

THE COPPERBELT UNIVERSITY SCHOOL OF MEDICINE

Knowledge, Attitudes and Practices of Analgesic use Among Female Students with Dysmenorrhea at the Copperbelt University School of Medicine

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AWARD OF BACHELOR OF MEDICINE AND SURGERY AT COPPERBELT UNIVERSITY.

DECLARATION

I am Egelina Mwale of SIN 16106915. I hereby, declare that this work is my original work and has not been presented for any other awards at the Copperbelt University or any other University.

Name of Candidate : _____

Signature : _____

Date : _____

I declare to have supervised this student accordingly and I am satisfied with the work this far.

Name of Supervisor : _____

Signature : _____

Date : _____

ABSTRACT

➤ *Background*

Dysmenorrhea is a common gynecological condition that affects as many as 50% of women. This situation not only has a significant effect on the quality of life and personal health but also has a global economic impact. In Zambia, very little is known about the distribution and impact of dysmenorrhea on the daily lives of females that experience it. This study assessed the knowledge, attitudes and practices of analgesic use among female students with dysmenorrhea at the Copperbelt University-School of Medicine, prevalence of dysmenorrhea and its impact on their daily lives.

➤ *Methodology*

A cross-sectional study using a self-administered questionnaire was used to obtain data from 273 randomly selected female students. Data was analyzed using SPSS22. Association between different variables was tested.

➤ *Results*

The total number of participants were 273. The data captured 241 students in the age range of 18-25(88.3%) as the majority of respondents. While 28(10.3%) respondents were in the age range of 26-30years and 4(1.47%) were between the ages of 31-35 years. The prevalence of dysmenorrhea at CBU-SOM is 89.4%. More than half(51.6%) described their pain as moderate while 37.0% described theirs as severe and 9.9% as mild. The majority of students represented by 60.4%(165) had average knowledge on dysmenorrhea and its medical treatment while 30.0%(82) had good knowledge and 9.5%(26) had poor knowledge. This study revealed that 91.9% of students had a positive attitude towards dysmenorrhea and its medical management while 8.1% had a negative attitude. Despite having adequate knowledge and positive attitude, only 40(14.7%) sought medical attention when they had painful menstruation while the remaining 233(85.3%) students never did. Therefore, most of the students had poor healthcare-seeking practices. Dysmenorrhea has a significant impact in the daily lives of affected participants with 72.5% reporting limitation doing daily chores and 68.1% had reduced concentration and their studies were disturbed as the most common.

➤ *Conclusion*

This study found the prevalence to be 89.38% among female students at CBU-SOM. Although, the majority of students had adequate knowledge and a positive attitude towards dysmenorrhea and its medical management, they had poor health-care seeking practices. Dysmenorrhea has a significant negative impact on the student's daily lives and as such should be a public health concern.

➤ *Keywords*

Knowledge, attitudes, practices, prevalence, impact, dysmenorrhea, non-steroidal anti-inflammatory drugs, analgesic use, female student, CBU-SOM.

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ABBREVIATIONS

CBU-SOM	Copperbelt University, School of Medicine
NSAIDs	Nonsteroidal anti-inflammatory drugs
PG	Prostaglandins
TDRRC	Tropical Diseases Research Center
COVID-19	Corona Virus Disease
MBChB	Bachelor of medicine and surgery
BDS	Bachelor of dental surgery

CHAPTER ONE INTRODUCTION

A. Background

Dysmenorrhea is a common gynecological condition that affects as many as 50% of women. About 10% of these women suffer severely enough to render them incapacitated for one to three days each menstrual cycle. This situation not only has a significant effect on quality of life and personal health but also has a global economic impact (Charu S., Amita R., Sujoy R. and Thomas G.A.2012). According to Ortiz M.I. (2010), 65% of women interviewed recounted limitation in daily activities and 42% reported absenteeism. Additionally, about 64% women had reported low concentration in class. Those with dysmenorrhea reported depression 1.5 times more than those without this problem (Titilayo A., Agunbiade O.M., Banjo O. and Lawani A. cited by Chia C.F. 2013).

Dysmenorrhea is a menstrual disorder that is characterized by painful menstruation. According to Poureslami M. and Osati-Ashtiani F. (2002), dysmenorrhea can also be defined as painful periods or menstruation cramps, which may be accompanied by symptoms and complications such as nausea, vomiting, diarrhea, headache, weakness, and fainting. It is classified into primary (spasmodic) and secondary (congestive) dysmenorrhea. Primary dysmenorrhea is defined as painful menses in women with normal pelvic anatomy (Ozerdogan N., Sayiner D., Ayrançi U., Unsal A., and Giray S., 2009). On the other hand, secondary dysmenorrhea is defined as menstrual pain resulting from anatomic or macroscopic pelvic pathology.

Primary dysmenorrhea presents with or shortly after menarche. It may start within 6 months after menarche because it occurs only during ovulatory cycles, which may not always be evident at menarche. Although it may occur as late as a year after menarche, it is less likely to do so later when it should raise suspicion of secondary dysmenorrhea. Due to the fact that it is characterized by fluctuating, spasmodic menstrual cramps, it is sometimes referred to as “labor-like” pains that begin only a few hours before or with the onset of menstrual flow. The pains are most intense on the first or second day of the menstrual flow, or more precisely the first 24–36 hours, consistent with the time of maximal prostaglandin release into the menstrual fluid. The pains are suprapubic in location with radiation into the inner aspects of the thighs. As mentioned earlier, the cramps are frequently accompanied by backache, nausea, vomiting, and diarrhea in a high percentage of cases. When severe, the pain may present as an intense acute abdominal episode and may mimic the presentation of an acute ectopic pregnancy. General and pelvic examinations are essentially normal (Dawood Y.M., 2006).

Secondary dysmenorrhea usually occurs a few years after menarche. The pain may be localized or diffuse in the lower abdomen and is not necessarily limited to the duration menstrual period. Pain may be accompanied by other symptoms, such as menorrhagia or intermenstrual bleeding(Wolf L.L., Schumann L. cited by Sima R.-M., Sulea, M., Radosa J.C., Findekle S., Hamoud B.H.; Popescu M., Gorecki, G.P., Bobirc̃a A., Bobirca F., Cirstoveanu C. and Liana P. 2022).

The major cause of dysmenorrhea is still not very clear. However, recent advances suggest that prostaglandins (PGs) have a well-recognized pathophysiological role in dysmenorrhea by inducing intense uterine contractions, decreasing uterine blood flow, increasing peripheral nerve hypersensitivity resulting in pain or cramps (Grosser T., Smyth E. and Fitzgerald G.A. 2011 cited by Fatima A., Mamatha K.R., Ambika B., and Rajarathna K.).

Dysmenorrhea is treated symptomatically using analgesics. Analgesic drugs are medicines that are used to relieve pain (wordweb dictionary). Analgesics such as nonsteroidal anti-inflammatory drugs (NSAIDs). Oral contraceptives and corticosteroids can also be used for pain relief (Dawood Y.M., 2006). NSAIDs will be the focus of this research.

Nonsteroidal anti-inflammatory drugs relieve menstrual pain by inhibiting endometrial PG production. NSAIDs are the most commonly treatment for both primary and secondary dysmenorrhea. They decrease menstrual pain by decreasing intrauterine pressure and lowering prostaglandin levels in menstrual fluid(MilsomL. Et al,Chan W.Y. et al and Dawood M.Y. et al cited by Allan D. and Kirsten J.S.) NSAIDs do not affect the development of the endometrium when given during the menstrual phase for dysmenorrhea but they suppress endometrial prostaglandin biosynthesis and release. Although the menstrual fluid PG levels are significantly reduced to or even below levels found in normal pain-free cycles, the menstrual fluid volumes are not affected. Furthermore, NSAIDs cause a return of the uterine activity to a pattern similar to normal pain-free menstruation and relief of the pain (Dawood Y.M., 2006).

Research showed that about 62% of university students with dysmenorrhoea self-medicated while 26% consulted physicians (Ortiz M.I. 2010, cited in Chia C.F. et al 2013). From the information above, it can be concluded that most females are affected by dysmenorrhea.

B. Problem Statement

According to a study by Ortiz M.I. (2010), 65% of women with dysmenorrhea reported that it limited their daily activities, and 42.1% reported absenteeism as a result. As earlier mentioned, dysmenorrhea affects more than 50% women and the pain they experience can be severe and disabling. It is the most common symptom of all menstrual complaints and poses a greater burden of disease than any other gynecological complaint in both developed and developing countries. It is a debilitating condition for many women that has a major impact on health-related quality of life, work productivity, and health-care utilization. Consequently, dysmenorrhea is responsible for considerable economic losses due to the costs of medications, medical care, and decreased productivity (Ju H., Jones M., and Mishra G., 2013).

