Research

Experience of dysmenorrhoea and self-care strategies among female students in a tertiary institution, Ibadan, Nigeria

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ABSTRACT

Background: The objective of the study was to investigate dysmenorrhoea experiences and self-care among female undergraduate students in two halls of residence at The Polytechnic, Ibadan, South West, Nigeria.

Methodology: A descriptive cross-sectional survey was used, and 354 consenting female students aged 16-29 years who were residents in the halls participated in the study. A self-administered, semi-structured questionnaire was used for data collection. Knowledge was assessed on an 11-point scale, scores of 0-5 and 6-11 were categorised poor and good, respectively while perception was measured on a 13-point scale, scores of 0-6 and 7-13 were also categorised negative and positive, respectively. Data were word-processed using IBM SPSS software and analysed. Results presented in descriptive and inferential statistics at p<0.05.

Results: Respondents' age was 20.4 ± 2.4 years. Only 22.0% correctly stated the two types of dysmenorrhoea. Some (16.9%) correctly recognised family history, the age of menarche (8.5%), and excessive sugar intake (87.6%) as factors predisposing someone to dysmenorrhoea. Most respondents, 67.2%, believed dysmenorrhoea is normal. Nature of pain experienced by the respondents varied from mild (10.2%), moderate (44.4%) and severe (30.2%) with the majority (91.2%) experiencing pain in the lower abdomen. Most respondents (96.6%) had poor knowledge of dysmenorrhoea, the mean knowledge score was 1.5 ± 1.3. The reported effects of dysmenorrhoea include a strained relationship with friends (50.3%), missing school (50.6%), mood swing (59.0%) and lack of concentration in class (61.6%). Use of medication (35.1%) and physical exercise (21.2%) was reported ways of preventing dysmenorrhoea. The majority, (87%) used drugs which are often associated with side effects.

Conclusion: Majority of the respondents had poor knowledge about the types and major cause of dysmenorrhoea. Varied measures were taken in the management of the health condition. Health education interventions such awareness, sensitisation and use of appropriate behaviour change communication strategy aimed at addressing these gaps is of import.

Keywords: Dysmenorrhoea knowledge, Dysmenorrhoea perception, Dysmenorrhoea experience, Female students, Tertiary institution, Dysmenorrhoea self-management.

INTRODUCTION

Menarche has been noted to be one of the most expressive milestones in a woman's life (Pitangui et al. 2013; Deligeoroglou and Tsimaris 2010 and . Menstrual cycle disturbances, such as menorrhagia, dysmenorrhea, and irregular cycles, are common during adolescence and adults of reproductive age (Roberts, 2012; Chung, 2011 and . Dysmenorrhoea is painful menstruation or pain during menstruation (within the menstrual cycle) and a common

gynaecological disorder among female adolescents and young adults of reproductive age. It has been noted that its onset is usually between 6 and 12 months after menarche (Loto, 2008). One of the female hormones, prostaglandin is implicated as the cause of pain that is associated with menstruation. This hormone plays an active role in the rupture of follicle during menstruation and in myometrial contraction, and control the process of menstruation, which involves the shedding of the lining in the absence of fertilization. Dysmenorrhea prevalence varies across the diverse population and ethnic groups (Farotimi, 2015; Pembe and Ndolele, 2011). In Nigeria, some studies have reported the varying prevalence of dysmenorrhea in different parts of the country (Farotimi, 2015). For example, its prevalence in Oyo State is 62% (Pembe and Ndolele, 2011), 58% in Osun State (Busari, 2012), and 69.8% in Borno State (Ogunfowokan and Babatunde, 2010). In some other countries, studies have also reported the prevalence of 62% in India (Amaza, 2012), 74.1% in Tanzania (Pembe and Ndolele, 2011), 72% in Ethiopia (Roberts SC, 2012), and 75% in Egypt (Jasrotia RB, 2012).

Dysmenorrhea is categorised into primary and secondary (El Gilany, 2005) primary dysmenorrhea relates to the experience of pain during menstruation without any underlying pathological reason. Secondary dysmenorrhea is painful menstruation due to an anatomical or pelvic pathology (Deligeoroglou E, 2010; Farotimi AA, 2015). Such pain usually appears with symptoms such as cramps and pain in the lower back and abdomen, as well as nausea, vomiting, fatigue, nervousness, appetite changes, diarrhoea and headache (Farotimi AA, 2015; El Gilany, 2005). Severe symptoms negatively affect the female's physical and psychosocial health.

