RESEARCH ARTICLE

PREVALENCE OF DYSMENORRHEA AMONG FEMALE STUDENTS ATTENDING SALAAM UNIVERSITY IN MOGADISHU, SOMALIA AND FACTORS ASSOCIATED WITH IT

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ABSTRACT

Dysmenorrhea is pain associated with menstruation. It's often an issue discussed in privacy yet continues to affect girls and women with grave impact on their education, social activities and work. Objective: To assess the factors that influence prevalence of dysmenorrhea among university students and factors associated with it in Salaam University in Mogadishu Capital city of Somalia. The study area was Salaam University. A cross sectional study was used to collect data on prevalence of dysmenorrhea among university students and factors associated with it. A self-administered questionnaire non-probability sampling, especially, the purposive sampling method was utilized to for semi-structured questionnaire and interview (N=190). SPSS V.16 was used for data analysis. The prevalence of dysmenorrhea was 72.0%. Conclusion: The prevalence of dysmenorrhea was high which was influenced mainly by the number of children, no family history of dysmenorrhea and daily consumption of sugary foods. The high prevalence of dysmenorrhea among students requires health education about it, its causes, management, schools to stock analgesics in the school clinics and further research on its effect on academic life of the students.

KEYWORDS

Dysmenorrhea, Menstruation, Female, Prevalence, Salaam, Mogadishu, Somalia, University

1. INTRODUCTION

Menstrual period is a natural phenomenon which occurs throughout the reproductive years of every woman. Most females experience certain degree of pain and distress during their menstruation period (Kaur et al., 2015). Dysmenorrhea is defined as painful menstruation that experienced as uterine pain or cramps in the lower abdomen, occurring just before and/or during menstruation, with variations among different females (Tangchia et al., 2004; Kiran et al., 2012). Dysmenorrhea is the most common gynecological disorder in women of reproductive age the term dysmenorrhea is derived from the Greek words Dys (difficult, painful or abnormal), meno (month) and rrhea (flow) (Adeyemi and Adekanle, 2007). It is defined as painful menses in women usually beginning during adolescence. It is characterized by campy pelvic pain beginning shortly before or at the onset of menses and lasting 1 to 3 days, Duration of the pain is usually 8 to 72 hours and is usually associated with menstruation.

Identification of dysmenorrhoea and associated features like vomiting, giddiness, mood changes was done around middle of 19th century (Andersch, 1982). Dysmenorrhea is a painful/ cramping sensation in the lower abdomen often accompanied by other biological symptoms including dizziness, fatigue, sweating, backache, headache, nausea, vomiting, and diarrhea all occurring just before or during the menstruation Dysmenorrhea may be categorized into two types as primary and secondary. Primary dysmenorrhea is defined as painful menses among females with normal pelvic anatomy, frequently beginning

during adolescence. It is observed only in ovulatory cycles, frequently emerging within 6 to 12 months after menarche with no pathology or organic basis. Secondary dysmenorrhea is a menstrual pain associated with underlying pathology and its onset might be years after menarche (Sharma et al., 2014).

Due to its importance, different treatments including pharmacological and non-pharmacological treatment approaches such as taking non-steroidal anti-inflammatory drugs (NSAIDs), herbal, dietary therapies, yoga, meditation, and acupuncture have been used to lessen the effects of dysmenorrhea (Mahvash et al., 2012). In Somalia, menstruation is an issue that is discussed in privacy and should not be talked about in public posing a challenge for girls to manage their periods while at school (Nazni, 2014). Eleven percent of the total learning days of school are missed by girls in rural areas because of menstruation and 74% of the girls in a baseline survey in Kaseke district believed that pain accompanying a period was a sign of illness (Titilayo et al., 2009; Latthe et al., 2006). Many girls therefore choose to stay at home during their menstruation which affects their education (Latthe et al., 2006). Despite the above, menstruation disorders are issues that have been under researched in Africa as a whole

2. PROBLEM STATEMENT

Students who suffer from severe dysmenorrhea report missing school so as to rest during the pain and if present in class, they are not concentrating but sleeping in class, moving in and out of class so as to gain relief.

