
AN EVALUATION OF THE PERCEPTION OF SECONDARY SCHOOL STUDENTS
TOWARDS MENSTRUATION IN KENYA

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ABSTRACT

The research explored the level of knowledge students have about menstruation and how it affects girls' health behavior practices and attitudes towards menstruation. The study employed descriptive research design and naturalistic research approach to gather data from a total of 32 students purposely selected from one girls' boarding school, one boys' boarding school, and one mixed day school. Eleven teachers and two health workers also participated in the study. Our findings established that there was need for knowledge in relation to menstruation among secondary school students. Majority students expressed positive attitude towards menstruation, but were contradicted by others who expressed negative attitude towards menstruation. Attitudes towards menstruation were also linked to menstruation practices or behavior surrounding menstruation.

Keywords: Menstruation, Sanitary Pads, Secondary Students, Culture, Kenya.

1. INTRODUCTION

One neglected issue surrounding girl child health that exacerbates gender disparities and inequalities in matters pertaining to education is menstruation. The World Bank has estimated that if a girl misses 4 days of school every 4 weeks due to menstruation, she risks missing 10 to 20 percent of her school days (World Bank 2005). And a 2005 UNICEF report maintains that one in ten Kenyan girls does not attend school during menstruation. It adds that poor sanitary facilities in schools also affect female teachers' experiences. Further, certain cultural taboos discourage women from teaching during menstruation. Given the unavailability of substitute teachers due to teacher shortages in Africa, this means that teachers' instruction time in school is reduced by 10-20% (World Bank 2005). This has prompted Biriwasha (2008) to observe that menstruation is an addition to the heap of gender disparities women and girls have to face in life.

Several NGOs and sanitary product manufacturers have responded to the problem by initiating campaigns to increase the availability of sanitary pads with a stated goal of improving school attendance among girls (Oster and Thornton, 2010). In Kenya, the government has recently stepped in to provide free sanitary protection to needy primary school pupils, but despite the increasing number of adolescent in public schools the same government has slashed more than \$1 million from the 2013-14 budget allocation to the program making the management of menstruation for rural school girls a nightmare.

However, this “simple” solution does not tackle other important issues that surround menstruation like the level of preparedness to cope with menstruation, attitude towards menstruation, and health behavior practices related to menstruation among Kenya primary school girls. The problem is further compounded by the fact that gender socialization in most African societies, tend to lean patriarchy. This patriarchal power relation assigns women a subordinate status in decision-making and resource control to the extent that females do not have control over their sexuality. As a result female concerns like menstruation are not addressed because they do not directly affect males (Kambarami, 2006). But that, notwithstanding menstruation has continued to remain a mysterious and confusing issue to most rural girls and boys. To begin with, people different cultures respond to problems of menstruation differently. In some cultures sex topics are a taboo and therefore values, norms, mores, and meanings that are communicated to girls (and boys) on this line tend to limit information about menstruation. Secondly males’ perception towards menstruation is not well studied and most parents leave such discussions to teachers who in most cases are not well equipped to educate the adolescent on the subject.

These realities have made many authorities recognize the fact that there is a need for compulsory sex and menstrual hygiene education in schools so that both sexes can freely discuss about menstruation. A consensus has emerged that girls need emotional support and assurance that menstruation is normal and healthy. In order to prepare them to cope with menstruation challenges, education on the subject should start at an early age even before menarche and it should be linked to attitudes they already have and behaviors they exhibit towards menstruation (Adhikari, et.al. (2007). But, do boys make it more difficult for girls to cope with menstruation challenges? Larson, Brown and Mortimer (2002:87) theorize that environmental input is essential to attitude development because most of the threats to adolescents are products of their environment. There is therefore a need to examine female and male secondary school students’ attitude towards menstruation, and how this attitude may affect their response to menstruation.

It is also important to study the health behavior practices of girls, especially at the onset of menstruation because the measures they are likely to employ may have an impact on their health. According to Garg, Sharma and Sahay (2001) in a study conducted in Delhi, India, some women used pieces of cotton cloth to absorb the blood, but did not take time to clean the pieces of cloth before reusing due to fear of embarrassment from men.