Menstruation-related disturbances may have considerable physical and psychological consequences (Chung PW, 2011). These conditions contribute to school absenteeism and can increase problems faced by adolescents and their families during this stage of development (Pitangui ACR, 2013; Deligeoroglou E, 2010; Farotimi AA, 2015; Ozerdogan N, 2009). Dysmenorrhoea is a significant problem from an individual and public health perspective (Chia CF et al., 2013). It was estimated that 140 million work and school hours were lost annually due to menstrual-related symptoms (Ozerdogan N, 2009; Chia CF, et al., 2013; Patruno JE, 2006; Sulayman HU et al., 2013). It causes changes in women's Activities of Daily Living (ADL) and social roles and reduces their quality of life. It also causes negative effects such as increased absenteeism (not being able to go to work) and a reduction in school success and productivity in adolescents and young women (Ozerdogan N, 2009; Chia CF, et al., 2013; Patruno JE, 2006; Sulayman HU, et al., 2013).

While many of those affected lack experience and knowledge for effective management of dysmenorrhoea and other menstrual discomforts, the situation is further aggravated by the way the problem is managed by individuals. In many developing countries, the health challenge is given less attention (Ezeukwu AO, 2014). In a developing country like Nigeria where the young population is faced with enormous socio-economic challenges, it is pertinent to investigate into experiences and methods female undergraduates adopt to manage the effects of the physiological challenges of dysmenorrhoea on their daily activities. This study, therefore, explores female undergraduates' experiences and strategies developed towards the management of dysmenorrhoea.

METHODS

This was a descriptive cross-sectional study which focused on experiences and self-management patterns of dysmenorrhoea among female students of The Polytechnic, Ibadan, Oyo State, Nigeria. A multi-stage sampling technique was used in selecting a total of 354 consenting female students who participated in the study. The two female halls of residence on the campus were selected; part-time and sandwich (students who work but due to their work schedule only come for their sessional compressed academic programme for some weeks) students were identified and excluded from the study as they are not on the regular programme. A validated semi-structured, self-administered questionnaire which includes respondents' socio-demographic characteristics, knowledge, perception, experiences and strategies developed at management of dysmenorrhoea was used for data collection. Knowledge was assessed on an 11-point knowledge scale categorised poor (0-5) and good (6-11); the perception was measured on a 13-point scale and their responses categorised negative (0-6) and positive (7-13). Data entry and analysis were facilitated using IBM/Statistical Package for the Social Sciences (IBM/SPSS version 22) software. Data entered into the computer were analysed using descriptive statistics and inferential statistics such as Chi-square test at $p<0.05$. The research participants were provided with information on the study and consent was obtained after the provision of adequate, clear and complete information. The study was conducted in compliance with the Declaration on the Right of the subject/participant (World Medical Association, 2000). Verbal consent was obtained from respondents after they were provided with detail information on the objectives of the study.

RESULTS

A total of 354 respondents consented to participate in the study. Respondents' age ranged between 15 and 29 years with a mean age of 20.4 ± 2.4 years. More

than half (53.7%) of the respondents were within the age bracket of 20-24 years. Most of the respondents (80.8%) were in the Ordinary National Diploma (OND) while only 19.25 were in the Higher National Diploma (HND) level of the programme. The majority, 85.9% and74.9%, were of Yoruba ethnic group and Christian religion faithful, respectively (Table 1).

Table 1. Respondents' socio-demographic characteristics (N=354).

Characteristics	№	%
Age (in years)		
15-19	136	38.4
20-24	190	53.7
25-29	28	7.9
Level of study		
ND 1	142	40.1
ND 2	144	40.7
HND 1	29	8.2
HND 2	39	11
Faculty		
Science	132	37.3
Business and Communication Studies	110	31.1
Financial Management Studies	87	24.6
Environmental Studies	14	4
Engineering	11	3
Ethnicity		
Yoruba	304	85.9
Igbo	34	9.6
Edo	6	1.7
Hausa	4	1.1
Others	6	1.7

Knowledge about dysmenorrhoea

Respondents' mean knowledge score was 1.5 ± 1.3 and the majority (96.6%) had poor knowledge of dysmenorrhoea (Figure 1). Some respondents (39.8%) indicated knowing various types of dysmenorrhoea while high sugar intake (69.2%) was the most common cause of dysmenorrhoea mentioned. In respect to ways in which dysmenorrhoea can be prevented, reduction in sugar intake prior to the time and during menstruation (42.1%) was the most common non-pharmacological way. On the use of medication in preventing dysmenorrhoea, using medication or painkillers (35.0%) was the most mention method. Less than half respondents (42.4%) pointed out that medication can cure dysmenorrhoea (Tables 2 and 3).