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Dysmenorrhea has been reported to affect the girls' school activities, social life and performance (Shabnam et al., 2016). Dysmenorrhea is a cause of frequent short-term work and school absenteeism in women of reproductive age. Approximately 10–15% of females experience monthly menstrual pain severe enough to stop normal daily functions at work, home, or school. Even though primary dysmenorrhea is not a real threat of life but can affect the quality of females' life and in case of severity it might lead to disability and inefficiency. Moreover, dysmenorrhea can cause mental problems in some of the females resulting in their loneliness and reduced participation in different social activities. In adolescents, moderate to severe pain that affects lifestyle and does not respond to pharmacological treatment requires professional attention and appropriate diagnosis of possible underlying pelvic disease. The exact prevalence of dysmenorrhea is difficult to determine because of variety of diagnostic criteria and the subjective feature of the symptoms. In many countries, primary dysmenorrhea is the principal cause of recurrent short-term work and school absenteeism in young girls and women (Nidhi et al., 2014). This study is aimed to find out the prevalence of dysmenorrhea among female students attending Salaam University and factors associated with it.

3. METHODOLOGY

The design of the study was cross-sectional study. Self-administered questionnaire (N=190) and interview was taken the data by using semi-structured questionnaire. The questionnaire was prepared in English and translated to Somalia language to ensure clarity.

4. RESULT

Age of the respondents: Mean age of the respondent was 20.83±2.08 marital status most respondents were single 73% (138), while minority were married 27 % (52). Among the respondents 75% (142) had not yet given birth to a child, while 17% (33) had <4 and 8% (15) had >4. Employment among the respondents, 31% (59) of the respondents was employed, and 69% (131) of the respondents were unemployment. Religion the respondents were Muslims 100% (190) because Somali people are hundred percent Sunni Muslims.

Table 1: Socio-demographic Characteristics

Variable	Category	Frequency	Percent
Mean Age of the respondents		20.83±2.08	
Marital status	Single	138	73
	Married	52	27
	Total	190	100
Number of children	None	142	75
	<4	33	17
	>4	15	8
	Total	190	100
Employment status	Employed	59	31
	Unemployed	131	69
	Total	190	100
Religion	Islam	190	100
	Total	190	100

Among the respondents 15% had experience their first menstrual period at age of 13, 31% of the respondents experience at age of 14, while 53% of the respondents experience at age of 15 and 1% of the respondents had experienced their first menstrual period at age of 16. Majority of the respondents 83% said yes that they experience their periods every month while 17% of the respondents said no that they don't experience their periods every month. Among the respondents who had 1-2 days menstrual period in month were 8%, those who had 3-4 days were 33%, and those who had 5-6 days were 33%, 26% were those who had >7 days. Cycle of the menstruation period, majority of the respondents 83% had regular cycle and only 17% of the respondents had irregular cycle. Cycle duration 33% of the respondents had <21days, while 53% of the respondents had 21days up to 35 days and 14% had >35 days. Bleeding time: participants who had bleeding <3 days were 14%, while those who had bleeding 3 days up to 5 days were 51% and those who had >5days were 35%. Among the respondents who their studies affected by dysmenorrhea were 64%, and those who their studies didn't affect by Dysmenorrhea were 36%. Participants who miss class due to pain were 45%, and those who didn't miss class due to pain were 55%.

Table 2: Personal factors influencing the prevalence of Dysmenorrhea

Variable	Category	Frequency	Percent
Age of experience at your first menstrual period	13	30	15
	14	58	31
	15	100	53
	16	2	1
	Total	190	100%
Do you experience your periods every month?	Yes	157	83
	No	33	17
	Total	190	100%
How long is your monthly menstrual period?	1-2 days	15	8
	3-4 days	62	33
	5-6 days	63	33
	>7 days	50	26
	Total	190	100%
Cycle	Regular	158	83
	Irregular	32	17
	Total	190	100%
Cycle duration	<21days	64	33
	21 days-35 days	100	53
	>35 days	26	14
	Total	190	100%
Bleeding time	<3 days	26	14
	3days-5days	98	51
	>5days	66	35
	Total	190	100%
Do your studies get affected by dysmenorrhea?	Yes	121	64
	No	69	36
	Total	190	100%
Do you miss class due to pain?	Yes	86	45
	No	104	55
	Total	190	100%

Among the respondents 72% of the respondents said that they experience dysmenorrhea during their period while 28% of the respondents said that they don't have pain during their period. 37% of the respondents said that they experience pain before menstruation, 24% during the period and 11% after the menstruation. Symptoms of dysmenorrhea among the respondents 18% had headache, 10% had nausea, only 8% of the respondents had vomiting and 36% of the respondents had depression. 45% of the respondents feel pain lower abdomen, while 19% feel pain lower back and 8% of the respondents feel pain at different locations. 25% of the respondents use pain killers, 17% took a rest, only 6% take mineral while 16% warm the abdomen with a hot water and 8% had not use anything.

