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Effects of Menstruation on Class Attendance among Girls in Public Secondary Schools in Kieni East Sub County, Nyeri County, Kenya

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Abstract:

The purpose of the study was to establish effects of menstruation on class attendance among girls in public secondary schools in Kieni East Sub County, Nyeri County, Kenya. The study was hinged on the Social Learning Theory advanced by Albert Bandura. The study used descriptive survey research design. It targeted students, class teachers and HoD (Guidance and Counseling). Stratified random sampling technique was used to select the respondents. Questionnaires and interview guides were used to collect data. The study found out that on average, a girl loses 11 lessons per month due to physiological effects related to menstruation. School factors related to menstruation and school attendance, the adequacy of toilet facilities for all the girls, location of toilets near the tuition area to make them more accessible to girls and toilet facilities providing adequate privacy to girls using them, were found to be important in influencing class attendance among the girls undergoing menstruation. Based on the findings, the study recommends that the schools make toilet facilities more adequate and appropriate for use and also provide adequate sanitary materials.

Keywords: Menstruation, physiological factors, class absenteeism, school factors

1. Introduction

In 2003, the UN Secretary General, Kofi Annan, stated that 'there is no tool for development more effective than the education of girls. No other policy is as likely to raise economic productivity, lower infant and maternal mortality, improve nutrition and promote health' (UNICEF, 2008: 45). Other key benefits associated with girls' education include protection against early pregnancy and other sexual/reproductive harms including HIV/AIDS (Mason, Fernandes, 2010). Girls in sub-Saharan Africa (SSA) bear a disproportionately high burden of such harms (Mason, Fernandes, 2010) and although girls' school enrolment ratios in the region have increased in recent years, large gender inequality gaps in primary education remain (UN, 2012). Gender gaps are even more pronounced in secondary education (Sommer, 2010; Malusu&Zani, 2014). This may be attributed to the unique factors that confront girls that do not apply to boys.

Menstruation, also known as a period or monthly, is the regular discharge of blood and mucosal tissue from the inner lining of the uterus. The first period usually begins between twelve and fifteen years of age, a point in time known as menarche (Biggs, 2011). However, periods may occasionally start as young as eight years old and still be considered normal. The typical length of time between the first day of one period and the first day of the next is 21 to 45 days in young women, and 21 to 31 days in adults (an average of 28 days). Bleeding usually lasts around 2 to 7 days (Kristin, 2013).

Chronic absenteeism, truancy and academic failure may be evidence of a dysfunctional relationship between factors outside school, within the school or within the students themselves. This argument is supported by research that highlights significant associations between students

background, poor class attendance, and early school leaving (Bryk&Thum, 1989). One of such factors that affect class attendance among girls is girl's menstruation.

Menstruation is unique to females and is part of the female reproductive cycle that starts at puberty (Adhikari, et al., 2007). Even though menstruation is a natural process, it is linked to several misconceptions and malpractices which may result in adverse health and social outcomes. Poor hygiene during menstruation has been associated with serious ill-health, including reproductive tract and urinary tract infections (Prateek&Saurabh et al., 2011). During menstruation, girls experience different feelings including fear, shame and guilt because of lack of prior information about menstruation (Oche et al., 2012).

A study done among Nigerian secondary school girls revealed that adolescent girls gave different meanings to menstruation and perceived it as a physiological process, as an assurance of fecundity, and as a release of 'bad blood' (Adinma et al., 2008). In another study, it was viewed as an event that happens to girls during puberty occurring monthly where the body gets rid of spoiled blood. However, girls who had information about menstruation before menarche had a positive attitude towards the process (Abeer et al., 2012).

According to estimates of the United Nations Children's Fund (UNICEF, 2008), about one in ten school-age African girl did not attend school during menstruation or dropped out at puberty due to lack of cleanliness and separate toilet facilities for female students at schools (Mc Mahon, et al.,2014). A study done in Kenya showed that the girls had faced difficulty to manage their menstrual periods at school due to lack of adequate privacy and sanitary facilities. In some schools which did not have waste disposal facilities, girls were obliged to carry soiled absorbents back home. As a result, girls preferred to stay at home during their menstruation period (McMahon. et al., 2014).

There are physiological and symptomatic challenges that girls go through during their menstrual cycle, which also hinder their full access to education, as well as, stop them from fully enjoying activities with others. For instance, before the onset of menstruation, adolescent girls can experience tension, depression, tiredness and irritability – Symptoms of Premenstrual Syndrome (PMS), which affect the way adolescent girls relate to other students in school and their teachers (Dalton, 1979). This may discourage girls from attending school or miss some lessons as they nurse the feelings.