Chi-square tests showed that there was no significant association between respondents age, level of study, marital status and religion and the knowledge score as all the p-values were greater than 0.05 (Table 4).
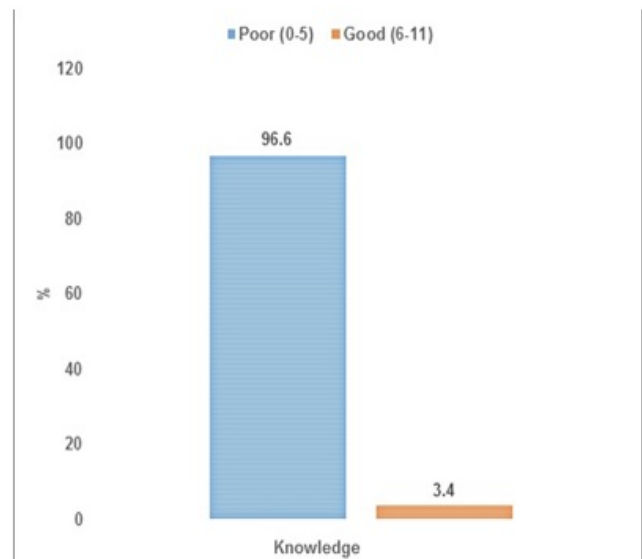
Figure 1. Knowledge categories among respondents (N=354). Mean knowledge score=1.5 ± 1.3, Minimum=0, Maximum=8.

Table 2. Respondents' knowledge about dysmenorrhoea (N=354).

Knowledge Variable	No	%
Types of dysmenorrhoea (N=354)		
Primary	45	12.7
Secondary	18	5.1
Primary and Secondary	78	22.0
I don't know	213	60.2
††Causes of Dysmenorrhoea		
High Sugar Intake	245	69.2

Stress/Fatigue	89	25.1
Hereditary/Normal/Family History	53	15.0
Natural/Normal/Nature	23	6.5
Excess Fat and Oil/Protein	10	2.8
Infections/Toilet disease/STIs	8	2.3
Unhealthy diet/Lack of fruits/Not eating in time	8	2.3
Age/Age of Menarche	8	2.3
Lack of body exercise during the period	8	2.3
Puberty/Hormonal changes/Changing menstrual cycle	8	2.3
Taking of cold drinks during the period	7	2.0
Blood clot or inability of blood to flow	7	2.0
Use of un-prescribed painkillers/Drug Abuse	7	2.0
Having sex prior to menstruation	6	1.7
Excess carbohydrate	5	1.4
Excess level of Prostaglandin*	4	1.1
Fibroid/Ovarian cyst*	4	1.1
Tight pelvic/Pelvic congestion	4	1.1
Pelvic inflammatory	3	0.8
Weather	3	0.8
Hard drug/Alcohol	3	0.8
Endometriosis*	2	0.6
Adenomyosis*	2	0.6
Spiritual attack	2	0.6
Intestinal worms	2	0.6
Environment	2	0.6
Tilting back of the uterus*	1	0.3
Dysentery/Diarrhoea	1	0.3
Staying in a place for a long period of time	1	0.3
Excess Oestrogen	1	0.3
State of virginity/Tight vaginal	1	0.3
Unhealthy lifestyle/Being dirty	1	0.3
††Multiple responses, *Correct responses.		

Table 3. Respondents' knowledge about ways of preventing dysmenorrhoea (N=354).

