Assessment of Premenstrual Syndrome and Coping Strategies among Female Students of the School of Basic Medical Sciences, University of Benin, Benin City, Nigeria

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Abstract
There are several health problems associated with menstruation. One of the most common problems is premenstrual syndrome which occurs when the premenstrual symptoms are severe enough to disturb the quality of life of a woman. **Aim:** The study aimed to determine the common premenstrual symptoms, various coping strategies, and health-seeking behaviours adopted by female students in the School of Basic Medical Sciences, University of Benin, Benin City, Nigeria. **Method:** Cross-sectional design was adopted for the study. The questionnaire was used for the collection of data; a multistage sampling technique was adopted to select three hundred and ten (310) students from the four (4) departments proportionately. Descriptive and inferential statistics were used to analyse data collected using SPSS version 21.0. **Results:** The result showed that the most common premenstrual syndrome was mood swing 240 (77.7%), irritability 184(59.5%), fatigue 181(59.5%), and breast tenderness 171(55.3%). The degree of the menstrual syndrome was low 241(78.0%), moderate 206(66.7%). Common coping strategies were resting 206(66.9%), sleeping 200(64.7%), accepting the process as natural 148(47.9%), and the majority 273(88.3%) had negative health-seeking behaviour. Findings of the hypotheses testing revealed that there is no significant relationship between students' age and premenstrual syndrome and no significant association between premenstrual syndrome and course of study. **Conclusion:** It was concluded that the respondents experienced low to moderate degrees of the menstrual syndrome. Resting, sleeping, and accepting the process as natural were common coping strategies, and health-seeking behaviour was poor. **Recommendations:** Periodic health education programmes should be encouraged to involve active coping behaviours such as regular aerobic exercises, muscle strengthening, and slow breathing exercises. Students should be encouraged to have positive health-seeking behaviour.

Keywords: *Premenstrual syndrome, Coping strategies, Health seeking behaviour, Female students*

DOI: https://dx.doi.org/10.4314/bjnhc.v4i1.2

Introduction

There are several health problems associated with menstruation and one of the most common problems is a premenstrual syndrome which occurs when the premenstrual symptoms are severe enough to disturb the quality of life of a woman. Menstruation is a natural phenomenon that occurs throughout the reproductive years of every woman (Farotimi, et al. 2015). Most females experience some degree of pain and discomfort during their menstrual periods. During reproductive age, women generally experience physical, psychological, and behavioural symptoms regularly at the same phase of each menstrual cycle. This happens especially during the premenstrual period or early menstruation. This could also occasionally occur at ovulation. The premenstrual syndrome usually becomes

Akpoigho, E.C & Ukamaka, N.C (2022)

problematic in adolescent years and declines in climacteric et al. Premenstrual syndrome is defined as constellation of recurrent physical, emotional or behavioural (psychological and or somatic) symptoms occurring specifically during the lateal phase of the menstrual cycle and resolving before the onset of menstruation (Sulayman et al. 2015)

Though potentially not life-threatening, PMS is associated with a reduction in health-related quality of life, and women with PMS have greater work productivity impairment than women without it (Ikeako *et al.* 2014). The severity of premenstrual symptoms varies widely from person to person. Symptoms of premenstrual syndrome (PMS) include three aspects: emotional, physical, and behavioural which occur in a healthy sequence and last for about one week (Hafez, et al. 2015). According to the study of Nworie, et al. (2018) on common premenstrual syndrome among reproductive-aged females studied in South East, Nigeria, revealed that the most prevalent symptoms were trouble in concentrating (85.0%), irritability (79.2%), abdominal bloating (75.3%), aches and pains (70.0%), mood swings (69.2%), breast tenderness (69.2%) and food craving (68.0%). Their conclusion was that the prevalence of PMS was high among female students in Nigeria.

A similar study carried out by Ikeako, et al. (2014) on the commonest premenstrual clinical female medical students at the University of Nigeria, Enugu campus revealed that common premenstrual symptoms such as Pelvic discomfort (65.8%) and breast fullness (59.5%) were the most common physical symptoms, while mood changes (27.9%) and irritability (20.8%) were the most common psychological changes. The behavioural symptoms reported by the students were staying in bed (16.4%), whereas 23(12.6%) each stayed at home and avoided social activities, and 18 (9.8%) had lowered concentration in academic work at school. It was concluded that premenstrual symptoms were common among pre-clinical medical students, and they had mild, and a majority

with a severe degree of premenstrual syndrome.