Menarche poses a unique challenge to schooling, particularly as more girls remain in school at ages beyond the onset of puberty. The “girl unfriendly” school environment as it relates to menstrual-hygiene management has been described as one in which there are a number of dissatisfactory components for successful (or comfortable) menstruation management (Sommer& Kirk, 2008). The study sought to find out the extent to which menstruation related challenges influence class attendance among the girl students in Kieni East Sub County.

UNICEF and other international agencies have attempted to address these issues through campaigns to build and improve school toilet facilities in many less developed countries (Birdthistle, Dickson, Freeman &Javidi, 2011). Most of these projects, however, have not been embedded within randomized studies and the evidence base remains very thin as to whether the provision of school toilets has an impact on menstruation-related absenteeism or affects gender differences in school attendance (Birdthistle, Dickson, Freeman &Javidi, 2011).

In Kenya, menstruation is not only a health concern, but also an educational policy concern and has become a key factor in the country's bid to achieve the Sustainable Development Goal (SDG) in Kenya (Daily Nation, September 14, 2016) of eliminating gender disparity in primary and secondary education by 2030. For most girls in Kenya and other parts of the continent, this phase often brings challenges that push girls out of school and social activities. These challenges have often been underplayed, even though research has shown that their effects are significant. For example, menstruation causes Kenyan adolescent girls to lose an average of 3.5 million learning days per month (Muvea, 2011).

Focusing more on the dynamic in the school space, the Federation of African Women Educationists (FAWE) discovered that lack of a conducive school environment was a leading cause of the low retention of girls in school, with poor sanitation being specifically cited as a leading determinant of whether adolescent girls turn up for class or not. Yet, according to FAWE, girl's education is the most important investment for women in developing countries because of its contribution towards better health for their families, alongside increasing the women's potentials, as well as, lowering fertility rates (FAWE, 2006).

The possible interference with academic school attendance at the menstrual and premenstrual phases of the monthly cycle remains potentially problematic. As Herrmann (1984) pointed out, it is likely that female students may impose artificial barriers on their school attendance levels on the assumption that their intellectual functioning is regularly disrupted by menstrual cycle factors. This is because girls who are unable to cope with the challenges of menstrual management end up losing study time and this adversely affect their academic performance.

Girls, unlike boys are absent from schools more, since in addition to other causes of absenteeism, menstrual challenges lead to school absenteeism. Many factors including menstruation in girls could explain this disparity. This study attributes the disparity in school attendance between girls and boys to challenges related to menstruation. To date no extensive multidimensional study has been undertaken in public secondary schools in Kieni East Sub County, Nyeri County to determine the extent to which menstruation and the issues surrounding it may influence class attendance among the girls and thus the disparity in the performance at KCSE. Consequently, this study sought to assess the impact of menstruation on class attendance among the girls in public secondary schools.

2. Statement of the Problem

Despite the efforts that have been put in place by the government and other interested parties to increase access to education, as well as, reducing disparity between the educational outcomes among boys and girls, disparities in school attendance between boys and girls are being recorded in many places in Kenya.

A lot of research work has gone into finding out the factors that are contributing to the disparity in school attendance. Absenteeism is a major factor contributing to poor academic performance. Among the major causes that make girls absent themselves from school is menstruation. Research on the link between menstruation and class absenteeism is scanty or insufficient to explain the phenomenon, especially in localized settings such as Kieni East. In addition, multifaceted approach to research on the impact of menstruation and class attendance involving community, individual factors, school factors and family factors are lacking. In regard to this, the study sought to assess the impact of menstruation on class attendance among the girls in public secondary schools.

3. Objectives of the Study

The study was guided by the following specific objectives:

- i. To examine the impact of physiological challenges related to menstruation on class attendance among girls in public secondary schools in Kieni East Sub county, Nyeri County.

- ii. To establish the impact of school factors related to girls' menstruation on class attendance among girls in public secondary schools in Kieni East Sub county, Nyeri County.

4. Theoretical and Empirical Review

4.1. Theoretical Review

The study is hinged on the Social Learning Theory. Social learning theory by Albert Bandura posits that learning is a cognitive process that takes place in a social context and can occur purely through observation or direct instruction, even in the absence of motor reproduction or direct reinforcement (Bandura, 1963). In addition to the observation of behaviour, learning also occurs through the experiences of rewards and punishments, a process known as vicarious reinforcement.

According to social learning theory therefore, a person's behaviour is determined by prior learning. This theory states that learning occurs either through association/conditioning, reinforcement or observation/imitation. Social learning theory can be used to explain how attitudes are formed through learning and how people are socialized into certain behaviours. The theory considers the primary agent of socialization to be the family, where a child learns the attitudes, values and actions appropriate to individuals as members of a particular culture. The theory regards the school, peer groups, religious groupings, and mass media as secondary agents of socialization.