Knowledge Variable	№	%
Ways of preventing dysmenorrhoea (Non-pharmacological ways)		
Avoidance or reduction of sugary substances	149	42.1
Physical exercise*	75	21.2
Drinking hot or warm water	42	11.9

Rest/Relaxation	26	7.3
Healthy diet*	24	6.8
Avoiding stress	23	6.5
Consulting healthcare providers/Medical advice*	15	4.2
Taking herbs or bitter substances	9	2.5
Having sexual intercourse/Marriage	8	2.3
Hot bath	6	1.7
Lying on one's belly/Massaging one's belly	6	1.7
Healthy lifestyle/Being neat	5	1.4
Avoiding cold drinks	4	1.1
Avoiding fatty foods or drinks	4	1.1
Cold bath	3	0.8
Avoiding self-medication*	2	0.6
Prayer	2	0.6
Lying on one's back supported with a pillow	2	0.6
Studying one's menstrual cycle	2	0.6
Avoiding sex	1	0.3
Avoid smoking and Alcoholic drink	1	0.3
Use of alcoholic drink like	1	0.3
Ways of preventing dysmenorrhoea (Pharmacological ways)		
Pain killers (E. g. Paracetamol, Felvin)	124	35
Drugs can cure dysmenorrhoea		
Yes	150	42.4
No	70	19.8
Not certain	134	37.8

*Correct responses.

Table 4. Comparison of knowledge with selected socio-demographic variables (N=354).

Items	Knowledge scores		X2	df	p-value
	Poor (0-5) № (%)	Good (6-11) № (%)			
Age group					
15-19	132 (37.3)	4 (1.1)	0.137	2	0.934
20-24	184 (51.7)	7 (2.0)			
25-29	27 (7.6)	1 (0.1)			
Level of study					
OND* 1	138 (39.0)	4 (1.1)	0.505	3	0.918
OND 2	139 (39.3)	5 (1.4)			

HND** 1	28 (7.9)	1 (0.3)			
HND 2	37 (10.5)	2 (0.6)			
Marital Status					
Single	334 (94.4)	12 (3.4)	0.287	1	0.592
Married	8 (2.3)	0 (0)			
Religion					
Christianity	259 (73.2)	6 (1.7)	4.078	1	0.043
Islam	83 (23.4)	6 (1.7)			

*OND-Ordinary National Diploma, certificate offered to a student after completing the first two years in a polytechnic in Nigeria. **HND-Higher National Diploma, certificate offered to a student after completing the second two years in a polytechnic in Nigeria.

Perception relating to dysmenorrhoea

Respondents' mean perception score of 7.5 ± 2.0 and the majority (72.9%) had positive perception about dysmenorrhoea (Figure 2). Most respondents were of the view that dysmenorrhoea is normal (67.2%) while (91.0%) were of the view that dysmenorrhoea is not a form of spiritual attack. Moreover, the majority (70.9%) disagree with the view that they experienced dysmenorrhoea because my mother does experience it while 79.7% noted that dysmenorrhoea occurs when one takes sugary food or drink. About forty per cent were of the view that dysmenorrhoea is because of stress an individual went through. In addition, most respondents (63.8%) disagreed with the notion that dysmenorrhoea is experienced because of sitting for long during menstruation. Moreover, the majority (75.1%) perceived dysmenorrhoea as an important health concern for young women and 68.1% were of the view that dysmenorrhoea hinders sleep. Most of the respondents (73.4%) disagreed with the notion that dysmenorrhoea could hinder one from getting pregnant in the future and a few (12.4%) indicated that sexual intercourse reduces dysmenorrhoea (Table 5).

Chi-square test showed that there is a significant association between the age of respondents and the perception score as the p-value was lesser than 0.05. Moreover, Chi-square test showed that there is a significant association between respondents' marital status and the perception score (p<0.05) (Table 6).

Table 5. Respondents' perception about dysmenorrhoea (N=354).

