify predictors of PMS in nursing students. A descriptive survey design was used in this study and 154 nursing college students enrolled in the nursing departments of universities located in D and K cities became the study participants. Data were collected through survey questionnaires and were analyzed using IBM SPSS 20.0 through mean and standard deviation, t-test, ANOVA, Pearson correlation, and stepwise regression analysis. The results showed that menstrual attitude has a negative correlation with PMS, and resilience has a positive correlation with PMS. The participants' PMS showed a positive correlation with menstrual attitude ($r=.114$, $p=.004$) and a negative correlation with resilience. In addition, factors affecting PMS in nursing students were menstrual attitude and resilience, with an explanatory power of 20.5%. In particular, resilience was identified as the key factor for predicting PMS among nursing students. Therefore, based on the study results, a nursing intervention program must be developed to effectively manage the premenstrual and postmenstrual clusters of nursing students.

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1. Introduction

Menstruation is a normal physiological phenomenon in women of childbearing age; however, many women experience physical and emotional discomfort associated with menstruation, which is defined as premenstrual syndrome (PMS). Seventy to eighty percent of women of childbearing age experience premenstrual symptoms, such as breast tenderness or abdominal bloating, nausea, and headache before menstruation (Cho et al., 2020). In most cases, the symptoms are generally mild and do not require any special treatment. However, twenty to forty percent of women have severe premenstrual symptoms that interferes with their daily life. This condition is referred to as PMS and involves various emotional and physical symptoms (Ozisik et al., 2012; Lauersen, 1985).

Premenstrual syndrome (PMS) was described by Abraham in 1982 as premenstrual tonicity, and during the luteal phase, elevated estrogen and progesterone ratio changes, aldosterone and renal

dopamine deficiency, anxiety symptoms, carbohydrate cravings symptoms, and depressive symptoms. According to the American Association of Obstetricians and Gynecologists in 2000, the premenstrual syndrome was defined as a condition in which one or more symptoms causing loss of function to occur 5 days before the onset of menstruation during 5 menstrual cycles and disappear after the onset of menstruation (Park and Lee, 2011).

Nursing students are experiencing a higher burden of study and clinical practice in addition to the various stresses experienced by students in other departments, and they spend a lot of time. In addition, it was found that nursing is exposed to unfamiliar environments due to clinical practice and is experiencing difficulties in adapting to stress that causes anxiety and tension (Cho et al., 2020).

The most common physical symptoms of PMS are abdominal bloating, fatigue, breast tenderness, headache, dizziness, and the most common psychological symptoms include mood changes, anxiety, tension, sadness or depression, increased appetite, and weakness. These various symptoms of PMS affected women's symptoms life. As factors related to menstrual characteristics, it has been reported that menstrual volume, dysmenorrhea, and menstrual period are important predictors of PMS.

May light, dysmenorrhea, and menstrual periods to factors associated with menstrual characteristics

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have been reported as important factors for predicting premenstrual syndrome. That is, the higher the menstrual volume, the higher the dysmenorrhea, and the longer the menstrual period, the higher the incidence of premenstrual syndrome. That is, the higher the monthly lightweight, and dysmenorrhea is higher, the higher the incidence of premenstrual syndrome, and longer menstrual periods. Also, it has been reported that an irregular menstrual cycle changes the cycle of estrogen and progesterone, increasing the incidence of type 2 diabetes, cardiovascular disease, and osteoporosis.

According to the definition by the International Classification of Diseases, PMS may be diagnosed when at least one of the seven symptoms (mental disorder, bloating, weight increase, breast tenderness, muscle pain, poor concentration, and changes in appetite) disrupts normal functioning, and such symptoms only occur regularly in the luteal phase of the menstrual cycle (Yoon, 2019). PMS interferes with daily activities and periodically and continuously affects the lives of women of childbearing age (Jung et al., 2014). A vicious cycle can occur where PMS becomes severe with more negative menstrual attitudes and, in turn, negative menstrual increases with more severe PMS (Janca and Hiller, 1996). Female college students, in particular, have been found to experience more severe PMS, compared with women in other age groups, because college students, who are in the transition period from adolescence to adulthood, experience various stresses in the process of resolving various tasks given to them, and this stress affects PMS.

