



Research article

Health seeking behavior among tertiary school female students with Dysmenorrhea in Delta State, South-South, Nigeria

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Article history

Received : October 07, 2021

Accepted : October 30, 2021

Keywords

Chi-square test
Dysmenorrhea
Health seeking behavior
Herbal preparation
Menstruation

DOI: 10.53517/JCKHH.2581-3331.512021215

ABSTRACT

Dysmenorrhea, also referred to as painful menstruation, is a common chronic pelvic pain syndrome that affects women that are of childbearing age and it is positively linked with recurrent short-term absence from school among adolescent girls accompanied by diminished health-related quality of life. This study examined various correlates of healthcare-seeking behavior for dysmenorrhea among female students in three tertiary institutions in the Delta state of Nigeria. The research design was cross-sectional employing the questionnaire as a research instrument. A total of 400 female students randomly selected in the three tertiary institutions, filled and returned the questionnaire. Descriptive and inferential methods were used to analyze the data. The most recurring age groups in COE and DELSU were 16-21years (49.3% and 54% respectively) while DSSH was 22-27years (39%). Over 75% of all respondents were single;. Across the institutions, the majority (26.3%) visited the chemist, 22.3% the pharmacy, 13.0% the hospital and 1.5% sought health care from herbal and spiritual homes. For self-medication, 59.8% used Paracetamol and 1.5% resorted to herbs to relieve menstrual pain. Generally, more people patronized private health facilities; there was a significant difference across educational institutions ($p < 0.05$) in the first point of call during menstrual pains/cramps, Self-medication usage, Herbal preparation usage and Effectiveness of self-medication. The use of self-medication had a relationship with the severity of cramps in all institutions, [COE ($p = 0.009$), DELSU ($p = 0.036$) and DSSH ($p = 0.036$). Overall, the magnitude of appropriate healthcare-seeking behavior was satisfactory.

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INTRODUCTION

Dysmenorrhea refers to the pain associated with menstruation (Azagew et al., 2020) and it is the leading cause of recurrent short-term school absence in adolescent girls plus being a common problem in women of reproductive age (Osayande and Mehulic, 2014). Health-seeking behaviour has been variously described as a “sequence of remedial actions that individuals undertake to rectify perceived ill-health. All behaviours associated with establishing and maintaining a healthy physical and mental state include behaviours that deals with any digression from the healthy state, such as controlling (Secondary Prevention) and reducing the impact and progression of an illness (Tertiary prevention). The concept of studying health-seeking behaviors has become a tool for understanding how people engage with the health care systems in their respective socio-cultural, economic and demographic circumstances. This is of utmost relevance if

we must combat unaffordable costs of health care. Health-seeking is a social behavior influenced by various factors in people’s everyday lives. Generally, it is recognized that identifying and controlling the determinants associated with health care seeking behavior have positive impacts on modern health services utilization. Recognition of the manifestation of diseases is essential for early initiation of health care seeking.

There is limited information on the level of healthcare-seeking behavior and associated factors among young females. Therefore, assessing factors associated with healthcare-seeking behavior among young females have a significant role in filling the information gap to control inappropriate health care seeking practice and its outcomes. Very little is known about the health-seeking behaviors of Nigerian women with Dysmenorrhea in the southern part of Nigeria, Delta State in particular. There has been no study of the healthcare-seeking behaviour of young women with dysmenorrhea in the southern part of

Nigeria, particularly in Delta State. This is the gap in the literature that this study is designed to address. The purpose of this paper is to present findings from a study that explored the health-seeking behaviors of women with dysmenorrhea in the Delta State of Nigeria. In this regard, the scope of this study covers randomly selected young women at Delta State University, Abraka (DELSU), College of Education, Agbor (COE) and Delta-State School of Health, Ufuoma (DSSH). The major objectives of the present study were to determine the first point of call during menstrual pains/cramps, self-medication usage, herbal preparation usage and effectiveness of self-medication.

MATERIALS AND METHODS

The study is a descriptive cross-sectional survey to evaluate the Health seeking behavior for Dysmenorrhea among young females in Delta-State. The study was carried out in three tertiary institutions in Delta State. The respondents were from Delta-State University, Abraka Campus (DELSU), Delta-State School of Health, Ufuoma (DSSH) and the College of Education, Agbor (COE).

The sample populations were female students in the selected tertiary institutions who are of child-bearing age. Data were collected using a structured pre-tested questionnaire: A sample size was calculated with the aid of the online sample size calculator at a 95% confidence level and 5% margin of error.

