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Presbyterian University College, Ghana
Faculty of Health and Medical Sciences
Department of Physician Assistantship

Research Topic:

Health Seeking Behaviors and Management Methods for Menstrual Pain among Female Senior High School Teenagers in Agogo

BY

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DECLARATION

Candidate's Declaration

I hereby declare that, except for the references to other people's work which has been cited, this project work is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Signature:…….. Date: ……

Name: Danquah Ahmed

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Supervisor's Declaration

I hereby declare that the preparation and presentation of this research project work were supervised in accordance with the guidelines on supervision of project work laid down by the Presbyterian University College, Ghana.

Signature:…….. Date: ……

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ABSTRACT

Dysmenorrhea is a major gynecological problem faced by teenage girls leading to morbidity that may have adverse effects on their school attendance, source of anxiety and psychological stress with estimated prevalence range from 45% to 95%. Often, there is a delay in seeking medical advice for menstrual problems by teenage girls. The purpose of the study was to determine the prevalence, health seeking behaviors and management methods for menstrual pain among Senior High School teenagers. A quantitative cross-sectional study using purposive and simple random sampling technique were used to select 100 post menarche teenage female students from two Senior High Schools. Structured questionnaires were administered to collect data for the study. Out of the 100 respondents, 86% experienced dysmenorrhea, only 11.6% had visited the hospital/clinic to seek healthcare and just (8.1%) indicated full effectiveness of their management methods. The study found high prevalence of dysmenorrhea among respondents with poor effective management methods and poor health seeking behaviors. Therefore there is the need to increase efforts to provide regular, health education on menstrual and adolescent health for all female students in their various Senior High Schools to improve upon their health seeking behaviors and also provide easily accessible health services to reduce the morbidities associated with dysmenorrhea and improve upon their general wellbeing.

DEDICATION

To my parents, Mr. Augustine Yaw Ibrahim and Mrs. Aliheli Francisca

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CHAPTER ONE
INTRODUCTION

This chapter constitutes the general introduction consisting of background, statement of the problem, purpose of study, objectives, research questions, significance, delimitations and Operational definitions of this research work.

1.1 Background to the Study

A teenager is an adolescent who falls within the ages of thirteen to nineteen years old. Adolescence is a transition period from childhood to adult life during which pubertal development and sexual maturation take place. It is characterized by immense hormonal changes Rahatgaonkar's study (as cited in Blakemore, Burnett & Dahl, 2010).

The World Health Organization (2011) categorizes adolescence as the period of growth and development of humans that happens between childhood and adulthood, from 10 to19 years of age. Adolescence is further divided by certain writers into early and late adolescence as 10 – 14 years and 15 – 19 years of age respectively (Cobb, 2001; James-Traore, 2001). This stage is sometimes noted as the beginning of fertility or puberty, and it is specified by physical, emotional and social development. Logan (2016) posited that in the course of puberty, the fluctuating levels of hormones contribute significantly in stimulating the development of secondary sex characteristics. According to Diers (2013), there are about 1.2 billion adolescents (10 to 19 years of age) making up 18% of the world's population. As of the year 2010 the last time population census was conducted, adolescents (10-19 years) accounted for 25% of the total population of Ghana (GSS, 2012). Females between 15-19 years of age represented 20% of women in the reproductive age group of 15-49 years (GSS 2012), which indicates a very high momentum for population growth.

Adolescents encounter general as well as sexual and reproductive health problems which if not resolved can affect them not only at this stage but in adulthood (Omoni, 2009). Given this, globally, there is an increased concern about the sexual and reproductive health and adolescents' development (Omoni, 2009) and Ghana is no exception.

The onset of menstruation is considered as a landmark in the growth and development of an adolescent girl and is the most important physiological event of female puberty which plays a key role in a woman's reproductive life (Esen, Oğuz & Serin, 2016). The age of onset and the pattern of menstrual cycles vary on different factors (Wasnik *et al*., 2015). Zafar *et al*. (2018) found out that, the age of menarche is determined by means of standard health, genetic, socio financial and nutritional factors. The cycle of the physiological changes from the beginning of one menstrual period to the beginning of the next portrays the menstrual cycle. It entails the coordination of many activities through the hypothalamic pituitary ovarian axis and is effortlessly prompted through physiological, pathological and psychological adjustments occurring all through the reproductive lifespan (Rigon *et al*., 2012).

Menstrual abnormalities are a disruptive physical, and or emotional symptoms that occurs just before and during menstruation. They are a major gynecological problem faced by adolescent girls leading to morbidity that may have an adverse effect on their school attendance (Rahatgaonkar *et al.*, 2018). Endocr and Basel (2012) attributed the main cause of menstrual abnormalities to the poor development of the hypothalamic-pituitary- ovarian (HPO) axis of the brain. Nevertheless, environmental, disease associated physiological changes and idiopathic causes may be contributing factors to menstrual abnormalities. After menarche, even as important as menstruation is to human reproduction, it is often accompanied by varying disorders such as abnormalities of frequency and intensity; or a combination of both, which may affect the quality of life of teenagers and young adults; and which may be indicators of serious underlying problems. Menstrual disorders of intensity include poly or oligomenorrhea and hyper or hypo menorrhea; disorders of frequency include polymenorrhea, oligomenorrhea; disorders of duration include amenorrhea, menorrhagia; and disorders of pain include dysmenorrhea and premenstrual syndrome. These menstrual disorders are common causes of morbidity among teenagers and a source of anxiety and psychological stress (Amu & Bamidele, 2014).

Dysmenorrhea is a subgroup of pelvic pain that manifests as painful menstrual drift. It is the most usually announced issue. More than one portion of ladies who emancipate has some agony for 1 - 2 days every month. Prevalence of menstrual pain estimates range from 45% to 95%. Absenteeism from work and school because of dysmenorrhea is not unusual. Thirteen percent (13%) to 51% ladies had been absent at least once and 5% to 14% are regularly absent due to the severity of symptoms (Zafar *et al*., 2018). Often, there is a delay in seeking medical advice for menstrual problems by adolescent girls (Rahatgaonkar *et al.*, 2018). It may be primary dysmenorrhea and secondary dysmenorrhea. Primary dysmenorrhea is painful menstruation in absence of any gynecological disorder. Typically it starts at six months to one year after menarche and might hold to

menopause. At any time in a female's life among menarche and menopause, the secondary dysmenorrhea can occur. After 25 years of age, it most customarily occurred subsequent to a gynecological pathology including endometriosis and ovarian cysts (Zafar *et al*., 2018).

1.2 Statement of the Problem

Despite some initiatives by the government such as policies on the Accessibility, Attitudes and Availability of Information and ADHD (Adolescent Health and Development) Services, it is however unfortunate that more than 50% girls and women in rural communities in Ghana have very little knowledge about their sexual and reproductive issues. This means that many of them are not able to make well informed choices about their sexual health, which particularly affects girls going through major development stages like menstruation. This leads them missing school, with knock on effect of poor academic performance, low self-esteem and social stigmatization (Adolescent Health Policy and Strategy 2016). Hence it is important to understand the factors which drive adolescent menstrual health in Ghana. A research conducted by Smitha *et al*. (2016) revealed that, menstrual problems are generally perceived as minor health problems and irrelevant to the public health agenda and the private nature of menstruation perpetuates the belief that menstrual complaints do not warrant too much attention. In many countries and cultures, menstruation is a taboo subject that is rarely discussed. As a result, girls and women experience shame and fear that interfere with their ability to manage menstrual health and can impact their overall well-being (UNICEF, 2018).

In developing countries, the main causes of mortality are in the priority of the health sector. However very little attention is paid to understand women's menstrual complaints (Pandey & Pradhan, 2017; Al-Sahab, Ardern, Hamadeh & Tamim, 2010). Despite the high prevalence of dysmenorrhea in adolescents, many girls do not receive professional help or treatment. Mothers are the most important persons the girls turned to for answers regarding menstruation, followed by peers and school nurse. From 21% to 96% practiced self–medication either by pharmacological or non-pharmacological interventions where some of these non-prescribed drugs may have serious side effects on the individual (Rahatgaonkar, Wakankar, Oka & Kamble, 2018).

Often, there is a delay in seeking medical advice for menstrual problems by adolescent girls. As far as the treatment seeking behavior of girls was concerned, only 25.7% girls with Heavy Menstrual Bleed, 26.7% with painful menses and 33% with irregular cycles took medical advice *(*Rahatgaonkar *et al.,* 2018). At least 500 million girls and women globally lack adequate facilities for menstrual hygiene management as according to the World Bank report, (2018).

In Africa, the prevalence rate of dysmenorrhea is about 93%, no reported mortality but less than 60% of individuals with dysmenorrhea practice self–medication and surprisingly, less than 30% seeks for medical help (Abdelmoty *et al.*, 2015; De Sanctis *et al.*, 2016). Menstrual pains were responsible for greatest number of school absenteeism in adolescent girls in Ghana according to Nwankwo, Aniebue & Aniebue, (2010). Thus, this study seeks to provide answers to the factors affecting health seeking behaviors and possible future complications of various methods of menstrual pain management among Senior High School female teenagers in Agogo.

1.3 Purpose of the Study

The purpose of the study is to determine the prevalence, health seeking behaviors and management methods for menstrual pain among high school teenagers.

1.4 Objectives

1.4.1 Main Objective

To determine the prevalence, health seeking behaviors and management methods for menstrual pain among teenage female Senior High School students in Agogo.