Resilience is the tendency to respond flexibly when faced with changing situational demands or stressful situations. Resilience is the tendency to respond flexibly when faced with changing situational demands or stressful situations. When ego resiliency is when things are put to situational demands or stressful situations that have changed the tendency to react flexibly. In a narrow sense, it is an adaptive dimension that regulates an individual's emotional dimension and changes circumstances and environmental consequences. In a broad sense, it refers to the ability to flexibly and flexibly adapt to internal and external stress.

Korean university students have to adapt to a completely different life in the middle and high school entrance exam-oriented educational system after admission and invest a lot of time and effort into college life to acquire the basic knowledge and qualifications necessary as a professional medical professional.

Resilience helps people effectively overcome stress or hardship they are experiencing and works as a positive factor in maintaining psychological health and managing health when dealing with stress or adversity (Hur, 1985). In addition, resilience is similar to the strength of the mind, and hence, differs in its capacity from one person to another, similar to how muscle mass and physique vary by the person (Lee, 2019). Resilience is a

concept that includes the idea of individual development. In other words, resilience is something a person develops while positively adapting to a rapidly changing environment and is not naturally possessed. In the end, people with high resilience are better at coping with stress, compared to those with low resilience (Hur, 1985). Resilience is a psychological variable that can be enhanced through appropriate intervention and learning, thus it can serve as an effective approach for nursing interventions for PMS management.

Previous studies on PMS in nursing college students have reported the relationship between PMS and various variables, such as menstrual pattern, menstrual attitude, personality characteristics, lifestyle, and stress. However, research has yet to report on the relationships between menstrual attitude, resilience, and PMS.

Menstruation means the overall attitude, and awareness of menstruation to be formed by all social factors in addition to the factors of women. These changes to physical and mental changes are a variety of symptoms depending on the menstrual cycle, thereby worsening the majority of women around the electricity and menstruation as negative.

It is reported that if a woman has negative symptoms and emotions that interfere with her daily life, she will have a negative menstrual attitude. As for the effect on menstrual attitude, the more severe the physical and mental symptoms they experience before and after menstruation, the more negative the attitude toward menstruation is, and the more orthodox gender role stereotypes, the more negative the menstrual attitude.

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The menstrual attitude of South Korean women was seen as a form of patriarchal, male-dominated social and environmental cultural inferiority to look for women, this idea has the stereotype of the poor and the nature of women to be negative biological, body experiences, and social. And when women had a lot of prior knowledge about menstruation, it was found that their attitude toward menstruation was positive. It is reported that if a woman has negative symptoms and emotions that interfere with her daily life, she will have a negative menstrual attitude. Recently, studies on resilience have been conducted with a positive view of stress. Resilience is a concept that explains how people experiencing adversity overcome such adversity and grow spiritually (Baek et al., 2010). Resilience is also closely related to the negative stress experienced by nursing college

students because it is related to flexible problem-solving abilities in various environments (Lee and Cho, 2018). Resilience is formed gradually through the dynamic interaction between an individual and their environment and indicates an individual capacity to improve education or training. It is an aspect required by nursing college students, who are under heavy academic and clinical practice stress (Cho et al., 2020; Lee and Cho, 2018).

Therefore, this study aims to provide basic data for the development of nursing intervention programs for nursing students' management by investigating the relationships between menstrual attitude, resilience, and PMS among nursing students and identifying factors affecting PMS.

2. Research method

2.1. Research design

This is quantitative research conducted using a descriptive survey design aimed at identifying the menstrual attitude, resilience, and PMS of nursing students, as well as predictive factors affecting their PMS.