A total of 400 female students were randomly selected in the three tertiary institutions. SPSS Version24 was used for the analysis. Before the commencement of the study, approval letters were obtained from the heads of affairs in the selected tertiary institution. Informed consent was obtained from each of the respondents. Responses derived from all questionnaires were coded into quantitative data to enable parametric and non - parametric analyses. Data were entered into a Microsoft Excel spreadsheet, transported into the Statistical Package for the Social Sciences (SPSS) version 24. Data generated from SPSS

were descriptive and Chi-square test was carried out to evaluate significant relationships or associations with categorical data.

RESULTS

Health seeking behavior, self-reported effects and health-related outcomes of dysmenorrhea and demographic characteristics of respondents were recorded. The most recurring age group in COE and DELSU was 16-21 years (49.3% and 54% respectively) while DSSH was 22-27 years (39%). Over 75% of all respondents were single; more than 75% of those married from COE and DELSU had been married only 1-5 years while 53.4% of those from DSSH had been married for 11-15 years.

Health seeking behavior

In respect to the health seeking behaviour of the respondents of the selected institutions, the majority (26.3%) visited the chemist, 22.3% the pharmacy, 13.0% the hospital and 1.5% sort help from herbal and spiritual homes. As regards self-medication, 59.8% used paracetamol, 21.6% used felvin and 1.5% resorted to herbs to relieve pain.

Of the 1.5% that used herbal preparation, Yoyo cleanser (17.0%) use was most prevalent. 35% considered self-medication to be very effective while 4% did not recognize the effectiveness of self-medication. Data revealed a highly significant correlation between all aspects of health-seeking behaviour among respondents in the three institutions (Table 1-3).

The study showed that there was a significant difference across educational institutions in the first point of call during menstrual pains/cramps, self-medication usage, herbal preparation usage and effectiveness of self-medication ($p < 0.05$) (Table 1).

The use of self-medication had a relationship with the severity of cramps in all institutions, [COE ($p = 0.009$), DELSU ($p = 0.036$) and DSSH ($p = 0.036$) (Table 4).

Table 1. Health seeking behaviour during dysmenorrhea among respondents

Variables	COE Agbor		DELSU Abraka		DSSH Ufuoma		Mean response	Chi-square/ P-Value
	N	%	N	%	N	%		
Type of facility visited								
Private	105	70	95	63.3	77	77	92.33 (70.0)	$\chi^2 = 51.487$ df = 7 P = 0.000
Public	45	30	55	36.7	23	23	41.0 (30.1)	
Total	150	100	150	100	100	100		
First point of call during menstrual pains/ cramps								
Hospital	20	13.3	9	6.0	23	23.0	17.33 (13.0)	$\chi^2 = 61.183$ df = 10 P = 0.000
Chemist	36	24.0	39	26.0	30	30.0	35.0 (26.3)	
Pharmacy	37	24.7	45	30.0	7	7.0	29.67 (22.3)	
Herbal homes	0	0	6	4.0	0	0	2.0 (1.5)	
Spiritual House	6	4.0	0	0	0	0	2.0 (1.5)	
Others	6	4.0	15	10.0	0	0	7.0 (5.3)	
No response	45	30.0	36	24.0	40	40.0	40.33 (30.2)	
Total	150	100	150	100	100	100		

Self-medication usage								
Paracetamol	39	26.0	36	24.0	44	44.0	39.67 (29.8)	$\chi^2=33.573$ df =10 P=0.000
Buscopan	12	8.0	18	12.0	9	9.0	13.0 (9.6)	
Indocid	5	3.3	6	4.0	3	3.0	4.67 (3.5)	
Felvin	33	22.0	48	32.0	6	6.0	29.0 (21.6)	
Herb	3	2.0	0	0	3	3.0	2.0 (1.5)	
Other	6	4.0	6	4.0	0	0	4.0 (3.0)	
No response	52	34.7	36	24.0	35	35.0	41.0 (30.8)	
Total	150	100	150	100	100	100		
Herbal preparation usage								
Boiled obuicoyeke	6	4.0	18	12.0	0	0	8.0 (4.7)	$\chi^2=42.750$ df =6 P=0.000
Yoyo cleanser	25	16.7	16	10.7	10	10	17.0 (12.5)	
Bitter leaf and scent leaf	0	0	3	2.0	3	3.0	2.0 (1.2)	
Moringa	0	0	9	6.0	0	0	3.0 (1.8)	
No response	119	79.3.0	104	69.3	87	87.0	103.3 (78.8)	
Total	150	100	150	100	100	100		
Effectiveness of self-medication								
Very effective	24	16.0	57	38.0	3	3.0	28 (21.0)	$\chi^2=36.863$ df =4 P=0.000
Effective	53	35.3	48	32.0	39	39.0	46.67 (35.0)	
Not effective	6	4.0	3	2.0	7	7.0	5.33 (4.0)	
No response	67	44.7	42	28.0	51	51.0	53.33 (40.0)	
Total	150	100	150	100	100	100		