Statement	№	%
Dysmenorrhoea is normal		
Agree	238	67.2
Undecided	54	15.3
Disagree	62	17.5
Dysmenorrhoea is a spiritual attack		
Agree	15	4.2
Undecided	17	4.8
Disagree	322	91
Experience dysmenorrhoea because my mother does experience it		
Agree	36	10.2
Undecided	67	18.9
Disagree	251	70.9
Dysmenorrhoea occurs when one takes sugary food or drink		
Agree	282	79.7

Undecided	38	10.7
Disagree	34	9.6
Dysmenorrhoea is because of stress		
Agree	141	39.8
Undecided	96	27.1
Disagree	117	33.1
Dysmenorrhoea is experienced when one sits for long during menstruation		
Agree	42	11.9
Undecided	86	24.3
Disagree	226	63.8
Don't sleep well when I experience dysmenorrhoea		
Agree	241	68.1
Undecided	27	7.6
Disagree	86	24.3
Having sex intercourse reduces dysmenorrhoea		
Agree	44	12.4
Undecided	122	34.5
Disagree	188	53.1
Physical exercise reduces dysmenorrhoea		
Agree	220	62.1
Undecided	87	24.6
Disagree	47	13.3
Hot drinks e.g. tea, water or alcoholic drink eases my flow of blood		
Agree	237	66.9
Undecided	53	15
Disagree	64	18.1
Dysmenorrhoea is a major disorder that can kill		
Agree	29	8.2
Undecided	92	26
Disagree	233	65.8
Dysmenorrhoea hinders one from getting pregnant in the future		
Agree	23	6.5
Undecided	71	20.1
Disagree	260	73.4
Dysmenorrhoea is an important health concern for young women		
Agree	266	75.1
Undecided	47	13.3
Disagree	41	11.6

Table 6. Comparison of perception category with selected socio-demographic variables (N=354).

Items	Perception category		X2	df	p-value
	Negative (0-6) № (%)	Positive (7-13) № (%)			
Age group					
15-19	46 (13.0)	90 (25.4)	7.451	2	0.024
20-24	47 (13.3)	143 (40.4)			
25-29	3 (0.8)	25 (7.1)			
Level of study					
OND* 1	49 (13.8)	93 (26.3)	11.003	3	0.012
OND 2	38 (10.7)	106 (29.9)			
HND** 1	5 (1.4)	24 (6.8)			
HND 2	4 (1.1)	35 (9.9)			
Marital Status					
Single	90 (25.4)	256 (72.3)	9.494	1	0.002
Married	6 (1.7)	2 (0.2)			
Religion					
Christianity	67 (18.9)	198 (55.9)	1.797	1	0.215
Islam	29 (8.2)	60 (16.9)			

*OND-Ordinary National Diploma, certificate offered to a student after completing the first two years in a polytechnic in Nigeria. **HND-Higher National Diploma, certificate offered to a student after completing the second two years in a polytechnic in Nigeria.
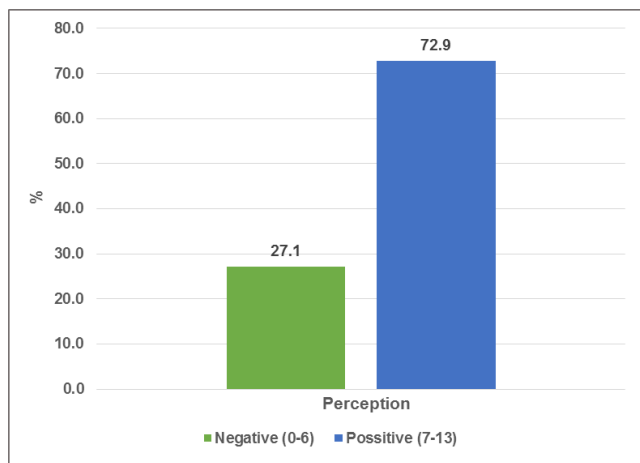

Figure 2. Perception categories among respondents (N=354). Mean perception score=7.5 ± 2.0, Minimum=0, Maximum=13.

Respondents' experiences of dysmenorrhoea

Half of the respondents were between 10 and 13 years old at the onset of menarche while 46.6% reported having had their first menstruation between the ages of 14 and 17 years. The mean age of onset of menarche was 13.7 ± 1.8 years. The majority, 91.5%, reported to had menstruated once in a month, however, 2.8% reported to menstruate twice a month while others (5.6%) experienced irregular menstruations.

More than half respondents, 56.2%, stated that their menstruation lasts more than four days, 41.8% reported that theirs lasted for just three days. On the onset of dysmenorrhoea, 29.9% of the respondents indicated that the experience of dysmenorrhoea started over four years ago (as at the time of data collection-2014), 17.2% started experiencing the health challenge between one to three years ago while only a few, 8.5%, reported that the discomfort started less than a year ago. While sharing their experiences, about half of the respondents (48.4%) reported that dysmenorrhoea started the same day of menstruation while 23.4% and 21.8% started experiencing dysmenorrhoea before the menstrual flow and throughout the menstruation period, respectively.