2.2. Research participants

The study participants were nursing students at universities in D and K cities who understood the study purpose and method and consented to participate in the research. The number of samples required for this study was confirmed using the G*Power 3.1.9 program and multiple regression analysis. A sample size of 180 was computed when the analysis required for multiple regression analysis was conducted with an effect size of .15, a significance level of .05, a power of .80, and a number of predictors of 10. Among the 160 questionnaires collected, 154 were used in the final analysis, excluding six copies with insincere responses.

2.3. Research tools

2.3.1. Menstrual attitude

This study measured the menstrual attitude of nursing students with the "Attitude toward Menstruation Scale (AMS)" developed by Yoon (2019). AMS consists of 21 items in total, including eight items on women's secrets, five items on women's baggage, five items on traditional femininity, and three items on women's symbolism. Responses to each item were measured on a seven-point Likert scale from "strongly disagree" (1 point) to "strongly agree" (7 points). Thus, the total scores ranged from 21 to 147, with higher scores indicating a negative attitude toward menstruation. Reverse scoring was applied to positive items. The reliability of the scale (Cronbach's α) was .81 at the time of its development and .82 in this study.

2.3.2. Resilience

Resilience is a psychological and social ability that humans have to effectively cope with stress or crisis situations and to further bring about positive adaptive results (Hur, 1985). In this study, resilience was measured using the Connor-Davidson Resilience (CD-RISC) (Baek et al., 2010). This tool consists of 25 items. The higher the scores for the responses measured on a five-point Likert scale, the higher the resilience. The reliability of the scale (Cronbach's α) at the time of its development was .88 (Hur, 1985) and .91 in this study.

2.3.3. Premenstrual syndrome

This study used the Menstrual Distress Questionnaire (MDQ), which was developed for menstruating women to measure the degree of PMS in nursing students. This tool consists of 47 items in total, including nine items on behavioral change, nine items on negative emotions, seven items on pain, eight items on concentration, six items on water retention, six items on changes in the autonomic nervous system, and two items on changes in the gastrointestinal system. Items are rated on a five-point Likert scale, ranging from "Not at all" (1 point) to "Strongly agree" (5 points). Thus, the total scores ranged from 47 to 235, with higher scores indicating more severe PMS. The reliability of the scale (Cronbach's α) was .95 at the time of its development and .96 in this study.

2.4. Data collection method

Data collection for this study was carried out from September 1, 2020, to December 31, 2020. The survey for this study was conducted after having nursing students who wished to voluntarily participate in the research fill out the consent form. Among the 160 questionnaires received, 154 were used for statistical processing, excluding those with insincere responses.

2.5. Data analysis

The collected data were analyzed as follows using the IBM SPSS Statistics version 20.0 program:

- The general characteristics of participants were analyzed in terms of frequency and percentage, and their menstrual attitude, resilience, and degree of PMS degree were analyzed in terms of mean and standard deviation.
- A t-test and one-way ANOVA were performed to determine the difference in the degree of PMS based on the general characteristics of participants, and the Scheffe test was used for a post-hoc test.
- Pearson's correlation coefficient was used to determine the correlation between the participants' menstrual attitudes, resilience, and PMS.

- A stepwise multiple regression analysis was conducted to verify the effect on the participants' PMS.
- The statistical significance level was set at .05.

3. Results

3.1. General characteristics of participants

In terms of age, 71.4% of participants were between the ages of 19 and 22. Moreover, 84.4% of participants slept for 5–6 hours a day. In terms of caffeinated beverage intake, the most common response was 1–2 cups per day, accounting for 59.7% of participants. Regarding the menstrual cycle, 64.3% of participants had a regular cycle. The most common menstrual cycle was found to be 5–6 days (61.7%). In terms of menstrual volume, 71.4% of participants had “moderate” menstrual bleeding (Table 1).