Kelbessa, . (2017) study on the prevalence of premenstrual syndrome and coping mechanisms among female students of Guber Preparatory School West Shawa Zone, Onomia Regional State, Ethiopia, revealed the degree of symptoms as a total of 51.94% of respondents having symptoms with mild severity that leads to reduced daily activities like school performance, poor interpersonal relationships. 32.72% reported moderate PMS symptoms, while 15.55% with severe PMS. From the sample population, the symptoms are more among 15-25 years of age, and they interfere with their daily activities like school performance, and interpersonal relationships. Among the respondents (59.30%) did not use any of the coping methods, while (20.93%) used a change in diet. (15.11%) used medication and (4.65%) used exercise as a coping mechanism. There is no relationship between the severity of PMS and age among the sampled students. In conclusion, the study revealed a high prevalence of premenstrual syndrome as a common problem faced by the majority of Guber High School and preparatory schools. And that the symptoms interfere with daily functioning.

Sein, et al. (2016) study showed that the most frequent presenting PMS symptoms were poor concentration (88.6%), irritability (87.3%), aches and pain (81.9%), increased appetite (79.2%), and breast swelling (75.8%). The most frequent symptom in mild and moderate PMS is a physical symptom (aches and pain), irritability, poor concentration, food craving, and abdominal bloating. None of the women with mild and moderate PMS complained of uncontrollable anger. In conclusion, the prevalence of PMS was found to be high (37.3%) in reproductive-age Myanmar women from the medical field (medical students, doctors, and nurses). stressful lifestyle might be attributable to the high level of premenstrual syndrome.

928

A study by Bharti, et al. (2020) revealed that pelvic discomfort, abdominal cramps, restlessness, mood swings, and irritability were the most commonly reported symptoms. A commonly used coping mechanism by the subjects was rest (69.6%) followed by hot packs (62.8%). Conclusively, proper actions should be taken to educate and increase awareness among women and to provide a better coping methods to alleviate the symptoms of PMS. Appropriate pharmacological and psychological treatment should be encouraged to improve the quality of life.

A study conducted by Ezeh and Ezeh (2016) revealed that coping strategies used were prayer (50.8%), sleep/bed rest (29.2%), hot tea/coffee/kola nuts (8.5%), hot drinks/alcoholic beverages (0.8%), drugs and herbs (18.5%), physical/ aerobic workout/ exercise (0.8%), breathing exercise(0.8%). The three most frequently identified/ used coping strategies were; prayer, sleep/rest, and drug/herbs. These strategies were mainly passive coping skills. It was concluded that since, effective, and adequate behavioural coping strategies have been demonstrated to improve symptoms, and health outcomes; behavioural and active strategies in combination with proper medication were strongly recommended by the researcher to cope effectively with PMS.

A similar study conducted by Nageeb, et al. (2015) revealed that a majority of the students used complementary and alternative therapies (CAT) to relieve PMS symptoms such as herbal therapy followed by hydrotherapy, food change, massage, exercise, fixed oils, prayer, aromatherapy, and finally rest/sleep and hot apostasy, which were effective among the study samples. In the same vein, a study conducted by Elnagar and Awed (2015) revealed that self-care practices during PMS include correct and incorrect dietary changes of PMS; supplementation of vitamins (Vit. B, Vit E, Ca), Herbal; cinnamon, Mint, ginger, fenugreek, green tea. Mind-Body Interaction; (yoga, hearing music, drawing, and hearing Quran); Manipulative and Body-based Methods (massage, exercises, warm shower, warm compress, more than one method). Another study conducted by Molugulu, et al. (2015) revealed that the coping method used by the entire respondents to alleviate the premenstrual symptoms were; sleeping (63%), resting (62.3%), listening to music (38.7%), and self-medication (34.3%). In the self-medication analysis, most of the respondents take painkillers to alleviate the pain caused by premenstrual symptoms. Respondents' lifestyles in the study also displayed a significant association with PMS severity, under stressful lifestyle (47%), and course of study (50%). These may have correlated with life as a healthcare student that undergoes stress due to academic obligations and plentiful assignments which must be submitted on time.

A study conducted by Ruhi and Meenal (2015) revealed that health care-seeking behaviour was found to be very poor and only 34.34% of girls were seeking health care during dysmenorrhoea. A similar study conducted by Wong and Khoo (2015) revealed that there was poor treatment-seeking behaviour for PMS.