On issues surrounding menstruation the social learning theory can be used to explain how behaviour and attitudes, whether positive or negative, come into being. In the same way through its concept of re-socialization, it can be used to elucidate how un-learning of undesired behaviour or sets of attitudes can occur and re-learning of desired behaviour and attitudes takes place. The theory is a good fit to understand the possibilities of changing negative cultural perceptions and resultant behaviour towards matters that surround menstruation not only among adolescents but also the society at large.

4.2. Empirical Review

There are physiological and symptomatic challenges that girls go through during their menstrual cycle, which also hinder their full access to education, as well as, stop them from fully enjoying activities with others. For instance, before the onset of menstruation, adolescent girls can experience tension, depression, tiredness and irritability. These are symptoms of Premenstrual Syndrome (PMS), which affect the way adolescent girls relate to other students in school and their teachers (Dalton, 1979). The physiological factors experienced by the girls during this period may discourage girls from attending school until the physical symptomatic challenges subside. At times, the girls attend school but shy off from attending lessons as they nurse the feelings.

The hormonal changes in the bodies of adolescent girls cause sudden mood swings as well. Physically, the retention of fluids in the body tissues can cause swelling around the ankles in some girls, as well as, backaches. If fluids are retained in the stomach region, it can result in bloating (Dalton, 1979). Sharma, Malhorta, Teneja and Saha (2010) argue that, at the onset of menstruation, females between the ages of 15 and 25 can experience dysmenorrhea, which features as the commonest problem among adolescent girls and often results in prolonged bed rest and girls missing both classes and other social activities. Meanwhile, UNESCO (2008) estimates that 1 in 10 African adolescent girls miss school during menstruation and eventually drop out because of menstruation-related issues, such as the inaccessibility of affordable sanitary towels (Bharadwaj, Sowmya & Archana, 2004). A number of researchers and policy-makers have argued on the importance of menstruation in limiting school attendance and attainment (World Bank, 2005). According to the World Bank, if a girl misses four days of school every four weeks due to her period, she will miss 10 to 20 percent of her school days (Tjon a Ten, 2007).

School facilities may influence the regular attendance of female students during their menstrual periods. Although insufficient country specific data still exists, a range of non-governmental organizations (NGOs), local African women's organizations, United Nations entities such as UNICEF, and a growing number of academic researchers, have analyzed and explicated what makes a school environment girl unfriendly or problematic (El-Gilany, Badawi & El-Fedawy, 2005).

The problematic components include: First, school environments where there is a complete lack of latrines or where available latrines are inadequate in terms of their number, their quality, their design, their nearness to boys' latrines, the safety of their location, and the privacy they provide, including locks on the inside of latrine doors. Secondly, some school environments lack or have insufficient water, and in some cases, water sources are located at a distance from sanitation facilities. Thirdly some school environments lack adequate disposal mechanisms for used sanitary materials, including a lack of dustbins inside the latrine/toilet. Fourthly, a school environment that is either predominantly male teaching staff and administration, and hence less attuned to the needs of menstruating girls or an environment that has both male and female teachers, but who are not sensitized to the needs of menstruating girls (Oster, 2010).

UNICEF and other international agencies have attempted to address these issues through campaigns to build and improve school toilet facilities in many less developed countries (Birdthistle et al., 2011). Most of these projects, however, have not been embedded within randomized studies and the evidence base remains very thin as to whether the provision of school toilets has an impact on menstruation-related absenteeism or affects gender differences in school attendance (Birdthistle et al., 2011). In a study on sanitation facilities and its implications on the girl child's participation in public primary education in Thika Municipality by Ogeta, Wesonga & Mumbi (2011), it was established that public primary schools were facing many challenges related to provision of sanitation facilities for the girl child. The schools did not have adequate toilets, with all the schools not fulfilling the Ministry of Education recommended toilets ratio of 1:25 for girls. In addition to this, toilets in most of the schools were poorly maintained, with flush toilets having broken cisterns. There were also inadequacies of toilet papers, sanitary pads and soap. Coping mechanisms used in some of the schools were

hazardous, whereby some schools indicated that children answer the call of nature in bushes, which could expose them to diseases such as diarrhea, cholera and worm infections. There were cases of girls dropping out of school or missing classes due to poor sanitation facilities in schools. These findings were important to this study as there was need to confirm whether these findings are replicated in Kieni East Sub County and to further establish the effect of the sanitation challenges on the girl's education.

This section proposes a conceptual framework within which the menstruation related factors affecting class attendance are treated in this work. In this case, the extent of achievement of the independent variables, that is; physiological factors, social cultural factors, social economic factors and school factors influences the dependent variable which is class attendance among female students in secondary schools in Kieni East Sub County. The interaction between the variables exists against a backdrop of intervening variables that were beyond the scope of the present study such as school rules, government policy, staffing and administration in the schools and discipline status of the students. Figure 2.1 displays the conceptual framework developed for the study.