C. Literature Review

The onset of puberty in the life of a young girl sets into motion hormonal, psychological, cognitive and physical changes which transforms the girl from a child to a sexually matured woman. Menstruation is one of the milestones of puberty in girls and involves the cyclical shedding of the inner lining of the uterus called the endometrium. Onset of menstruation is celebrated in some cultures as it shows the girl is becoming a woman. However, it also heralds a period of inhumane treatment of some post pubescent girl since some cultures and religions consider the menstruating woman as impure leading to forced seclusion, reduced mobility, as well as dietary and social restrictions. Some women, before or during menstruation also have to contend with dysmenorrhea which is sometimes accompanied by headache, dizziness, diarrhea, bloated feeling, nausea and vomiting, backache and leg pains (Ameade E.P.K, Amalba A. and Mohammed B.S.).

Previous studies on university students showed its prevalence to be 34% in Egypt, 64% in Nigeria and Mexico, 84% in Thailand, 88% in Turkey and 93% in Taiwan, 74.5% in Malaysia, 70% in Italy, 80% in Australia, 85% among Hispanic, and the lowest prevalence has been reported in Japan at 16%. India reported that the prevalence of dysmenorrhoea ranges between 50 to 87.8%. A greater prevalence was generally observed in younger women, with estimates ranging from 67% to 90% for those aged 17–24 years (Karanth S. and Liya S.R. 2018). Despite its prevalence, the socio-economic impact of dysmenorrhea is rather underestimated and not appreciated by many.

Fortunately, some people understand that dysmenorrhea is an important public health problem among university students and all post pubescent females. For students, it is associated with school absenteeism and poor quality of life. Approximately 10-15% of females experience monthly menstrual pain severe enough to stop normal daily functions at work, home, or school. Data from various studies conducted earlier show that absenteeism from school due to primary dysmenorrhea is 34-50% (Karanth S. *et al* 2018). The study by Ameade E.P.K, Amalba A. and Mohammed S.B.(2018) also showed that dysmenorrhea affected the daily life activities of two thirds of the female students including school attendance. It was found that attending lectures was the most disrupted daily life activity for students and even if they made it to the lectures, their concentration was greatly disturbed due to the dysmenorrhea. Females with dysmenorrhoea were significantly affected by psychosocial problems during their menstrual periods than those without abdominal pain during menses. Consequently, female students with dysmenorrhoea reported one and a half times of depression than those without dysmenorrhea (Titilayo A., Agunbiade O.M., Banjo O., and Lawani A., 2009).

Adebimpe W.O., Farinloye E.O., and Najeemdeen Ajao Adeleke(2016) reported that the common effects of menstrual problems on the daily routines of undergraduate students include prolonged resting hours (54%), followed by inability to study (50%), reduced concentration in the class (59%), reduced performance in sports (51%), reduced class participation (50%), socialization (46%), homework (35%), test-taking skills (36%), grades (29%), and absenteeism. Dysmenorrhea brings discomfort and eventually low quality of life as a result of the inability to fulfill usual or expected gender roles.

In most cases, females with painful menstruation do not seek medical attention as they think that the pain will eventually pass. Others, on the other hand, choose self-medication. Medical students usually have poor health-seeking habits. This is proven in a study by Fatima A. *et al* (2016) which showed that self-medication practice in primary dysmenorrhea among medical and paramedical students is about 62.98% of which more was by medical students. Although self-medication is encouraged so as to lessen the burden on health care providers, it is necessary for people, including medical students, to seek advice so that the right dosages are taken to avoid adverse effects. Some people may take more drugs than advised so as to obtain quick relief from pain.

D. Objectives

➤ General Objective

- To determine the knowledge, attitudes and practices of analgesic use among female students with primary dysmenorrhea at the CBU-SOM.

➤ Specific Objectives

- To investigate the level of knowledge, the attitudes and practice of analgesic use among female students with primary dysmenorrhea at CBU-SOM.
- To evaluate the prevalence of dysmenorrhea.
- To assess the impact or effects of dysmenorrhea on the daily lives of affected students especially absenteeism from classes and effects on personal study patterns.

E. Research Question

What are the knowledge levels, attitudes and practices of analgesic use among female students experiencing primary dysmenorrhea at the Copperbelt University School of Medicine?

F. Rationale And Justification Of The Study

Although dysmenorrhea affects more than 50% women, as shown by research, sparse attention has been paid to understanding or ameliorating women's menstrual complaints. This is evident in that no documented study has been done concerning this in Zambia.

Menstrual problems are generally perceived as only minor health concerns and thus irrelevant to the public health agenda, particularly for women in developing countries who may face life-threatening conditions. Information on the frequency of menstrual dysfunction and on the impact of bleeding problems on health status, quality of life, and social integration among women in developing countries are certainly scant (Harlow S.D. and Campbell O.M.R., 2000).

This lack of information and the private nature of menstruation perpetuate the belief that menstrual complaints do not warrant the public health community's attention. However, a more careful examination of available evidence and consideration of both the social impact of menstrual dysfunction on women's lives and the availability of effective, relatively inexpensive interventions is needed. The relative importance of addressing menstrual complaints within reproductive health programs should be reconsidered (Harlow S.D. et al, 2000).

The reasons above necessitate carrying out research in this area. The results obtained from this research will help the government through the Ministry of Health to know where we stand as a nation in addressing this problem. This will be helpful in understanding the urgency required to provide general public sensitization concerning dysmenorrhea, and its medical management using analgesics as advised by medical personnel so as to lessen the negative effects it causes in the lives of those affected.

G. Measurements

Dysmenorrhea can be so debilitating as to disrupt the daily activities, work and schooling of post pubescent females hence it is a health concern. Several studies have reported various risk factors associated with dysmenorrhea which include age less than 20 years, nulliparity, higher social economic status, heavy menses, depression, smoking, anxiety, and lack of physical activity (Grandi G., Ferrari S., Xholi A., Cannoletta M., Palma F., Romani C., Volpe A., and Cagnacci A., (2015) cited by E.P.K. Amaede, A. Amalba and B.S. Mohammed, 2018). Primary dysmenorrhea can lead to reduced productivity, absenteeism, poor concentration and poor study patterns. These consequently lead to poor grades, anxiety, poor quality of life and depression which will lead to an economic burden on all females affected by it. This concept is shown in the figure below.