According to Shenuka, et al. (2018) study, severe symptoms can affect work, school performance and lead to problems/conflicts in interpersonal relationships. Hence this vulnerable phase of life requires attention in order to assess the common premenstrual symptoms and coping strategies and health-seeking behaviour adopted. This would in turn help to prevent a negative impact on their quality of life.

Statement of Problem
Interest in the topic was borne out of the researcher's work experience in the health center where the researcher worked. Students were frequently admitted as a result of discomfort, and pain during menstruation. The admission of these students into the health centres affected the academic activities of the students. It was noted that a majority of the

undergraduate females are usually within adolescent and young adulthood, and they faced a lot of challenges relating to puberty and familiarity with reproductive life issues. Such challenges may diminish their opportunities for successful educational and psychological health. According to Bakr and Ez-Elavab (2010) prevalence of premenstrual symptoms was found to be 89.6% among medical students of Ain Sharus University, Egypt. 80.2% among El-Minia University students, Egypt (Seedhom et al., 2013), 40.7% among students in health institutions in Zaria, Nigeria (Sulayan, et al, 2015). Students are faced with a lot of challenges as regards premenstrual syndrome, such as study efficiency, absenteeism, school performance, social interaction, and quality of life. Despite the challenges faced, PMS is regarded as a common problem not requiring medical attention. The literature reviewed has shown numerous symptoms which vary from individual to individual. Hence, this study on premenstrual syndrome is imperative to identify which of these symptoms are common with this population, their coping strategies, and health-seeking behaviours.

The objectives of the Study are to:
i.   determine the common premenstrual symptoms experienced by female students in the School of Basic Medical Sciences, University of Benin based on age.
ii.   determine the common coping strategy adopted by the students in handling premenstrual syndrome based on the course of study.
iii. identify health care-seeking behaviours used by the students towards premenstrual syndrome based on their academic level.

Hypotheses
The following null hypotheses are formulated by the researcher for this study and to be tested at a 0.05 level of significance
i.   There is no relationship between premenstrual syndrome and students' age.
ii.   There is no relationship between students' premenstrual syndrome and their course of study.

Methods and Materials
Research Design
A cross-sectional design was adopted for the study. This design has been successfully used in previous studies by Nworie, et al. (2018) on the assessment of premenstrual syndrome among female students in South-East, Nigeria; Kelbessa, et al (2017) on the prevalence of premenstrual syndrome and coping mechanisms among female students of Guber Preparatory School, West Shawa zone, Onomia Regimen State, Ethiopia.

Research Setting
The study was carried out at the University of Benin which was established on Saturday 23rd November 1970. It is located in Ovia Northeast Local Government Area of Edo State, Nigeria. It has the main campus located at Ugbowo while the second campus is located in Ekehuan town. The Ekehuan campus comprises some departments from the Faculty of Arts such as Theatre Art and Mass Communication, while other faculties such as Law, the Social Sciences, Agriculture, Education, Engineering, Life Sciences, Physical Sciences, Management Science, Basic Medical Sciences, and Medicine are located at the main campus at Ugbowo.

Population
The target population for this study is nine hundred and fifty-four (954) female students of the School of Basic Medical Sciences.

Sample Size and Sampling Technique
Taro Yamene (1967) was used to obtain a sample size of 310. The multistage sampling method was adopted.
Stage I: Sampling of department: a simple random sampling (lottery method) was used to select four departments out of six departments in the School of Basic Medical Sciences. The departments are Anatomy, Physiology, Biochemistry, Nursing Science, Medical

Laboratory Science, and Physiotherapy. Four departments selected were Anatomy, Medical Biochemistry, Medical Laboratory, and Nursing Science.

Stage II: Sampling of respondents to selected departments Stratified sampling was used to allocate students to selected departments as shown in table 1. Cochran (1977) formula was used to assign sample to strata, which is in the approach of proportionate stratification. With proportionate stratification, the sample size of each stratum is proportionate to the population size of the stratum. Stratum size is determined by the following equation:

$$nh = (Nh/N)n$$

where nh = Sample size for the stratum h

Nh = Population size for stratum size h

N = Total sample size

With the above formula, the individual department was allocated the proportion below:

Table 1: *Selection of respondents for the study*

Department	Population	Sample
ANT	150	72
MBC	150	72
MLS	182	87
NSC	164	79
Total	**646**	**310**

Stage III: Selection of respondents for the study
Convenient sampling was done to select students in each department.