Table 2. Reasons for the place as the first choice

Variables	COE Agbor		DELSU Abraka		DSSH Ufuoma		Mean response	Chi-square/ P-Value
	N	%	N	%	N	%		
Reasons for place as first choice								
Quality of care	69	46	38	25.3	25	25	44 (32.1)	$\chi^2=46.150$ df =10 P=0.000
Nearest	46	30.6	72	48	55	55	57.6 (44.5)	
Cost least expensive	25	16.7	36	24	12	12	24.33 (17.5)	
Free treatment	0	0	0	0	0	0	0	
Others	10	6.7	4	2.7	8	8	7.33 (5.8)	
Total	150		150		100			

Table 3. Drug bills that considered affordable and a source of funds for payment

Variables	COE Agbor		DELSU Abraka		DSSH Ufuoma		Mean response	Chi-square/ P-Value
	N	%	N	%	N	%		
Affordable drugs bill in Naira								
#500	68	45.4	53	35.4	54	54	58.33 (44.1)	$\chi^2=38.454$ df =8 P=0.000
501-1500	48	32.1	50	33	33	33	43.67 (32.5)	
1501-2500	20	13.5	33	22.5	9	9	20.67 (14.9)	
2501-3500	6	4.2	10	6.4	2	2	6 (4.1)	
3501-4500	3	1.2	2	1.5	1	1	2 (1.2)	
\$4501	5	3.6	2	1.2	1	1	2.66 (1.8)	
Source of money for payment of bills (x = 305)								
Savings	113	75.3	108	72	68	68	96.33(71.5)	$\chi^2=42.854$ df =8 P=0.000
Borrowed from friends	13	8.7	16	10.7	10	10	12.9(9.7)	
Assistance from people	10	6.7	14	9.3	16	16	13.33(10.6)	
Sales of belonging	2	1.3	2	1.3	2	2	2 (1.5)	
Paid in kind	2	1.3	2	1.3	1	1	1.67(1.1)	
Others	10	6.7	8	5.4	3	3	7 (5.03)	

Table 4. Correlation between severity of dysmenorrhea and self-medication

Variable (self-medication)	Severity of cramps/pains during period (%)				Chi-square/ P-Value
	Very severe	Severe	Not severe	Total	
COE					
Paracetamol	6 (20.0)	12 (40.0)	12 (40.0)	30 (100)	X ² = 23.380 df = 10 P = 0.009
Buscopan	0 (0)	6 (50.0)	6 (50.0)	12 (100)	
Indocid	2 (40.0)	0 (0)	3 (60.0)	5 (100)	
Felvin	9 (30.0)	18 (60.0)	3 (10.0)	30 (100)	
Herb	0 (0)	0 (0)	3 (100)	3 (100)	
Others	0 (0)	3 (50.0)	3 (50.0)	6 (100)	
Total	17 (19.8)	39 (45.3)	30 (34.9)	86 (100)	
DELSU					
Paracetamol	10 (29.4)	4 (11.8)	20 (58.8)	34 (100)	X ² = 16.491 df = 8 P = 0.036
Buscopan	3 (50.0)	3 (50.0)	0 (0)	6 (100)	
Indocid	0 (0)	0 (0)	3 (100)	3 (100)	
Felvin	3 (50.0)	0 (0)	3 (50.0)	6 (100)	
Herb	0 (0)	0 (0)	0 (0)	0 (0)	
Others	0 (0)	0 (0)	3 (100)	3 (100)	
Total	16 (30.8)	7 (13.5)	29 (55.8)	52 (100)	
DSSH					
Paracetamol	10 (29.4)	4 (11.8)	20 (58.8)	34 (100)	X ² = 16.491 df = 8 P = 0.036
Buscopan	3 (50.0)	3 (50.0)	0 (0)	6 (100)	
Indocid	0 (0)	0 (0)	3 (100)	3 (100)	
Felvin	3 (50.0)	0 (0)	3 (50.0)	6 (100)	
Herb	0 (0)	0 (0)	0 (0)	0 (0)	
Others	0 (0)	0 (0)	3 (100)	3 (100)	
Total	16 (30.8)	7 (13.5)	29 (55.8)	52 (100)	