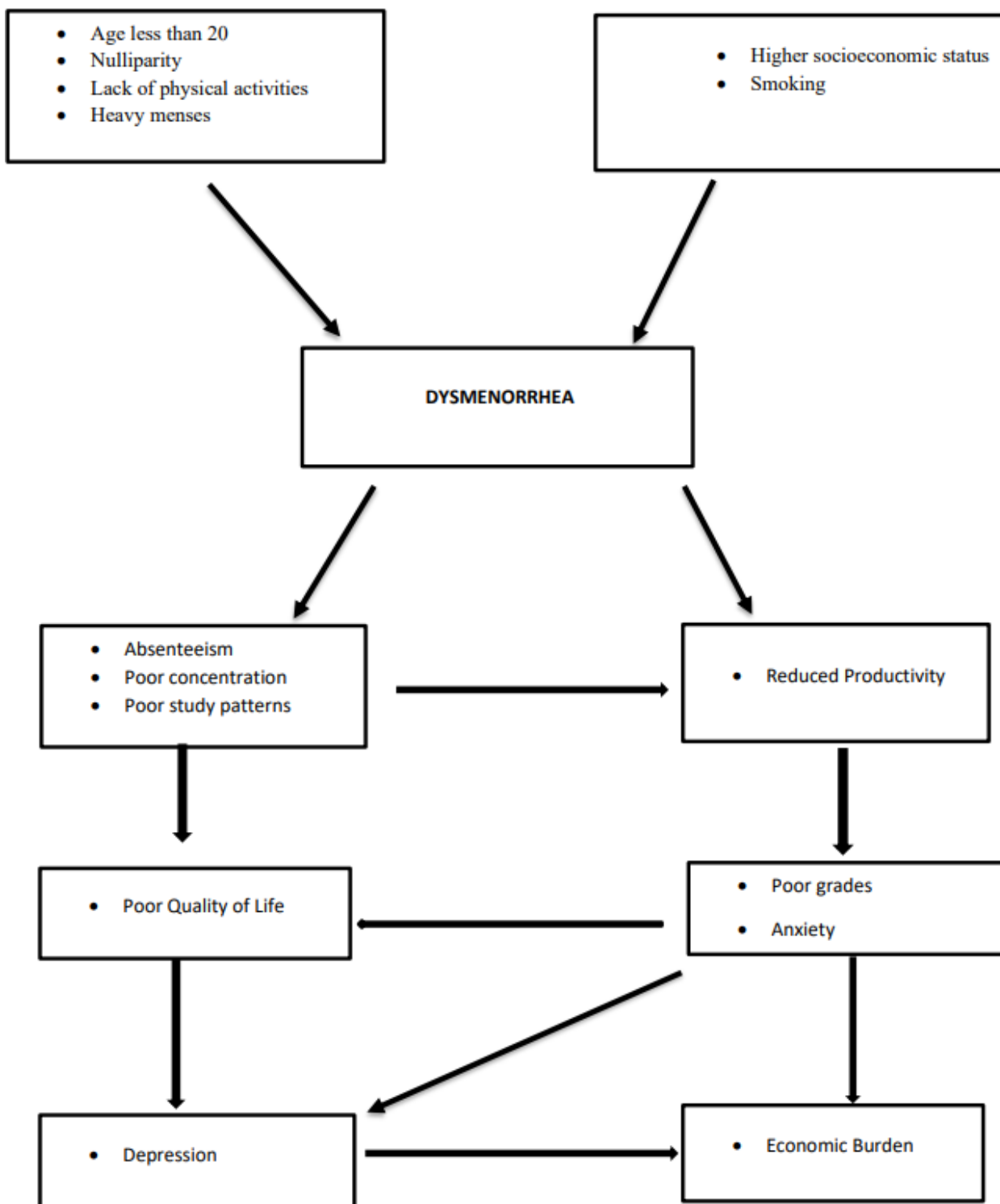


Fig 1 Conceptual Framework

The measurements will be as follows, for knowledge, each right response will be given a score of 1 while a wrong answer will be given a score of 0. The total knowledge scores will be calculated as out of 6. A score between 0-2 will be considered poor, 3-4 as average and greater than 4 as good knowledge. Attitudes towards primary dysmenorrhea and use of analgesics in its treatment will be assessed using a questionnaire where a score less than 50% will be considered as negative attitude. The questionnaire will assess the practice of analgesic use in primary dysmenorrhea.

CHAPTER TWO METHODOLOGY

A. Background of the Study Area

The Copperbelt University is an institution of higher learning that has five satellite campuses and the main campus in Kitwe, making them six in total across Zambia; which are situated in Ndola, Solwezi, Lusaka, Mpika and Chinsali. The Copperbelt University, school of medicine is located in Ndola, the headquarter of the Copperbelt Province. It is located in proximity to Ndola Teaching Hospital and the Tropical Diseases Research Centre (TDRC).

B. Study Design

An analytical cross-sectional study design was used because it measures the outcome and the exposure at one point in time.

C. Study Population

Female students at the Copperbelt University school of medicine will be included.

D. Inclusion And Exclusion Criteria

The collection of information will only include female adults in the reproductive age that is 18 to 49 years pursuing any program of study at the Copperbelt University School of Medicine. Those below or above the stated age group will be excluded.

E. Sample Size Determination

Since no similar study has been done in a similar setting in our country, the prevalence rate will be set at 50%. With $Z = 1.64$ at $d=5$ and $Q = 100 - P$. The formula used to calculate the sample size is shown below.

$$N = Z^2 \frac{PQ}{d^2}$$

$$N = (1.64 \times 1.64 \times 50 \times 50) / (5 \times 5)$$

$$N = 268.96$$

$$N = 300$$

➤ Sampling

To avoid selection bias, a systematic random sampling will be used in which 300 ladies will be selected to take part in the research. The sampling interval(k) is 2.

$$k = \text{population size/sample size}$$

$$= 554/300$$

$$= 1.85$$

$$k = 2$$

F. Data Collection

Pretested questionnaires will be given to all participants as a means of data collection. The questionnaire used in the study which occurred between December 2021 and April, 2022 was piloted among 20 female students across the fields of study before distribution for actual data collection to ensure correction of inconsistent questions.

➤ Research Instrument

The data was obtained using structured questionnaires that had been pre-tested before distributing them. The questionnaires were self-administered to the students. Structure of the questionnaire contained sections covered socio-demographic data of the student, sections for levels of knowledge, attitudes and practice of analgesic use among female students with dysmenorrhea and its impacts.

➤ Data Management During Entry

The computer software SPSS version 22 was used to enter data. During data entry caution will be taken. This will be done by checking the data for consistency and any errors.

G. Data Analysis

The software SPSS version 22 was used to analyze the entered data.

H. Ethnical Considerations

The research information gathered from this study was strictly confidential. Anonymity was maintained as only initials of the participants were used. The information will be disseminated to relevant authorities without it been directly linked to the participants. The study participants were recruited based on their willingness to participate in the study. The information concerning the study was availed to them through a consent form. All COVID-19 guidelines were adhered to. The research will or approval was sought and obtained from the Tropical Disease Research Center (TDRC).

I. Study Limitation

The participants were selected from only one educational institution which limits the ability to generalize the result to other settings. The self-reporting nature of the questionnaire and it never been used in any study prior to this study might have resulted in bias and inadequate reporting. This consequently, may have had an impact on the stated prevalence and failure to adequately consider several such as smoking, obesity, socioeconomic status and stress. This cross-sectional study may serve as an insight for further rigorous studies.

CHAPTER THREE RESULTS

A. Socio-Demographic Characteristics

The total number of participants were 273. The data captured 241 students in the age range of 18-25(88.3%) as the majority of respondents. While 28(10.3%) respondents were in the age range of 26-30years and 4(1.47%) were between the ages of 31-35 years. 191(70.0%) students of MBChB were the majority of respondents followed by 40 BDS(14.7%), 22(8.1%) other unspecified programs and 20(7.3%) pursuing biomedical sciences. 94.5% of all respondents were nulliparous. This information is shown in the figure 2, 3 and the table 1 below respectively.