Table 3: Prevalence of Dysmenorrhea

Variable	Category	Frequency	Percentage
Do you experience pain during your periods?	Yes	137	72
	No	53	28
	Total	190	100%
When do you experience pain (n=137)	Before the menstruation	70	37
	During the period	45	24
	After the menstruation	22	11
	Total	137	72
Symptoms of Dysmenorrhea (n=137)	Depression	68	36
	Vomiting	15	8
	Nausea	20	10
	Headache	34	18
	Total	137	72
Pain location (n=137)	lower abdomen	90	45
	lower back	35	19
	pain at different locations	12	8
	Total	137	72
What do you use to relieve it (n=137)	Use pain killers	47	25
	Rest	32	17
	Take mineral	12	6
	Warm the abdomen with hot water	30	16
	None	16	8
	Total	137	72

Among all life style factors, participants those who consume alcohol were 22% and those who did not consume alcohol were 78%. 61% of the respondents had services of alcohol 1-2 per week, 24% had 3-4 per week and 15% had services of alcohol >5 per week. 57% of the respondents consumed coffee while 43% did not consume coffee. And those who consume coffee 83% took 1-3 cups of coffee per day, 14% took 4-6 cups of coffee per day only 3% of the respondents took >7 cups of coffee per day. 51% of the respondents were obese, while 49 were normal. Participants who didn't smoke cigarettes or shisha were 100%, there is no any participant who smoke cigarettes or shisha. Among the respondents who said we make exercise were 46%, while 54% of the respondents didn't make exercise regularly.

Table 4: life style factors associated with the prevalence of Dysmenorrhea.

Variable	Category	Frequency	Percent
Do you drink alcohol?	Yes	41	22
	No	149	78
	Total	190	150
How many services of alcohol do you have per week?	1-2	25	61
	3-4	10	24
	>5	6	15
	Total	41	22
Do you drink coffee?	Yes	108	57
	No	82	43
	Total	190	100
If yes, how many cups of coffee do you take per day?	1-3	90	83
	4-6	15	14
	>7	3	3
	Total	108	57
Are you obese?	Yes	96	51
Do you smoke cigarettes or shisha?	No	94	49
	Yes	25	13
	No	165	87
	Total	190	100%
Do you exercise regularly?	Yes	88	46
	No	102	54
	Total	190	100%

5. DISCUSSION

We found 72.0% of students suffering from dysmenorrhea in Salaam University. Our observation is consistent with previous studies reporting dysmenorrhea occurrence between 45 and 85% from India and other countries. It is evident from results that nearly 70% of dysmenorrhea females experienced moderate to severe dysmenorrhea. While comparing prevalence of dysmenorrhea from other countries, Ethiopia reported 70% dysmenorrhea wherein 28.5% had moderate to severe, Malaysia reported an incidence of 6.8% having moderate to severe pain and Jordan reported 55.8% of the subjects had moderate to severe pain. One of the reasons for such vast differences could be due to the scales used for assessment. We found approximately 50% of dysmenorrhea girls remained absent from schools or colleges.

In several studies of young women, rates of absenteeism ranged from 24 to 50%. We found approximately 45% of dysmenorrhea girls remained absent from schools or colleges. In several studies of young women, rates of absenteeism ranged from 24 to 50%. Studies have demonstrated that menstrual pain restricts the movement and usual activity pattern of the females. It could also be argued that the perception of uneasiness and discomfort experienced during menstruation probably limits the movements more than the experience of pain. Study in Kenya indicated that the average age at menarche for the respondents was 13.83 years (SD= 1.498, ranging from 9 to 19 years) with most 83.2% (292) girls' age at menarche falling in between 12-15 years.⁽¹⁾ While the present study showed among the respondents 16% had experience their first menstrual period at age of 13, 31% of the respondents experience at age of 14, while 53% of the respondents experience at age of 15 and 1% of the respondents had experienced their first menstrual period at age of 16.