DISCUSSION

Primary dysmenorrhea usually begins a few hours before or just after the onset of menstruation. The cramps are most severe on the first or second day of menstruation. Characteristically, the pains are spasmodic in nature and strongest over the lower abdomen, but they may also radiate to the back and the inner aspects of the thigh, and they are often described as labor-like pains. The cramp is commonly accompanied by one or more systemic symptoms, including nausea and vomiting (89%), fatigue (85%), diarrhea (60%), lower backache (60%), and headache (45%). Nervousness, dizziness, and in some severe cases, syncope and collapse can be associated with primary dysmenorrhea. Lasting a few hours to 1 day, the symptoms seldom persist for more than 2–3 days (Coco, 1999; De Sanctis et al., 2015).

Demographics

Over 80% of respondents in this study were largely within the sexually-active age bracket (16-27 years) three-quarters of who were single (unmarried) and over 70% of who have never been pregnant. The very few that were married had been married for 1- 15 years. Studies have shown that over half of post-pubescent menstruating women are affected by dysmenorrhea, with about a tenth of them having incapacitating severe dysmenorrhea for up to 3 days each month (Dawood, 1984; Dawood, 1988).

Globally, The prevalence of dysmenorrhea varies between 16% and 91% in women of reproductive age, with

severe pain in 2%–29% of the women studied (Ju et al., 2014).

A greater prevalence was generally observed in young women, with estimates ranging from 67% to 90% for those aged 17–24 years (Harlow and Ephross, 1995). Further, studies have revealed that dysmenorrhea is most common in women between the ages of 20 and 24 years, with most of the severe episodes occurring before 25 years of age (Dawood, 1987). Primary dysmenorrhea also occurs more frequently in unmarried women than in married women (61% vs. 51%), decreases with age, and does not appear to be related to the type of occupation or physical condition of the woman.

A more recent study however reported a prevalence rate of 25% among predominantly single adolescents with over 38% always having menstrual pain which was very severe in about one-third of respondents; occurrence was correlated with age (Eniojukan et al., 2021). In effect, the respondents in this study had the basic characteristic features of those most likely to present with dysmenorrhea of varying degrees of severity/intensity.

Health Seeking Behaviour (HSB)

Health seeking behaviour (HSB) has been defined as any activity undertaken by individuals who perceive themselves to have a health problem or to be ill to find an appropriate remedy. It is considered as an illness or sick-term behavior directly situated within the broader concept of health behaviour, which encompasses activities undertaken to maintain good health, to prevent ill health, as well as dealing with any departure from a good state of

health. Two broad classes of studies on the factors predisposing to HSB have been identified (Magaard et al., 2017). First, modelling of steps taken by people regarding healthcare is commonly referred to as 'Pathway Models'. The most popular models are the Health Belief Model and Andersen's Health Behaviour Model (Andersen, 1995; Rosenstock, 2005).

Second, those studies which emphasize the process of illness response or health-seeking behavior. These studies demonstrate that the decision to engage with a particular medical channel is influenced by a variety of factors such as socio-economic status, sex, age, social status, the type of illness, access to services and perceived quality of the service (Cronin et al., 2013).

Majority of the studies under this second category focus on specific genres of determinants that lie between patients and services such as geographical, social, economic, cultural and organizational factors (Gao et al., 2012). For example, access to health facilities, socio-economic status and perceived quality of service has been found to be significant influencers of health-seeking decisions among different population segments (Babalola and Fatusi, 2009). In this study, a substantial proportion (70%) of the respondents across the three institutions preferred to patronize private health facilities over their public sector counterparts. This preference was highly significant ($p < 0.000$). The major reasons as deposed by respondents for this preference were close proximity, accessibility, affordable cost, the promptness of service provision, attention received, friendliness, and perceived quality of care. This correlates with many study reports in the literature (Phiri et al., 2014). It is of paramount significance to note that healthcare utilization has been directly linked to the healthcare system of the country and the health services that are provided (da Silva et al., 2011).