1.4.2 Specific Objectives

1. To determine the prevalence of menstrual pain among female Senior High School teenagers in Agogo.
2. To determine the factors affecting the health seeking behaviors among female Senior High School teenagers with menstrual pain in Agogo.
3. To identify the various menstrual pain management methods used by female Senior High School teenagers in Agogo.
4. To identify measures to improve the health seeking behaviors among female Senior High School teenagers in Agogo.

1.4.3 Research Questions

1. What is the prevalence of menstrual pains among high school teenagers in Agogo?
2. What are the factors affecting the health seeking behaviors of high school teenagers with menstrual pains in Agogo?
3. What are the various menstrual pain management methods among high school teenagers with menstrual pains in Agogo?

4. What are the measures to improve the help-seeking behaviors of high school teenagers in Agogo?

1.5 Significance of the Study

This study highlights the prevalence, health seeking behaviors and various management methods for menstrual pain among high school teenagers in their communities.

It will also serve as a reference point to the Health Directorate, Education Ministry and stakeholders by giving them in-depth challenges high school teenage girls experience during menstruation and any associations between any predisposed non-medical management methods and possible future complications. It will further create more awareness on the need for urgent and more health seeking friendly environment for menstruating teenage girls with menstrual abnormalities reducing absenteeism from class and improving their confidence, general health and performances. Also contributing to literature and recommending areas for future research.

1.6 Delimitations

i. The sample size representing the study population cannot speak for all post menarche high school students in the country.
ii. Failure of some respondents to respond to the questionnaire or to be able to open up on such sensitive topic.
iii. Lack of standardized definitive criteria on dysmenorrhea
iv. The study will be limited to only the post menarche high school teenagers in the Agogo State College and Collins Senior High School. It will be done to assess only the prevalence, health seeking behaviors and management methods for menstrual pains.

1.7 Operational Definitions/ Definitions of Terms

Teenager- Relating to females who have had their menarche but are less than 19years old.

Menarche -The first menstrual period of an individual (Merriam Webster)

Post Menarche -After the first menstrual period of an individual up to 19 years of age.

Endometriosis- the presence and growth of functioning endometrial tissue in places other than the uterus that often results in severe pain and infertility (Merriam Webster)

Hypothalamic Pituitary Ovarian Axis- refers to the hypothalamus, pituitary gland and gonadal glands as if these individual endocrine glands were a single entity. In females, it is mainly involved in the regulation of the menstrual and ovarian cycle (Wikipedia)

ADHD - Adolescent Health and Development, Ghana.

1.8 Organization of the study

This research paper is made up of five chapters. Chapter one consist the introduction, which covers the background of the study, statement of problem, research objectives and questions relating to the knowledge and use of contraceptives as well as the factors determining contraceptive use. It ends with the justification and scope of the study. Chapter two gives an account of both theoretical and empirical review of literature of different authors on the subject matter. Chapter three focuses on the methodology; it gives an account of how the research has been conducted and the statistical methods and processes employed in arriving at the desired results. Chapter four will cover the results and discussions of the study. It will as well tackle the findings of each objective consecutively. Lastly, chapter five will give details the conclusions and recommendations from the study. The references and appendices used to support the study are also outlined at the end of this chapter.

CHAPTER TWO
REVIEW OF RELATED LITERATURE

In this section, the paper reviews mainly theory and empirical work of several authors. It focuses on some menstrual pain (dysmenorrhea) and health seeking theories in relation to menstruation as well as empirical reviews regarding the prevalence, health seeking behaviors and management methods for menstrual pain.

2.1 Theoretical Review

The Proposed Theory on Dysmenorrhea

In 2009, Mats Åkerlund proposed the Mechanisms of possible pathophysiological importance in primary dysmenorrhea. He discussed that, Hyperactivity of the myometrium with accompanying uterine ischemia is considered to be of central importance in the causation of pain. Prostaglandins seem to be involved to a large extent in the development of the myometrial hyperactivity. Other mechanisms of possible importance such as ovarian hormones, cervical factors, vasopressin, nerves, and psychological factors can well act ultimately through prostaglandin release but an action directly on the myometrium and blood flow may also occur (Åkerlund, 2009).

The Help-seeking theory

Help-seeking theory postulates that people follow a series of predictable steps to seek help for their inadequacies, it is a series of well-ordered and purposeful cognitive and behavioral steps, each leading to specific types of solutions. Health seeking theory falls into two categories where some consider similarity in the process' (e.g. Cepeda-Benito & Short, 1998) while others consider it as dependent upon the problem (e.g. Di Fabio & Bernaud, 2008). In general health seeking behaviors are dependent upon three categories, attitudes (beliefs and willingness) towards help-seeking, intention to seek help, and actual help-seeking behavior (Gulliver, Griffiths, Christensen & Brewer, 2012).

2.2 Empirical Review

2.21 Dysmenorrhea

Dysmenorrhea is characterized by a cramp-like, dull, throbbing pain that usually emanates from the lower abdomen, and that occurs just before and/or during menstruation and lasting 1–3 days. Some 2–4 days before menstruation begins, prostaglandins proceed into the uterine muscle where they build up quickly at menstrual

onset and act as smooth muscle contractors that aid in the expulsion of the endometrium. Some authors suggest that a type of menstrual pain that is lighter than dysmenorrhea, called normal menstrual cramps, could exist Dawood; Santer, Warner & Wyke's studies (as cited in Grandi *et al*., 2012).

The proposed distinction between dysmenorrhea and normal menstrual cramps is "the need for medication and the inability to function normally in the latter situation. Accordingly, categorizing dysmenorrhea on the basis of pain intensity using a visual analog scale (VAS) fails to consider a woman's capacity to cope with pain, and so may not directly relate to the need for medication or the ability of a woman to function normally when suffering from dysmenorrhea.(Ozerdogan, Sayiner, Ayranci, Unsal & Giray; Ortiz, Rangel-Flores, Carrillo-Alarcòn & Veras-Godoy, 2009)

2.22 The Prevalence of Dysmenorrhea

There is a wide variation in the estimate of dysmenorrhea from studies around the world reporting a range between28% and 71.7% Durain ; Campbell & McGrath; Burnett *et al.*; Pitts, Ferris, Smith, Shelley & Richters's study (as cited in Unsal, Ayranci, Tozun, Arslan & Calik, 2010). Studies on the prevalence of menstrual pain have shown that many factors are related to this disorder. These factors include a younger age, low body mass index (BMI), smoking, early menarche, prolonged or aberrant menstrual flow, perimenstrual somatic complaints, pelvic infections, previous sterilization, somatization, psychological disturbance, genetic influence, and a history of sexual assault influencing the prevalence and severity of dysmenorrhea (Unsal *et al*., 2010), Emotional and behavioral problems may exacerbate menstrual cycle problems and dysmenorrhea.

A study by Parker (2006) in Australian teenagers using The Menstrual Disorders Of Teenagers (MDOT) questionnaire to survey participants about their usual pattern of menstruation, exploring typical menstruation, menstrual pain (dysmenorrhea), signs and symptoms experienced with menses and how menstruation affected various aspects of their lives including school attendance, out of One thousand and fifty one (1, 05 1) completed questionnaires with 98% response rate, the prevalence of menstrual pain was 94% where 21% experienced severe pain. Furthermore, statistically significant associations were found between each and all of: menstrual pain, symptoms, interference on life activities and school absence. The study method was not stated but used questionnaire based material for the study and did not clearly state their criteria for categorizing dysmenorrhea but also recommended replication of the MDOT study should be done in younger teenagers (from menarche) to determine menstrual disturbance in the younger age group.

The results however was similar to a Cross-sectional Data based on a quantitative survey study on The menstrual disorder of teenagers (MDOT) study In some Senior High Schools in the Australian Capital Territory (ACT) which also found Typical menstrual pain in adolescence to be 93% and 71% cramping (Parker, Sneddon & Arbon, 2010). Parker *et al.* (2010) concluded that menstrual pain and symptoms are common in teenagers. Therefore girls indicating moderate to severe pain in association with a high number of menstrual symptoms, school absence and interference with life activities should be effectively managed to minimize menstrual morbidity. Those girls who do not respond to medical management should be considered for further investigation for possible underlying pathology, such as endometriosis.

In another Cross-sectional study by Unsal *et al*. (2010), on the Prevalence of dysmenorrhea and its effect on quality of life among a group of female university students in Western Turkey, it showed that Prevalence of dysmenorrhea was found to be 72.7% and was significantly higher in coffee consumers, females with menstrual bleeding duration more than 7 days, and those who had a positive family history of dysmenorrhea when compared to the others. In similar studies from Turkey, the prevalence of dysmenorrhea has been reported to be between 58.2% and 89.5%. (Unsal *et al*., 2010)

Furthermore, many studies determined that the prevalence of dysmenorrhea showed a decrease with increasing age, indicating that primary dysmenorrhea peaks in late adolescence and the early 20s and the incidence falls with increasing age (Unsal *et al*., 2010). However, this study did not find any connection between age groups and the prevalence of dysmenorrhea. This was probably because the students in the study group were not in a higher range of years. The severity of dysmenorrhea in this study was determined with a 10-point visual analog scale unlike the previous' which did not use any.

A further cross-sectional study on a population-based sample of Italian adolescents aged 13–21 years attending secondary school, 4,892 subjects were analyzed. Dysmenorrhea was strictly defined as abdominal pain severe enough to interfere with normal activities, or require medication.

