

Dysmenorrhoea: Ways of Management among Nigerian University Students

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Original article

Abstract

Objective: This study was performed to evaluate self-medication for the treatment of self-diagnosed dysmenorrhoea among a group of University of Maiduguri female students.

Methods: The population of this randomized study was 289 female students suffering from dysmenorrhoea out of over 25 000 students attending a college of medicine and eight non-medical faculties of university of Maiduguri in Borno state, Nigeria. The students were interviewed using a self-administered pre-tested structured questionnaire in January, 2011.

Results: The Mean \pm Standard Deviation (SD) of age of the participants was 22.50 ± 3.12 years. Significant number 112 (38.8%) of participants use drugs to remedy menstrual pains followed by non-drug therapy while few combine both the drug and non-drug therapy for the pain management ($p < 0.001$). The most common non drug remedies employed by the participants were taking a hot bath (15.2%) and placing a heating pad on abdomen (5.5%). However, the most common drugs used by the participants were Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) which were usually taken orally at the onset of menstruation. Among the participants that used drug, 72% found it effective while 4.2% reported ineffectiveness. Significant majority of the participants usually self-prescribed their drugs, and were ignorant of the common side effects of these drugs ($p < 0.001$). Most participants (63%) spent 300 Nigerian Naira and below (1.9048 US Dollar and below) on drugs for dysmenorrhoea every month.

Conclusion: The results confirmed that NSAIDs were the most common drugs used for dysmenorrhoea treatment, but frequently used without knowledge of potential side effects due to self-medication. Therefore, we recommend educational intervention by health care professionals.

Key words: dysmenorrhoea, NSAIDs, treatment, side-effects

DYSMENOREA: MANAGEMENT U NIGERIJSKÝCH UNIVERZITNÍCH STUDENTEK**Původní práce****Abstrakt**

Cíl: Posoudit efekt samoléčby a autodiagnózy dysmenorey u studentek univerzity v Maiduguri.

Metody: 289 studentek trpících dysmenorhoeou z celkového počtu 25 000 studentek univerzity v Maiduguri ze státu Borno, Nigerie, bylo randomizováno k léčbě dysmenorey. Studentky byly vybrány na základě dotazníku, který vyplnily v lednu 2011.

Výsledky: Střední věk \pm směrodatná odchylka (SD) účastnic byl 22.50 ± 3.12 roku. 112 (38.8 %) užívalo analgetika a nefarmakologické prostředky k tišení bolesti, buď současně, nebo následně ($p < 0.001$). Nejčastějšími nemedikamentózními prostředky byly horká lázeň (15.2 %) a ohřívací dečka umístěná na podbřišek (5.5 %). Nejčastějšími léky byly nesteroidní antirevmatika (NSAID) užívané při nástupu menstruace. V 72 % byla léčba účinná, ve 4.2 % nebyla. Většina účastnic se medikovala sama a nezabývala se možnými vedlejšími účinky ($p < 0.001$). Většina účastnic (63 %) utratila 300 Nigerijských Naira a méně (1.9 US Dolarů a méně) za léčbu dysmenorey.

Závěry: Výsledky potvrdily, že NSAID byly nejčastěji užívané medikamenty k léčbě dysmenorey, ale většinou bez znalosti potencionálních vedlejších účinků. Proto doporučujeme zapojení profesionálních zdravotníků do tohoto procesu.

Klíčová slova: dysmenorea, NSAID, léčba, vedlejší účinky

Introduction

Dysmenorrhoea is often defined simply as menstrual pain (1). Menstrual pain is often used synonymously with menstrual cramps, but the latter may also refer to menstrual uterine contractions, which are generally of higher strength, duration and frequency than in the rest of the menstrual cycle (2). Dysmenorrhoea can feature different kinds of pain, including sharp, throbbing, dull, nauseating, burning, or shooting pain. Dysmenorrhoea may precede menstruation by several days or may accompany it, and it usually subsides as menstruation tapers off. Dysmenorrhoea can be divided into 2 broad categories - primary and secondary. Primary dysmenorrhoea occurs in the absence of pelvic pathology, whereas secondary dysmenorrhoea results from identifiable organic diseases. Although it is not life-threatening, dysmenorrhoea can be debilitating and psychologically taxing for many women. Some choose to self-medicate at home and never seek medical attention for their pain.