The Instrument for Data Collection
A self-constructed questionnaire titled Premenstrual Syndrome Questionnaire (PSQ) was used for data collection from the respondents. A total of 52 close-ended question items of the (PSQ) were used to collect uniform and adequate information from the respondents.
Section A: Socio-Demographic data such as age, academic level, marital status, religion, age of menarche, and course of study. Section B: Common symptoms of women with Premenstrual Syndrome. Section C: Coping Strategies Used for Premenstrual Syndrome. Section D: Health Seeking Behaviour When Experiencing Premenstrual Syndrome.

Validity of Instrument
The drafts questionnaire, objective, and hypotheses of the study were submitted to experts in the field for face and content validity and then by the statistician. The items were scrutinized, and modifications were made where necessary. All the inputs were used to effect corrections in the final copy.

Reliability of Instrument
Reliability test was done by conducting a pilot study on thirty-one (31) female students who were not included in the sample for the study in the Department of Nursing at the Igbinedion University, Okada Edo State using the split half method. The Pearson Product Moment Coefficient correlation was used to calculate the reliability coefficient which was established at .86.

Method of Data Collection
Four research assistants were trained on the purpose and objectives of the study. The researcher and assistants collected data in various classes (500level -200level) during the break period. The copies of the questionnaire were administered to the students after the documents for informed consent had been duly completed and after which they were retrieved. Data collection took three weeks – from 3rd to 21st May 2021.

Method of Data Analysis
The completed copies of the questionnaire were collated and analysed using the Statistical Package for the Social Sciences (SPSS) version 21.0. The research questions were answered using descriptive statistics of frequencies, percentages, mean and standard

deviation while the hypotheses were tested using Chi-Square statistics at a 0.05 (5%) level of significance. Items in section D with the Likert scale were analysed using a decision rule of mean scores less than 1.5 indicating negative health-seeking behaviour while mean scores equal to or greater than 1.5 indicates positive health-seeking behaviour.

Result

Ethical Consideration

Written ethical permission to conduct the study was obtained from the College of Medical Sciences Ethical Committee, University of Benin, Benin City with reference number CMS/REC/01/Vol.2/186.

Table 2: *Demographic data of respondents*

	Frequency	Percentage
Age		
16 – 20	155	50.2
21 – 25	140	45.3
26 – 30	12	3.9
Above 30	2	0.6
Academic level		
200	74	23.9
300	84	27.2
400	112	36.2
500	39	12.6
Religion		
Christian	293	94.8
Muslim	16	5.2
Others	0	0.0
Course of Study		
Anatomy	87	28.2
Medical Biochemistry	91	29.4
Nursing Science	45	14.6
Medical Laboratory Science	86	27.8

Table 2 shows the demographic data of respondents. It shows that 155(50.2%) are in the age cohort 16 – 20yrs, 140(45.3%) are 21 – 25yrs, 12(3.9%) are 26 – 30, while 2(0.6%) are above 30yrs. 74 which is 23.9% of the respondents are at the 200 level, 84(27.2%) are at the 300 level, 112(36.2%) are at 400 level, and 39(12.6%) are at 500 level. It also shows that 87(28.2%) of the respondents are in the Department of Anatomy, 91(29.4%) are in Medical Biochemistry, 45(14.6%) are in Nursing Science, and 86(27.8%) are in Medical Laboratory Science.

Table 3: *Common premenstrual syndrome systems*

	Frequency	Percentage
Mood swing	240	77.7
Irritability	184	59.5
Fatigue	181	58.6
Breast swelling/Tenderness	171	55.3
Ache and pains	163	52.8
Decreased Interest in usual activities	129	41.7
Short temper	127	41.1
Abdominal bloating	120	38.8
Food craving	116	37.5
Poor concentration	115	37.2
Increased appetite	115	37.2
Headache	114	36.9
Avoidance	91	29.4
Apathy	90	29.1
Back ache	85	27.5
Insomnia	81	26.2
Uncontrollable anger	79	25.6
Anxiety	73	23.6
Nausea and vomiting	66	21.4
Depression	62	20.1
Lethargy	53	17.2
Hypersomnia	53	17.2
Forgetfulness	46	14.9
Swelling in hands and feet	19	6.1