Menstruation-related severe abdominal pain was reported by about 56% of the sample. Among girls with severe pain, 10% satisfied the criteria for dysmenorrhea, while referring to the whole sample population the prevalence of dysmenorrhea was 6.2% (95%CI 5.4%-7.0%).

In the whole sample, the prevalence of dysmenorrhea significantly increased with age, rising from about 2% in the youngest age group age to about 8% among the over 17 year-olds. It was not significantly associated with the length of the menstruation interval, but there was clearly a significant association with the length of the bleeding period, the prevalence being about 7% among subjects with bleeding periods <4 days or >6 days, as opposed to about 5% for those with periods lasting 4–6 days ($p = 0.01$).

The results from this study was limited to only the cities, exclusion of the mild and moderate menstrual pain from the dysmenorrhea criteria and the strict criteria for dysmenorrhea might have had significant effects on the results from the study. (Rigon *et al*., 2012).

Some studies from India in both adolescents from schools in the district and rural communities evidenced that, there were clear associations between standards of living and the prevalence of dysmenorrhea even though there were no clear criteria for dysmenorrhea. Thirty three percent (33%) of girls from the district and 62.3% girls from the rural communities suffered from dysmenorrhea respectively. (Beevi *et al.*, 2017; Wasnik, Dhumale & Jawarkar, 2015).

In Africa, a study by Abdelmoty *et al*. (2012) using a cross-sectional survey on menstrual patterns and disorders among secondary school adolescents in Egypt, 412 out of 800 subjects responded to the semi-structured questionnaire. Of the 93 % of girls who reported pain with menstruation, nearly 29 % of the respondents (n = 108) reported no/mild pain (0–3 on rating scale), 49 % (n = 183) reported moderate pain (4–7) and 22 % (n = 83) reported severe pain (8–10), Overall, menstrual disorders prevented 33 % (n = 133) of adolescents from participating in social activities and 7.7 % (n = 31) from attending school.

Further studies in Uganda showed that girls reported substantial embarrassment and fear of teasing related to menstruation in the qualitative interviews, and said that this, together with menstrual pain and lack of effective materials for menstrual hygiene management, led to school absenteeism. All policy makers interviewed reported poverty and menstruation as the key factors associated with school attendance.

They further concluded that, in the peri-urban Ugandan population, menstruation was strongly associated with school attendance. Evaluation of a menstrual management intervention that address both psychosocial (example. self-confidence, attitudes) and physical (example. management of pain, use of adequate menstrual hygiene materials, improved water and sanitation facilities) aspects of menstruation were needed. However,

similar to other studies, there were no criteria for dysmenorrhea and most of the subjects in the study were orphans.

In Ghana, there has been some initiatives established in order to improve upon the quality of life of the girl child and increase school going attendance during their periods. Nevertheless, young people are unable to access them because of factors such as provider bias, restriction by law, fear of being branded as a bad girl, distance to services, unfavorable opening hours, or simply lack of knowledge about the availability of such services (Adolescent Health Policy and Strategy 2016).

2.3 Health seeking Behaviors

Help-seeking behavior is the demand for help or for social support by the adolescent. Some researchers interviewing adolescents across cultures found that youth who report positive connections with parents (one form of social support) are more socially competent and less depressed (Barber, in WHO & UNICEF, 2000). Being able to seek and find help – from formal or informal sources – is a protective factor for adolescent health and development and overall satisfaction with life Baumeister & Leary's study (as cited in WHO, 2007). They further suggested various factors which influence the need for health seeking behaviors by adolescents some of which are individual and help for special needs health seeking behaviors.

2.3.1 Individual factors associated with help-seeking

Some individual factors – including personal motivation, perception of need, self-agency, internalized gender norms, and perceptions of social supports as positive, among others – influence the help-seeking behavior of adolescents.

Personal beliefs about what constitutes a need for help

There are tremendous individual differences related to what adolescents define as a need for help. Studies in the United States (US) find that adolescents are more likely to report family problems as issues for which they require and seek help (Bowles & Fallon, 1996). In the consultation with programs, staff reported a common set of personal problems for which adolescents sought help: sexuality/intimate relationships; employment; normative adolescent role transitions; homelessness; family violence and sexual abuse; and substance use. To understand why young people seek help, and what help they seek, requires understanding how adolescents define their needs, in addition to understanding the perceptions and biases of parents, service providers, policy-makers and other adults.

Internalized gender norms related to help-seeking

while internalized gender norms have different manifestations depending on context and culture, gender norms are key to understanding the help-seeking behavior of adolescents, and to the nature of social supports offered, and must be considered when studying and promoting adolescent help-seeking.

Perceptions of others and helping institutions as helpful and trustworthy

Whether young people trust or view others (example, parents, other adults, peers and social institutions) as helpful – that is whether they view their available social supports as helpful – is an important factor in help-seeking behavior. Research suggests that youth may ignore health-related and help-related information because they do not trust the source or see it as unreliable hence Various studies on coping have suggested that trust, rather than the need for help per se, is the key variable in determining whether a young person seeks help.

Personal coping skills

A young person's ability to resolve (or the belief that he/she can resolve) his/her problems is also an important factor related to help-seeking. The ability of young persons to cope with problems and stress on their own varies tremendously by individual. Literature on resilience offers some insights on this issue, suggesting a variety of personal and family traits that lead to greater resilience (optimism, greater verbal abilities, sociability, etc.). Some key informants suggested that in many cases adolescents may have an exaggerated sense of their ability to cope with problems and risks. Many researchers affirm that help-seeking and coping are learned behaviors. Young people observe and internalize the ways their parents and other adults around them cope with stress and in which situations their parents tend to seek help.

Previous experiences with seeking help

If help-seeking is a learned behavior, it is influenced by past experiences of seeking help.

Adolescents who have had negative experiences in seeking help may be reluctant to trust such persons or services in the future. This indicates the need for targeted efforts to overcome mistrust and win trust, a point that various key informants also stressed.

Self-efficacy and self-agency

Applied to help-seeking behavior, self-efficacy and self-agency refer to the belief that one has the ability to seek help and that seeking help will make a difference. Research from Australia found that adolescents who sought help had lower self-concept, which might mean a temporary reduction in self-concept during a stressful

moment, or in this context might suggest that adolescents who seek help consistently have lower self-concept (Bowles & Fallon, 1996). In other settings, adolescents with lower self-concept or lower self-esteem may be less likely to seek help.

Identity and other specific characteristics of the young person.

A variety of individual characteristics, which in turn interact, have implications for help-seeking behavior, among them age, ethnicity, marital status, sexual orientation, educational attainment, social class and sexual debut status, among others.

Perceived stigma associated with the need for help

Seeking help – from either formal or informal sources – is also affected by whether the need for help is associated with stigma, or whether seeking help for the need is perceived as a sign of weakness or personal inadequacy.

Conclusions: adolescents in many parts of the world have numerous unmet needs for specific health care and information. Finally, the research calls our attention to the importance of gender norms in influencing whether adolescents seek help, or are able to seek help.

2.3.2 Help-seeking for special needs for Sexual and reproductive health

In studies around the world, adolescents typically report that their peers are their main source of information about sexuality. Teachers, adult family members, siblings and television and other media are also reported as sources of information with varying percentages across regions. While we have tremendous information on where, what kind, when and how adolescents would like to receive information on Sexual Reproductive Health, research is also clear that deep-seated taboos about adolescent sexuality continue to hinder the adequate provision of this information.

Conclusions: Trust and familiarity with the service or social support emerge as crucial, as does the degree of taboo or stigma associated with the particular need.

Menstrual abnormalities are a major gynecological problem faced by adolescent girls leading to morbidity that may have an adverse effect on their school attendance.

Rahatgaonkar, Wakankar, Oka and Kamble, (2018) conducted a cross-sectional study on 592 girls in the age group of 10 to 19 years attending schools. They researched on menstrual disorders and treatment seeking behavior of the girls and found out that, the most prevalent menstrual disorder was painful menses which was reported by 70% of girls where the Proportion of girls visiting a doctor and taking medications for painful menses was 26.7% and 16.5% respectively. No association was found between mother's education and treatment seeking behavior for menstrual disorders. It was concluded that, In spite of high prevalence of menstrual disorders, only a minority of the adolescents seek expert advice. This underscores the need for creating awareness among girls, mothers and teachers and developing a screening tool to identify girls who could benefit by further investigation and follow-up.

A sample of 300 urban school going adolescents between 11-14 years were chosen at random and assessed using similar studies also found out that, 72% girls reported health problems during survey with an average of 1.93 complaints per girl. However, only 43% girls reported to the clinic voluntarily to seek which probably reflects a poor health seeking behavior. They also made conclusions that, to increase health seeking behavior of adolescents, apart from health and life skill education, their medical screening with a focus on reproductive health by trained physicians, parental involvement, supported by adolescent friendly centers (AFC) for counseling, referral and follow up are essential.

The most important barriers to seeking health information by adolescents were mentioned as follows: "difficulty in determining the quality of information found", "absence of appropriate information", and "concerns about the disclosure of their problems or illness to others (Esmaeilzadeh, Ashrafi, Shahrzadi & Mostafavi, 2018).
Unfortunately, there were no articles from Africa.