On the degree of severity of dysmenorrhoea experienced, 30.2% of the respondents reported severe pain, 44.4% experienced moderate pain while 10.2% reported that they usually experience mild pain. The location on the body in which respondents' experience pain was the lower abdomen, waist, low back and legs (91.2%, 41.2%, 34.7% and 23.7% respectively) (Tables 7-9).

Table 7. Dysmenorrhoea experiences (N=354).

Statement	№	%
Time when dysmenorrhoea started		
Less than a year	30	8.5
1-3 years	61	17.2
4 years or more	106	29.9
Can't recall	157	44.4

Table 8. Signs and symptoms of dysmenorrhoea (N=354).

Variable	Yes		No	
Signs and symptoms of dysmenorrhoea	№	%	№	%
Stomach pain	247	69.8	107	30.2
Weakness	211	59.6	143	40.4
Loss of appetite	176	49.7	178	50.3
Pimples on the face	156	44.1	198	55.9
Breast pain	155	43.8	199	56.2
Waist pain	146	41.2	208	58.8
Feeling unhappy	144	40.7	210	59.3
Mood swing	138	39	216	61
Backache	135	38.1	219	61.9
Headache	116	32.8	238	67.2
Dizziness	86	24.3	268	75.7
Nagging	83	23.4	271	76.6
Tenderness of breast	68	19.2	286	80.8
Over eating	57	16.1	297	83.9
Big stomach	54	15.3	300	84.7
Over sleeping	52	14.7	302	85.3
Rashes on the body	20	5.6	334	94.4
High temperature	4	1.1	350	98.9
Vomiting	3	0.8	351	99.2
Cold	3	0.8	351	99.2
Vaginal pain	2	0.6	352	99.4

Table 9. Part of body pain was experienced (N=354).

Location of pain	Yes		No	
	№	%	№	%
Lower Abdomen	323	91.2	31	8.8
Waist	146	41.2	208	58.8
Low Back	123	34.7	231	65.3
Legs	84	23.7	270	76.3
Hip Joints	72	20.3	282	79.7
Upper Abdomen	47	13.3	307	86
Knee Joints	26	7.3	328	92.7
Hand Joints	12	3.4	342	96.6
Ankle Joints	10	2.8	344	97.2
Anus	4	1.1	350	98.9
Breast	3	0.8	351	99.2
All over the body	3	0.8	351	99.2
Thigh	1	0.3	353	99.7

Effects of dysmenorrhoea on daily activities

On the effects of dysmenorrhoea on daily activities, 50.6% respondents reported that anytime the health condition occurs, it negatively affects their school attendance as well as other academic activities. Most respondents (63.0%) also reported that dysmenorrhoea prevents them from reading or studying and few, 12.1%, reported to have ever missed class continuous assessment or exams because of dysmenorrhoea. Thus, 13.3% of the respondents experienced poor academic performance due to dysmenorrhoea. Fifty-nine per cent respondents experienced mood swing because of dysmenorrhoea; about half (50.3%) reported strained relationships or interaction with friends or colleagues due to the health condition (Table 10).

Table 10. Effect of dysmenorrhoea on activities of daily living (N=354).

Variable	Yes		No	
Effect of dysmenorrhoea*	№	%	№	%
Location of the pain hinder the performance of normal daily activities	230	65	124	35
Dysmenorrhoea disturb reading or studying	223	63	131	37
Dysmenorrhoea hinders concentration in class	218	61.6	136	38.4
Experience of mood swing because of dysmenorrhoea	209	59	145	41

Dysmenorrhoea affects daily academic activities or school attendance	179	50.6	175	49.4
Dysmenorrhoea affect relationship or interaction with friends or colleagues	178	50.3	176	49.7
Dysmenorrhoea result in poor academic performance due to dysmenorrhoea	47	13.3	307	86.7
Dysmenorrhoea disturb to the extent of missing test or exams	43	12.1	311	87.9

*Multiple Responses.