Management/Treatment

The treatment goals of primary dysmenorrhoea is directed at providing relief from the cramping pelvic pain and associated symptoms (e.g., headache, nausea, and vomiting, flushing, diarrhoea) that typically accompany or immediately precede the onset of menstrual flow. The pelvic pain can be distressing and occasionally radiates to the back and thighs, often necessitating prompt intervention (3). The treatment of secondary dysmenorrhoea is aimed at correction of the primary cause. The primary cause of secondary dysmenorrhoea can vary and so its treatment will vary accordingly. In Nigerian culture, young girls are not provided with enough knowledge about treatment and consultation with a physician for dysmenorrhoea; however this condition is often considered as normal part of menstrual cycle which will settle with time or after marriage, so most of these women resort to self-remedies (4).

Table 1

Intervention	Strength of recommendation
Effective	
• Non-steroidal Anti-inflammatory Drugs (NSAIDs) (5)	A
Possibly effective	
• Acupuncture (6)	B
• Low-fat vegetarian diet (7)	B
• Oral contraceptives	B
• Topical heat (8)	B
• Transcutaneous electric nerve stimulation (9)	B
Uncertain effectiveness	
• Exercise (10)	C
• Glyceril trinitrate	C
• Surgical interruption of pelvic nerve pathways (11)	C

A = consistent, good-quality, patient-oriented evidence; B = inconsistent or limited-quality patient-oriented evidence; C = consensus, disease-oriented evidence, usual practice, opinion, or case series

Non-Pharmacological Treatment**Self-Help Measures**

A number of self-help measures are available for women with dysmenorrhoea.

Topical heat: Heat therapy has been a traditional home remedy for dysmenorrhoea (12).

Diet: As well as creating a beneficial feeling of well-being, a good diet reduces the chances of constipation. A constipated bowel increases the symptoms of dysme-

norrhoea by pressing against the uterus when it swells before menstruation. Eating light and frequent meals is helpful. Increased proportion of whole meal foods, vegetables, salads, fruit and water; and reduced refined carbohydrates, salt, alcohol and caffeine ameliorate dysmenorrhoea. Diets low in fat and meat products have been shown to decrease serum sex-binding globulin and decrease the duration and intensity of dysmenorrhoea (13,14).

Exercise: Exercise seems to reduce menstrual symptoms, including pain (10).

Transcutaneous electrical nerve stimulation (TENS): TENS has been demonstrated as being effective for pain relief in a variety of conditions including dysmenorrhoea. It alters the body's ability to receive or perceive pain signals (15). An analysis of several studies showed that TENS does not relieve pain as well as medications, although it may be a useful alternative for women who cannot or prefer not to take pain-relieving medications (9).

Acupuncture: Acupuncture has long been indicated in traditional Chinese medicine for gynaecological problems such as amenorrhoea and dysmenorrhoea (15).

Surgical intervention: Surgical intervention is appropriate in some cases, usually as a last resort, for the treatment of secondary dysmenorrhoea. However, no surgery has been shown to provide long-term relief of pain. This may be related to regrowth of nerves or pain signals being transferred by alternate routes (11).

Pharmacological Treatment

Pharmacotherapy has been the most reliable and effective treatment for relieving dysmenorrhoea because the pain results from uterine vasoconstriction, anoxia, and contractions mediated by prostaglandins, symptomatic relief can often be obtained from use of agents that inhibit prostaglandin synthesis and have anti-inflammatory and analgesic properties. The current approach to the therapy of primary dysmenorrhoea is to inhibit prostaglandin synthesis or to suppress ovulation, which in turn inhibits prostaglandin synthesis (12). The prostaglandin synthetase inhibitors include aspirins, fenamates, and non-steroidal anti-inflammatory medications (NSAIDs) (14).