5. Conceptual Framework

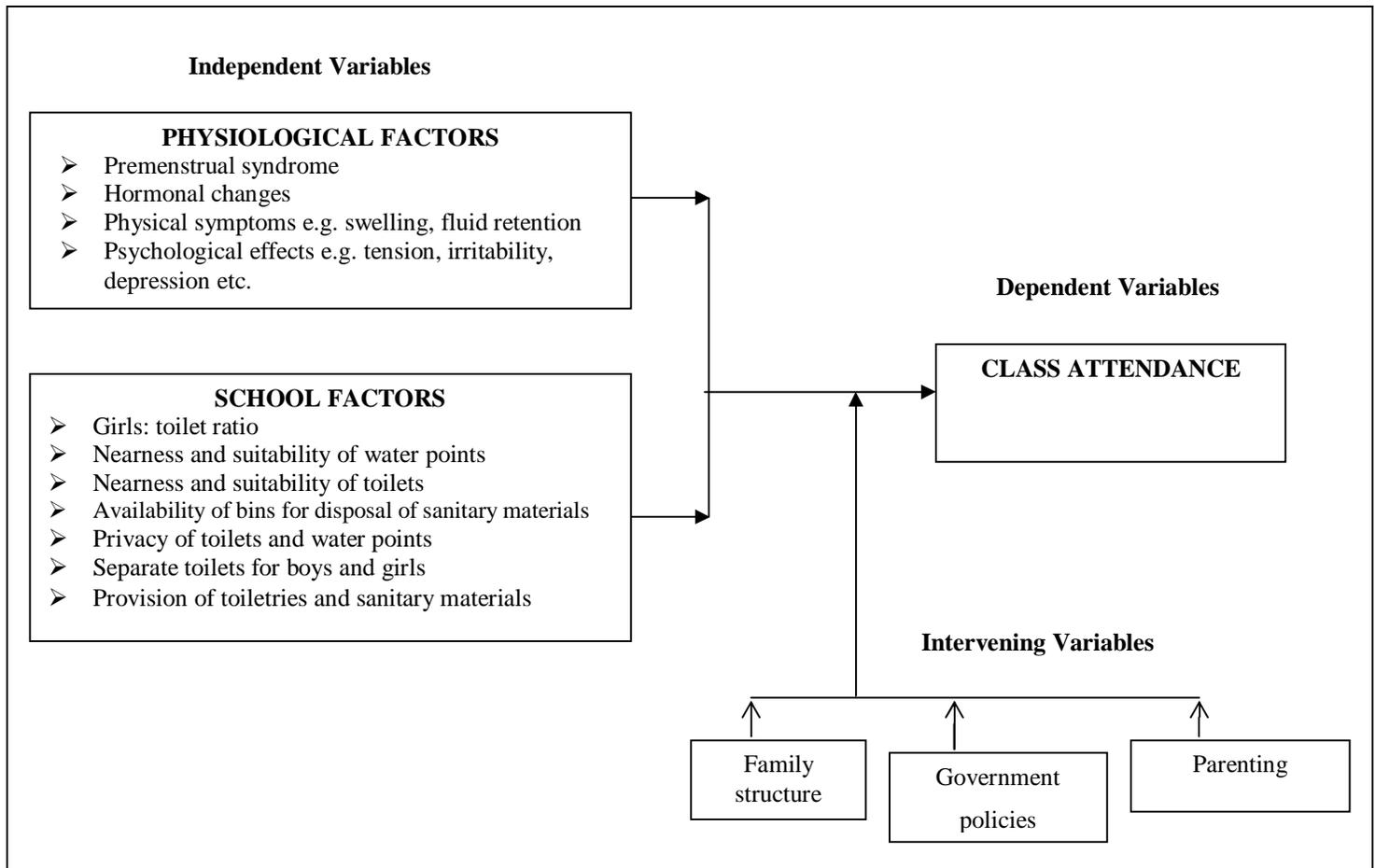


Figure 1: Conceptual Framework on the Variables in the Study

6. Materials and Methods

6.1. Location of the Study

The study was carried out in the secondary schools in Kieni East Sub county, Nyeri County. Kieni East Sub county is one of the six sub counties that make up Nyeri County. It is about 25Km from Nyeri town which is the County Headquarters and about 180Km from Nairobi, The Capital city of Kenya.