Management patterns employed to manage dysmenorrhoea

The majority (87.0%) used some medications in managing dysmenorrhoea whenever it occurs and of those who use drugs, 49.7% used painkillers/pain relievers to reduce pain caused by dysmenorrhoea. A few respondents (11.6%) also used herbal mixtures in managing dysmenorrhoea. The reason given for this was that herbal mixtures were preferred the choice of treatment; they were of the view that non-steroids anti-inflammatory drugs sometimes are not effective in relieving dysmenorrhoea-related pain or discomfort. It is of import to note that a few (2.3%) respondents admitted having used oral contraceptive pills to manage dysmenorrhoea. Reasons given by 45.2% for use of these medicines were generally perceived effectiveness in the management of dysmenorrhoea recommended by friends (19.2%), recommended by healthcare providers (12.1%) and low cost of drugs (5.4%) among others. Respondents sought help from different places whenever they experience dysmenorrhoea; some places where help was sought include trado-medical centres (9.6%), religious centres (7.9%), family members (6.8%) and hospitals (6.8%).

Of those who preferred to seek help, 4.5% respondents sought help at religious centres anytime they experience dysmenorrhoea; according to them, they were of the view that they believe that it is only God who soothes the pain whenever it becomes unbearable. Another 6.5% sought help from the trado-medical centre with the reason that these centres give them herbal mixtures that are effective as well as adequate treatment and care. Of those who reported having sought help from parents, 4.5% were of the view that parents especially mothers give advice based on the experiences they had. Moreover, 5.6% prefer to seek help from hospitals with the view that medical professionals are knowledgeable in this regard. Of those who didn't go anywhere for help, 2.5% reported that they prefer to stay alone because they know what to do.

Apart from the use of drugs as a means of managing dysmenorrhoea, respondents reported use of the following management strategies: 79.1% avoided sugary foods or drinks during the period, 63.0% admitted drinking hot water or tea to reduce dysmenorrhoea, more than half respondents (59.9%) stated that they only rest enough during the period and 32.2% took to physical exercise/activities as a way of managing the health challenges. Some factors which influenced the choice of management patterns to include severity of pain (55.1%), duration of pain (35.9%), inability to work (35.6%), loss of appetite (34.5%) and inability to sleep (31.4%) (Tables 11-16).

Table 11. Drugs taken by respondents to manage dysmenorrhoea (N=354).

Classification of drugs	Variable	№	%
	Name of drugs*		
Analgesic	Paracetamol++	176	49.7
	Felvin++	159	44.9
	Buscopan++	84	23.7
	Ibuprofen	33	9.3
	Diclofenac++	23	6.5
	Aspirin	8	2.3
	Tranadol++	1	0.3
Herbal mixtures	Herbal mixtures	41	11.6
Contraceptives	Oral Contraceptive Pills	8	2.3
Sleeping pills	Sleeping pills	2	0.6
Antibiotic	Flagyl++	1	0.3
Antacid	Mixmag/Magsil++	1	0.3

*Multiple Responses, ++Drugs with the trade name and not the generic name.

Table 12. Respondents' Reasons for taking drugs (N=354).

Variable	№	%
Reasons for taking drugs		
It is effective	160	45.2
A friend introduced the drug to me	68	19.2
A health professional recommended it to me	43	12.1
It is cheap	19	5.4
It reduces the pain	9	2.5
It makes me sleep	1	0.3

Table 13. Reported side effects of the drugs experienced by respondents (N=354).

Variable	№	%
Side effects of drugs*		
Drastic reduction in the flow of blood	56	15.8

Vomiting	25	7.1
Ulcer	9	2.5
Drowsiness	4	1.1
Indigestion	2	0.6
*Multiple Responses.		

Hot shower	85	24
Taking of low-fat food	63	17.8
Massage	60	16.9
Walk	45	12.7
Herbal tea or garlic drink	44	12.4
Diet modification	42	11.9
Vitamins	39	11
Consulting a physician or gynaecologist	30	8.5
Heating pads	13	3.7
Caffeine	13	3.7
Eating bitter kola	11	3.1
Alcohol/Gin	3	0.8
Dancing	3	0.8

Table 14. Management patterns employed by respondents (N=354).

Variable	№	%
Avoidance of sugary foods or drinks	280	79.1
Hot drinks	223	63
Rest	212	59.9
Exercise	114	32.2

Table 15. Places visited for help and reasons for visiting (N=354).