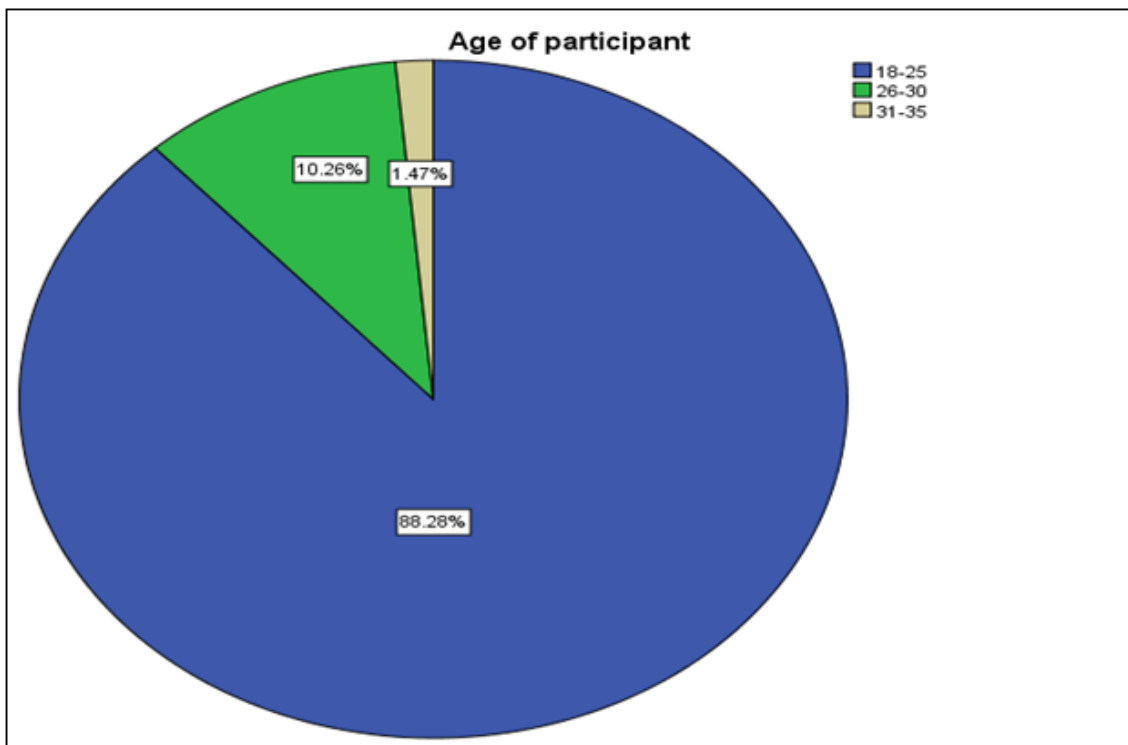


Fig 2 Age of Participant

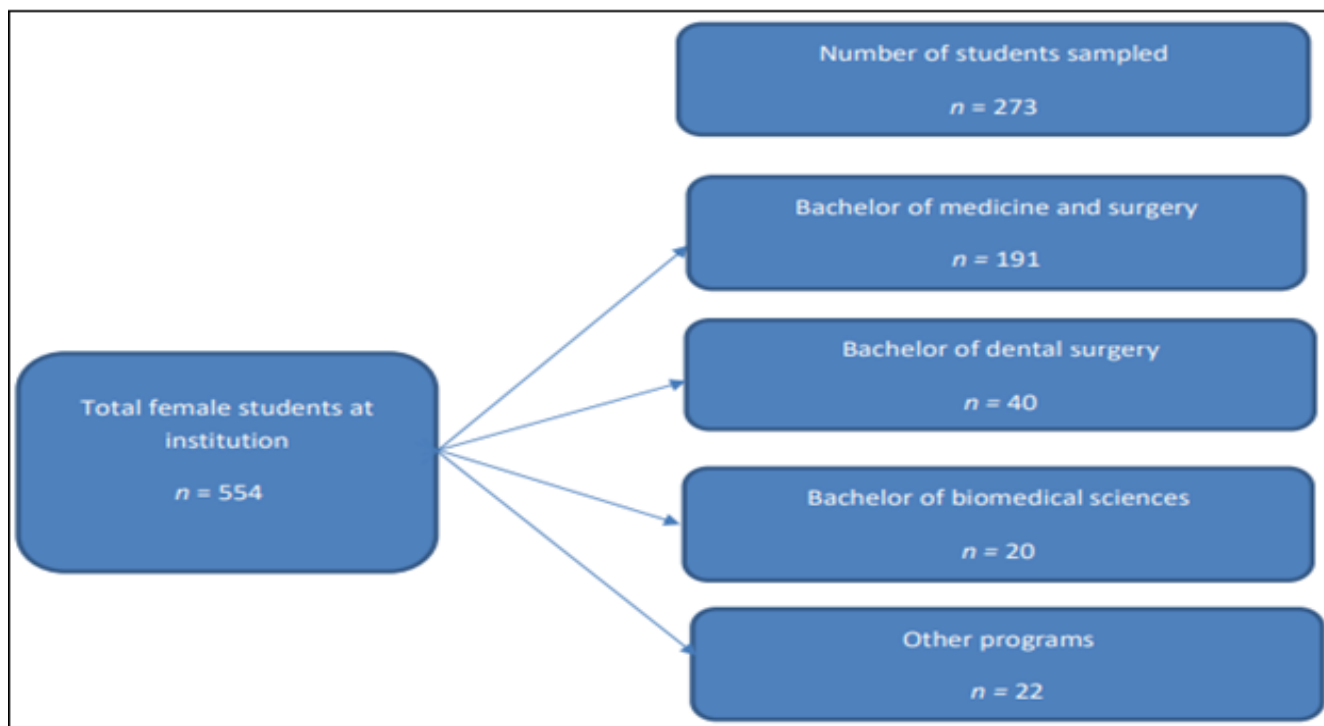


Fig 3 Flowchart of Sampling

Table 1 Gravidity or parity of participants

Gravidity of participant					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	258	94.5	94.5	94.5
	Yes	15	5.5	5.5	100.0
	Total	273	100.0	100.0	

B. Prevalence of Dysmenorrhea

Of the 273 female students sampled, 244 had dysmenorrhea which represented 89.38%. Of these 101(37.0%) considered their pain as severe, while 141(51.6%) as moderate and 27(9.9%) as mild. Figure 4 below shows the distribution of dysmenorrhea and figure 5 shows the severity.

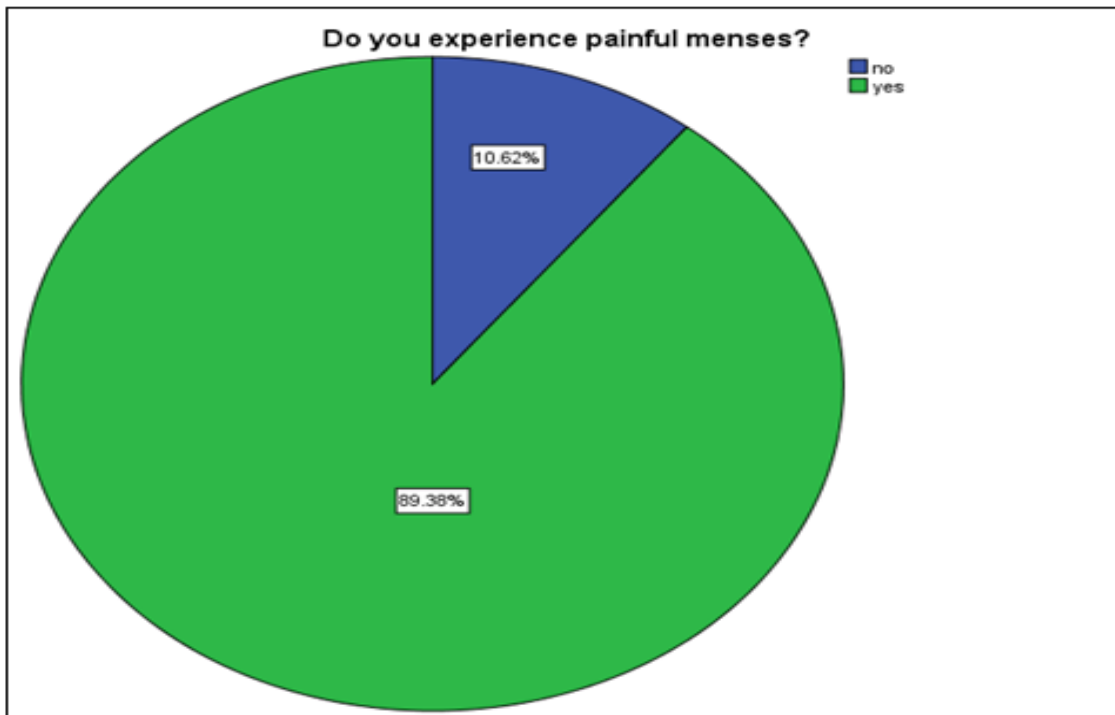


Fig 4 Prevalence of Dysmenorrhea

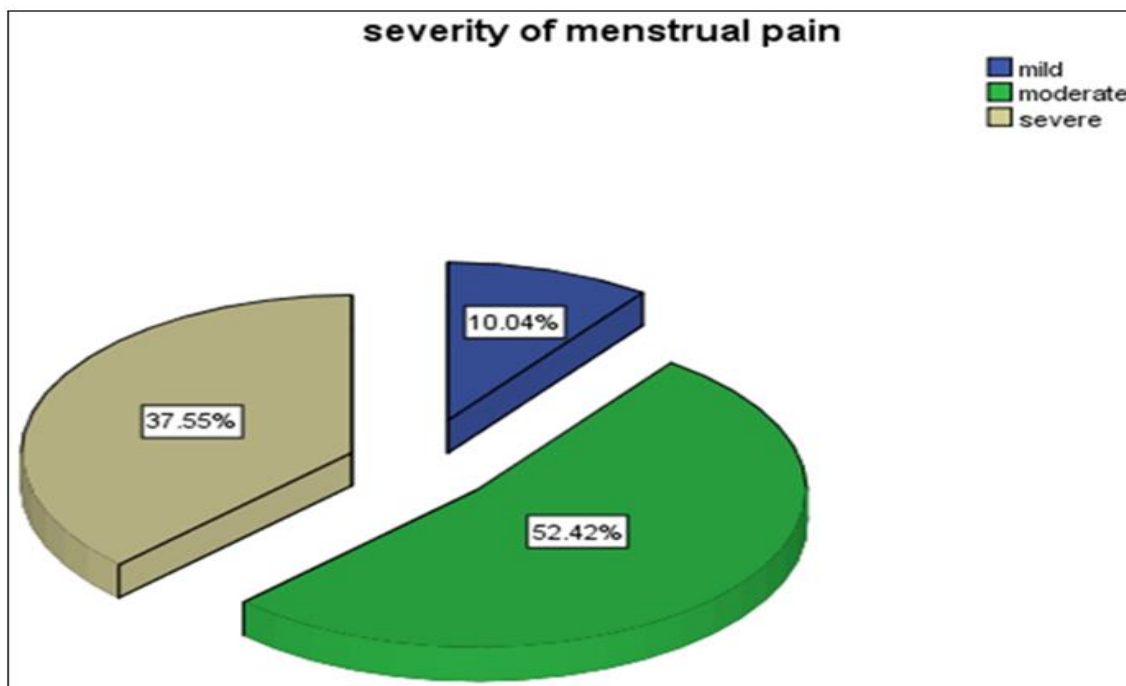


Fig 5 Severity of Menstrual Pain

Pain was not the only symptom that occurred with menstruation. It was accompanied by other symptoms with the most common being diarrhea. The other complaints associated with dysmenorrhea and the number of students that were affected are shown in figure 6 below.