Non-Steroidal Anti-Inflammatory Drugs (NSAIDs):

Many women find one NSAID to be more effective than another, and tend to try various products before settling on a single effective medication and dosage (14). Between 17% and 95% (mean 67%) of women achieve pain relief with an NSAID (16). It is estimated that as many as 10%–25% of women do not respond to NSAIDs or choose not to use them because of their related side effects (14). Gastrointestinal effects (nausea, vomiting, and/or diarrhoea) are of particular concern with NSAIDs. Effects are generally tolerable, but when treating women with risk factors for NSAID induced ulceration, the potential risks and benefits of using an NSAID should be considered (12). However, a recent Cochrane Intervention Review found that NSAIDs provide effective relief for dysmenorrhoea-related pain and appeared to be more ef-

fective than paracetamol. However, the comprehensive review of over seven databases did not demonstrate that any particular NSAID was safer or worked better than others (16). NSAIDs are contraindicated in women with a history of gastroduodenal ulcer, gastrointestinal bleeding, or gastroduodenal perforation (12). Individuals with premenstrual molimina (bloating, headaches, nausea, and breast tenderness) can begin their NSAID dosing with the onset of these symptoms, which herald the onset of menstrual flow. Treatment is started at the onset of menstruation to avoid inadvertent exposure to these agents during early pregnancy and continued for the duration of the dysmenorrhoea. If treatment is initiated at the onset of bleeding and/or associated symptoms, it could be started with an initial loading dose followed by divided doses over 24 hours. Agents such as Ibuprofen, Ketoprofen, Naproxen, and Mefenamic acid are effective for dysmenorrhoea (17) because of their tendency to achieve peak serum concentrations within 30–60 minutes with a faster onset of action. Aspirin may not be as effective as other NSAIDs, and paracetamol may be a useful adjunct for alleviating only mild menstrual cramping pain.

Oral contraceptive pill: Adolescents and young adults with symptoms that do not respond to treatment with NSAIDs for three menstrual periods should be offered combined oral contraceptive pills (COCPs) for three menstrual cycles, and those who do not respond to this treatment should be evaluated for secondary causes of dysmenorrhoea (18). Some researchers (19) demonstrated that research as far back as 1937 showed that dysmenorrhoea responds favourably to ovulation inhibition and that synthetic hormones could be used to treat it. The hormones act by suppressing ovulation and reducing the thickness of the endometrial lining of the uterus. This reduces dysmenorrhoea because the volume of menstrual fluid is reduced as the prostaglandins are produced (19). Oral contraceptive pills are an effective treatment in most patients with primary dysmenorrhoea.

Glyceryl trinitrate patches: Combined oral contraceptives, and NSAIDs are not effective in a few women. Transdermal glyceryl trinitrate, which relaxes uterine contractions, could be used in these women. None of the contraindications of NSAIDs or of the combined oral contraceptive pill apply to transdermal glyceryl trinitrate. The advantages of glyceryl trinitrate are that it has a short half-life and disappears rapidly from the circulation, and that the patches can be applied and removed as required giving patients control over their symptoms (20).

Evaluation of drug utilization in the management of dysmenorrhoea has been conducted by some researchers such as in a study (5) conducted to determine the efficacy of minor analgesics in primary dysmenorrhoea. Another study (21) was done on primary dysmenorrhoea among Mexican university students to determine the prevalence, impact and treatment. Yet another study (4) on attitude and knowledge of medical students about dysmenorrhoea and its treatment was conducted in Pakistan. These studies were carried out in other countries, to the best of our knowledge no study on the ways of treatment/management of dysmenorrhoea has been con-

ducted in Maiduguri. However, we undertook this study at a federal university in Maiduguri, Borno state, north-eastern Nigeria. Most people with dysmenorrhoea usually take any available drug without knowledge of its efficacy and safety which can lead to serious adverse effects. Furthermore, if left untreated, primary dysmenorrhoea, and secondary dysmenorrhoea, can result in pain, suffering, and impaired fertility and sexual function. These reasons underscore the need for the present study. The objective of the study therefore, was to evaluate self-medication for the treatment of self-diagnosed dysmenorrhoea among a group of University of Maiduguri female students.

Methods

The population of this randomized study was 289 female students suffering from dysmenorrhoea out of over 25 000 students attending a college of medicine and eight non-medical faculties at University of Maiduguri in Borno state, Nigeria.

The students were interviewed using a self-administered pre-tested structured questionnaire in January, 2011. Data was analyzed using SPSS version 16.0, and Chi-square analysis was used to test for statistical significance at $p \leq 0.05$.