2.4 Management Methods for Menstrual Pain

Management methods may include medical and non-medical. Medical treatment for dysmenorrhea includes Non-Steroidal anti-inflammatory drugs (NSAIDs), Over the Counter Prescriptions (OCP) or surgical intervention. The efficacy of conventional treatments using NSAIDs and OCP is high. However, failure rate may reach up to 20% to 25%, besides the occurrence of drug-associated adverse effects. Only 6% of adolescents receive medical advice to treat dysmenorrhea while 70% practice self-management. Unfortunately, some girls even abuse these medications (non-therapeutic high doses) for quick pain relief. In adolescent girls, when dysmenorrhea persists despite the use of OCP and/or NSAIDs drugs is a strong indicator of an organic

pelvic disease. This condition mandates an appropriate referral to a gynecologist with proper laparoscopic diagnosis of endometriosis and/or other pelvic diseases (Sanctis *et al*, 2012).

A study by Abdelmoty *et al*, (2015) on Adolescents' Self-Treatment and Dysmenorrhea reported that 50% to 58% of adolescent undergraduate students in Turkey and Britain and 43.8% in China, 52% to 58% of high school students in the USA and Australia, and 33%-38% of young Sweden women use self-treatment for dysmenorrhea. In adolescent girls, the persistence of the dysmenorrhea despite the use of OCP and/or NSAIDs is a strong pointer to the diagnosis of organic pelvic disease and justifies a laparoscopic exploration. The study further concluded that, moderate to severe dysmenorrhea requires professional attention, especially when pain affects lifestyle or fertility is impaired and further recommended that, a comprehensive school education program on menarche and menstrual problems may help girls to cope better with dysmenorrhea and appropriately seek medical assistance.

Adolescents in another study used a variety of measures to cope with menstrual cycle problems; spharmacologic (46 %), non-pharmacologic (24.4 %) and consulting a physician (8.9 %). Medications were self-administered, provided by respondents' parents and health care professional in (62, 23, and 3 %) of cases respectively. Similar to other studies, non-steroidal anti-inflammatory drugs (NSAIDs), paracetamol and aspirin were the most frequently used pain medications. Other measures used by respondents to alleviate menstrual pain included; use of a heating pad (40.5 %), rest (21.0 %), uncategorized herbal drinks (17.0%), exercise (12.6%) and 2 % used non-contraceptive hormonal medications. Of those respondents who took analgesics, 75 % reported moderate to high effectiveness (scoring 4–10 on a scale of 0–10, where 0 = not effective and 10 = highly effective). Only 2.9 % of all respondents reported having been treated for menstrual cycle irregularities. This was mostly done with unspecified medications. Alarmingly while effective treatments for menstrual disorders exist; approximately two thirds of all respondents self-medicated, one quarter reported low effectiveness of analgesics used and only 7 % consulted their health care provider. This latter figure is comparable to other studies and is of significant concern because if these disorders are considered to be "normal" and ignored, teenagers may not seek care for underlying gynecologic conditions. Recommendations were that Additional studies were needed to increase our understanding of coping strategies used by girls with menstrual problems and their reluctance to access medical treatment (Abdelmoty *et al*, 2015).

Similar Results from Experience of symptoms among respondents (students and women) suffering from dysmenorrhea showed that 25.9% women usually felt reduction in pain when they lied still while 26.1% women

never felt the effect of posture on pain reduction. Majority of students (65.1%) never experience nausea during menstruation. However 8.3% women always experienced nausea during menstruation. 32.8% women always restrict specific diet during menstruation. Only 13.4% never experienced pain. From remaining participants, 14.3%, always take medicines for relieving pain. While majority of participants (48.8%) never take medicines for relieving pain. 44.3% participants take medicines for relieving pain. From them, 30.8% found medicines are always effective for relieving pain while 5.3% participants thought medicines are never effective for relieving pain (Grandi *et al*, 2012).

2.5 Summary of Literature Review

After a careful review of literature from various researches across the world, it was discovered that;

Globally, there were high study populations an all reviewed articles, study populations and research methods were clearly defined considering ensuring validity and ethics with exceptions of studies from Africa and Ghana which was insufficient to derive much information.

There were high prevalence of dysmenorrhea worldwide but there were no standard globally accepted inclusion criteria for the diagnosis of dysmenorrhea should the menstruating girl report pain.

In the prevalence of menstrual disorders, significant associations were found between the various social class of individuals and prevalence of menstrual disorders. Thus dysmenorrhea was commoner in low income earning individuals as compared to high income class.

Health seeking behaviors among teenagers were generally not encouraging and bad and was attributed to Personal beliefs about what constitutes a need for help and Help-seeking for special needs for Sexual and reproductive health.

Pain management in menstruation varied depending on perceived intensity of pain worldwide and general hygienic practices were also affected by social class. The various forms of management included the use of NSAIDS, OCPs, postural and other traditional methods such as warm pads to apply on abdomen.

Some researchers also stated that, there were no associations between age of menarche and menstrual disorders whilst others found associations in the two. Some reasons were attributed to the choice of participants.

A reason for the variation in these estimates may be the use of selected groups of women, and the absence of a universally accepted method of defining dysmenorrhea, which was probably as greatly responsible for the disparity as the methods of collecting data, the study definitions of dysmenorrhea and pain, and the study populations themselves.

As previously stated, there is a lack of research from developing countries that uses the concept of health seeking and social supports.

In discussions with some key informants several limitations to the concept of help-seeking emerged. Perhaps first and foremost is that help-seeking is largely an individual-centred, behavioral concept in which the motivation for seeking help is seen to reside within the individual.

The recommendations made were to improve upon adolescent health seeking behaviors and to increase the healthy life of adolescents.

CHAPTER THREE
METHODOLOGY

INTRODUCTION

This chapter will include a discussion of the methods that were used for this study. More specifically, the chapter includes a discussion of the study site and the design of the research. The remainder of the chapter includes the discussion of the scale development procedures, sampling strategies, data collection techniques and statistical analysis procedures that were used to analyze the data.

3.1 Study Area (Setting)

The study was conducted in the two Senior High Schools in Agogo. These are the Agogo State Senior High and Collins Senior High Schools in the Asante Akyem North District in the Ashanti Region of Ghana. Asante Akim North District Assembly is one of the newly created districts in Ghana. It was carved out of the then Asante Akim North Municipal Assembly in 2012. It was established by LI 2057 and inaugurated on 28th June, 2012. Agogo is the administrative capital of the District. The District shares boundaries with Sekyere Kumawu and Sekyere Afram Plains in the North, Kwahu East in the East, Asante Akim South and Asante Akim Central in the South and Sekyere East in the West. The district is located in the Eastern part of Ashanti Region and lies between latitude 6^0 30' North and 7^0 30' North and longitude 0^0 15' West and 1^0 20' West. It covers a land area of 1,125square.

According to the 2010 population and housing census, the total population of Asante Akim North District is 69,186. This represents 1.4 percent of Ashanti Region's population. The District has five communities assuming urban status using a population of 5000 as a basis. They are Agogo, Domeabra, Juansa, Hwidiem and Wioso. The age distribution in the district shows that, approximately 21.9 percent of the total population is less than 15 years (0-14 years); 71 percent are within the economically active age group (15-64 years), whiles 7.1 percent above 65 years. (Asante Akyem North District Assembly, 2019).

Agogo State Senior High School was established as a private institution in 1963 by Nana Kwakye Tutu. The school is mixed (males and females) institution. The total enrolments of students currently at Agogo State is 3382 (1489 females and 1893 male) students. The school runs the double track High School system and provides facilities for both male and female day and boarders. Collins Senior High School started as a private

commercial school as Collins Commercial College. It was found by Mr. Victor Collins Asabre in 1954. It is also a mixed (male and female) institution with current population of 2649 (1340 females and 1319 male) students, provides facilities for both boarders and day students and running the double track High School System as well.

Study Population and Size

The population chosen to provide answers to research questions in the study is female teenagers in Agogo State Senior High and Collins Senior High Schools. They were studied to get their actual experiences during menstrual pain. The total population of females in both schools is 3046 students.

The Target Population

Post menarche teenage students of Agogo State Senior High and Collins Senior High Schools irrespective of their religion, ethnicity or race.

Sample Size

A purposive simple random sample of consecutive post menarche females in both Agogo State and Collins Senior High School was used. In this way, each student selected had a fair chance of taking part in this study. Post menarche females less than 19years of age were used.

Using a total of 2829 female students, a sample size of 350 was determined using the Yamane formula (1967) with an error 5% and with a 95% Confidence coefficient but a sample size of 100 will be used for the study due to financial reasons.

Using the Yamane formula (1967)

$$n = \frac{N}{1+N\,e^2}$$

Where n= the sample size

N= the size of population

e=Margin of error (MoE) = 5percentage points (0.05)

$$n = \frac{\mathbf{2829}}{\mathbf{1+2829\ (0.05^2)}}$$

= 2829

1+2829 (0.0025) =350.449

=350 respondents

3.2 Research Design

The design of the study was a quantitative cross-sectional study that assessed the prevalence, health seeking behaviors and management methods for menstrual pain among Senior High School teenagers in Agogo. This research design has some advantages such that it is relatively quick and easy to conduct, no problems with drop outs and data on all variables are only collected once. This type of study was chosen because of its suitability for short term investigations and often involves data collection at a specific point in time. Cross-sectional study is relatively easy and inexpensive to carry out and also useful for investigating individuals or groups with the same or similar characteristics. The study does not give much accurate result since the study involves only a representative sample of the entire population under study.

3.3. Data Collection Procedure

I obtained an introductory letter from the Head of Department of Physician Assistantship of the Presbyterian University College, Ghana Faculty of Health and Medical Sciences and was sent to the various schools in order to introduce myself to the institutions for permission to conduct the study and the respondents as well. The relevance of the study was explained to the school's authorities and the respondents and their consents were sought. With regards to this, the respondents views were sought for and corrections of the items was done in other to attain validity and reliability. I improved upon the items in the questionnaire based on the comments of the supervisor.