Table 3 shows the common premenstrual syndrome systems experienced among the respondents. The majority 240(77.7%) experience mood swings, 184(59.%) irritability, 181(58.6^) experienced fatigue, 171(55.3%) experienced breast swelling/Tenderness, 163(52.8%) experience aches and pans, 129(41.7%) experienced decreased interest in usual activities, 127(41.1%) experienced short temper, 120(38.8%) experienced Abdominal bloating, 116(37.5%) experienced food craving, 115(37.2%0 experienced poor concentration and increased appetite respectively, experienced Forgetfulness, while the least 19(6.1%) experienced swelling in hands and feet.
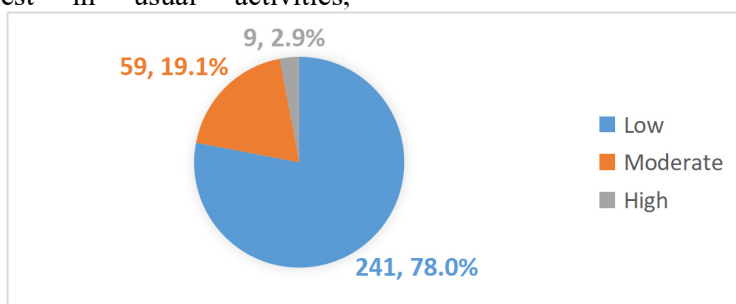
Figure 1: *Degree of premenstrual syndrome*

Figure 1 shows the degree of premenstrual syndrome among respondents. It shows that 241(78.0%) of the respondents experienced a low degree of premenstrual syndrome, 59 (19.1%) experienced moderate, and 9(2.9%) experience a high degree of premenstrual syndrome.

933

Table 4: *Common coping strategies adopted by students in handling premenstrual syndrome*

	Frequency	Percentage
Resting	206	66.7
Sleeping	200	64.7
Accept the process as the natural process	148	47.9
Listening to music	122	39.5
Pain killer	118	38.2
Diverting of attention	91	29.4
Exercise	73	23.6
Hot shower	65	21.0
Massage	60	19.4
Self-medication	59	19.1
Hot pack	58	18.8
Eat more than usual	57	18.4
Prayer	52	16.8
Hot water bag on the painful part	48	15.5
Talk to family	32	10.4
Herbal remedies	27	8.7
Dietary supplements	25	8.1
Seeks physician	13	4.2

Table 4 shows the common coping strategies adopted by students in handling premenstrual syndrome. It shows that 206(66.7%) rest, 200(64.7%) sleep, 148(47.9%) accept the process as a natural process, 122(39.5%) listen to music, 118(38.2%) use pain killer, 91(29.4%) divert their attentions to other things, 73(23.6%) exercise, 65(21.0%) adopt hot shower, 60(19.4%) adopt massage, 59(19.1%) resort to self-medication, 58(18.8%) use a hot pack, 57(18.4%) eat more than usual, 52(16.8%) pray, 48(15.5%) apply hot water bag on painful part, 32(10.4%) talk to family, 27(8.7%) resorts to herbal remedies, 25(8.1%) use dietary supplements, while 13(4.2%) seeks physician.
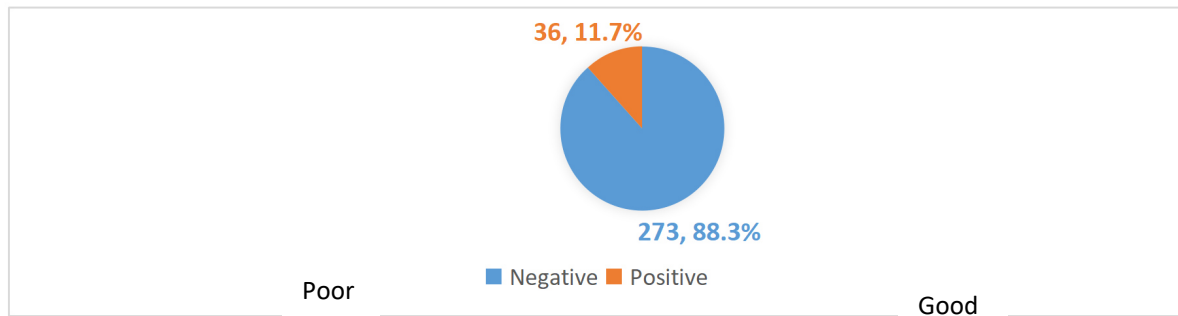
Table 5: *Health-seeking behaviour*