Results

A total number of 320 questionnaires were administered; out of which 289 filled questionnaires were recovered giving a response rate of 90.31%.

pains associated with menstruation (**Table 3**). The most common drugs that the participants used to remedy dysmenorrhoea were NSAIDs which were mainly taken at the onset of menstruation (**Figures 1 – 3**). Majority of the participants who did not report the time they usually take their drugs to alleviate dysmenorrhoea took paracetamol (**Figure 1**). NSAIDs were the most common drugs taken by the studied participants before the onset of menstrual bleeding to remedy dysmenorrhoea (**Figure 2**). NSAIDs were also the most common drugs taken by the studied participants at the onset of menstrual bleeding to remedy dysmenorrhoea. However, all the drugs taken at the onset of menstruation were reported to be effective except some percentage (1.7 %) of Paracetamol, 1.7 % of oral contraceptives, and 0.9 % of Ibuprofen and Hyocine butyl bromide combination (**Figure 3**). Most of the participants used oral drugs (**Figure 4**).

Among participants that used drug therapy, 72 % found it effective while 4.2 % found the drug therapy ineffective (**Table 4**). Most (52.9 %) of the participants buy their drugs from pharmacy shops, 18 % from patent medicine stores, and 6.9% from drug vendors. Significant majority (29.4 %) of the participants usually self-prescribed their drugs, 14.9 % reported that the drugs were prescribed by friends, and 12.1 % by medical doctors (**Table 5**). Most (63%) participants spent 300 Nigerian Naira and below (1.9048 US Dollar and below) on drugs for dysmenorrhoea every month (**Table 6**).

Table 2 Cross tabulation of If Yes What Do You Do? and Do You Remedy or Treat the Pains Without Drugs?

If yes what do you do?	Do you remedy or treat the pains without drugs?			Total (%)
	Yes (%)	No (%)	Both (%)	
No response	2 (0.7)	112 (38.8)	1 (0.3)	115 (39.8)
Take a hot bath	44 (15.2)	0 (0.0)	41 (14.2)	85 (29.4)
Place a heating pad on your abdomen	16 (5.5)	0 (0.0)	15 (5.2)	31 (10.7)
Exercise regularly	8 (2.8)	0 (0.0)	8 (2.8)	16 (5.5)
All of the above	3 (1.0)	0 (0.0)	3 (1.0)	6 (2.1)
Rest	5 (1.7)	0 (0.0)	16 (5.5)	21 (7.3)
Drink warm water	0 (0.0)	0 (0.0)	1 (0.3)	1 (0.3)
Take a hot bath and Exercise	2 (0.7)	0 (0.0)	0 (0.0)	2 (0.7)
Take a hot bath and Place a heating pad on abdomen	5 (1.7)	0 (0.0)	7 (2.4)	12 (4.2)
Total	85 (29.4)	112 (38.8)	92 (31.8)	289 (100.0)

$$\chi^2 = 2.762; df = 18; p < 0.001$$

The Mean \pm Standard Deviation (SD) of age of the participants was 22.50 ± 3.12 years with 18 and 35 years as the lowest and highest ages respectively.

Significant number 112 (38.8 %) of participants used drugs to remedy pains followed by non-drug therapy while a few combined both the drug and non-drug therapy for the pain management (**Table 2**). Most 120 (41.5%) of the participants reported that the non-pharmacologic measures employed were effective in relieving

Table 3 Frequency Distribution of Participants Reported Outcome of Non – Drug Remedies Used (n = 289)

Efficacy	Frequency	Percentage
No response	101	34.9
Effective	120	41.5
Ineffective	68	23.5

Table 4 Frequency Distribution of Perceived Efficacy of the Drug Therapy and Place of Purchase of Drugs by Participants (n= 289)

Variable	Response	Frequency	Percentage
Reported Efficacy of the drug therapy	No response	69	23.9
	Effective	208	72.0
	Ineffective	12	4.2
Place of purchase of drugs	No response	64	22.1
	Pharmacy shops	153	52.9
	Patient Medicine stores	52	18.0
	Drug vendors	20	6.9

Table 5 Cross tabulation of Prescribers and Knowledge of Side Effects of Drugs taken by Participants