6.2. Research Design

This study adopted a descriptive survey research design. The design enabled the researcher to explain the existing status of the independent and dependent variables using in-depth empirical data. Orodho (2009) notes that, a survey is broad-based, implying that, it will enable the researcher to obtain data from a diverse category of subjects. Hence, the researcher collected data from students, teachers and guidance and counselling HoDs. Orodho (2009) further asserts that survey design allows a researcher to present and interpret collected data about a certain phenomenon for the purpose of clarification. The design facilitated clarification of the effects of physiological factors, social cultural factors, socio economic factors and school factors associated with menstruation on girls' class attendance.

6.3. Target Population

The study targeted 5038 students, class teachers as well as guidance and counselling HoDs in the secondary schools in the area of study. There were 31 secondary schools in the area all of which were public schools. The schools were of different categories including extra county, county and district schools. There was only one pure boys' school which was not involved in the study. There were three girls boarding, single sex schools and the rest were mixed sex day schools. The total enrolment of girls in the sub county stood at 4856 as at 31st July, 2015. Table 1 shows the distribution of the target population of the study.

Strata	Total
HoD for Guidance and counseling	30
Class teachers	152
Students (Girls)	4856
Total	5038

Table 1: Target Population of the Study
Source: Sub County Director of Education's Office

6.4. Sample Size and Sampling Techniques

Due to the large number of the subjects in the target population, the sample size was calculated based on Yamane's formula (Yamane, 1967).

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

Where,

n= the sample size

N = the size of target population

e= the error of 10 percentage points.

By using Yamane's (1967) formula of determination of sample size, the calculation of the sample from a population of 4856 girls yielded 98 students, while the population of 152 class teachers yielded 60 teachers. The calculation of the sample from a population of 30 heads of guidance and counselling teachers yielded 23 HoDs. Table 2 summarizes the sample size for each stratum.

Stratum	Target population	Sample size
Students (girls)	4856	98
Class teachers	152	60
HoD	30	23
TOTAL	5038	181

Table 2 : Sampling Matrix for the Study

Stratified random sampling technique was used to select the respondents. Orodho (2009) observes that when using stratified sampling the sample is selected in such a way that the researcher is assured that certain sub-groups in the population are represented in the sample in proportion to their numbers in the population itself. Each stratum contributes to the sample a number that is proportional to its size in the population. The target population was subdivided into different strata consisting of class teachers, guidance and counselling HoDs, and students. Since there were 23 schools, there was an equal number of HoDs in Guidance and Counseling. 10 class teachers from boarding girl schools and 50 class teachers from mixed day schools were included in the sample. The student's strata comprised of four students from form 1 to form 4 and 2 student leaders from boarding schools and 6 from day schools as tabulated in Table 3. The HoDs from all the 23 sampled schools took part in the study.

Category	Number of schools	HoDs	Class Teachers	Students	
				Ordinary students	Student leaders
Boarding Schools	4	4	10	8	5
Day Schools	19	19	50	76	9
Total	23	23	60	98	

Table 3 : Stratification of the Sample

6.5. Research Instruments

Two types of instruments were used to collect data. These were questionnaires for the students, class teachers and a structured interview schedule for Guidance and counselling HoDs.

Questionnaires were only economical to use but also allowed respondents enough time to think about answers for questions which required a lot of reflection. The questionnaires had both closed-ended and open-ended items. Closed-ended items were relatively easier to code and analyze as they were in an immediate usable form, while the open-ended ones allowed respondents a greater depth of response.

The class teachers' questionnaire had two sections: In Part one, they provided their background information relevant to the study and in part two they provided data relating to the objectives of the study. The questionnaire administered to the students was aimed at

obtaining the views, perceptions, opinions, as well as, the experiences of the students, as far as the relationships between the variables were concerned. It contained a blend of open ended and closed ended questions. In depth interviews for the HoDs were structured to contain items on the variables being studied. The respondents gave their responses verbally. This enabled the researcher to obtain detailed information on the items being researched on. This technique was particularly useful because in case the responses were inadequate, clarification or supplementary questions were requested for.

6.6. Piloting of Research Instruments

In the study, the researcher carried out a pilot study using a sample with similar characteristics as the sample for the study. This was done in the neighbouring Laikipia County. The results were carefully analyzed for clarity, correctness and also ensure that the items were comprehensive, as far as, the coverage of objectives was concerned. The results of the pilot study enabled the researcher to ascertain and enhance the validity and reliability of the research instruments.

According to Mugenda and Mugenda (2003), validity determines whether the research truly measures that which it was intended to or how truthful the research results are. Orodho (2009) describe validity as “construct validity”. The construct is the initial concept, notion, question or hypothesis that determines which data is to be gathered and how it is to be gathered. Validity was determined in two stages. First, the developed instruments were handed over to the supervisors for critical perusal. They were then revised accordingly, based on the supervisors’ recommendations. Finally, pre-testing the instruments in the field was done as recommended in Kathuri and Pals (1993) who note that many times a field test can also be conducted with a section of the population to help with assessment of content validity. This helped to reveal items that were irrelevant, inconsistent or ambiguous. The instruments were revised, accordingly.

