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**Prevalence of Premenstrual Syndrome among Female
Students of Kampala International University Western
Campus**

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ABSTRACT

Premenstrual syndrome is used to describe physical, cognitive, affective, and behavioural symptoms that occur cyclically during the luteal phase of the menstrual cycle and resolve quickly at or within a few days of the onset of menstruation. This study determined the prevalence, knowledge, attitude and effects of premenstrual syndrome among female medical students (18-35 years) at Kampala International University, western campus. This was an institution-based descriptive cross-sectional study involving female medical students. Data were edited, coded and entered into the computer and analyzed using SPSS v.20. Descriptive data was Presented inform from tables and pie charts. Out of the 100 respondents in the study, the majority (65.0%) were aged 18-24 years, 79.0% were married, 45.0% had a monthly income of 100,000-200,000/= and 93.0% did not smoke. The prevalence of premenstrual syndrome was found to be 21.0% in the study. According to the study, only 47.0% of the participants had ever heard about premenstrual syndrome, 28.0% reported having ever experienced it, the majority (53.0%) said premenstrual syndrome is experienced a week after, 67.0% said all females are affected by premenstrual syndrome, 19.0% said it has interfered with their duties, 74.0% said it's a normal experience and majority (47.0%) said they use oral contraceptives to treat it. The study further established that the majority (80.0%) reported that PMS/menstrual leave should be an option at university, 84.0% said PMS/menstrual leave should be an option at work place, only 23.0% would talk to their parents/spouse about premenstrual syndrome, 17.0% would consult a doctor for checkup of PMS and only 31.0% thought PMS is a significant issue to be discussed. Out of those who reported to have experienced premenstrual syndrome (28),71.4% reported academic performance impairment of which frequent class missing (50.0%) was the most common type of impairment and 80.0% reported to have scored less than boys due to PMS. This study concludes that PMS is a widespread issue that considerably lowers women's quality of life. Despite the increased awareness, there is still a sizable information gap regarding when patients should visit a doctor or seek treatment for their symptoms.

Keywords: Premenstrual syndrome, menstrual cycle, Menstrual leave, Oral contraceptives, Doctor.

INTRODUCTION

Premenstrual syndrome (PMS) is used to describe physical, cognitive, affective, and behavioural symptoms that occur cyclically during the luteal phase of the menstrual cycle and resolve quickly at or within a few days of the

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onset of menstruation. Premenstrual symptoms only occur during the luteal phase, between ovulation and the start of menstrual bleeding, or soon after. Premenstrual symptoms can occur during the entire luteal phase or can appear briefly during ovulation, in the days leading up to menstrual bleeding. Premenstrual syndrome (PMS) is a group of disorders and symptoms related to the menstrual cycle that include premenstrual dysphoric disorder (PMDD). Symptoms must: Be cyclic, sufficiently severe to interfere with some aspects of life and have a consistent and predictable relationship to the menstrual cycle. The severity and pattern of PMS symptoms vary from month to month. One may also stop or start having PMS symptoms for no clear reason. The causes of PMS are not completely understood but involve fluctuation of ovarian steroids, central nervous system neurotransmitters, genetic predisposition and psychosocial expectations. Causal factors include estrogen, progesterone, testosterone, and neurosteroids. Symptoms are temporally associated with luteal-phase fluctuations in ovarian hormones. Serum levels of estrogen and progesterone are not diagnostic or predictive of PMS. Cyclic ovarian hormone fluctuations are associated with changes in brain neurotransmitters and neurosteroids. Changes in brain chemistry may result in PMS symptoms in biologically susceptible women. It is a natural part of the menstrual cycle which may disrupt work, interpersonal relationships, sense of wellbeing and cause academic stresses in female students. Premenstrual symptoms are experienced by up to 90% of women of child bearing age. A smaller subset meets the criteria for premenstrual syndrome (PMS) and less than 10% of them are diagnosed as having premenstrual dysphoric disorder (PMDD) [1]. The American College of Obstetrics and Gynecology (ACOG) published the diagnostic ten criteria for PMS. It was considered if at least one of the 6 affective and one of the 4 somatic symptoms was reported five days prior to the onset of menses in the three prior menstrual cycles and ceased within 4 days of the onset of menses. More than 200 different symptoms have been associated with PMS, but the three most prominent symptoms are irritability, tension, and dysphoria (unhappiness)- Common emotional and non-specific symptoms include stress, anxiety, difficulty in falling asleep (insomnia), headache, fatigue, mood swings, increased emotional sensitivity, and changes in libido. Formal definitions absolutely require the presence of emotional symptoms as the chief complaint; the presence of exclusively physical symptoms associated with the menstrual cycle, such as bloating, abdominal cramps, constipation, swelling or tenderness in the breasts, cyclic acne, and joint or muscle pain no matter how disruptive these physical symptoms are is not considered PMS.