Prescriber of drugs	Knowledge of Side effects of the drug(s) used			Total (%)
	No response (%)	Yes (%)	No (%)	
No response	60 (20.8)	2 (0.7)	0 (0.0)	62 (21.5)
Medical doctor	0 (0.0)	16 (5.5)	19 (6.6)	35 (12.1)
Pharmacist	2 (0.7)	15 (5.2)	14 (4.8)	31 (10.7)
Nurse	4 (1.4)	8 (2.8)	13 (4.5)	25 (8.7)
Yourself	0 (0.0)	27 (9.3)	58 (20.1)	85 (29.4)
Friend	1 (0.3)	4 (1.4)	38 (13.1)	43 (14.9)
Medical doctor and pharmacist	0 (0.0)	6 (2.1)	0 (0.0)	6 (2.1)
Self and friend	0 (0.0)	0 (0.0)	2 (0.7)	2 (7.0)
Total	67 (27.0)	78 (49.8)	144 (49.8)	289 (100.0)

$$\chi^2 = 281.77; df = 14; p < 0.001$$

Table 6 Frequency Distribution of Monthly Spending on Drugs

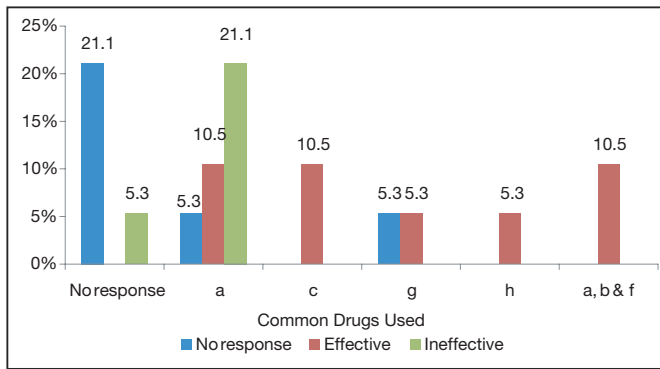
Monthly spending (US Dollar)	Monthly spending (Nigerian Naira)	Frequency	Percentage
No response	No response	79	27.3
≤ 1.9048	≤ 300	182	63.0
1.9111- 3.8095	301-600	11	3.8
≥ 3.8159	≥ 601	17	5.9
Total		289	100.0

Discussion

With respect to the distribution of non-pharmacological measures for pain management, the findings of this study are in agreement with that of another study (22) that showed that non-medicinal approaches such as exercise, heat, behavioural interventions, and dietary/herbal supplements were commonly utilized by women in an effort to relieve dysmenorrhoea. The outcome of non-drug remedies used is consistent with that of another study (8) that demonstrated that continuous low-level topical heat was as effective as oral ibuprofen for the treatment of dysmenorrhoea. Using heat in addition to ibuprofen may speed the relief of pain (8). However, the practicality of applying continuous low-level heat during the activities of daily living such as attending class and

working may be somewhat impractical (6,13,14) hence the need for pharmacologic measures. The mood-improving effect of endorphins that are released during exercise may indirectly contribute to the lessening of the symptoms of dysmenorrhoea.

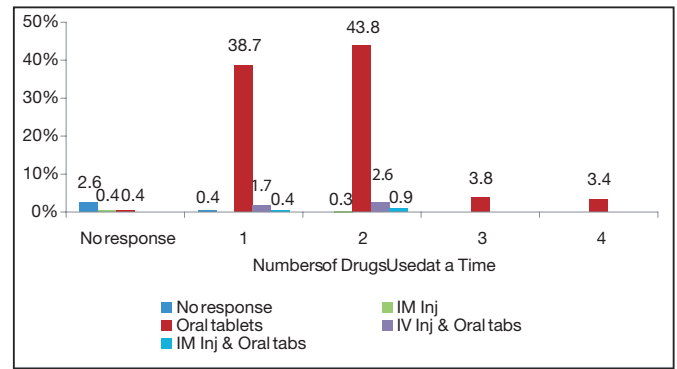
The most common drugs that the participants use to remedy dysmenorrhoea were NSAIDs which were mainly taken at the onset of menstruation. This is consistent with the findings of some studies (14,21). Another study (5) on a meta-analysis of 56 trials confirms that NSAIDs are effective in primary dysmenorrhoea. Of the total number of participants that took paracetamol, majority reported that it was ineffective in the management of their pains. This is consistent with the findings of two meta-analyses (5,23) of randomized controlled trials (RCTs) of