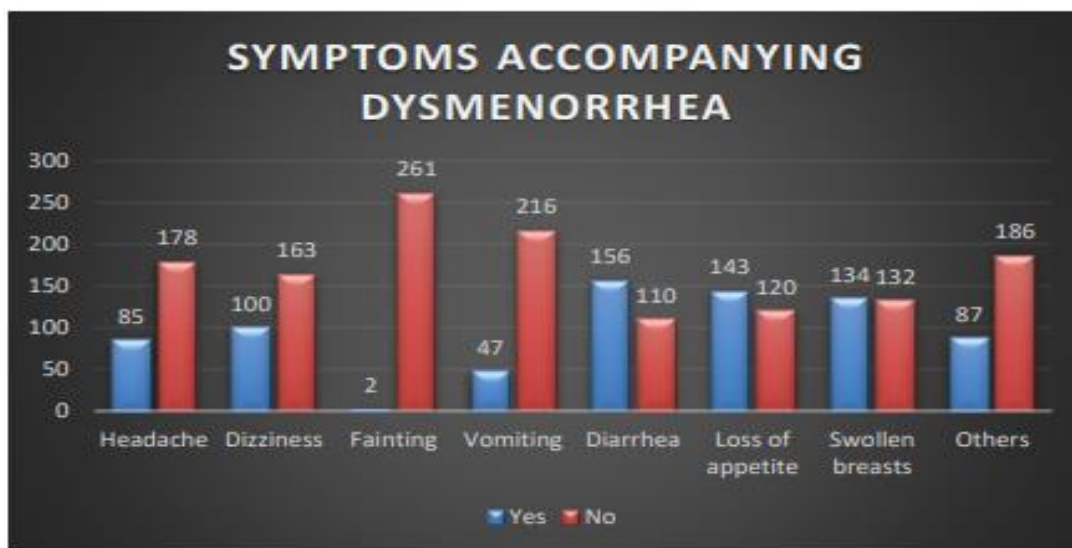


Fig 6 Other Symptoms Occurring with Pain.

C. Knowledge on Dysmenorrhea and its Medical Treatment

Knowledge was assessed using six research questions that probed for 1: methods of treatment used, 2: if fragyll was one of the drugs used, 3: whether painful menses were normal, 4: if one could seek medical attention when they have painful periods, 5: if they knew any medical treatment available at their local health center and 6: to give a reason if they did not know any treatment available. This study revealed that the majority of students represented by 60.4%(165) had average knowledge on dysmenorrhea and its medical treatment while 30.0%(82) had good knowledge while 9.5%(26) had poor knowledge. These findings are illustrated in figure 7 below.

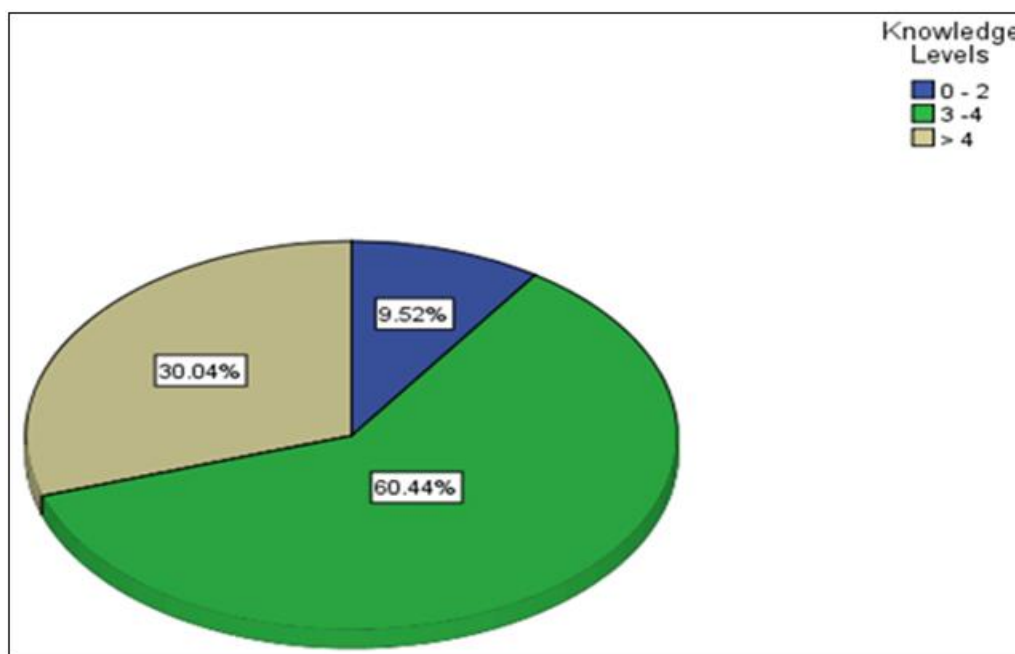


Fig 7 knowledge Levels.

D. Attitude

Attitude was assessed using five research questions that probed for 1: females experiencing painful periods seeking medical attention, 2: should they self-medicate to avoid embarrassment when they seek medical attention, 3: use of medication to relieve pain is simply being lazy, 4: if females should be in seclusion on menses, and 5: if talking about dysmenorrhea was a taboo. This study revealed that 91.9% which is the majority of students had a positive attitude towards dysmenorrhea and its medical management while 8.1% had a negative attitude. The findings are illustrated in figure 8 below.

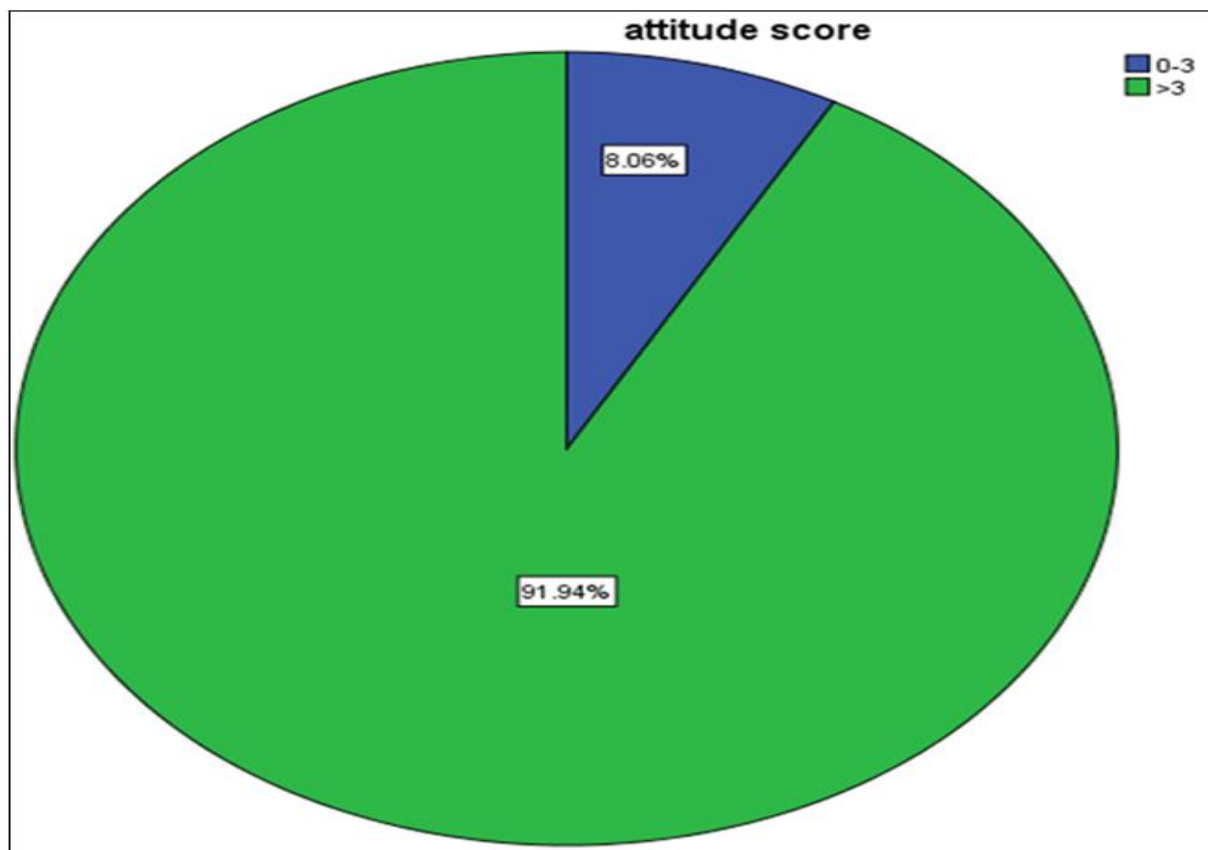


Fig 8 Attitudes of Participant:>3(Positive), 0-3(Negative).