Table 1: General characteristics of participants (N=154)

Characteristics	Categories	n	%
Age	19–22	110	71.4
	23–28	32	20.8
	>28	12	7.8
Sleep hours	<4	8	5.2
	5–6	130	84.4
	>6	16	10.4
Caffeine	0	41	26.6
	1–2	92	59.7
	>3	21	13.7
Menstrual cycle	Irregular	99	64.3
	Regular	55	35.7
Menstrual period	3–4	40	26.0
	5–6	95	61.7
	>7	59	38.3
Menstrual quantity	Small	17	11.0
	Average	101	71.4
	Large	36	17.6

3.2. Menstrual attitude, resilience, and degree of premenstrual syndrome

The mean score of participants' menstrual attitudes was 71.40(±16.74), and the mean score of their resilience was 3.70(±0.50). The mean score of their PMS was 91.66(±14.37) (Table 2).

Table 2: Levels of attitude toward menstruation, resilience, social support, and premenstrual syndrome (N=154)

Variable	Mean±SD	Min–Max	Range
Menstrual attitude	71.40±16.74	42–127	21–147
Resilience	3.70±0.50	2.47–4.79	0–5
Premenstrual syndrome	91.66±14.37	50–130	26–130

3.3. Premenstrual syndrome by general characteristics of participants

The results of examining the difference in PMS based on the general characteristics of nursing students show that students with irregular menstrual cycles experienced more PMS, compared with those with regular menstrual cycles (F=.578, p=.002), and this difference was statistically significant (t=.788, p=.005) (Table 3).

3.4. Correlation among menstrual attitude, resilience, and premenstrual syndrome

The participants' PMS showed a positive correlation with menstrual attitude (r=.114, p=.004) and a negative correlation with resilience (r=-.23, p=.001) (Table 4).

Table 3: Adjustment to college life, according to demographic variables(N=154)

Characteristics	Categories	n	M±SD	t or F	P Scheffe
Age	19–22	110	90±12.88	2.65	.568
	23–28	32	54±14.33		
	>28	12	50±13.27		
	<4	8	64±14.21		
Sleep hours	5–6	130	92±15.21	3.88	.684
	>6	16	90±12.88		
	0	41	64±15.33		
Caffeine	1–2	92	50±14.27	1.57	.195
	>28	21	74±14.21		
	Irregular	99	90±12.88		
Menstrual cycle	Regular	55	64±14.33	3.88	.021
	3–4	40	50±13.27		
Menstrual period	5–6	95	74±14.21	.029	.368
	>7	59	90±12.88		
	Small	17	74±14.33		
Menstrual quantity	Average	101	50±13.27	.074	.465
	Large	36	74±14.21		

Table 4: Correlations among attitudes about menstruation, resilience, and premenstrual syndrome (N=154)

Variable	Attitude about Menstruation	Resilience	Premenstrual Syndrome
Attitude about Menstruation	1	.498 (.001)	.114(.004)
Resilience		1	-.23(.001)
Premenstrual Syndrome			1

3.5. Factors influencing premenstrual syndrome

As a result of testing the hypotheses in the regression analysis, all conditions of the regression equation were satisfied. The Durbin-Watson statistic value was 1.659 in the test for autocorrelation, thereby indicating that there was no autocorrelation between the independent variables. The tolerance limits for the variables were all above 0.1, between .596 and 0.964. The variation inflation factor (VIF) value was 1.088, which is less than the standard 10,

thereby indicating that there is no multicollinearity problem. The explanatory power of the regression model for PMS of nursing students was 20.5% ($F=5.98$, $p=.001$), menstrual attitude ($B=.28$, $p=.017$), and menstrual cycle ($B=-.22$, $p=.036$), and resilience ($B=.34$, $p=.004$) were identified as variables that significantly influence PMS. Among the three variables, resilience has the most significant impact on PMS (Table 5).