After the pre-testing, I conveniently administered copies of the questionnaire to the respondents and assisted them to complete them and were collected from them within 15 minutes then thanked the respondents for their cooperation.

3.3.2 Sampling Methods

Purposive and simple random sampling technique were used to select 100 students from both schools. A purposive sampling is a non-probability sample that is selected based on the characteristics of the population. In simple random sampling the sample for the study is randomly chosen. Random picking will be done and selected post menarche teenage students will be included in the research. Purposive sampling is a technique

used for the identification and selection of information- rich cases for the most effective use of limited resources. This involves identifying and selecting individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest.

Simple random sampling is a sampling method used to cull a smaller sample size from a larger population and make generalization about the larger group. It is advantageous because of its ease of use and its accurate representation of the larger population.

3.3.3 Tools for Data Collection

A structured questionnaire with both close-ended and open ended questions was used to collect data or information on respondent's background information, the prevalence, health seeking behaviors and management methods for menstrual pain among high school teenagers. The questionnaires were distributed and collected in unmarked envelopes by the Researcher, with the support of some teachers in the various schools. Those that did not wish to participate were encouraged to return the questionnaire unanswered.

3.4 Methods of Data Analysis

Microsoft Word, Microsoft Excel and Statistical Package for Social Sciences (SPSS) version 20.1 were used for data entry and analysis. Statistical frequency distribution table and percentages were calculated according to variables which were related to the objectives and research questions of the study.

3.5 Validity and Reliability

3.5.1 Validity

The questionnaire was subjected to critical scrutiny and for the researcher to ensure its consistency and appropriateness. It was given to the supervisor to go through and comment with the view of establishing validity. It was also pre-tested. I removed items that were considered irrelevant to the subject under consideration. New ideas and relevant items derived from this exercise were included in the final draft of the instrument.

3.5.2 Reliability

There was pretesting of the questionnaire with 5 respondents from Agogo State and Collins Senior High Schools who had similar characteristics with the respondents to be involved in the main study. The purpose of

(the pilot test) was to determine the extent to which the research questionnaire will be effective in collecting data from the respondents for the actual study.

3.6 Ethical Consideration

In the design of the study, careful considerations were given to ethics. In the questionnaire designed, I ensured that questions are simple and straight forward. As much as possible, permission to conduct the study was obtained from the school authorities. Questions that will stir up emotions were avoided in the questionnaire. Verbal consents were obtained from each student before questionnaires will be administered. Confidentiality and anonymity were maintained throughout the process. The data was collected and processed by the researcher and with the help of my supervisor. Data was stored on a laptop with a password known to the researcher. In addition, no potential respondent was required to provide his or her name. Anonymity ensures that not only will their identity be disclosed, but none of their responses would be linked to them and confidentiality ensured that the researcher safeguards the identities of the subjects and their responses kept from public disclosure.

CHAPTER FOUR
RESULTS AND DISCUSSION

This chapter presents the results of the field work conducted using tables and figures. It details the results using a narrative of the findings and goes on further to make meaning of the results through discussions, comparing, contrasting and linking results to the findings of other researchers on the same subject matter.

4.1 Background Information of Respondents

The study obtained information on the background of the respondents, which included their age group, level of school, religious group, ethnic group and age at menarche. The results are presented in Table 1.

Table 1: Background characteristics of teenage female Senior High School students

Variables	Frequency (n) (n=100)	Percentage (%)
Age group (years)		
10-14	3	3.0
15-19	97	97.0
Total	100	100.0
Level of school		
First year	56	56.0
Second year	21	21.0
Third year	23	23.0
Table 1: Continued		
Religious group		
Christianity	98	98.0
Muslim	2	2.0
Other	0	0.0
Total	100	100.0
Ethnicity		
Akan	84	84.0
Ewe	6	6.0
Ga- Adangbe		

1	1.0	Dagomba	3	3.0	Other	6	6.0
Total	100	100.0					
Menarche							
11 years	10	10.0	12 years	17	17.0	13 years	18
18.0	14 years	26	26.0	15 year	23	23.0	
16 years	5	5.0	Other	1	1.0		

Table 1: Continued

Contraception							
Yes	13	13.0	No	87	87.0		
Total	100	100.0					

The study yielded 97 (97%) of the respondents been in their late teenage years, aged between 15-19 years and 3 (3%) also falling within their early teenage years (10-14 years) as shown in Table 1. The average Senior High School age range in Ghana is between 15-19years and this may account for reasons why there are more late teenage girls in the female High School population than early teen girls.

To find out about the respondents' level/class they are, the study also yielded that more than half, 56 (56%) of respondents were first year students followed by 23(23%) second year students and 21(21%) in their third year respectively.

Ghana is a Christian dominated country and this explains why the study revealed majority 98(98%) of respondents been Christians and only 2(2%) Muslims as shown in Table 1. Akans forming 84(84%) of respondents' ethnicity against 16(16%) non-Akans is also evidenced by the fact that the indigenous people in the study area are Akans. With regards to the age at menarche, it ranged from nine years to sixteen years. Age

fourteen was the highest in the population with 26(26%) followed by 23(23%) age fifteen, 18(18%) age thirteen, 17(17%) age twelve, 10(10%) age twelve, 5(5%) age sixteen and 1(1%) at age nine. This shows there are variations in the onset of menarche from the results. The results is supported by findings from Wasnik *et al.* (2015) which revealed that the age of onset of menarche and patterns of menstrual cycle varies on different factors some of which are genetic and nutritional. The study however found out that, 87(87%) of respondents were not on any form of contraception whilst 13(13%) were using contraceptives.

4.2 Socio-Demographic Information of Respondents' Parents/Guardian

Information on respondents' parents socio-demographic characteristics which included educational background, occupation and monthly income were obtained from the study and presented in Table 2.

Table 2: Socio-demographic characteristics of respondents' parents/guardian

Variables	Frequency (n) (n=100)	Percentage (%)
Educational level of parent		
Illiterate	6	6.0
Primary	12	12.0
JHS/JSS/Middle School	37	37.0
SHS/SSS	34	34
Tertiary	11.0	11.0
Total	100	100.0
Occupation of parent/guardian		
Unemployed	6	6.0
Government worker	15	15.0
Private company	9.0	9.0
Table 2: Continued		
Self-employed	70.0	70.0
Total	100	100.0
Monthly income of parent/guardian		
Less than GH ¢ 690	1	1.0
Less than GH ¢ 2520	2	2.0
Less than GH ¢ 4910	1	1.0
Less than GH ¢ 12700	4	

	4.0	Less than GH ¢ 22600	1
	1.0	No idea	91
	91.0		
Total	100	100.0	

The study disclosed as shown in Table 2 that, there were 94(94%) respondents' parents/guardians having some form of formal education with just 6(6%) been illiterates. Thirty seven percent (37%) of the educated were up to the JHS/JSS level, 34.0% had SHS/SSS education, 12% primary school and 11.0% having tertiary education.

In order to know the various forms of works respondents parents/guardians were doing, they were asked about their parents/guardians forms of employment. The responds shows that, 94(94%) of them had some form of employment with 70.0% been self-employed including agriculture, 15% Government workers, 9.0% private company workers and 6% unemployed. This shows that there is very less unemployment rate.

The study also found out that, only 4(4%) of respondents knew their parents/guardians monthly income against 91(91%) of the respondents who had no idea on the income level of their parents/guardian. The lowest average monthly salary in Ghana is GH¢ 690 and the highest average is GH¢ 22,600.

4.3 Prevalence of Menstrual Pain

Table three presents information on the characteristics of dysmenorrhea among the respondents. These characteristics includes the prevalence, rate of pain, frequency of pain, onset of pain, family history, the number of pads they use per day during menstruation, menstrual cycle length, type of pad used and associated symptoms.

Table 3: Characteristics of dysmenorrhea among teenage female Senior High School students

Variables	Frequency (n) (n=100)	Percentage (%)
Prevalence		
Yes	86	86.0
No	14	14.0
Total	100	100.0

Rate of pain

No pains 14 14.0 Mild pains 21 21.0 Moderate pains 25 25.0 Severe pains 40 40.0 Total 100 100.0

Table 3: Continued

Frequency of pain

Occasionally 10 10.0 Most of the time 35 35.0 Always 41 41.0 No dysmenorrhea 14 14.0

Onset of pain

Three days before menstruation 10 10.0 Two days before menstruation 9 9.0 A days before menstruation 24 24.0 With flow 18 18.0 At beginning of menstrual flow 25 25.0 No dysmenorrhea 14 14.0 Total 100 100.0

Family history

No 33 33.0 Positive 67 67.0 Total 100 100.0

Pads per day

One 5 5.0 Two 49 49.0

Table 3: Continued

More than 2 46 46.0 Total 100 100.0

Cycle length

2 days 1 1.0 3 days 5 5.0 4 days

9	9.0	5 days	37
	37.0		
6 days	19	19.0	
7 days	29	29.0	
Type of pad			
Disposable pad	80	80.0	
Reusable pad	8	8.0	
Tampons	5	5.0	
Menstrual cup	7	7.0	
Symptoms			
Nausea	6	6.0	
Vomiting	4	4.0	

Table 3: Continued

Depression	15	15.0
Loss of appetite	55	55.0
No symptoms	6	6.0
No dysmenorrhea	14	14.0

Majority, 86% from the sample female Senior High School students experience dysmenorrhea and only 14(14%) did not experience it as shown in Table 3. The results showed that there were very high prevalence of dysmenorrhea among participants. This is similar to other studies Zafar *et al.* (2018); Parker (2006); Parker *et al.* (2010); Unsal *et al.* (2010); Abdelmoty *et al.* (2012); and Beevi *et al.* (2017). Contrary to this study was a finding by Rigon *et al.* (2012) in some Australian teenagers which revealed that, the prevalence of dysmenorrhea was 6.2%. Reasons been that, dysmenorrhea was strictly defined as abdominal pain severe enough to interfere with normal daily activities or which require medications.