$\chi^2 = 17.034; df = 10; p = 0.074$

Figure 1 Distribution of Drugs taken at Unknown Time by Efficacy

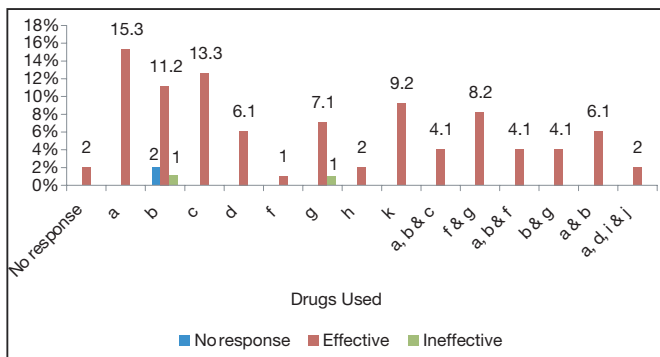
Key: a – Paracetamol; b – Ibuprofen; c – Piroxicam; f – Paracetamol preparation (Ladinax®); g – Hyoscine butyl bromide; h – Oral contraceptives



$\chi^2 = 1.461; df = 16; p < 0.001$

Figure 4 Frequency Distribution of Number of Drugs taken at a Time and their Dosage Forms

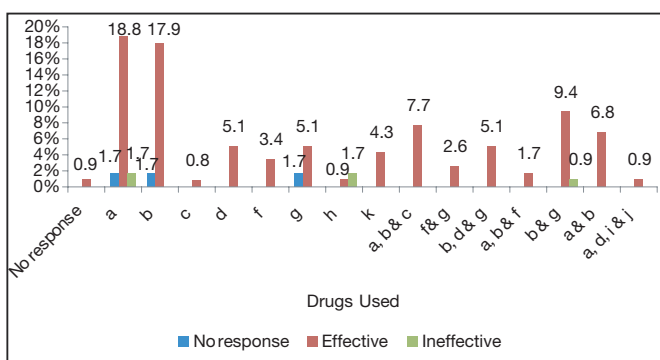
NSAIDs and paracetamol which showed that NSAIDs were effective and more effective than paracetamol in treating women with dysmenorrhoea. Despite its evidence of lesser efficacies, Paracetamol may offer some relief in women who cannot tolerate NSAIDs (12). However, all the drugs taken before menstruation were reported to be effective except Ibuprofen (1.0%), and 1.0% of Hyocine butyl bromide. This finding is consistent with the report that NSAIDs may be most effective when therapy is started before the onset of menstrual pain and flow (2) although therapy need not be continued after the end of the flow. Contrary to expectation, it was observed that some participants managed dysmenorrhoea with metronidazole and analgesics, and tetracycline and analgesics combinations respectively, which may be attributed to self-medication practiced by most of these young women. Most young women always choose to self-medicate at home and will never seek medical attention for their menstrual pain since they are of the opinion that it is the destiny of every young adolescent woman.



$\chi^2 = 20.255; df = 28; p = 0.855$

Figure 2 Distribution of Drugs taken Before the Onset of Menstruation by Efficacy

Key: a – Paracetamol; b – Ibuprofen; c – Piroxicam; d – Naproxen; e – Aspirin; f – Paracetamol preparation (Ladinax®); g – Hyoscine butyl bromide; h – Oral contraceptives; i – Metronidazole; j – Tetracycline; k – Unknown drugs



$\chi^2 = 43.737; df = 28; p = 0.029$

Figure 3 Distribution of Drugs taken at Onset of Menstruation by Efficacy

Key: a – Paracetamol; b – Ibuprofen; c – Piroxicam; d – Naproxen; e – Aspirin; f – Paracetamol preparation (Ladinax®); g – Hyoscine butyl bromide; h – Oral contraceptives; i – Metronidazole; j – Tetracycline; k – Unknown drugs

All the drugs taken at the onset of menstruation were reported to be effective except some percentage (1.7%) of Paracetamol, 1.7% of oral contraceptives, and 0.9% of Ibuprofen and Hyocine butyl bromide combination. Literature supports that effective treatment is initiated at the onset of bleeding and/or associated symptoms and should not be necessary for more than 2 to 3 days. Recommended maximum dosing includes starting with an initial loading dose followed by divided doses over 24 hours (24). This finding supported the safety of NSAIDs apart from efficacy in women of child bearing age that NSAIDs should be started at the onset of bleeding to avoid inadvertent use during early pregnancy and to be taken for 2–3 days (25). Analgesics-antibiotics combinations reported in the present study for the management of dysmenorrhoea could also be as a result of self-mediations practiced by some of the participants.