E. Practices

The following five questions were used to assess practices of the students affected by dysmenorrhea 1: if participant ever sought medical attention during painful menstruation, 2: methods used as treatment, 3: drugs used to treat it, 4: number of tablets taken as a single dose and 5: how often the drugs were taken in a day. Of the sampled 273 students only 40(14.7%) sought medical attention when they had painful menstruation while the remaining 233(85.3%) never did. Therefore, most of the students had poor healthcare-seeking practices. However, the majority 242(88.6%) of students were using the recommended first-line medical management which are NSAID painkillers with the most common drug being diclofenac. About 8% of student reported a non-therapeutic dose to relieve the pain. Other treatment methods used by the students were herbs by 4(1.5%), hot water bottle therapy by 8(2.9%) and other methods like exercise by 7(2.6%). Figure 9, figure 10 and figure 11 below shows the results of assessment of practices.

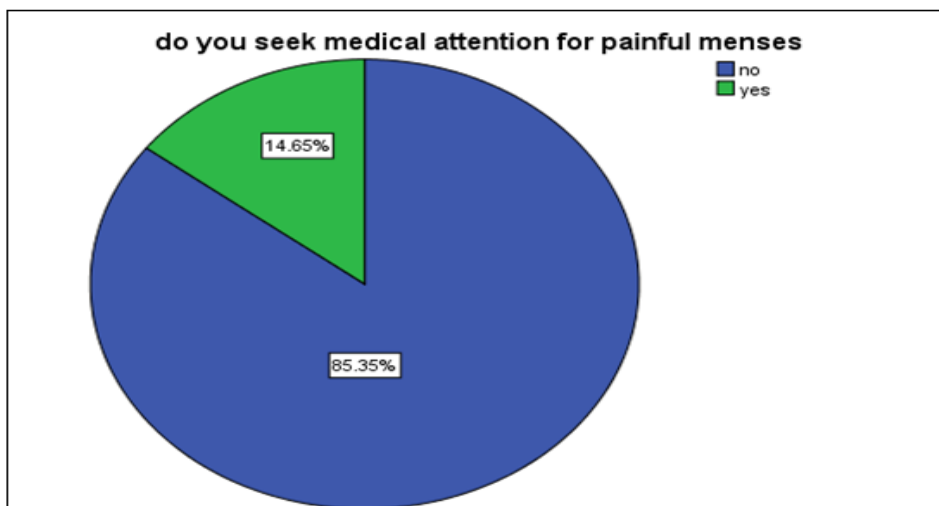


Fig 9 Healthcare-seeking practices.

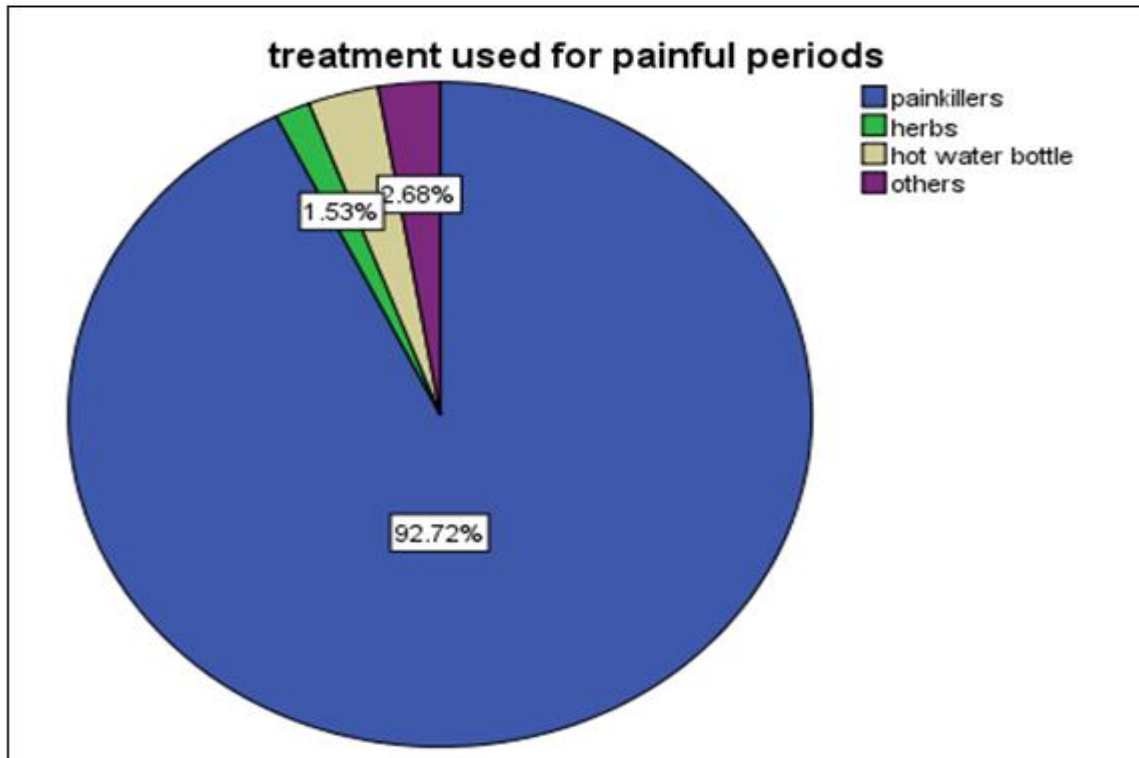


Fig 10 Treatment Methods Applied.

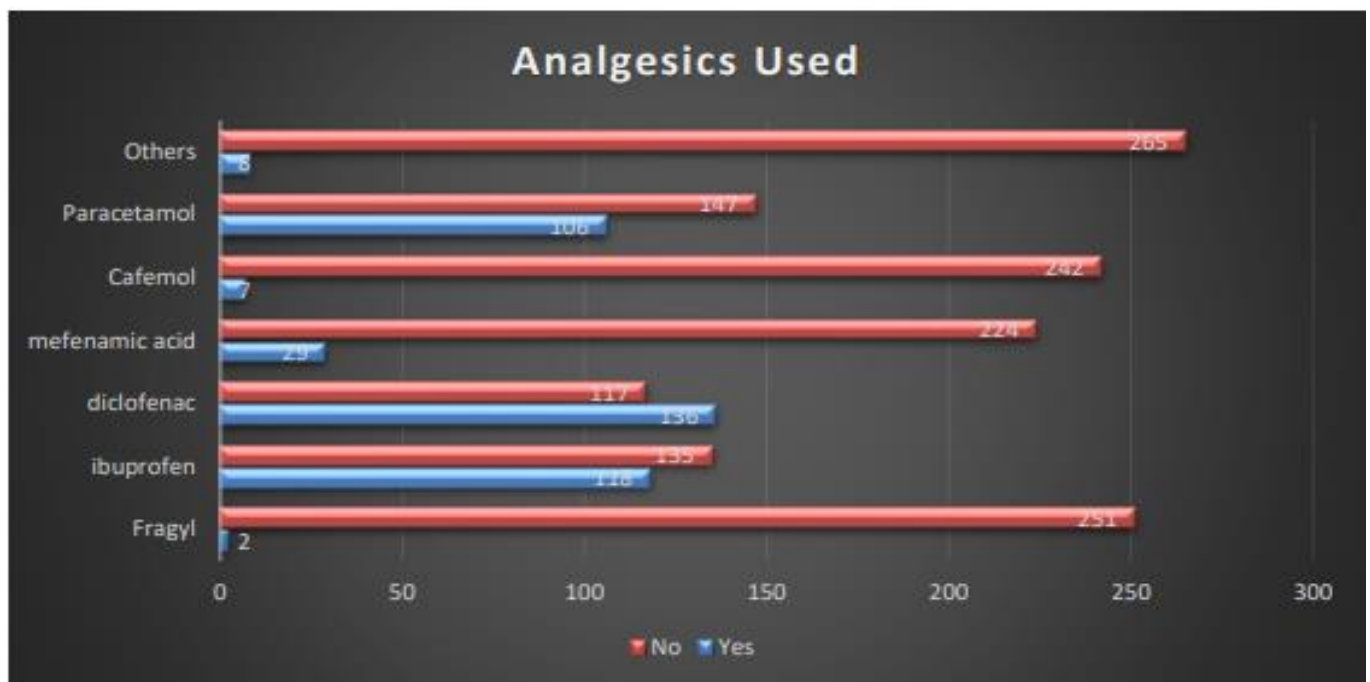


Fig 11 Drugs used as Treatment.