Healthcare provision in Nigeria is a concurrent responsibility of the three tiers of government in the country (Akhtar, 1991). Private providers of healthcare have a visible role to play in health care delivery. Nigeria health care system faces notable challenges; poor healthcare infrastructures, lack or inadequate funding, and poor policymaking and implementation which leads to underinvestment in the healthcare system. These challenges among others in the Nigerian healthcare system contribute to failure in the healthcare system (Akunne et al., 2019). The Nigerian health care system is poorly developed. Nigerian health care has suffered several downfalls (Obinna et al., 2010). Despite Nigerian's strategic position in Africa, the country is greatly underserved in the health care sphere. Health facilities (health centers, personnel, and medical equipment) are inadequate in this country, especially in rural areas (Welcome et al., 2011). According to the 2009 communique of the Nigerian national health conference, the healthcare system remains weak as evidenced by lack of coordination, fragmentation of services, dearth of resources, including drug and supplies, inadequate and decaying infrastructure, inequity in resource distribution, and access to care and very deplorable quality of care. The communique further outlined the lack of clarity of roles and responsibilities among the different levels of government to have compounded the situation. The deplorable condition of the Nigerian Public healthcare delivery sector has led to the preferred utilization of other

treatment sources such as community pharmacies, drug peddlers, herbal medicine, and religious or spiritual care organizations in the private sector (Welcome et al., 2011).

Data from the present study revealed that the majority of respondents across the three institutions exhibited desirable healthcare-seeking behavior. The desired HSB is said to be responding to an illness by seeking help from a trained health professional in a recognized public or private health care center. In this study, the majority of respondents (61.6%) chose as the first point of call while seeking for healthcare from the hospital, pharmacy or chemist where varying degrees of medical knowledge and skills are relatively available for appropriate guidance and counseling. Patronage of herbal and spiritual homes was heavily unpopular. This is not too surprising arising from the characteristics of the respondents – students at school. Elsewhere, like the community, a different picture might be seen judging from the rise in the use of herbal formulations for numerous ailments and spiritual consultations.

The use of herbal medicinal products and supplements has increased tremendously over the past three decades with not less than 80% of people worldwide relying on them for some part of primary healthcare. Although therapies involving these agents have shown promising potential with the efficacy of a good number of herbal products clearly established, many of them remain untested and their use is either poorly monitored or not even monitored at all. The consequence of this is an inadequate knowledge of their mode of action, potential adverse reactions, contraindications, and interactions with existing orthodox pharmaceuticals and functional foods to promote both safe and rational use of these agents. Since safety continues to be a major issue with the use of herbal remedies, it becomes imperative, therefore, those relevant regulatory authorities put in place appropriate measures to protect public health by ensuring that all herbal medicines are safe and of suitable quality (Ekor, 2014).

Spirituality has been found to play a critical role in mitigating the pains and sufferings of ill-health because the relationship with a transcendent being or concept can give meaning and purpose to people's lives and sufferings. Several studies and surveys have demonstrated the relevance of spirituality in the health of patients (Puchalski and Romer, 2000).

However, with over a third of the respondents choosing unspecified 'other' facilities or did not provide a response, the entire cohort still qualifies to be targeted for strategic policy formulation to improve health-seeking behavior. HSB and the health status of the nation are closely inter-twined dove-tailing into its economic development (Latunji and Akinyemi, 2018). This is logical. The provision of inclusive, affordable, and accessible high-quality health services to all citizens are the exclusive responsibility of government globally (WHO, 2018). Today, Universal Health Coverage is the number one goal of WHO with the tagline of "Health for all - everyone, everywhere" The road to achieving this is governments' investment in good quality, accessible primary healthcare. Effective implementation of essential primary healthcare services through universal health coverage coupled with efficient healthcare utilization has been proposed to be capable of reducing disease burden and improving the overall well-being of the population

(Wang et al., 2012). The obvious consequence will be a reduction of the economic burden to the country (Busato and Künzi, 2008; Sato, 2012). Inappropriate HSB has been linked to worse health outcomes, increased morbidity and mortality and poorer health statistics (Mwase, 2015).

Self-medication (SM)

Generally speaking, self-medication (SM) is defined as "the use of drugs to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of a prescribed drug for chronic or recurrent disease or symptoms" (Bennadi, 2013). According to WHO, SM involves the use of medicinal products by the patient to treat self-recognized disorders or symptoms akin to self-care, what people do by themselves to keep their health, prevent and treat illness or symptom (WHO, 2000). The consensus is that SM is a part of the self-care that helps efficient use of the burdened health care system. The use of OTC drugs is a variant of SM; the buyer diagnoses his own illness and buys a specific drug to treat it.