Statement of Problem

Premenstrual syndrome (PMS) is a common disorder of young and middle-aged women characterized by cyclic occurrence in the luteal phase of the menstrual cycle of a combination of distressing physical, psychological and behavioral changes of sufficient severity to result in deterioration of inter- personal relationships and / or interference with normal activities; which remit upon onset or immediately after menstruation [2] [3] [4]. According to the American College of Obstetricians and Gynecologists, at least 85 per cent of menstruating women have at least one PMS symptom as part of their monthly cycle. Most of these women have symptoms that are fairly mild and do not need treatment." [5]_Medline Plus states that PMS affects up to 75% of women during their childbearing years. It occurs more in women between their late 20s and early 40s, women who have at least one child, and women that have a family history of depression or mood disorder. There is still little research done about Premenstrual syndrome in developing countries especially in Africa and in more emphasis East Africa. The larger population of uneducated females does not understand their bodies and are afraid and mostly embarrassed by such discussions involving their female physiology. There is a need to research on prevalence awareness, attitude and effects of Premenstrual syndrome on daily activities among female medical students of KIU-WC.

Aim

The aim of the study is to determine the prevalence of premenstrual syndrome (symptoms) among female medical students (18-35 years) at Kampala International University, western campus.

Specific objectives

- To determine prevalence of premenstrual syndrome among female medical students.
- To assess general knowledge of premenstrual syndrome symptoms.
- To assess attitude of female students towards premenstrual syndrome.
- To assess effects of premenstrual syndrome on their daily activities.

Research Questions

- i. What is Prevalence of PMS among KIU female medical students?
- ii. What is the level of awareness of premenstrual syndrome among female medical students of KIU?

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- iii. What is the attitude towards premenstrual syndrome among female medical students of KIU?
- iv. What is the effect of PMS to female medical students of KIU?

METHODOLOGY

Study design

This was an institution-based descriptive cross-sectional study.

Area of Study

The study was carried out at Kampala International University Western Campus in Bushenyi District, Western Uganda.

Study population

The study population was female students of reproductive age (18-35 years of age) of Kampala International University Western campus in western Uganda.

Sample selection method

Simple random sampling by balloting was used.

Sample size

The population of female medical students in Kampala International University was 1,323 in the year 2021. The sample size was determined using the Morgan Table for determining population size of less than 10,000 people. N^* is the population size = 1323 S^* is the sample size = 297. Due to financial and time constraint a sample size of 100 participants was used.

Data collection instrument

I used a questionnaire for quantitative and quantitative data collection. The questionnaire was administered to the sampled respondents; this made up of structured questions. The questionnaire was pre-tested by administering it to fellow students of KIU-WC and corrections were done thereafter. The study used a questionnaire because it helped cover a large number of respondents in relatively short time.

Data processing and analysis

Data was edited, coded and entered into a computer and analyzed using SPSS v.20. Presentations was done by use of tables and pie charts.

Quality control

- i. I trained the data collection team & I used a person who knows the language of the area to avoid language barrier and hence ensure proper relay of information.
- ii. I pretested my tools prior to data collection and I used IT specialists in data analysis.

Ethical consideration

- ❖ A research proposal was submitted and approval, letter of introduction was obtained from the Dean School of Clinical Medicine and Dentistry and endorsed by IREC Kampala International University, Western Campus which was taken to the district health officer (DHO) and a copy to the hospital director and the in-charge of the family planning unit.
- ❖ Informed consent was sought from each respondent, participation was voluntary & participants' decisions and information were respected.
- ❖ Privacy and confidentiality were observed throughout the course of the study.

RESULTS

Socio-demographic characteristics of Respondents

Out of the 100 respondents in the study, majority (65.0%) were aged 18-24years, 21.0% were married, 45.0% had a monthly income of 100,000-200,000/= and 93.0% did not smoke as shown in the table below.