	Never	Rarely	Sometimes	Always	Mean	Remark
Self-medication	112(36.2)	64(20.)	97(31.4)	36(11.7)		
Consult mother	111(35.9)	70(22.7)	87(28.2)	41(13.3)		
Pray about it	118(38.2)	63(20.4)	90(29.1)	38(12.3)		
Endure it	42(13.6)	25(8.1)	79(25.6)	163(52.8)		
Consult the doctor	216(69.9)	48(15.5)	35(11.3)	10(3.2)		
Taking herbal drugs	254(82.2)	27(8.7)	26(8.4)	2(0.6)		
Taking medicines from nearby stores	160(51.8)	47(15.2)	79(25.6)	23(7.4)		
Apply warm compress	152(49.2)	50(16.2)	84(27.2)	23(7.4)		
Attend community health centre	267(86.4)	16(5.2)	16(5.2)	10(3.2)		
No need to go for treatment	149(48.2)	41(13.3)	54(17.5)	65(21.0)		

Table 5 shows the health-seeking behaviour of the students. One hundred and twelve (36.2%) never did self-medication, while 26(11.7%) always used self-medication, 111(35.9%) never consult their mothers, while 41(13.3%) always consult their mothers, 118(35.9%) never prayed about it, while 38(12.3%) always pray about it; 42(13.6%) never endure it, while 163 (52.8% always endure it; 216(69.9%) never consult a doctor, while 10(3.2%) always consult a doctor; 254(82.2%) never take herbal drugs, while 2(0.6%) always take herbal drugs; 160(51.8%) never take medicines from nearby stores, while 23(7.4%) always take medicines from nearby stores; 152(49.2%) never apply a warm compress, while 23(7.4%) always apply warm compress; 267(86.4%) never attended community health centres, while 10(3.2%) always attend community health centers; 14(48.2%) never went for treatment, while 62(21.0%) always go for treatment.

Figure 2: *Health-seeking behaviour*

Figure 2 shows the health-seeking behaviour of the respondents. It shows that 26(11.7%) have good health-seeking behaviour, while 273(88.3%) have poor health-seeking behaviour.

Hypotheses Testing

Hypothesis One: *There is no significant relationship between premenstrual syndrome and the coping behaviour of female students.*

Table 6: *Relationship between premenstrual syndrome and coping strategy*

		Premenstrual Syndrome	**Coping Strategy**
Premenstrual Syndrome	Pearson Correlation	1	0.305**
	Sig. (2-tailed)		0.000
	N	309	309
Coping Strategy	Pearson Correlation	0.305**	1
	Sig. (2-tailed)	0.000	
	N	309	309

Table 6 shows the relationship between premenstrual syndrome and coping strategy. It shows that there is a significant positive relationship (r=0.31; p<0.001) between premenstrual syndrome and coping strategy. This implies that the more the premenstrual syndrome increases, the more they develop a more coping strategy.

Hypothesis Two: *There is no relationship between premenstrual syndrome and students' age*

Table 7: *Relationship between students' premenstrual syndrome and students' age.*

	Menstrual Syndrome				
	Low	**Moderate**	**High**	χ^2	**p**
Age					
16 – 20	117(75.5)	33(21.3)	5(3.2)	3.546	0.738
21 – 25	112(80.0)	24(17.1)	4(2.9)		
26 – 30	11(91.7)	1(8.3)	0(0.0)		
Above 30	1(50.0)	1(50.0)	0(0.0)		

Table 7 shows the relationship between students' premenstrual syndrome and the students' age. The result shows that there is no significant relationship (p>0.05) between the students age and premenstrual syndrome. We, therefore, accept the null hypothesis.

Hypothesis Three: *There is no relationship between students' premenstrual syndrome and their course of study.*

935

Table 8: *Relationship between students' premenstrual syndrome and their course of study*

	Menstrual Syndrome				
	Low	Moderate	High	χ²	p
Course of Study					
Anatomy	66(75.9)	18(20.7)	3(3.4)	7.340	0.291
Medical Biochemistry	79(86.8)	11(12.1)	1(1.1)		
Nursing Science	35(77.8)	9(20.0)	1(2.2)		
Medical Laboratory Science	61(70.9)	21(24.4)	4(4.7)		

Table 8 shows the relationship between students' premenstrual syndrome and their course of study. The result shows that there is no significant relationship (p>0.05) between a course of study and premenstrual syndrome. We, therefore, accept the null hypothesis.