The prevalence of dysmenorrhea presents as a serious problem since 40(46.5%) of respondents with dysmenorrhea indicated that they experience severe pains which is present and incapacitating against 25(29%) moderate pains and 21(24.4%) mild pains and this may have great impacts on their daily activities as mentioned by Amu and Bamidele (2014) stating that these are common causes of morbidity among teenagers.

Then again, 41% experienced dysmenorrhea all the time, 35% also had it present most of the time and 10% experienced it occasionally. Those that revealed onset of pain was before menstruation accounted for 43% equally as those that experienced with and after flow. Unsal *et al.* (2010) found out that genetic factors may account for some of the factors related to the disorder. However 67% of the entire respondents had a positive family history of dysmenorrhea against 33% who had no positive family history. Approximately 67(77.9%) of those who experience dysmenorrhea had a positive family history of dysmenorrhea. This results indicates that, a positive family history of dysmenorrhea predisposes a female's chance of acquiring it as well.

Responders were also asked the number of pads they used in a day during menstruation, 49(49%) of them used two pads per day, 46(46%) used more than two pads and 5(5%) used one pad per day. Majority, 85(85%) had their cycles duration within 2-4days against 15(15%) who had theirs 5-7 days. This is reported normal with different studies.

The study participants were asked the type of pads used during menstruation so as to assess if that can predispose them complications, the study found out that, 80(80%) used disposable pads, 8(8%) used reusable pads, 7(7%) used menstrual cups and 5(5%) used tampons. There were no unusual non-hygienic forms of pads used during menstruation which could predispose them to acquiring infections and menstrual related morbidities.

Then again, when asked about symptoms associated with dysmenorrhea, more than half 55(63.9%) ticked that they experience loss of appetite, 15(17.4%) depression, 10(11.6%) nausea and vomiting and 6(6.97%) had no associated symptoms.

4.4 Health Seeking Behaviors for Menstrual Pain

The study obtained information on the health seeking behaviors of respondents which included their first point of contact when they experience dysmenorrhea, if they visit the hospital when in pain and factors that may prevent them from seeking health advice or help.

Table 4: Characteristics in terms of health seeking behaviors for dysmenorrhea among teenage female Senior High School students

Variable	Frequency (n) (n=100)	Percentage (%)
First point of contact		
Mother	74	74.0
School nurse	2	2.0
Friends	3	3.0
Hospital	3	3.0
Other	4	4.0
No dysmenorrhea	14	14.0
Hospital visit		
Yes	10	10.0
No	76	76.0
No dysmenorrhea	14	14.0
Total	100	100.0
Preventive factors		
Stigma	4	4.0
Table 4: Continued		
Fear of been tagged as a bad girl	15	15.0
Shyness	23	23.0
No knowledge on available services	12	12.0
Provider bias	4	4.0
Low self-esteem	6	6.0
No money	18	18.0
Other	4	4.0
No dysmenorrhea	14	14.0

The study further examined the health seeking behaviors of participants experiencing dysmenorrhea as shown in Table 4. In terms of first point of contact when they experience dysmenorrhea, 74(86 %) of them indicated their mothers with various reasons such as having more experiences and how close they are to them. 4(4.7%)also chose other unspecified first points of contacts while hospital and friends accounted for 3(3.5%) each and 2(2.3%) choosing school nurse. Reasons for choosing friends were how close they are to them. Having more knowledge about the condition were the reasons why people chose hospital and school nurse. This shows there is generally poor health seeking behaviors among female high school teenagers with respect to hospitals/clinics. Similar to the outcomes of this study, mothers were the most important persons girls sought to for help regarding menstruation followed by peers and school nurse. An overwhelming 76(88.4%) of participants who experience dysmenorrhea reported not to have ever visited he hospital for help against 10(11.6%) who has visited the hospital to seek help. Contrary to this outcomes are studies from Rahatgaokar *et al.* (2018) who reported that, 26.7% girls with dysmenorrhea took medical advice. Another study by Esmaeilzadeh, Ashrafi, Sharzadi and Mustafi (2018) also found out that, 43% of girls reported to clinic voluntarily to seek for help. This shows there are generally extremely varying percentages on the seeking of medical advice at hospitals/ clinics which may be due variations in study settings and population. Research from Australia found that, adolescents who had lower self-concept consistently sought for help while in other settings, adolescents with lower self-esteem may be less likely to seek for help (Boules and Fallon, 1996). On the other hand, when assessed for factors which may prevent them from health seeking, majority of respondents 23% said shyness. 18% no money, 15% fear of been tagged as a bad girl. However no knowledge on available services, low self-esteem also accounted for 12% and 6% each while stigma, provider bias and others accounted for 4% each. This shows that individual factors forms much of the reasons preventing respondents from seeking help.

4.5 Management of Menstrual Pain

Respondents were asked about how they manage their menstrual pains. Management was based on the methods they used, its effectiveness, affected activities and if they practice any dietary restrictions. Results are presented in Table 5.

Table 5: Various Management methods, its effectiveness, associated affected activities and dietary restrictions for study participants experiencing dysmenorrhea

Variable	Frequency (n) (n=100)	Percentage (%)
Methods		
Ibuprofen	6	6.0
Paracetamol	39	39.0
Herbal preparations	12	12.0
Hot pads on your abdomen	12	12.0
Change in posture	3	3.0
Other	14	14.0
No dysmenorrhea	14	14.0
Total	100	100.0
Effectiveness		
No	22	22.0
All the time	7	7.0
Most times	7	7.0
Sometimes	50	50.0
No dysmenorrhea	14	14.0
Table 5: Continued		
Total	100	100.0
Affected activities		
Class attendance	20	20.0
Class performance	9	9.0
Social performance	8	8.0
Psychological health	10	10.0
Sleep	38	38.0
None	1	1.0
No dysmenorrhea	14	14.0
Total	100	100.0
Dietary restrictions		

Yes	44	44.0
No	42	42.0
No dysmenorrhea	14	14.0
Total	100	100.0

With regards to management methods for menstrual pain, there were widespread use of paracetamol for the management of mild to moderate dysmenorrhea. It accounted for 39(45.3 %) followed by 14(16.2%) unspecified others, herbal preparations and putting hot pads on abdomen both accounted for 12(14%) each, ibuprofen and change in posture were the least methods used with 6(7%) and 3(3.5%) as shown in Table 5. Pharmacologic methods of the management were 45(52.3%) and non-pharmacologic 27(31.4%) and others were 14(16.3%). This is in agreement with Abdelmoty *et al.* (2015) studying the various management methods of dysmenorrhea in teenage girls also found that 46% of the methods were pharmacologic and 24.4% non-pharmacologic and 8.9% others. It also showed that Non-Steroidal Anti Inflammatory Drugs (NSAIDS) and paracetamol were the most used pharmacologic medications while hot pads on abdomen, rest and herbal preparations were the least used. This shows that there is big problem among the female teenagers with self-medications. Failure rates with persistent use of these may be as a result of underlying conditions which could be identified by a health professional in a clinic or hospital.

The study revealed that, of all the respondents who took various management methods, only 7(8.1%) indicated full effectiveness of their methods, 57(66.3%) reported to have some form of relief, 22(25.6%) had no relief at all. This also shows poor effective management methods used by respondents which could increase dysmenorrhea related morbidities. The study also revealed that, some activities that could be affected when they are having dysmenorrhea were academic class and social activities. These accounted for 37(43%) of participants followed by psychological 10(11.6%), sleep 38(44.2%) and only one person (1.2%) who indicated no activities of hers were affected.

The study further revealed that, some activities that could be affected when they are having dysmenorrhea were class and social activities of some respondents experiencing dysmenorrhea which were 37(43%) against psychological 10(11.6%), sleep 38(44.2%) and only one person (1.2%) reported that no activities of hers were affected. This is not in agreement with a study in Ghana by Nwanko, Aniebue and Aniebue (2010) who found

out dysmenorrhea was responsible for greatest number of school absenteeism. This means that teenage female girls experiencing dysmenorrhea are most likely to have poor academic and social involvement during their periods.

About 44(51.2%) do some dietary restrictions while 42(48.8%) had no dietary restrictions when they experience dysmenorrhea. Grandi *et al.* (2012) found out that, 32.8% of their respondents had some form of dietary restrictions which is almost similar to this studies. This means that diet might play some significant roles in the worsening and relieving of pains with individual differences.

4.6 Measures to Improve Health Seeking Behaviors

The study obtained information on the measures to improve respondents' health seeking behaviors and results are presented in Table 6.