Table 5: Variables influencing premenstrual syndrome (N=154)

Variable	B	β	t	p	R ²	Adj. R ²	F(p)
Constants	75.31		4.35	.000	.217	.205	5.98 <0.001
Attitude about Menstruation	.25	.28	2.43	.017			24.65 (<0.001)
Menstrual period	-.26	-.22	-2.12	.036			16.46 (<0.001)
Resilience	.23	.34	2.93	.004			12.93 (<0.001)

4. Discussion

The aim of this study was to determine the correlation between menstrual attitude, resilience, and PMS, and the factors influencing PMS in nursing students. This study was providing basic data for the development of a PMS management program for nursing students. Menstruation is a normal physiological phenomenon in women of childbearing age; however, many women experience physical and emotional discomfort associated with menstruation, which is defined as premenstrual syndrome (PMS). Seventy to eighty percent of women of childbearing age experience premenstrual molimina, such as breast tenderness or abdominal bloating, nausea, and headache before menstruation (Cho et al., 2020). In most cases, the symptoms are generally mild and do not require any special treatment. However, twenty to forty percent of women have severe premenstrual molimina that interferes with their daily life. This condition is referred to as PMS and involves various emotional and physical symptoms (Ozisk et al., 2012; Lauersen, 1985).

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The menstrual attitude of participants showed a mean score of 71.40 points (out of 147 points in total), which is higher than the mean score of 67.2

points reported in a previous study (Park and Lee, 2011) conducted with nursing students using the same tool. Participants showed a moderate attitude toward menstruation, which is neither positive nor negative; therefore, nursing students should be provided with education to improve their positive perception or attitude toward menstruation.

The participants' resilience showed a mean score of 3.70 (out of 5 points in total). A previous study examined PMS in nursing students using the same tool described resilience as an individual's capacity to enhance their ability to adapt to a situation of change or challenge which leads to their increased adaptation to change, developmental stage, or stress and noted that students with higher resilience show higher confidence in performing health promotion behaviors (Lee and Cho, 2018). Resilience is the tendency to respond flexibly when faced with changing situational demands or stressful situations. Resilience Ego resilience is the tendency to respond flexibly when faced with changing situational demands or stressful situations.

Ego resiliency is when things are put to situational demands or stress situations that have changed the tendency to react flexibly.

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In a narrow sense, it is an adaptive dimension that regulates an individual's emotional dimension and changes circumstances and environmental consequences. Korean university students have to adapt to a completely different life in the middle and high school entrance exam-oriented educational system after admission and invest a lot of time and effort into college life to acquire the basic knowledge and qualifications necessary as a professional medical professional. In addition, people with high resilience are better at managing themselves to

relieve PMS and maintain a sense of control over their bodies. It is considered that it is necessary to implement self-resilience strengthening education for nursing students who need to establish human relationships with various subjects such as patients, guardians, and medical personnel in the clinical field. Therefore, there is an urgent need for the development of programs to ensure better management of resilience and PMS among female college students.

The result of examining participants' PMS based on their general characteristics showed that PMS is experienced more as the menstrual cycle becomes more irregular. This finding supports the results of a previous study showing that the occurrence of PMS increases with longer menstrual periods (Kang, 2017; Lee, 2019). Irregular menstrual cycles cause changes in the cycle of estrogen and progesterone, thereby leading to serious problems, such as type-2 diabetes, cardiovascular disease, osteoporosis, and infertility. PMS can be experienced more frequently when the menstrual cycle is irregular; therefore, periodic checkups and management for stress relief are necessary (Park and Lee, 2011; Lee and Cho, 2018). Resilience has recently been attracting a lot of attention and research as interest in well-being has increased (Yoon, 2019). In the field of psychological counseling, which has been dealing with pathological dysfunction for a long time, interest in positive aspects of human beings such as optimism, happiness, and resilience is increasing, and much attention is paid to individual subjective and positive experiences. In relation to this effect, more research results show that ego resilience exerts a very positive effect on human adaptation (Park and Kwon, 2013). Therefore, research is being conducted from various angles. Comprehensively looking at the meaning of ego resilience, ego resilience can be said to be a dynamic personality characteristic of an individual who responds flexibly to a given situation and uses active resolution ability (Lee, 2019). Therefore, it is considered important for nursing students to develop a self-resilience program that can manage premenstrual syndrome without disturbing them so that they can adapt to excessive academic, clinical practice stress, and dynamic situations (Lee and Cho, 2018).