Discussion of Findings
Premenstrual syndrome primarily affects those in their twenties and thirties without racial, socio-economic, or other demographic factors. Findings from the study revealed that the common symptoms of premenstrual syndrome experienced were mood swings, irritability, breast swelling/tenderness, abdominal bloating, and a short temper. This is in line with the studies of Nworie, et al. (2018); Ikeako, et al. (2014), and Bharti et al. (2020). respectively. A plausible reason could be due to changes in the levels of some hormones and their metabolites such as prolactin, oestrogen, progesterone, endorphins, and prostaglandin.

Findings on the degree of premenstrual syndrome revealed that a majority of respondents experience a low degree of premenstrual syndrome. This is supported by the study of Kelbessa, et al (2017) and Sein, et al. (2016) which revealed that a majority had mild degree of symptoms. The result is at variance with Ikeako et al which revealed a severe degree of PMS. Findings also showed that common coping strategies adopted by respondents were resting, sleeping, accepting the process as a natural process, listening to music, pain killer and diverting attention. This is supported by the studies of Ezeh and Ezeh (2016); Molugulu, et al. (2015) respectively which revealed resting, and sleeping listening as the most frequently used coping strategies.

This is however at variance with studies of Nageeb, et al. (2015) and Elnagar and Awed (2015) which revealed that the majority of their respondents used herbal therapy hydrotherapy, mind-body interaction, manipulative and body-based methods as coping strategies. Findings revealed that respondents' health-seeking behaviour is negative. This is in line with the study of Wong and Khoo (2015) which revealed poor-seeking behaviour of PMS. The negative health-seeking behaviour of respondents could be as a result of respondents' acceptance of PMS as a natural process which is a phase in every reproductive-age woman's life. The result of the hypothesis revealed that there is no relationship between premenstrual syndrome and students' age. Therefore, the null hypothesis is accepted, this is supported by the study of Kelbessa, et al (2017). This could be because premenstrual syndrome occurs in the Luteal phase of the menstrual cycle in reproductive-age women. The result of the other hypothesis also revealed that there is no significant relationship between the course of study and premenstrual syndrome in which the null hypothesis is accepted. This is at variance with the study of Molugulu, et al. (2015) which revealed that there is a significant association between premenstrual syndrome and course of study. The result in this study did not show any correlation with their life as the students undergoing a professional course of study and premenstrual syndrome, even though, they undergo academic stress.

Conclusion
Analysis of the data clearly shows that the common symptoms of premenstrual syndrome are the mood swing, irritability, breast

swelling, tenderness, abdominal bloating and a short temper. A majority of the respondents have a low degree of premenstrual syndrome, while the coping strategies adopted were resting, sleeping, accepting the process as a natural process, listening to music, pain killer, and diversion of attention. A majority of respondents have negative health-seeking behaviour. Finally, the hypotheses revealed that there is no relationship between premenstrual syndrome and students' age and also no significant association between premenstrual syndrome and course of study.

Recommendations

Based on the findings of the study, the following recommendations are proffered:

✧ Health education programmes should be organised to provide students with the appropriate information for coping healthily with premenstrual syndrome. Students should be trained in more active behavioural coping strategies. For example, regular aerobic exercise, muscle strengthening, and slow breathing exercises are the suggested behavioural coping strategies. Those exercises have been shown to release endorphin in the body which elevates mood, reduces psychological stress, and improves PMS-related psychosocial symptoms. Training in the use of active behavioural coping results in better bio-psycho-social health outcomes, better quality of life, and reduced morbidity and medical costs.

✧ Encourage female students to seek prompt medical attention to rule out any underlying problem that may be responsible for menstrual disorders and to have positive health seeking behaviour.

✧ Students should be educated on the use of non-prescriptive analgesics and the effects they could have on them.

Implication for Nursing Practice

The findings from this study add to the body of knowledge on common symptoms of premenstrual syndrome among female undergraduates, their coping strategies as well as their health-seeking behaviour. There is a need for regular reproductive health programmes for female undergraduates including information on how to manage premenstrual syndrome and seeking medical advice in order to have positive health-seeking behaviour for a better quality of life.

Limitation of the Study

One of the limitations of this study was the dependence on a retrospective report which could introduce a recall bias.

Competing Interest

The authors declare that they have no competing interests.

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Akpoigho, E.C & Ukamaka, N.C (2022)