Instrument reliability is a measure of the degree to which an instrument yields consistent results or data after repeated trials (Kothari, 2004). Test retest was used in which case the instruments were administered twice within an interval of one week and then the results correlated using Pearson Moment correlation method to obtain a reliability index. Smith (2003) declares that a reliability index of 0.8 is normally deemed to be satisfactory. A reliability index of 0.84 was obtained in this case. The instruments were, therefore, considered sufficiently reliable.

6.7. Data Collection Techniques

After collecting the data, the researcher checked the data for completeness and determined the response rate to find out whether the data collected was adequate for analysis purposes. The researcher obtained an introductory letter from KeMU which was used to apply for a research permit from the National Commission for Science, Technology and Innovations (NACOSTI). On receipt of the permit, the researcher used it to solicit for local consent from the County Commissioner, County Director of Education and the Sub County Director of Education, Kiini East Sub-County.

On acquiring the necessary authorization, the researcher visited the schools involved in the study to create rapport and informed the respective principals of the intention to conduct research in their schools. Appointments were then made on the convenient times to collect the data. The respondents were given two days to complete the questionnaires after which the researcher collected all the questionnaires for data analysis. The researcher personally conducted the interviews on the HoDs.

6.8. Data Analysis Techniques and Presentation

Interview notes and responses of unstructured items were transcribed, yielding qualitative data. On the other hand, quantitative data, comprising of data from closed-ended items and quantifiable interview notes, were coded and entered into the SPSS (version 23.0) computer software for statistical analysis.

Data analysis employed both qualitative and quantitative techniques. Content analysis, descriptive analytical procedures were employed in analyzing the data. Qualitative data was subjected to content analysis, while quantitative data was analyzed using the descriptive statistics such as means and standard deviation.

6.9. Ethical Considerations

In compliance with ethical provisions, informed consent was sought and the confidentiality of respondents was assured through the introductory letter to the respondents. Participants were informed that the information provided would be used for academic purposes only. All the respondents were given freedom to participate or not to in the study. Respondent’s anonymity was also maintained throughout the study to dispel the fear of being victimized for providing the required data. In addition, the researcher ensured that there was no plagiarism whereby all works and statements in the study were duly cited, with sources clearly being indicated, within text and properly referenced. The necessary authorization to conduct research was obtained from the relevant authorities and study timelines were adhered to.

7. Data Presentation, Analysis and Discussion

7.1. Physiological Factors Related to Menstruation

The first objective of the study was to examine the impact of physiological challenges related to menstruation on class attendance among girls in public secondary schools in Kiini East Sub County, Nyeri County. To achieve this objective, the researcher sought to establish the opinion of the class teachers and students on how often girls’ exhibit various physiological characteristics related to menstruation miss classes. Figure 4.1 presents the responses obtained.

Physiological effects	Frequently			Moderately frequent			Rarely		
	Teachers	Students	Total	Teachers	Students	Total	Teachers	Students	Total
Tension	27	50	77	8	24	32	10	24	34
Irritability	29	43	72	9	25	34	7	30	37
Hormonal disturbances	28	49	77	7	21	28	10	28	38
Lower abdominal pains	22	58	80	11	19	30	12	21	33
Swelling of ankles	22	41	63	10	25	35	13	32	45
Depression	30	52	82	6	18	24	9	28	37

Table 4: Physiological Effects Related to Menstruation

According to the information presented in Table 4, majority of the class teachers and students were of the opinion that the physiological characteristics tested, were observed/ experienced frequently and only a small proportion of the class teachers and students were of contrary opinion. Depression was identified as the most frequent (82 out of 143 respondents) followed by lower abdominal pains (80 out of 143 respondents); tension and hormonal disturbance (77 out of 143 respondents), irritability (72 out of 143 respondents) and finally swelling of ankles (63 out of 143 respondents) was the least frequent. The findings of the study thus indicated that the students experienced physiological effects associated with menstruation frequently.

The class teachers were asked to state the approximate percentage of the girls who skipped classes as a result of physiological effects related to menstruation. Results indicated that 2 out of 5 girls with a standard deviation of 2.03 missed classes due to physiological effects related to menstruation. The findings indicated that an appreciable percentage of girls missed classes. On average, the students said that they missed 12 lessons every time they are on menstruation. This implied that a girl loses 144 lessons per year or 14 days of learning per year due to physiological effects related to menstruation.