SM is claimed to have the potential to do good as well as cause harm since it involves the use of drugs. However, responsible SM can help prevent and treat diseases that do not require medical consultation and also provide a cheaper alternative for treating common illnesses⁶⁰. The term 'responsible SM' implies that the patient treats his illness with the medicine available without prescription which is safe and effective when used according to the established conditions (WHO, 2000). Quest for recovery from diseases and having wellness is a natural HSB. In response, SM is the most commonly seen phenomenon (Agbor and Azodo, 2011). Responsible SM involves the use of non-prescription, safe, quality medicinal products for easily self-diagnosed conditions or for recurrent conditions that have been previously diagnosed by a physician. Responsible SM implies that the patient treats his illness or symptoms.

WHO points out that responsible self-medication requires that the medicinal product to be supported with information describing how to take the medicine, possible side effects, monitoring, possible interaction, warnings, duration of use, etc. it should also be noted that since herbal medicines are regulated as OTC medicinal products, SM only medicines/drugs, dietary supplements, functional or health food in most countries, the use of herbal medicines also constitutes a potential case of responsible SM, provided that they are supported by the appropriate, aforementioned information. Several studies have indicated that inappropriate SM results in adverse drug reactions, disease masking, and inaccurate diagnosis of disease, increased morbidity, drug interactions, antibiotic resistance and wastage of healthcare resources (James et al., 2006; Sahebi and Vahibi, 2009).

Studies have reported SM prevalence rates to be diverse globally – Europe 68%, Kuwait 92%, India 31%, Nepal 59% (Jain et al., 2011), Spain 15.2% (Grigoryan et al., 2006), African Countries 40.7-81.8% (Ehigiator et al., 2010), Sudan 73.9%, Cameroun 55.7% (Awad et al., 2005), Nigeria 67-85% (Omolase et al., 2007) and Pakistan 84% (Grigoryan et al., 2006). The rates are noted to be higher in developing countries. SM may not only be a problem but could also offer advantages in many

situations. There has been a reported increase in SM practices in the last decade worldwide (Sanchez, 2014).

Self-medication is an important component of the healthcare system and its practice is widespread (Albawani et al., 2016). However, the major problem with SM is the detrimental consequences due to its inappropriate use. Consumers prefer to manage their common health problems using self-medication as it is easier, cost-effective, and time-efficient (Keshari et al., 2014).

In this study, the practice of self-medication for treatment of dysmenorrhea was quite prevalent involving over-the-counter medicines and herbal formulations; agrees with a study in Ghana (Ameade et al., 2018) but not consonant with a study among Chinese adolescents which reported that self-medication was not part of most girls' self-care (Wong et al., 2016).

Among the OTC medicines self-medicated, Paracetamol was most prevalent (29.8%) followed by Felvin (Piroxicam) (21.6%) and Buscopan (9.6%).

Dosage was not investigated. However, it would appear that some responsible self-medication was practiced among this population. Paracetamol and Felvin have analgesic and anti-inflammatory properties which are essential in the treatment of dysmenorrhea. There was a positive correlation between the use of SM and the severity of cramps in all three institutions ($p < 0.05$).

Potent prostaglandins and potent leukotrienes play an important role in generating dysmenorrhea symptoms. Non-steroidal anti-inflammatory drugs (NSAIDs) are the most common pharmacologic treatment for dysmenorrhea (Harel, 2006). A loading dose of NSAIDs (typically twice the regular dose) should be used as initial treatment for dysmenorrhea, followed by a regular dose until symptoms abate (Harel, 2008). Treatment with NSAIDs is the preferred initial treatment for dysmenorrhea in non-sexually active adolescents/young adults (Harel, 2012). Studies consistently report that a moderate to large proportion of Western adolescent girls self-medicate with NSAIDs and acetaminophen for dysmenorrhea (Agarwal and Venkat, 2009). Whereas the management of secondary dysmenorrhea requires the treatment of the primary cause, non-pharmacological methods which include fatty diet restriction, exercise, rest, heat application, spinal manipulation, and acupuncture, have been reported in several studies to ease the pains of primary dysmenorrhea (Kumbhar et al., 2011).

Medications that provide relief for primary and secondary dysmenorrhea include NSAIDs such as ibuprofen, naproxen sodium, diclofenac, and mefenamic acid. Other allopathic drugs such as combined oral contraceptives, medications that reduce uterine contraction, dietary supplements and narcotics analgesics had found some role in the management of dysmenorrhea (El-Gilany et al., 2005). Regarding the use of herbal formulations, over 70% of the respondents declined the use of herbal products; only about one-tenth of respondents used a herbal product called Yoyo Bitters. Bitters are made from aromatic herbs, spices, roots, bark and fruits chosen for their flavor and medicinal properties. Traditionally, high-proof, neutral-flavored alcohol is used to make bitters, such as vodka. Bitters are generally sold in a small bottle, and a little bit will go a long way. Bitters (plural also bitters) is traditionally an alcoholic preparation flavored with botanical matter so that the end result is

characterized by a bitter, or bittersweet flavor. Originally, numerous longstanding brands of bitters were developed as patent medicines, but now are sold as digestifs, sometimes with herbal properties, and as cocktail flavorings. Since cocktails often contain sour and sweet flavors, bitters are used to engage another primary taste and thereby balance out the drink and make it more complex, giving it a more complete flavor profile.