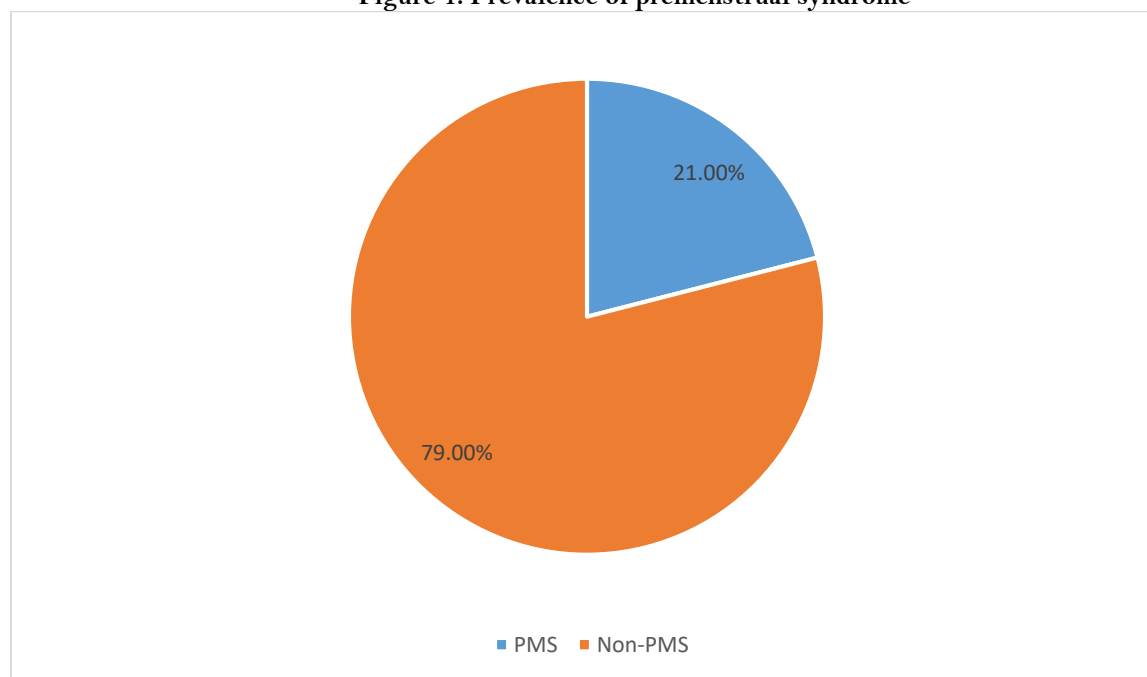
Table 1: Socio-demographic characteristics of the respondents

Variable	Frequency(N=100)	Percentage (%)
Age(Years)		
18-24	65	65.0
25-29	27	27.0
30-35	08	8.0
Marital Status		
Married	21	21.0
Single	79	79.0
Monthly income		
≤100,000/=	20	20.0
100,000-200,000/=	45	45.0
≥200,000/=	35	35.0
Smoking		
Yes	07	7.0
No	93	93.0

Prevalence of Premenopausal syndrome

The prevalence of premenstrual syndrome was found to be 21.0% according to this study as shown in the figure below.

Figure 1: Prevalence of premenstrual syndrome



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Knowledge of premenstrual syndrome

According to the study, only 47.0% of the participants had ever heard about premenstrual syndrome, 28.0% had ever experienced it, the majority (53.0%) said premenstrual syndrome is experienced a week after, 67.0% said all females are affected by premenstrual syndrome, 19.0% said it has interfered with their duties, 74.0% said it's a normal experience and majority (47.0%) said they use oral contraceptives to treat it as shown in the table below.

Table 2: Knowledge of premenstrual syndrome

Variable	Frequency (N=100)	Percentage (%)
Have you ever heard of premenstrual syndrome?		
Yes	47	47.0
No	53	53.0
Have you ever experienced premenstrual symptoms?		
Yes	28	28.0
No	72	72.0
When do you experience these symptoms?		
Week before	34	34.0
Week after	53	53.0
Never	13	13.0
Do you think all females are affected by premenstrual syndrome?		
Yes	67	67.0
No	33	33.0
Has it interfered with your duties?		
Yes	19	19.0
No	81	81.0
What do you think about premenstrual syndrome?		
It is a normal experience	74	74.0
It is a bad experience	26	26.0
What mode of treatment do you often seek when you experience it?		
Pain killers	39	39.0
Oral contraceptives	47	47.0
No intervention	09	9.0
Others	05	5.0

Attitude towards premenstrual syndrome

From table 3 below, majority (80.0%) reported that PMS/menstrual leave should be an option at university, 84.0% said PMS/menstrual leave should be an option at work place, only 23.0% would talk to their parents/spouse about premenstrual syndrome, 17.0% would consult a doctor for checkup of PMS and only 31.0% thought PMS is a significant issue to be discussed.