Describing physiological and behavioural challenges experienced by girls related to menstruation, the guidance and counselling HoDs said that;

- “Some challenges include pimples on the face that girls are not comfortable with. Girls also adopt new walking styles to conceal the effects of menstruation. These changes at times make girls stay away from class and miss lessons for fear of being ridiculed”
 - “Some girls have abdominal pains and they become very emotional and moody during the menstrual period. The extremes of these challenges make some girls opt to stay away from class”
- The HoDs further said that;
- “lower abdominal pains (cramps) are common among girls accompanied by severe headaches that make the girls miss classes...Mood swings due to hormonal imbalances also contribute to poor class attendance”

The findings of the study therefore, indicate that during their menstrual period, girls experience a variety of physiological and behavioural challenges which make them stay away from classes and thus miss lessons. This contributes to absenteeism among girls during their menstrual cycle.

The findings of the study are consistent with those of other studies conducted in the area of study. For instance, Dalton (1979) found that before the onset of menstruation, adolescent girls can experience tension, depression, tiredness and irritability which affect the way adolescent girls relate to other students in school and their teachers. Sharma, Malhorta, Teneja and Saha (2010) in their study found out that at the onset of menstruation, girls can experience dysmenorrhea, which often results in prolonged bed rest and girls missing both classes and other social activities. The findings of the study, therefore, concur with those of past studies.

7.2. School Factors Related to Menstruation and School Attendance

The second objective of the study sought to establish the impact of school factors related to girls' menstruation on class attendance among girls in public secondary schools in Kieni East Sub County, Nyeri County.

A 5-point Likert scale was used to quantify the opinion of class teachers and the students on various aspects of school factors related to menstruation that may affect class attendance among girls in secondary schools. Table 5 summarizes the descriptive statements on the responses obtained. According to the results obtained, most respondents agree that the adequacy, location and privacy of toilet facilities for all the girls have a key impact on girls' school class attendance.

Statement	N	Mean	Std. Deviation	Variance
The toilet facilities in my school are adequate for all the girls	143	3.64	1.209	1.462
The toilets in the school are located near the tuition area to make them more accessible to girls	143	3.27	1.325	1.382
The toilet facilities provide adequate privacy to girls using them	143	3.133	1.325	1.755
There are adequate water points near the toilet area accessible to the students	143	2.422	1.323	1.749
The school has provided adequate ways of disposal for sanitary materials	143	2.578	1.438	2.074
Overall mean	143	3.01	1.324	1.684

Table 5: Descriptive Statements for School Factors Related to Menstruation and Class Attendance

KEY: 5=Strongly agree 4=Agree 3=Neutral 2=Disagree 1=Strongly disagree

This is indicated by the means ranging from 3.133 to 3.64 in the 'agree' region. The overall mean for all the items tested was 3.01 which were in the 'agree' region indicating that all the factors had an impact on girls' class attendance. The results indicate that the girls' absenteeism from class on menstruation related challenges is determined so much by the adequacy, privacy and accessibility of washrooms/ toilets. Presence or absence of water points, as well as, means of disposing used sanitary materials were not very critical to most respondents since most of the schools had pit latrines which made disposal of used sanitary materials easy.

The HoDs gave more details on the school factors that influenced school absenteeism due to menstruation related challenges. Majority of the respondents pointed to the lack of adequate toilets as a factor that may cause absenteeism among girls undergoing menstruation.

- "...toilet facilities are not adequate whereas others are not even available such as means of disposing used sanitary materials. Mostly, pit latrines are used. inadequacy of the toilets makes girls on menstruation skip school/ classes"

In addition,

- "...toilets are few in number and students queue to use them. Girls on menstruation are ashamed to change their towels with everybody in the queue listening. This then becomes a problem for girls. Water points are metres away from the toilets which makes it inconvenient to use...toilet facilities such as soap, toilet papers etc. are never available to the students."

When asked whether there were times when girls skipped/ avoided school/ classes as a result of unfriendly school environment, majority of the HoD (Guidance) reply to the affirmative.

- "...Sometimes girls mess themselves up waiting for their turn to use the toilet and lack materials for cleaning themselves up such as toilet papers. They end up missing a lesson or two as a result..."
- "...yes...the girls don't tell the truth. They fake sickness and it is only after pushing them too much that they open up that they were absent since they were on their periods..."

The findings, therefore, indicate that unfavourable school environment made some girls skip school when they were on menstruation since they had difficulties with how to carry themselves during the period, bearing in mind that the facilities in school were not conducive for use. The findings of the study concur with those of past studies such as that by El-Gilany, Badawi& El-Fedawy (2005) which analyses the factors that make a school girl unfriendly, such as, school environments where there is a complete lack of latrines or where available latrines are inadequate in terms of their number, their quality, their design, their nearness to boys' latrines, the safety of their location, and the privacy they provide, including locks on the inside of latrine doors. In another study by Ogeta, Wesonga and Mumbi (2011) it was established that public schools were facing many challenges related to provision of sanitation facilities for the girl child. The schools did not have adequate toilets, with all the schools not fulfilling the Ministry of Education recommended toilet ratio of 1:25 for girls. In addition to this, toilets in most of the schools were poorly maintained with flash toilets having broken cisterns. The poor state of sanitation and their unfavourable location in terms of accessibility, usability and privacy, prompt girls to keep away from school during their days of menstruation so as to avoid inconveniences and embarrassment that results from having to use the facilities at the school.