Table 6: Displays the measures to improve health seeking behaviors by respondents

Variables	Frequency (n) (n=100)	Percentage (%)
Measures		
Health education	62	62.0
Easily accessible health services	9	9.0
Presence of a school nurse	19	19.0
Table 6: Continued		
Improving self-confidence	8	8.0
Other	2	2.0
Total	100	100.0

Despite the fact that more than half 62(62%) of respondents recognized health education as a measure to improve the health seeking behaviors of female teenagers, 19 (19%) believed the presence of a school nurse , 9(9%) believed easily accessible health services and 8(8%) improving self-confidence and 2 (2%) choosing other unspecified method to improve health seeking behaviors. However few people chose more than one

answers as various measures to improve their health seeking behaviors. This means that, improving this methods will positively affect the health seeking behaviors of female teenage Senior High School students.

4.7 Relationship between Various Variables Using the Pearson Value (P-Value)

4.71 Relationship between the demographic characteristics of responds and prevalence of dysmenorrhea

The table below displays information from the study on the relationship between demographic characteristics of female High School teenagers such as age group, year of school, religious group, ethnicity, menarche and contraceptive use and the prevalence of dysmenorrhea with their Pearson (P-value).

Table 7: Relationship between the demographic characteristics of female High School teenagers and the prevalence of dysmenorrhea

Variable X **Prevalence of dysmenorrhea**	**P-value**
Age group	0.071
Year	0.161
Religion	0.148
Ethnicity	-0.055
Menarche	0.123
Contraceptive use	0.156

‘‘X’’ = association/relationship

The study examined association of study participant’s background characteristics with prevalence of dysmenorrhea. Analysis from the chi-square test reveals that there is no statistically significant relationship between the age group of female High School teenagers (p=0.071) and the prevalence of dysmenorrhea supported by studies from Unsal *et al.* (2010) who also did not find any correlation between age groups and the prevalence of dysmenorrhea. Likewise there was no correlation between level (p=0.161), religion (p=0.148), menarche (p=0.123), contraceptive use (p=0.156) and the prevalence of dysmenorrhea. However there was negative correlation between ethnicity (p= -0.055) and the prevalence of dysmenorrhea meaning there is inverse relationship between the two variables. Inference be made that the level of significance was set value of p>0.05.

4.72 Relationship between respondents' demographic characteristics and health seeking behaviors

Table eight shows information from the study on the relationship between the demographic characteristics of female High School teenagers and their health seeking behaviors with their Pearson (P-value)

Table 8: Relationship between the demographic characteristics of female High School teenagers and their health seeking behaviors

Variables	X	health seeking behaviors	**P-value**
Age group			-0.070
Year			0.143
Menarche			-0.007
Contraceptive use			0.156

''X'' = association/relationship

There was no statistically significant correlation between the level of respondents and their health seeking behaviors (p=0.433). However there were negative correlations between age (p= -0.070), menarche (p= -0.007) and their health seeking behaviors. This means that the variables are inversely dependent on each other.

4.73 Relationship between characteristics of female High School teenagers and management methods for dysmenorrhea

Table nine shows information from the study on the relationship between characteristics of female High School teenagers such as their age group, year of school and menarche and management methods for dysmenorrhea with their Pearson (P-value)

Table 9: Relationship between characteristics of female High School teenagers and management methods for dysmenorrhea

Variables	X	management methods	**P-value**
Age group			0.083
Year			0.091
Menarche			0.030

''X'' = association/relationship p= Pearson value

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In addition to, there were no significant relationship between age (p= 0.083), level (p= 0.091) and management of dysmenorrhea. Meanwhile contraceptive use showed a negative correlation p= -0.293. However, there was a significant relationship between menarche and management with p = 0.03.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The purpose of the study was to determine the prevalence, health seeking behaviors and management methods for menstrual pain among female Senior High School teenagers in Agogo. The study was a cross sectional study with quantitative approach using purposive simple random technique to obtain 100 selected post menarche female Senior High School teenagers out from 3046. From the study, the prevalence of dysmenorrhea was 86(86%) and those without dysmenorrhea accounted for 14(14%).

With regards to health seeking behaviors for menstrual pains, 74(86 %) of those that experience dysmenorrhea selected their mothers as their first point of contact to seek help from. 4(4.7%) also chose other unspecified first points of contacts while hospital and friends accounted for 3(3.5%) each and 2(2.3%) choosing school nurse.

For management methods for menstrual pain, there were widespread use of paracetamol for the management for the management of mild to moderate dysmenorrhea. It accounted for 39(45.3 %) followed by 14(16.2%) unspecified others, herbal preparations and putting hot pads on abdomen both accounted for 12(14%) each, ibuprofen and change in posture were the least methods used with 6(7%) and 3(3.5%).

62(62%) of respondents recognized health education as a measure to improve the health seeking behaviors of female teenagers, 19 (19%) believed the presence of a school nurse , 9(9%) believed easily accessible health services , 8(8%) improving self-confidence and 2 (2%) choosing other unspecified measures to improve health seeking behaviors.

Bivariate analysis yielded no statistically significant relationship between the age group of female High School teenagers ($p=0.071$, with level of significance set at $P>0.05$), level ($p=0.161$ set point at $P>0.05$), religion ($p=0.148$, set point at $P>0.05$), menarche ($p=0.123$, set point at $P>0.05$), contraceptive use ($p=0.156$, set point at $P>0.05$) and the prevalence of dysmenorrhea. However there was negative correlation between ethnicity ($p= -0.055$ set point at $P>0.05$) and the prevalence of dysmenorrhea.

The level of participants also yielded no statistically significant correlation (p=0.433 set point at P>0.05) with their health seeking behaviors. However there were negative correlations between age (p= -0.070 set point at P>0.05), menarche (p= -0.007, set point at P>0.05) and their health seeking behaviors. There was no affirmative correlation between age (p= 0.083, set point at P>0.05) neither was their level (p= 0.091) and management of dysmenorrhea. The use of contraceptives showed a negative correlation (p= -0.293, set point at P>0.05). However, there was a significant relationship between menarche (p=0.03, set point at P>0.05) and management of dysmenorrhea.

5.2 Conclusions

Post menarche female Senior High School teenagers sampled had high prevalence of dysmenorrhea with poor effective management methods and poor health seeking behaviors. This means that there is high dysmenorrhea related morbidities among female high school students who experience dysmenorrhea. Health education, easily accessible health services and high self-esteem can help improve the health seeking behaviors and management methods of dysmenorrhea among female Senior High School teenagers.

In the study, participants had very high prevalence rate for dysmenorrhea with more than half of them having positive family history of dysmenorrhea.

Along with this, they had generally poor health seeking behaviors. More than two-thirds of participants had never sought for medical help from a health professional in any clinic or hospital.

Almost half of participants used pharmacologic methods in treating their dysmenorrhea and less than one-third used non-pharmacologic methods. However both methods were not most effective in managing their pain most of the time.

Participants believed health education, presence of a school nurse and easily accessible health services are important measures that will improve their health seeking behaviors when they experience dysmenorrhea.

5.3 Recommendations

There should be increased efforts to provide regular, annual health education on menstrual and adolescent health for all female students in their various Senior High Schools.

There should be easily accessible health services for all female adolescents experiencing dysmenorrhea irrespective of status or age.

School authorities should be involved in helping adolescents experiencing dysmenorrhea.

Further research should be made into how various Senior High School authorities respond to female students experiencing dysmenorrhea.

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APPENDICES

APPENDIX A (Research questionnaire)

QUESRTIONNAIRE
PRESBYTERIAN UNIVERSITY COLLEGE, GHANA
FACULTY OF HEALTH AND MEDICAL SCIENCES
DEPARTMENT OF PHYSICIAN ASSISTANTSHIP

Dear Respondent,

I am a final year student of the above mentioned institution conducting a study on the topic **''Health Seeking Behaviors and Management Methods for Menstrual Pain among female Senior High School Teenagers in Agogo''**. Findings of this study will help stake holders gain deeper understanding of the phenomenon so as to strategize effectively and will enable me fulfill the academic requirement for the award of the BSc. Physician Assistantship degree.

Participation in this study is voluntary. You are assured of confidentiality of the information provided.
Thank you.

Instructions: **Please tick your choice(s) from the options provided. Also supply in the answer, in the spaces provided, where options are not provided to choose from.**

SECTION A: Socio-Demographic Information of Respondent

1. What is your age?

A.10-14 [ ] b. 15-19 [ ]

2. Which year are you?

a. First year [ ] b. Second year [ ] c. Third year [ ]

3. What is your religion?

a. Christianity [ ] b. Muslim [ ] c. Traditionalist [ ] d. Other (specify)……

4. What is your ethnicity?

a. Akan [ ] b. Ewe [ ] c. Ga-Adangbe [ ] d. Dagomba [ ] e. Other (specify)……..…

5. At what age did you start menstruating?

a. 11 [ ] b. 12 [ ] c. 13 [ ] d. 14[ ] e. 15 [ ] f. 16 [ ] g. Other (specify)……

6. Do you use contraceptives?

a. Yes [ ] b. No [ ]

SECTION B: Demographic information of parents/guardian (either answer for parents or guardian)

1. What is your mother's level of education?

a. Illiterate [ ] b. Primary [ ] c. JHS/ JSS/ MIDDLE SCHOOL/ [ ] d. SHS/ SSS [ ] e. Tertiary [ ]

2. What is your mother's occupation?

a. Unemployed [ ] b. Government worker [ ] c. Private company [ ] d. self-employed [ ]

3. What is your father's level of education?

a. Illiterate [ ] b. Primary [ ] c. JHS/ JSS/ MIDDLE SCHOOL [ ] d. SHS/ SSS [ ] e. Tertiary [ ]