Nursing students, who are future nurses, will play a pivotal role in promoting the health of patients. To fulfill this role, they must prioritize managing their own health. Therefore, it is important to provide accurate information about the factors influencing PMS and help them manage PMS based on this information. The study results indicate the need to develop a nursing intervention program that further enhances resilience to reduce PMS in nursing students.

5. Conclusion

The aim of this study was to determine factors influencing PMS in nursing students and provide basic data for the development of nursing

interventions that will relieve PMS. This study is a descriptive research study to investigate the correlation between menstrual attitude and resilience with premenstrual syndrome and factors affecting premenstrual syndrome in nursing students.

Menstruation means the overall attitude, and awareness of menstruation to be formed by all social factors in addition to the factors of women. These changes to physical and mental changes are a variety of symptoms depending on the menstrual cycle, thereby worsening the majority of women around the electricity and menstruation as negative.

It is reported that if a woman has negative symptoms and emotions that interfere with her daily life, she will have a negative menstrual attitude. As for the effect on menstrual attitude, the more severe the physical and mental symptoms they experience before and after menstruation, the more negative the attitude toward menstruation is, and the more orthodox gender role stereotypes, the more negative the menstrual attitude.

Menstrual the more before and after menstruation impact attitudes cultural seeing the physical and mental symptoms that they experience severe or at menstruation negative attitudes about menstruation is negative, the more there are authentic gender role stereotypes are negative menstrual attitudes. The menstrual attitude of South Korean women was seen as a form of patriarchal, male-dominated social and environmental cultural inferiority to look for women, this idea has the stereotype of the poor and the nature of women to be negative biological, body experiences, and social.

And when women had a lot of prior knowledge about menstruation, it was found that their attitude toward menstruation was positive. It is reported that if a woman has negative symptoms and emotions that interfere with her daily life, she will have a negative menstrual attitude. Recently, studies on resilience have been conducted with a positive view of stress. Resilience is a concept that explains how people experiencing adversity overcome such adversity and grow spiritually (Baek et al., 2010). Resilience is also closely related to the negative stress experienced by nursing college students because it is related to flexible problem-solving abilities in various environments (Lee and Cho, 2018). Resilience is a psychological variable that can be enhanced through appropriate intervention and learning, thus it can serve as an effective approach for nursing interventions for PMS management.

Resilience is formed gradually through the dynamic interaction between an individual and their environment and indicates an individual capacity to improve education or training. It is an aspect required by nursing college students, who are under heavy academic and clinical practice stress (Cho et al., 2020; Lee and Cho, 2018).

Therefore, this study aims to provide basic data for the development of nursing intervention programs for nursing students' AMS management by investigating the relationships among menstrual

attitude, resilience, and PMS among nursing students and identifying factors affecting PMS. The subjects of this study were students enrolled in the Department of Nursing at universities in D and K cities, who understood the purpose and method of this study and agreed to participate in the study. The data collection of this study was carried out from September 1 to December 31, 2020, and students who wished to participate voluntarily filled out the consent form and then conducted a questionnaire.

The data collection of this study was carried out from September 1 to December 31, 2020, and students who wished to participate voluntarily filled out the consent form and then conducted a questionnaire. The final form has been used in the statistical processing portion 154 except the one to falsely respond to 160 parts. The subjects of this study were students enrolled in the Department of Nursing at universities in D and K cities, who understood the purpose and method of this study and agreed to participate in the study. Subjects of this study are the person who understands the purpose and methods of the present study nursing students currently enrolled in college during the D and K material and agree to participate in the study.