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Table 3: Attitude towards premenstrual syndrome

Variable	Frequency	Percentage (%)
Should PMS/Menstrual leave be an option at university?		
Yes	80	80.0
No	20	20.0
Should PMS/menstrual leave be an option at work place?		
Yes	84	84.0
No	16	16.0
Are you likely to talk to your family/spouse about PMS?		
Yes	23	23.0
No	77	77.0
Are you likely to consult a doctor for a check-up for PMS?		
Yes	17	17.0
No	83	83.0
Do you think PMS is a significant issue to be discussed?		
Yes	31	31.0
No	69	69.0

Effects of premenstrual syndrome

Out of those who reported to have experienced premenstrual syndrome (28), 71.4% reported academic performance impairment of which frequent class missing (50.0%) was the most common type of impairment and 80.0% reported to have scored less than boys due to PMS as shown in the table below.

Table 4: Effects of premenstrual syndrome

Variable	Frequency	Percentage (%)
Academic performance impairment		
Yes	20	71.4
No	08	28.6
Types of performance impairment		
Frequent class missing	10	50.0
Exam missing	03	15.0
Low grade scoring	06	30.0
Academic withdrawal	01	5.0
Scoring less than boys due to PMS		
Yes	16	80.0
No	04	20.0

DISCUSSION

Prevalence of premenstrual syndrome

In Uganda, a sizable portion of women suffer from PMS. Because diagnostic criteria, sampling, and data collection methods vary among studies on PMS, there is no uniform tool to assess the prevalence of PMS. This leads to inconsistencies in the results, which makes it challenging to compare the prevalence of PMS adequately and this makes it a limitation restriction. According to my study, the prevalence of PMS was found to be 21.0%. This was comparable to a prevalence of 23.9% reported by a study in Pakistan [6]. The finding of this study is lower compared to a prevalence of 32.1% reported in Bulgaria [7]. Further, the result of the study is lower compared to a pooled prevalence of 53% reported by a review in Ethiopia [8]. A study in Uganda revealed that over quarter (28.3%) of female students had Premenstrual syndrome which is higher compared to the finding of this study [9]. The difference may be due to methodological difference and variation in participant characteristics.

Knowledge of premenstrual syndrome

As much as the study was conducted among medical students, only 47.0% of the participants had ever heard about premenstrual syndrome and 28.0% reported to have ever experienced it. This is inconsistent with the findings of a study in Pakistan where majority (96.4%) of the participants were aware of premenstrual syndrome [10]. Further, self-reported PMS was higher than the actual prevalence found in this study which is consistent with the findings of a study [11]. This may be due to knowledge gap regarding PMS since menstrual issues are viewed as a taboo in most cultures in Uganda. The present study also revealed that majority (53.0%) of the participants said premenstrual syndrome is experienced a week after, 67.0% said all females are affected by premenstrual syndrome, 19.0% said it has interfered with their duties, 74.0% said it's a normal experience and majority (47.0%) said they use oral contraceptives to treat it. This further demonstrates the lack of understanding regarding premenstrual syndrome among women.

Attitude towards premenstrual syndrome

A positive attitude towards PMS was noted in this study as majority (80.0%) reported that PMS/menstrual leave should be an option at university and 84.0% said PMS/menstrual leave should be an option at work place. Similar findings were reported by [12] in Pakistan. Surprisingly, only 23.0% would talk to their parents/spouse about premenstrual syndrome, 17.0% would consult a doctor for checkup of PMS and only 31.0% thought PMS is a significant issue to be discussed. This is consistent with the findings of a study in Pakistan which reported that almost half would not seek medical advice [11]. Additionally, the finding is supported by a study in Spain where only 18.7% of women sought medical care for PMS [13-14]. The results may be explained by the fact that women have developed an equally negative attitude toward menstruation and related topics as a result of our society's condemnation of the topic. As a result, they are reluctant to consult a doctor or seek treatment for PMS because they do not view it as a serious problem but rather as an ordinary aspect of their lives.