F. Impact

The impact of dysmenorrhea was assessed using a research question that required them to select from options offered or add to them what activity they noticed was affected by painful menstruation. This study showed that dysmenorrhea has a significant impact in the daily lives of affected participants. About 72.5% reported limitation doing daily chores and 68.1% had reduced concentration and their studies were disturbed. About two-thirds(67.7%) of respondents reported altered sleeping pattern and duration with decreased appetite in 46.2% during their menses. More than one-third(41.0%) of students reported that due to the restrictions in their daily activities during their menstrual period they absented from classes. This is shown in figure 12 below.

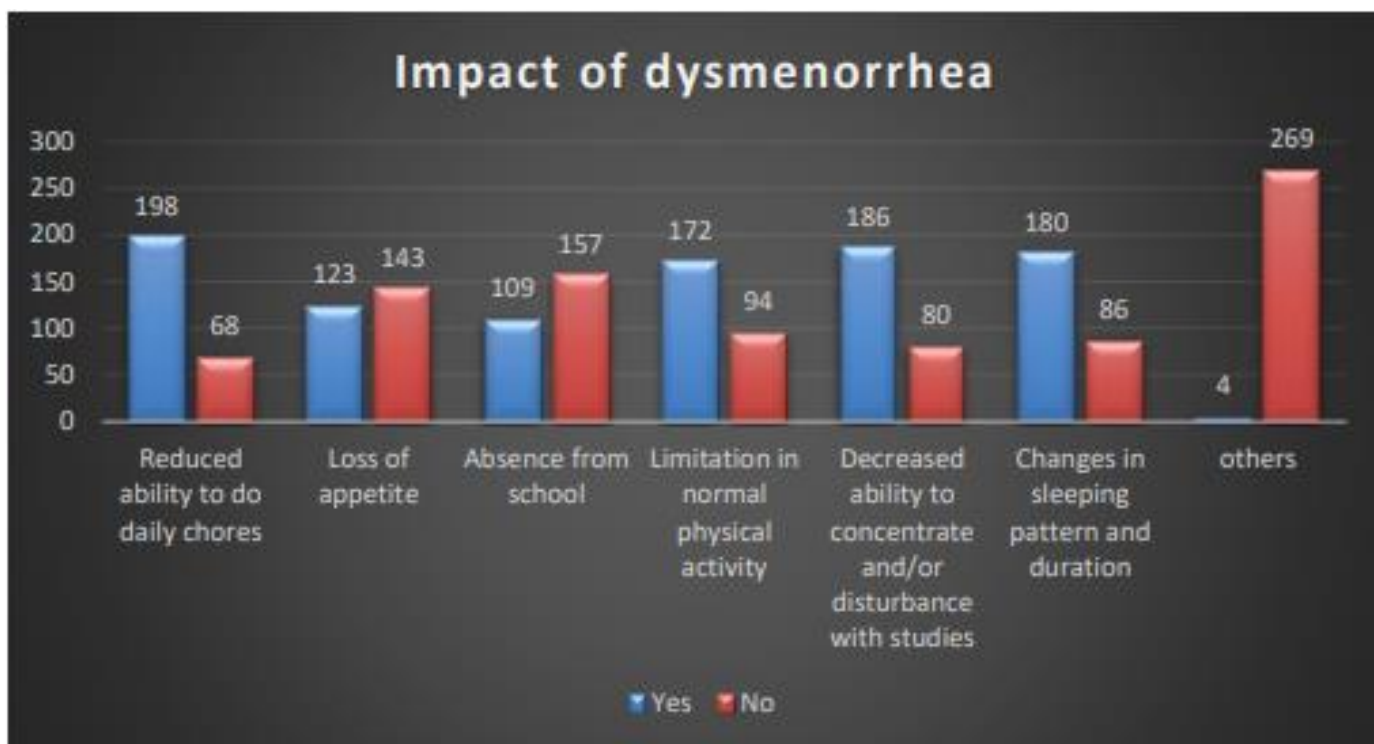


Fig 12 Impact or Effects of Dysmenorrhea

G. Associations

This study revealed that the prevalence of dysmenorrhea is strongly associated with the age of onset of menstruation (p value = 0.000). It further showed that there are also associations of prevalence to gravidity(0.038) and heavy flow(p value = 0.014). However, this study found no association between prevalence and duration of menstrual flow(p value = 0.079). No relationship was found between the age of the student(p value = 0.786), regularity of menses (p value = 0.515) and prevalence of dysmenorrhea.

Despite having adequate knowledge and good attitude towards dysmenorrhea and its medical management, this study revealed that the two variables had no association(p value = 0.065).

CHAPTER FOUR DISCUSSION, CONCLUSION AND RECOMMENDATIONS

A. Discussion

This study had a total of 273 female student participants that were randomly selected, the majority belonging to the age range of 18 to 25(88.3%) and most were nulliparous(94.5%). Most responses were given by MBChB students(70.0%) while the least were given by biomedical science students(7.3%). This study found a high prevalence of dysmenorrhea at CBU-SOM which was 89.38% reported among female students. The prevalence findings were consistent with previous studies done among university students in Egypt, Northern Ghana, Romania and North-western Ethiopia which were 92.9%, 83.6%, 78.4% and 77.6% respectively. A study by Farotimi, et al also showed the prevalence to be around the same range at 78.1%. In this survey, more than half of the respondents(51.6%) described their pain as moderate and more than one-third(37.0%) as severe. Furthermore, the painful periods were accompanied by other symptoms such as headache, dizziness, diarrhea, loss of appetite, swollen breasts and fainting with the most common being diarrhea.

This study revealed that the prevalence of dysmenorrhea is strongly associated with the age of onset of menstruation(p value = 0.000). Additionally, there are also associations to gravidity(0.038) and heavy flow(p value = 0.014). However, this study found no association between prevalence and duration of menstrual flow(p value = 0.079). No relationship was found between the age of the student(p value = 0.786), regularity of menses (p value = 0.515) and prevalence.

This study revealed that the majority of students had adequate knowledge(90.4%) and a positive attitude(91.9%) toward dysmenorrhea and its medical treatment. Additionally, about 8% of student reported a non-therapeutic dose to relieve the pain quicker. However, only 14.7% of all sampled students sought medical attention when they had painful menstruation. Therefore, this study concluded that most of the students had poor healthcare-seeking practices and preferred to self-medicate. The most common drugs used were diclofenac and ibuprofen which are part of the recommended NSAIDs. These findings were consistent with findings from other studies. For instance, a study by Fatima A. et al (2016) also showed that self-medication was practiced by most students with dysmenorrhea.

About 72.5% reported limitation doing daily chores and 68.1% had reduced concentration and their studies were disturbed as revealed in this study. About two-thirds(67.7%) of respondents reported altered sleeping pattern and duration with decreased appetite in 46.2% during their menses. More than one-third(41.0%) of students in this study reported absenteeism. This correlates with data from various studies conducted earlier that showed that absenteeism from school due to dysmenorrhea was about 34-50% (Karanth S. et al 2018). The study by Ajao Adeleke(2016) reported similar effects of menstrual problems on the daily routines of undergraduate students as this study. These included changes in resting hours, difficulties studying, reduced concentration in the class, reduced performance in sports or physical activity and absenteeism.

Therefore, this study showed that dysmenorrhea has a significant impact and strain on the academics of female students and their day-to-day functioning.

B. Conclusion

Prevalence of dysmenorrhea has been shown by various studies to vary from as low as 28% to as high as 94%. This study found the prevalence to be 89.38% among female student at CBU-SOM. This study also revealed that there were associations between prevalence and menarche, heavy flow and gravidity. However, there were no associations with regularity of menses, duration of flow nor age of participant established. Although, the majority of students had adequate knowledge and a positive attitude towards dysmenorrhea and its medical management, they had poor health-care seeking practices. Finally, dysmenorrhea was found to have a significant negative impact on the student's daily lives and as such should be a public health concern.

C. Recommendation

Dysmenorrhea is one of the most common causes of morbidity among women although they hardly seek medical attention for it. There is need for government through the ministry of health and other stakeholders to come up with effective, easy and relatively inexpensive interventions to sensitize and provide a conducive environment for women to have their menstrual complaints addressed by trained professionals to ensure correct management.

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APPENDICES

APPENDIX 1 WORK PLAN

Data collection ran for 6 months from December 2021 to May 2022. After Data had been collected, a trained data entry clerk under supervision did the data entry. The data was double checked and validated then exported to SPSS for analysis.