Producers/marketers of YOYO Cleanser Bitters Classical – 200 ml declared that it provides effective anti-oxidant protection. It is a combination of 100% natural anti-oxidants and vitamins giving total protection to the body and its metabolism against free radicals. Aids the effective digestion of heavy and fatty food, leaving the body system clean to function better. YOYO Bitters is reported to relieve menstrual pains and dizziness in women, help promote natural sleep with no side effects, general body pains, gastric discomfort/fatigue. YOYO Bitters is an antioxidant against free radicals, and it eliminates any traces of toxins in the body system. By virtue of these property claims, Yoyo Bitters might find some purpose in the management of dysmenorrhea.

Overall, in this study, self-medication may be said to be appropriate and rational. To corroborate this assumption, over half of respondents reported that their self-medication practice was either very effective or effective. Only about one-twentieth of respondents said self-medication was not effective. The use of self-medication is influenced by several factors such as personal, organizational, and environmental factors (de Boer et al., 2007). Media, Internet and extensive advertisement by pharmaceutical manufacturers also play an important role in practicing self-medication (Bond and Hannaford, 2003).

Inadequacies in the healthcare delivery systems especially in low-income countries such as inaccessibility, unregulated distribution of medicines, inequitable distribution, and lack of healthcare professionals, high costs, and patients' attitudes toward healthcare providers are some of the key drivers of self-medication (Yousef et al., 2008). Although various factors contribute, self-medication is the major reason for the irrational use of medicines. This could lead to adverse medicine reactions, development of resistance, medicine dependence, and wastage of money, prolonged suffering, and medicine dependence (Clavijo et al., 1995).

Economics

Over half of Nigeria's population live on less than \$1.90 a day ('Poverty Head-count'), making them one of the poorest populations in the world. As of February 2018, the country was ranked 187 out of 191 countries in the world in assessing the level of compliance with the Universal Health Coverage (UHC), as very few of the populace are health insured, whereas even government provision for health is insignificant. Out-of-pocket payments for health cause households to incur huge expenditures. Private expenditure on health as a percentage of total health expenditure is 74.85%. In May 1999, the government created the National Health Insurance Scheme, the scheme encompasses government employees, the organized private sector and the informal sector. The number of Nigerians covered by the National Health

Insurance Scheme (NHIS) since its establishment is 1.5 percent of the population. There is immense private sector participation in the scheme. In this study, the majority (76.6%) of the respondents reported affordability of drug bills at a mere 500-1500 Naira level. This is highly insignificant but a reflection of the level of poverty. This poses a serious barrier or limitation to securing appropriate high-quality patient care. The source of funding was reported to be predominantly their personal savings. No respondent reported any benefits from health insurance coverage.

Access to healthcare facilities in terms of cost of treatment

Access to health care has been defined as having "the timely use of personal health services to achieve the best health outcomes". Four components have been identified as follows.

1. Coverage: Facilitates entry into the health care system. Uninsured people are less likely to receive medical care and more likely to have poor health status. A survey in 2019 in the US where a large majority of citizens are health-insured (88%), showed that more than one in three uninsured adults (37%) said they delayed or went without health care because of cost reasons. Meanwhile, 7% of adults who have health insurance reported encountering cost-related barriers to accessing care. Nearly 20% of adults in worse health delayed or did not receive medical care due to cost barriers, while 9% of adults in better health reported the same.
2. Services: Having a usual source of care is associated with adults receiving recommended screening and prevention services.
3. Timeliness: Ability to provide health care when the need is recognized.
4. Workforce: Capable, qualified, culturally competent providers.