Menstruation attitude was measured using the Attitude about Menstruation Scale (AMS) tool (Baek et al., 2010). The attitudes (Attitude about Menstruation Scale, AMS) tool was developed for menstruation. It was measured using the Attitude about Menstruation Scale (AMS) tool (Hur, 1985). Resilience is the psychological and social ability of human beings to effectively cope with stress or crisis situations and to bring about positive adaptive results (Hur, 1985). Resilience helps people effectively overcome stress or hardship they are experiencing and works as a positive factor in maintaining psychological health and managing health when dealing with stress or adversity (Hur, 1985). In addition, resilience is similar to the strength of the mind, and hence, differs in its capacity from one person to another, similar to how muscle mass and physique vary by the person (Lee, 2019). Resilience is a concept that includes the idea of individual development. In other words, resilience is something a person develops while positively adapting to a rapidly changing environment and is not naturally possessed.

In the end, people with high resilience are better at coping with stress, compared to those with low resilience (Hur, 1985). Resilience is a psychological variable that can be enhanced through appropriate intervention and learning, thus it can serve as an effective approach for nursing interventions for PMS management. Resilience is the human psychology and social skills to effectively deal with stress or crisis situations and further lead to positive results adapt (Hur, 1985). In this study, CD-RISC (Connor-Davidson Resilience) (Baek et al., 2010) was used. The purpose of this study was measured using the Connor-Davidson Resilience Scale (Baek et al., 2010).

This tool consists of a total of 25 items. On a 5-point Likert scale, a higher score means higher

resilience. The premenstrual syndrome tool consisted of a total of 47 items, consisting of 9 items on behavioral changes, 9 items on negative emotions, 7 items on pain, 8 items on January tool of premenstrual syndrome consisted of 47 questions, 9 questions in behavioral change, negative emotion nine items, seven items pain, concentration 8 items, six items stagnant water, the autonomic nervous system changes six questions, two questions gastrointestinal system changes. On a 5-point Likert scale, each item ranges from 1 point for 'not at all' to 5 points for 'strongly agree'. Each item on a 5-point Likert scale is "Strongly agree" at a point "not at all" is up to 5 points. Scores ranged from 47 to 235, with higher scores indicating more severe premenstrual symptoms. The research results are as follows.

The age of the subjects participating in this study was 71.4% between the ages of 19 and 22. 84.4% of the sleep time was 5-6 hours a day. The caffeinated beverage intake was the highest in the group with ions, two quest7%). The menstrual cycle was found to be 'constant' at 64.3%. The number of menstrual days was the highest in the group with '5-6 days' at 61.7%. The degree of bleeding during menstruation was found to be 71.4% in the 'normal' group. The average score of the subjects' menstrual attitude was 71.40(±16.74), the average score of resilience was 3.70(±0.50), and the average score of PMS was 91.66(±14.37). As a result of confirming the difference in PMS according to the general characteristics of college students, it was found that students with irregular menstrual cycles experienced more PMS than those with regular menstrual cycles ($F=.578, p=.002$).

There was a statistically significant difference ($t=.788, p=.005$). As a result of confirming the difference in PMS according to the general characteristics of college students, it was found that students with irregular menstrual cycles experienced more PMS than those with regular menstrual cycles ($F=.578, p=.002$). There was a statistically significant difference ($t=.788, p=.005$).

It was measured using the Attitude about Menstruation Scale (AMS) tool (Baek et al., 2010). This study confirmed that resilience is a factor influencing PMS in nursing college students. Moreover, it is necessary to develop and implement college life adaptation interventions for nursing students. Based on the results of this study, the following suggestions are made for future research: First, future studies must consider various additional variables that influence the PMS of nursing students. Second, further research is required to develop nursing intervention programs for alleviating PMS in nursing students and verifying their effectiveness.

Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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