Effects of premenstrual syndrome

It is not surprising that PMS significantly affects women's daily routines, careers, and social lives in addition to their regular daily activities. PMS has been recognized as a significant and potentially disabling condition among women

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by previous studies [12]. Out of those who reported to have experienced premenstrual syndrome (28), 71.4% reported academic performance impairment of which frequent class missing (50.0%) was the most common type of impairment and 80.0% reported to have scored less than boys due to PMS in the current study.

CONCLUSION

This study concludes that PMS is a widespread issue that considerably lowers women's quality of life. Despite the increased awareness, there is still a sizable information gap regarding when patients should visit a doctor or seek treatment for their symptoms.

RECOMMENDATION

Education programs targeting women of reproductive age and the community at large to improve perception about menstruation.

REFERENCES

1. American Psychiatric Association. Diagnostic and statistical manual of mental disorders-DSM-IV-TR (4th ed, Text Revision). Washington DC: American Psychiatric Association, 2000.
2. Raja, SN, Feehan, M, Stanton, WR, McGee, R. Prevalence and correlates of the premenstrual syndrome in adolescence. *J Am Acad Child Adolescent Psychiatry* 1992; 31:783.
3. Yang M, Wallenstein G, Hagan M, Guo A, Chang J, Kornstein S. Burden of premenstrual dysphoric disorder on health-related quality of life. *J Womens Health (Larchmt)*. 2008 Jan-Feb;17(1):113-21. 2008; 17: 113-21. This article on PubMed
4. Every LJ, Thapa S, Askew I, Glor J. Menstrual experiences and beliefs: a multi country study of relationships with fertility and fertility regulating methods. *Women Health*. 1993; 20(2):1-20
5. Ntai A.B, Udezi, A.W, Ekanem, E.E. 1okon, U.J and Umoyioho A.U. Departments of Physiology and Department of Obstetrics and Gynaecology, University of Calabar, d Department of Clinical Pharmacy and Obstetrics and Gynaecology, University of Uyo, Uyo Nigeria. Premenstrual syndrome: Prevalence in students of the University of Calabar, Nigeria. *African Journal of Biomedical Research*, Vol. 7 (2004); 45 - 50 ISSN 1119 - 5096 © Ibadan Biomedical Communications Group.
6. Mahnaz Nowroozi Mousavi,2 (Development,3 Zahedan University of Medical Sciences, Zahedan, Iran, School of) Golbahar Khodabandeh3 (Foreign Services in Qatar, Georgetown University, Doha, Qatar.2) Prevalence and severity of premenstrual symptoms among Iranian female university students <http://www.jpma.org.pk/full-article-text.php?articleid=16>.
7. Elmar Peter Sakala, Manuel Penalver, (2002) USMLE Step 2 Lecture Notes, Obstetrics and gynaecology. KAPLAN Medical.
8. Tenkir A, Fisseha N, Ayele B. Premenstrual syndrome, prevalence and effect on academic and social performances of students in Jimma University, Ethiopia. *Ethiop J Health Dev*. 2003; 17:181-8
9. Mishell DR Jr. Premenstrual disorders: Epidemiology and disease burden. *Am J Manage Care*. 2005 Dec; 11(16 Suppl): S473-9.
10. Montero P, Bernis C, Loukid M, Hilali K, Baali A. Characteristics of menstrual cycles in Moroccan girls: prevalence of dysfunctions and associated behaviors. *Ann Hum Biol*. 1999; 26:243-9. This article on PubMed
11. Magdy Hassan Balaha, Mostafa Abd El Monem Amr, Mohammed Saleh Al Moghannum, Nouria Saab Al Muhaidab. The phenomenology of premenstrual syndrome in female medical students: across sectional study. *The Pan African Medical Journal*. 2010; 5:4.
12. Nour Mohammad Bakhshani,1 (Psychiatric and Clinical Psychology Department,1 Research Center of Health) Steiner M, Born L. Diagnosis and treatment of premenstrual dysphoric disorder: an update. *Int Clin Psychopharmacol*. 2000;15 Suppl 3: S5-17. This article on PubMed
13. Yonkers KA, O'Brien PMS, Eriksson E. Premenstrual syndrome. *Lancet*. 2008 Apr 5; 371(9619):1200-10.
14. Odongo, J. (2023). Factors Affecting Menstrual Hygiene Among Schoolgirls Attending Outpatient Department at Kampala International University Teaching Hospital, Ishaka Bushenyi. *INOSR Scientific Research*, 9 (2), 40-50.

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