There are a lot of issues (failures) associated with the four components of access to healthcare in Nigeria that directly affect the healthcare-seeking behaviour of Nigerians. There are indications that the cost of prescribed medicines is on the increase and the use of traditional medicine (TM) and complementary and alternative medicine (CAM) has increased significantly over the past few years. Key among its failures is the non-realization of the objective of making health care available to Nigerians at an affordable cost. As at date many Nigerians still pay out of their pocket for medical expenses; a retrogressive health care funding mechanism. This has continued to drive many families to catastrophic health expenditures and poverty. There is therefore an urgent need to review the scheme with a view to finding out factors responsible for its poor performance and proffer solutions that can lead to improvement in the scheme.

About 97% of Nigerians are uncovered and among these are the less privileged and other vulnerable groups. These less privileged and vulnerable groups are not protected from the financial hardship of huge medical bills. There is still a high out of pocket payment in Nigeria. The out of pocket expenditure as part of our Total health Expenditure is still about 64%. The high percent of

Nigerians purchasing care out of pocket is exposed to fluctuations in the price of services unlike health insurance with a definite premium and price for services. It becomes difficult to control or limit the rise in the cost of health care services when a large proportion of the population is outside the control of the scheme. Moreover, healthcare utilization and its patterns are mirrored by the healthcare-seeking behaviors of people. The convergent point will be to plan and provide health services based on data available on the healthcare-seeking behaviors and utilization, and its correlates as pertaining to social, economic, physical, cultural belief, religious practice, gender norms and political (Shaikh and Hatcher, 2005). Many studies have revealed that understanding the healthcare-seeking behaviors and their determinants helps government, stakeholders, policymakers, and health service providers to adequately allocate and manage existing resources, particularly in developing countries (Ngwakongnwi, 2017).

A number of studies on healthcare utilization applying Andersen's behavioural models have identified multidimensional factors that determine healthcare-seeking behaviours of people ranging from Predisposing Factors like Age, Gender, Ethnic, Cultural and Social to Enabling Factors like Financial, Insurance coverage, Healthcare Accessibility and Need Factors like Health Perceptions and Medical Conditions (Kim and Lee, 2016). Also, in a review of health care utilization, the existence of a vast socio-economic disparity was identified with determining factors reported to include income, knowledge, education, cultural and gender roles, social, distance to health facilities, and cost of health services (O'Donnell, 2007).

It is, therefore, very desirable for people to have the appropriate disposition to desirable HSB. Health, they often say, is wealth. Health seeking behaviour is situated within the broader concept of health behaviour, which encompasses activities undertaken to maintain good health, to prevent ill health, as well as deal with any departure from a good state of health.

CONCLUSION

Appropriate health-seeking behaviour was found to be high among respondents in this study with a prevalence of recognized health facilities as the first point of call. But there was a skewed preference towards private as opposed to public health facilities. The positive drivers of this preference were reported to be quality of care and proximity whilst the major negative driver reported was the cost. Most respondents across the institutions reported affordability at the level of 500-1500 Naira only sourced from their personal savings.

The self-medication rate was also high across the three institutions studied involving predominantly NSAIDs and Paracetamol. The use of alternative/herbal medicines was minimal involving the use of Yoyo Bitters majorly. Self-medication was reported to be either very effective or effective. The study revealed a highly significant correlation between all aspects of the health-seeking behaviour among respondents in the three institutions: the type of facility preferred (private/public), the first point of call during menstrual pains/cramps, Self-medication usage, Herbal preparation usage, Effectiveness of self-medication, reasons for a place of the first choice, affordability and

source of funds. The use of self-medication also had a significant relationship with the severity of cramps in all institutions.

Data provided by this study is expected to have a ramifying impact on policy formulation consequent on health system development. A more expansive study will be more informative. As variously envisaged, policy formulation and implementation are best directed at promoting access to healthcare services. This is achievable by increasing the number of health facilities in under-served areas. The quality of care offered at health facilities also needs attention as mentoring, supportive supervision and other measures could be embarked upon in order to improve the quality of care. Significant improvements in NHIS coverage should address issues concerning the affordability of such health services. Thereby providing financial protection for households with lower socioeconomic status in order to encourage a more appropriate healthcare-seeking behaviour during illness episodes.

CONFLICTS OF INTEREST

The author(s) declare(s) no conflicts of interest.

DECLARATION

The contents of this paper are published after receiving a signed copyright agreement from the corresponding author declaring that the contents of this paper are original. In case of any dispute related to the originality of the contents, editors, reviewers and publisher will remain neutral.

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How to cite this article?

Owonaro PA, Arute JE, Uweru BC, Eniojukan JF (2021). Health seeking behavior among tertiary school female students with Dysmenorrhea in Delta State, South-South, Nigeria. *Journal of Conventional Knowledge and Holistic Health*, 5 (1), Article ID 215.