Variable	№	%
Places visited for care or help		
Trado-medical centres	34	9.6
Religious Centres	28	7.9
Parents/Family members	24	6.8
Hospitals/Health centres/Healthcare providers	24	6.8
Pharmacy	9	2.5
Nowhere/None	40	11.3
Reasons for visiting those places		
The trado-medical centre is preferable for me because their drugs are effective, they take care of me better and they give adequate treatment	23	6.5
Medical professionals are well known and so I prefer to visit the hospital or health centres and to avoid self-medication	20	5.6
Parents (especially mothers) are experienced and thus give advice based on their personal experiences	16	4.5
Visit religious centres because of the belief that God can do all things and know they will pray for one there	16	4.5
Prefer to stay alone because of the knowledge of what to do or take some rest, will feel relieved after some time	9	2.5
Dysmenorrhoea is natural, and sometimes hereditary, thus, don't need help and prefer to endure the pain	9	2.5
Don't like seeking help from any place because am being careful, I don't want to be addicted to drugs	6	1.7
Seek help from pharmacy stores because it is closer to one's house and it is less stressful	4	1.1
Visiting the patent medicine vendors for care is less expensive and its comfortable for me	1	0.3
They are always available	1	0.3
Don't seek help from anywhere, feel shy and don't like talking about it to someone else	1	0.3

Table 16. Factor influencing the choice of management patterns (N=354).

Factors	Yes		No	
	№	%	№	%
Severity of pain	195	55.1	159	44.9
Duration of the pain	127	35.9	227	64.1
Inability to work	126	35.6	228	64.4
Loss of appetite	122	34.5	232	65.5
Inability to sleep	111	31.4	243	68.6
Location of the pain	75	21.2	279	78.8
Money	42	11.9	312	88.1
Others	6	1.7	348	98.3

DISCUSSION

Dysmenorrhoea in adolescents and young adults is usually primary (functional) and is associated with normal ovulatory dysmenorrhoea. Many of the respondents lack adequate awareness and knowledge about dysmenorrhoea; many do not know that there are types of dysmenorrhoea as only few could correctly list the types of dysmenorrhoea while majority admitted not knowing the types of dysmenorrhoea. Findings from the study revealed that sugar consumption was associated with dysmenorrhoea by interfering with the absorption and metabolism of some vitamins and minerals, thus causing nutritional imbalances, which in turn can cause difficulty in muscle functioning and lead to muscle spasms. Although all these claims have not been medically and scientifically proven yet, therefore further research is necessary to prove this hypothesis. Interestingly in this study, more than half of the respondents identified high sugar intake as a major cause of dysmenorrhoea while a quarter said stress or fatigue could cause it too.

Research has also linked sugar intake to the frequency of dysmenorrhoea; the study conducted by Tinatin, 2012 revealed a significant difference in the frequency of dysmenorrhoea. They found that women with high sugar intake experienced increased dysmenorrhoea compared with women with low sugar intake. Another factor mentioned which can make someone experience dysmenorrhoea was a family history of dysmenorrhoea; respondents mentioned that individuals with family history of dysmenorrhoea are more likely to have severe episodes of dysmenorrhoea. The studies conducted by Ortiz and colleagues (Ortiz, (2009); Harel (2006) and Gulsen, (2010) corroborated this. Findings from their studies revealed that dysmenorrhoea positively correlates with early menarche, increased duration and amount of flow as well as positive family history. This was also complemented by a study carried out by Tinatin et al. (2012) where they found that the risk of dysmenorrhoea in students who had a family history of dysmenorrhoea was approximately six times higher than in students with no prior family history.

Respondents reported numerous ways adopted for preventing dysmenorrhoea, this includes pharmacological methods (most especially use of non-steroids anti-inflammatory drugs) and non-pharmacological methods. However, more than half of the respondents admitted that avoidance of sugary substances is a way of preventing it.

CONCLUSION

Findings from this study show that majority of the respondents lack adequate knowledge relating to dysmenorrhoea and subsequently its management. Many suffer in silence and do not seek medical care from qualified personnel. Many used non-prescribed medications which may have dire consequences. Health education interventions/programmes aimed at addressing these gaps may be of import to these categories of people.

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CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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