Most of the participants used oral drugs. This finding is consistent with the current practice of preference of oral drugs over injections because of the dangers and risks that are associated with them. Similarly, this finding is consistent with findings of another study (21). Majority (43.8%) of the participants used two types of medications at a time to treat the pain. This finding revealed that the studied participants were not practicing poly-pharmacy, so the likelihood for drug – drug interactions could be minimal.

Among participants that used drug therapy, 72% found it effective while 4.2% found the drug therapy ineffective. This is consistent with the finding of another study (21). Most (52.9%) of the participants buy their drugs from pharmacy shops, 18% from patent medicine stores, and 6.9% from drug vendors. It is alarming that in the 21st century, people including university students still patronize drug vendors that no one can guarantee the source and storage conditions of their drugs.

Significant majority (29.4%) of the participants usually self-prescribed their drugs. This is consistent with the finding of another study (21) which revealed that most women usually practiced self-medication. Similarly, according to another study (26), many women with dysmenorrhoea do not seek professional medical care for it, even when symptoms are excruciating or incapacitating. Furthermore, other studies reported that most adolescents' women self-medicate with over-the-counter medicines, and few consult a physician about dysmenorrhoea (27–29). Dysmenorrhoea is often considered as normal by many healthcare processes, patients, and parents and this has led to the hesitation on the part of the affected individual to seek help (26). This can be attributed to the traditional folk beliefs passed from generation to generation which still affect health care of millions of women of menstrual age where menstruation is viewed by many as a burden women must bear, menstrual distress no matter how excruciating or incapacitating, is often considered as an inescapable plight. In spite of the frequency and severity of dysmenorrhoea, most women do not seek medical treatment for this condition (30). As a result of significant majority practicing self-medications, purchasing their drugs from pharmacy shops which may not have a pharmacist to carry out medication counselling, patent medicine stores and from street drug vendors, most (49.8%) of the participants didn't know the side effects of the drug they were using. This is consistent with the findings of another study (21), although the drugs commonly used to remedy the pains of primary dysmenorrhea are NSAIDs with the potential of eliciting side effects which may be worrisome. However side effects ignorance will automatically translate to drug contraindications ignorance too, thereby putting some of these women with contraindicated medical condition(s) at an increased risk of morbidity or mortality. NSAIDs cause gastrointestinal (GI) irritation and should not be taken by anyone who has or has had a peptic ulcer. However, they should be taken with or after food to minimize GI problems in non-peptic ulcer individuals. More so, they should not be taken by anyone who is sensitive to aspirin and should be used with caution in anyone who is asthmatic, because such individuals are more likely to be sensitive to NSAIDs. In addition, Hyoscine butyl bromide is contraindicated in women with closed-angle glaucoma due to its anti-cholinergic effects. Additive anti-cholinergic effects (dry mouth, constipation, blurred vision) means Hyoscine butyl bromide is best avoided if any other drug with anti-cholinergic effects (e.g. tricyclic antidepressants) is being taken. Hence, the needs for Health care professionals (Physicians, and pharmacists) to prescribe and dispense these drugs respectively to these young women for management of dysmenorrhoea.

The Study Limitations

Limitations of the study are the small number of participants and the use of self-reporting questionnaires.

Conclusions

Results of the study confirmed that the treatment with NSAIDs is the preferred treatment for dysmenorrhoea. Majority of these women self-prescribed these drugs. Self-medication for dysmenorrhoea is influenced by different factors such as education, exposure to advertisements, family, society, and especially by availability of drugs. These findings raise public health concerns on the safety and efficacy of these drugs for these women, therefore we recommend that these young adolescent women should be educated regarding healthy life-style and consultation with physicians for effective relief of pain, and also to determine if other problems exists and to find the most effective treatment options available. On other hand, pharmacists should carry out public medication education on the management of dysmenorrhoea in order to empowering young women to take an active role in their own health care and assisting them to make healthy choices to best manage individual needs and concerns. This will go a long way in ensuring that these women do not create additional medical condition(s) while treating dysmenorrhoea.

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