8. Summary of the Findings, Discussion, Conclusions and Recommendations

8.1. Summary of the Findings

Depression was identified as the most frequent (57.3% respondents) followed by lower abdominal pains (55.9% respondents); tension and hormonal disturbance (53.8% respondents), irritability (50.3% respondents) and finally swelling of ankles (44.1% respondents) was the least frequent. The findings indicated that an appreciable percentage of girls missed classes. Results indicated that 2 out of 5 girls with missed classes due to physiological effects related to menstruation. On average, the students said that they missed 12 lessons every time they are on menstruation. This implies that a girl loses 144 lessons per year or 14 days of learning per year due to physiological effects related to menstruation. The findings of the study, therefore, indicated that during their menstrual period, girls experience a variety of physiological and behavioural challenges which make them stay away from classes and thus miss lessons. The study found that physiological factors related to menstruation contribute a great deal to girls' class absenteeism due to menstruation. This implies that physiological factors related to menstruation have a significant influence on class attendance among girls.

8.2. School Factors Related to Menstruation and School Attendance

The adequacy of toilet facilities for all the girls, location of toilets near the tuition area to make them more accessible to girls and toilet facilities providing adequate privacy to girls using them all with means ranging from 3.133 to 3.64, are important in influencing class attendance among the girls undergoing menstruation. The results point to the importance of the school having adequate ratio of toilets to girls, location of toilets near the tuition area for easy access and the privacy of the toilets as important in influencing absenteeism among girls due to menstruation related absenteeism. The results indicated that the girls' absenteeism from class on menstruation related challenges is determined so much by the adequacy, privacy and accessibility of wash rooms/ toilets. The findings, therefore, indicate that unfavourable school environment make some girls skip school when they are on menstruation since they have difficulties with how to carry themselves during the period bearing in mind that the facilities in school were not conducive for use. The study found that school factors related to menstruation contribute a great deal to girls' class absenteeism due to menstruation. This implies that school factors related to menstruation have a significant influence on class attendance among girls.

8.3. Conclusions

The study sought, to examine the impact of physiological challenges related to menstruation on class attendance and to establish the impact of school factors related to girls' menstruation on class attendance among girls in public secondary schools in Kieni East Sub County, Nyeri County.

Physiological factors such as depression, swelling of ankles, hormonal disturbances and depression have a great impact on girls' class attendance. Consequent, to physiological factors, girls end up missing 12 lessons every time they are on menstruation an average of 14 days of learning every year.

Adequacy of toilet facilities for all the girls, location of toilets near the tuition area to make them more accessible to girls and toilet facilities providing adequate privacy to girls using them are important in influencing class attendance among the girls undergoing menstruation. Girls' absenteeism from class on menstruation related challenges is determined so much by the adequacy, privacy and accessibility of wash rooms/ toilets. Unfavourable school environment make some girls skip school when they are on menstruation since they have difficulties with how to carry themselves during the period bearing in mind that the facilities in school are not conducive for use.

8.4. Recommendations

Based on the findings of the study, the following recommendations are made;

- i. Members of the school community such as teachers need to be sensitized on the physiological effects that girls undergoing menstruation may experience. This will make them understand the needs of the girls and create a conducive environment for them. For instance; to allow them some time off from class when they request to be excused.
- ii. The members of the school community need to be sensitized about menstruation so as to adopt the right attitude and clear any misconceptions about it. This will help in minimizing stigma subjected to the girls experiencing menstruation and ease their discomfort.
- iii. The schools should encourage girls to open up and speak out their problems. In addition, the schools should create adequate communication channels through which girls can voice out their concerns on how the facilities may be made more appropriate for use. It is through opening up to the teachers that the girls will be advised on how to carry themselves during menstruation and also have the right attitude towards it.
- iv. The schools should construct more toilets and provide adequate toilet and sanitary materials to make them accessible to girls. Bins for convenient disposal of used sanitary materials should be provided and more water points placed at strategic areas. The toilets should be constructed in a location to ensure ease of access, as well as, providing privacy to girls using them, especially during menstruation.
- v. The Ministry of Education should train at least one teacher specifically on matters relating to menstruation, especially, in cases where the guidance and counseling teachers are men.

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