A study in Uganda showed that majority 92.6% (325) of the respondents experienced their periods per month, 58.4% (205) had a relative with dysmenorrhea, 61.95% (127) of the respondents citing a sister as the person experiencing dysmenorrhea. More than half 241(68.7%)

experienced work or institutional related stress, of which 66.4 % (160) reported moderate level of stress (Sundell et al., 1990). While in my research indicates that majority of the respondents 83% said yes that they experience their periods every month, 71% had a relative with dysmenorrhea And 31% of the respondents citing a mother as the person experiencing dysmenorrhea, 38% said sister only 2% citing cousin as the person experiencing dysmenorrhea and 30% said others. And The respondents who think that life at the institution /work was stressing were 72%, And 19% of the respondents rated the stress experienced at institution/work at low, 49% rated as moderate, only 4% rated as severe and 28% rated others. Research in Nigeria found that majority 72.9% (256) of the female students had their monthly menstrual period lasting 3-4 days with a mean length of the monthly period lasting 2.18 days (SD = 0.585).

In current study shows the respondents who had 1-2 days menstrual period in month were 8%, those who had 3-4 days were 33%, and those who had 5-6 days were 33%, 26% were those who had >7 days. Our study showed among all life style factors, participants those who consume alcohol were 22% and those who did not consume alcohol were 78%. 61% of the respondents had services of alcohol 1-2 per week, 24% had 3-4 per week and 15% had services of alcohol >5 per week. 57% of the respondents consumed coffee while 43% did not consume coffee. And those who consume coffee 83% took 1-3 cups of coffee per day, 14% took 4-6 cups of coffee per day only 3% of the respondents took >7 cups of coffee per day. 51% of the respondents were obese, while 49 were normal. Participants who didn't smoke cigarettes or shisha were 100%, there is no any participant who smoke cigarettes or shisha. The respondents who said we make exercise were 46%, while 54% of the respondents didn't make exercise regularly.

In a recent study in Uganda found majority 309 (88.0%) of the respondents did not consume alcohol while of the 42 participants who consumed alcohol, more than half 27 (64.3%) consumed 1-2 servings of alcohol per week with an average consumption of 1.74 servings (SD = 1.106). Most 60.4% (212) consumed coffee, out of these 92.9% (197) drunk 1-3 cups of coffee per day. Most 326 (92.9%) female students consumed sugar while 82.3% (289) consumed sugar in tea. Majority 339 (96.6%) did not smoke cigarettes or shisha. A total of 181 (51.6%) female students exercised regularly, of these most of the respondents were walking while others ran, skipped a rope, did jogging, aerobics, sit-ups, jumping up, swimming, volley ball, net ball, pressure ups and running. A total of 34.8% (63) female students exercised 2-3 times per week, an average of 2.59 times (SD = 1.100). A total of 51.9% (94) spent more than 30 minutes while exercising.

6. CONCLUSION

Prevalence of the dysmenorrhea is high in our study population. So, from the study it can be concluded that dysmenorrhea is a very common problem among girls, Such high prevalence makes dysmenorrhea a significant public health problem among young students that demands some attention from policy makers. Girls almost always, silently suffer the pain by dysmenorrhea and the discomfort associated with it due to lack of knowledge about reproductive health. It is probable that this also affects their academic performance. The findings of this study thus indicate the enormity of the problem and the need for appropriate intervention through a change in lifestyle.

RECOMMENDATION

- Young female undergraduates should be taught premenstrual signs and how to adequately prepare themselves for menstruation to minimize the effect of menstrual disorders through informative, educative and communication (IEC) materials such as handbills which should be included as part of the package for the orientation programme for new undergraduates.
- Enlightenment programmes should be organized periodically by the school health nurses on the various management strategies for menstrual disorders and how to use them effectively.
- Adequate counseling should be provided by the school nurses to students who experience dysmenorrhea during consultation in the school clinic to avoid or reduce the rate of school absenteeism among them.
- Encourage female students to seek prompt medical attention to rule out or treat any underlying problem that may be responsible for dysmenorrhea or that can interfere with the reproductive health of the Female Students in later years.

- Nurses as health educators should consistently provide information on the benefits of non-pharmacological self-help measures through the use of appropriate teaching aids such as postals, handbills and personal contact with these students during clinic consultation for management of other health problems.

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