APPENDIX 2 PERIOD OF EXECUTION

Table 2 Ghant Chart

TASK	November 2021	december/march 2021/2022	April 2022	December/June 2020/2022
Handing in of project idea and approval of research proposal				
Data collection				
Data entry				
Data analysis				
Report writing				
Submission of report				

Table 3 Budget

ITEM	QUANTITY	UNIT PRICE	TOTAL
Rim of plain papers	3	100	300
Pens /pencils	10	10	10
Transport	2	500	1000
Food allowance		950	950
Printing and photocopying Of questionnaires/consent forms		700	700
		Total	K2960

QUESTIONNAIRE

SECTION 1: SOCIODEMOGRAPHICS

1. Name Initials
2. Please state your age
3. Marital status:
 - Single
 - Married
 - Divorced
4. Residential address
5. What program are you doing at CBU-SOM?
 - Bachelor of medicine and surgery
 - Bachelor dental surgery
 - Bachelor of biomedical sciences
 - Others:.....
6. Have you ever been pregnant?
 - Yes
 - No

- 7. Do you have children?
- Yes
- No

SECTION 2: PREVALENCE, KNOWLEDGE, ATTITUDE, PRACTICES AND IMPACT.

- 8. Age when you started menstruation?
- 9. Do you have regular cycles?
- Yes
- No
- 10. How many days does each period last?
- 11. Do you experience heavy menses(flow)?
- Yes
- No
- 12. Do you experience painful menstruation (dysmenorrhea)?
- Yes
- No
- 13. In the last 6 months, how many periods presented with dysmenorrhea?
- 14. What is the timing of the pain?
- Before the period starts.
- At the beginning of the period.
- At the middle of the period.
- Towards the end of the period.
- Throughout the period.
- 15. How severe is the pain?
- Mild
- Moderate
- Severe
- 16. What other symptoms accompany dysmenorrhea?
- Headache
- Dizziness
- Fainting
- Vomiting
- Diarrhea
- Loss of appetite
- Swollen breasts
- Others specify:.....
- 17. What impact do the painful menses have on your daily life?
- Hospital admission.
- Reduced ability to do daily chores.
- Loss of appetite.
- Absence from school.
- Changes or limitations in normal physical activity.
- Reduced ability to concentrate and/or disturbance with study.
- Changes in sleeping pattern and duration.
- Others:
- 18. Do you ever seek medical attention when you are experiencing painful menstruation?
- Yes
- No

19. What method do you use to treat painful menstruation?

- Painkillers
- Herbs
- Hot water bottle therapy
- Others

20. What medicine do you use to treat dysmenorrhea?

- Ibuprofen
- Paracetamol
- Frayll
- Diclofenac
- Mefenamic acid
- Cafemol
- Others:

21. How many tablets of the drug/s named in 20 above do you take as a single dose?

- One tablet.
- Two tablets
- Three tablets
- Four or more tablets

22. How many times in a day do you take the medication named above?

- Once
- Twice
- Three times
- Four or more times

23. Do you consider painful cramps as normal?

- Yes
- No

24. If no to 23 above, what do you think of painful menstruation?

.....

25. Should a female experiencing painful menstruation medical management at a healthcare facility?

- Yes
- No

26. Females experiencing painful periods should self-medicate to avoid embarrassment when they seek medical care a health institution?

- True
- False

27. Do you think a female that uses medicines to relieve her menstrual pains is simply being lazy?

- Yes
- No

28. Should a female be in seclusion when on their menses?

- Yes
- No

29. Do you know any treatment for dysmenorrhea available at your local health center?

- Yes
- No

30. If yes to 29, what medical treatments are available at your local health center?

.....

31. If no to 29, why?

- People do not normally seek medical attention.
- Talking about menstruation is considered a taboo by most Zambians.
- Individuals do not know that they can seek medical attention or advice regarding their menstrual complaints.

32. Do you think talking about menstruation is a taboo?

- Yes
- No

ETHICAL APPROVAL

TROPICAL DISEASES
Tel/Fax: +260 212 811444
E-mail: ethics@tdrs.org.zm



RESEARCH CENTRE
P.O. Box 71759
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ZAMBIA

TDRS ETHICS REVIEW COMMITTEE
IRB REGISTRATION NUMBER : 0002911
FWA NUMBER : 0003729

TRC/C4/01/2022

10th January 2022

Egelina Mwale
Principal Investigator
Copperbelt University
Ndola.

Dear Ms. Mwale

RE: ETHICAL APPROVAL OF STUDY PROTOCOL

Reference is made to the protocol entitled "Knowledge, Attitudes and Practices of analgesic use among female students with primary dysmenorrhea at the Copperbelt University of School of Medicine" which was submitted to TDRS REC for ethical consideration.

On behalf of the Chairperson of the TDRS Ethics Review Committee (ERC), I wish to inform you that your protocol was reviewed and granted ethical approval.

You are further required to submit progress reports to the TDRS ERC twice a year.

Should there be any protocol modifications or amendments, you are required to notify the ERC and submit protocol amendments for approval.

You are now required to submit your protocol to the National Health Research Authority for final approval following the link: <https://www.nhra.org.zm>. A final report of the study should be submitted to the Ethics Review Committee Secretariat at the end of the study.

This approval is valid for the period 10th January 2022 to 9th January, 2023

The Committee wishes you success in the execution of the study.

Yours faithfully,
TROPICAL DISEASES RESEARCH CENTRE

Sydney Mwanza
DEPUTY SECRETARY – TDRS ETHICS REVIEW COMMITTEE



PROVINCIAL APPROVAL

PHO/CB/2/17/1

All Correspondences should be addressed to the
Provincial Health Director
Telephone fax No +260861274/+ 260 68093
Email: copyrbeltpho@gmail.com



REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH
COPPERBELT PROVINCIAL HEALTH OFFICE

PWD Yard, Kabompa Road
P.O. Box 70032,
Kansashi
NDOLA

31st January, 2022

Ms. Egelina Mwale
Micheal Chilufya Sata-School of Medicine
NDOLA

Dear Ms. Mwale,

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Reference is made to your letter dated 14th January, 2022 regarding the above captioned subject.

I am pleased to inform you that permission has been granted for you to conduct a research on the topic: **"Knowledge, Attitudes and Practices of Analgesis use among female students with Primary Dysmenorrhea at the Copperbelt University School of Medicine"** Ndola District, Copperbelt Province.

Kindly note that the data you will collect should not be used for any other purposes except for academic purposes only and that you should adhere to the guidelines as provided for by the Tropical Diseases Research Centre Ethical Review Committee (TDRERC). You are also expected to adhere to all the Covid-19 guidelines provided by the Ministry of Health.

Kindly share your findings with this Office for our reference and information purposes.

I wish you a successful study.

Yours faithfully,
COPPERBELT PROVINCIAL HEALTH OFFICE

A handwritten signature in black ink, appearing to read 'RZulu'.

Dr. Robert Zulu
PROVINCIAL HEALTH DIRECTOR
M/mw



INFORMATION SHEET

My name is Egelina Mwale a fifth year student of The Copperbelt University School of Medicine. I am conducting a study to find out the knowledge, attitudes and practices of analgesic use among female students with dysmenorrhea at the Copperbelt University School of Medicine, Zambia.

➤ *Purpose of the Study*

The purpose of the study is gain insight on the knowledge, attitudes and practices of analgesic use among female students with dysmenorrhea at the Copperbelt University School of Medicine.

➤ *Participation*

The study has been planned for ladies of CBU-SOM. The 300 people selected by a random sampling method to take part in the study.

➤ *Study Procedure*

If you agree to take part in this study, we are first going to hand you a questionnaire which will ask you questions on your knowledge, attitude and practice of analgesic use towards dysmenorrhea.

➤ *Confidentiality*

You will need not provide your name and contact information. Your participation and data provided will be completely confidential. You may simply provide us with your name initials for identification.

➤ *Results*

The results of this study will explore your knowledge, attitude and practice and this will aid in knowing our stance as a nation, providing general public sensitization on dysmenorrhea and its medical management to lessen the negative effects in the lives of those who have it.

➤ *Benefits*

You will benefit from the study by assessing what you know about dysmenorrhea and its medical management. At the end of the interview, information will be provided to you about what dysmenorrhea is and its medical management, in turn this will help you make an informed decision when managing it. In addition, your participation in this study will be of benefit in future to see ways to improve the knowledge aspect of people in various communities.

➤ *Risks*

There are no risks or discomforts that may arise from being a study participant.

➤ *Voluntariness*

Your participation in this study is completely voluntary should you choose not to participate, n penalty or injury will occur to you and you will continue to receive the same health care that you otherwise enjoyed prior to meeting us. You have the right to withdraw your participation anytime you wish to do so. If you have any doubts or you wish to seek clarification on the research please feel free to contact the main researcher on the address below:

Name: EGELINA MWALE

If you have any complaints about the study please contact the Secretary of the TDRC Ethics Review Committee at the following address:

The Secretary,
TDRC Ethics Review Committee,
P.O Box 71769,
Ndola.