4. What is your father's occupation?

a. Unemployed [ ] b. Government worker [ ] c. Private company [ ] d. Self-employed [ ]

5. What is your guardian's level of education?

a. Illiterate [ ] b. Primary [ ] c. JHS/ JSS/ MIDDLE SCHOOL [ ] d. SHS/ SSS [ ] e. Tertiary [ ]

6. What is your Guardian's occupation?

a. Unemployed [ ] b. Government worker [ ] c. Private company [ ] d. Self-employed [ ]

7. What is the monthly income of your parents or guardian?

a. less than GH¢ 690 [ ] b. less than GH¢ 2520 [ ] c. less than GH¢ 4910 [ ] d. less than GH¢ 12700 [ ]

e. less than GH¢ 22600 [ ] f. No idea [ ]

SECTION C: Prevalence of Menstrual Disorders

1. Have you ever experience menstrual pain?

a. Yes [ ] b. No [ ]

2. If Yes, how is the pain like?

a. Mild Pains (present but not incapacitating and does not necessitate treatment) [ ]

b. Moderate Pains (present but not incapacitating, however, requires treatment) [ ]

c. Severe Pains (present and incapacitating) [ ]

3. How often do you experience the pain?

a. Never [ ] b. Occasionally [ ] c. Most of the time [ ] d. Always [ ]

4. What is the onset of the pain?

a. Three days before menstruation [ ]

b. Two days before menstruation [ ]

c. A day before menstruation [ ]

d. With flow [ ]

e. At beginning of menstrual flow [ ]

5. Does anyone from your family experience menstrual pain?

a. No [ ] b. Mother [ ] c. Sister [ ] d. Other family members [ ]

6. How many pads do you use in a day during menstruation?

a. 1 [ ] b. 2 [ ] c more than 2 [ ]

7. How many days does the menses last?

a. 2days [ ] b. 3 days [ ] c. 4 days [ ] d. 5 days [ ] e. 6 days [ ] f. 7 days [ ] g. Other (specify)…….

8. What type of pad do you use during menstruation?

a. Disposable pad [ ] b. Reusable pad [ ] c. Tampons [ ] c. Menstrual cup [ ] d. Other (specify)……

9. Associated symptoms with menstrual pains

a. nausea [ ] b. vomiting [ ] c. depression [ ] d. loss of appetite [ ] e. Other (specify) [ ]

SECTION D: Help Seeking Behaviors for menstrual pain

1. Who is your first point of contact to seek help for menstrual pain? and why?

a. Mother [ ] why?.....

b. School nurse [ ] why?.....

c. Friends [ ] why?.....

d. Hospital [ ] why?.....

e. Teacher [ ] why?.....

f. Other (specify)…….. why?.....

2. Have you ever visited the hospital to seek help for menstrual pain?

a. Yes [ ] b. No [ ]

3. Which of these factors will prevent you from seeking help? (choose as many as you want)

a. Stigma [ ] b. Fear of been tagged as a bad girl [ ]

c. Shyness [ ] d. No knowledge on availability of services [ ]

e. Provider bias [ ] e. Low self-esteem [ ]

f. No money [ ] g. Others (specify)……

SECTION E: Management Methods for Menstrual Pains (choose as many as you want)

1. Which of these do you use for management of menstrual pain?

a. Ibuprofen [ ]

b. Buscopan [ ]

c. Paracetamol [ ]

d. Herbal preparations [ ]

e. Hot pads on your abdomen [ ]

f. Change in posture [ ]

f. Others (specify)…….

2. Are the methods effective?

a. No [ ] b. All the time [ ] c. Most times [ ] d. Sometimes [ ]

3. Which of these activities are affected when you experience menstrual pain?

a. Class attendance [ ] b. Class performance [ ] c. Social performance [ ]

d. Psychological health [ ] e. Sleep [ ]

4. Do you do dietary restrictions on certain foods? a. Yes [ ] b. No [ ]

SECTION F: Measures to improve health seeking behaviors of teenagers. (Choose as many as you want)

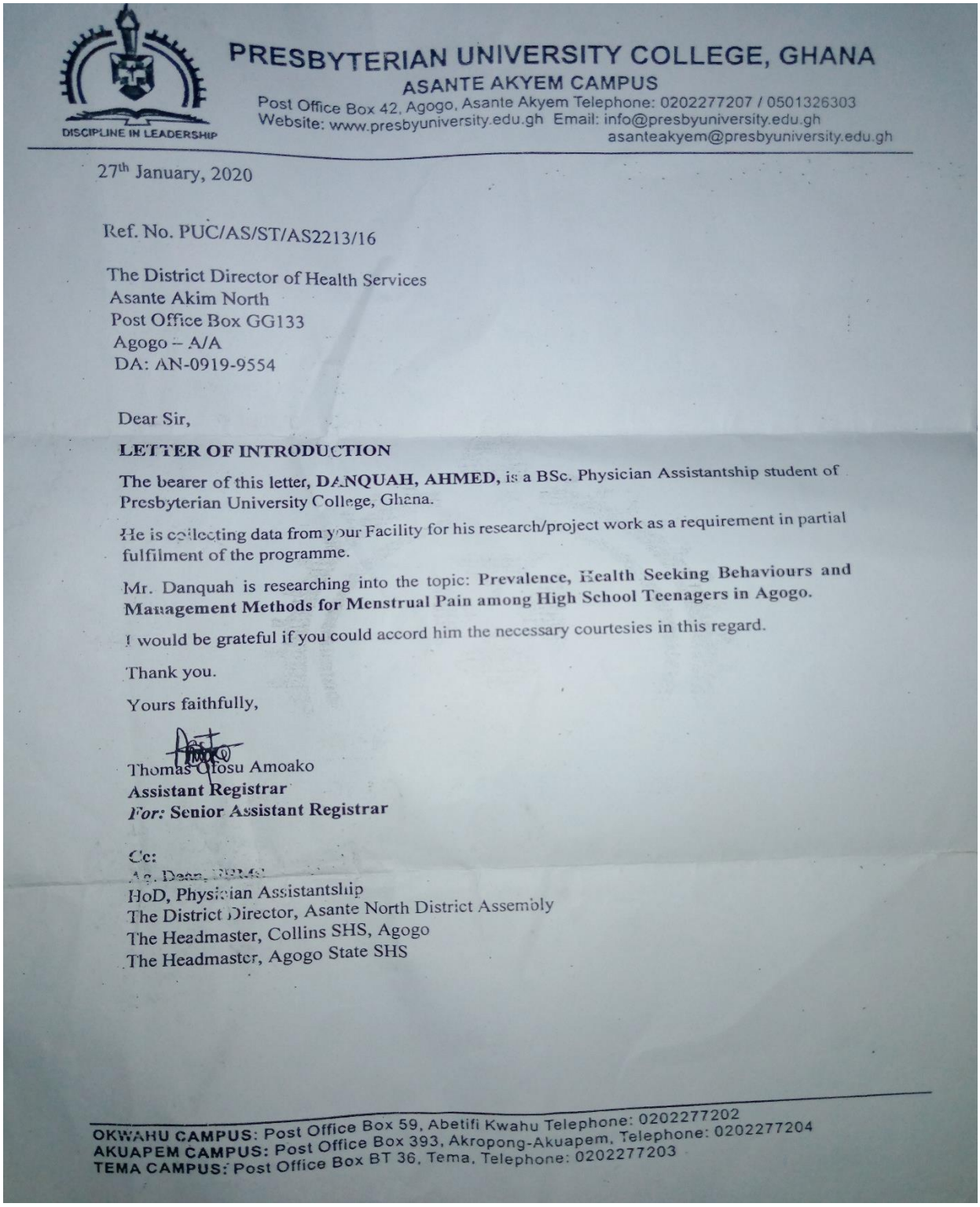
1. How can students be helped when they experience menstrual pain?

a. Health education [ ] b. Easily accessible health services [ ]

c. Presence of a school nurse [ ] d. Improving self-confidence [ ]

e. Other (specify)…….

APPENDIX B (Introductory letter)



PRESBYTERIAN UNIVERSITY COLLEGE, GHANA
ASANTE AKYEM CAMPUS
Post Office Box 42, Agogo, Asante Akyem Telephone: 0202277207 / 0501326303
Website: www.presbyuniversity.edu.gh Email: info@presbyuniversity.edu.gh
asanteakyem@presbyuniversity.edu.gh
DISCIPLINE IN LEADERSHIP

27th January, 2020

Ref. No. PUC/AS/ST/AS2213/16

The District Director of Health Services
Asante Akim North
Post Office Box GG133
Agogo – A/A
DA: AN-0919-9554

Dear Sir,

LETTER OF INTRODUCTION

The bearer of this letter, **DANQUAH, AHMED,** is a BSc. Physician Assistantship student of Presbyterian University College, Ghana.

He is collecting data from your Facility for his research/project work as a requirement in partial fulfilment of the programme.

Mr. Danquah is researching into the topic: **Prevalence, Health Seeking Behaviours and Management Methods for Menstrual Pain among High School Teenagers in Agogo.**

I would be grateful if you could accord him the necessary courtesies in this regard.

Thank you.

Yours faithfully,

Thomas Ofosu Amoako
Assistant Registrar
***For:* Senior Assistant Registrar**

Cc:
Ag. Dean, [illegible]
HoD, Physician Assistantship
The District Director, Asante North District Assembly
The Headmaster, Collins SHS, Agogo
The Headmaster, Agogo State SHS

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