1.1 MOTIVATION AND OBJECTIVES

According to Oster et.al (2010) girls lag behind boys in schooling, although female schooling is thought to be important for a variety of development outcomes. The authors add that researchers and policy-makers have established the link between menstruation and girls’ school performance. UNICEF also estimates that one in every 10 girls in Sub-Saharan Africa misses school or drops out during their period (UNICEF 2005). And according to Kristof (2009), education experts increasingly believe that providing high school girls with sanitary pads will maintain them in school. Most empirical data linked to menstruation and school going pupils revolves the around provision of sanitary products and the need for sufficient sanitation facilities such as clean water, adequate toilet facilities and appropriate dumping facilities for sanitary wear. The argument here is that by meeting these menstrual needs it is likely that girl-child absenteeism or school drop-out is to reduce. But from a quantitative study done in Ghana by Scott, Dopson, Montgomery, Dolan and Ryus (2009) in which they allocated sanitary pads to some villagers and not others, the impacts on school attendance was found to be the same when only menstrual education was provided.

This research explored the extent of the importance of providing sanitary products to school going children in catering the needs of adolescents. It focused on the amount of menstrual information available to both secondary school girls and boys. Most studies on the problem have focused on the knowledge possessed by the girl child, but the current study incorporates the boy to find out how imparting menstrual knowledge of both can help reduce negative attitude towards menstruation. The objectives of the study are to:

- Establish the extent to which secondary school girls and boys are aware of issues relating to menstruation.
- Find out the attitudes of secondary school girls and boys towards menstruation and how such attitudes shape their behavior towards menstruation.
- Investigate behavior practices associated with menstruation among secondary school girls and boys.
- Identify the major cultural challenges faced by adolescents with regard to menstruation.

2. THEORETICAL FRAMEWORK

This research is hinged on two important theories, namely the Social Learning Theory and the Theory of Reasoned Action. The Social Learning Theory has its origins in a school of psychology called behaviorism and was spurred by the work on association ('classical conditioning') by Russian psychologist Ivan Pavlov in 1920s. According to social learning theory, a person's behavior is determined by prior learning. This theory states 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 behaviors. 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 behavior 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 behavior or sets of attitudes can occur and re-learning of desired behavior and attitudes takes place. The theory is a good fit to understand the possibilities of changing negative cultural perceptions and resultant behavior towards matters that surround menstruation not only among adolescents but also the society at large.

The Theory of Reasoned Action is a model that finds its origin in the field of social psychology and was developed by Ajzen and Fishbein (1957 and 1980). This model defines the links between beliefs, attitudes, norms, intentions, and behaviors of individuals. According to this model, a person's behavior is determined by the behavioral intention to perform it. This intention is itself determined by the person's attitude and his subjective norms towards the behavior (Haksym, 2008).

According to the Theory of Reasoned Action attitudes are as a result of the information that a person holds about the attitude object. The theory proposes the integration of attitudinal and behavioral factors. In relation to menstruation, the Theory of Reasoned Action can provide a mechanism of knowing people's salient primary beliefs on which their attitudes towards a given behavior are based. For example, attitudes made up of beliefs formed by different sources to determine behavior. Hence, negative attitude towards menstruation formed by direct experience (in the case of a girl who gets mocked by others for soiling her clothes) or formed by outside information (in the case of cultural expectations socialized to individuals) determine behavior.

3. LITERATURE REVIEW

In order to get the entire picture of the objectives of the study, we confined our literature review on the four narrow subtopics namely: Secondary School Students Awareness about Menstruation; Behavior Practices Associated with Menstruation among Secondary School Students; Attitudes of Secondary School Girls and Boys towards Menstruation; and Cultural Challenges Relating to Menstruation. Adolescents perceive a clear distinction between two kinds of menstrual knowledge: the anatomy and physiological functioning of menstruation usually learned from institutional sources; and realistic lived experience of menstruation always learned from other females (Kissling 2011). He argues that most adolescents feel they need more of the practical, personal menstruation knowledge that they acquire from parents and friends. However the two kinds of knowledge do not seem to be well integrated, even after girls experience their first period (Kissling 1996). In the traditional African societies, the important task of educating adolescents on such matters like menstruation was often left with grandparents. But due to the impact of AIDS on the lives and livelihoods of individuals, families and communities, the grandmothers who played the traditional role of explaining menstruation to young girls are no longer available. Parents also prefer to delay discussing menstruation with their pubescent daughters because the subject provokes so much anxiety among adults. According to Kissling mothers who would prefer to present menstruation in a positive way find themselves in an awkward position because they are caught between awareness of the culture's distaste for menstruation plus the negative feelings towards menstruating among women and a mother's desire to instill positive self-esteem and attitudes in her daughter. In short cultural and social attitudes render discussion of menstruation almost impossible.

Attitudes of adolescents towards matters that involve menstruation are exhibited in their behavior. Even though menstruation is a normal thing, girls feel insecure and embarrassed about the process (Meyer, 2012). Behaviors such as ridiculing females who have soiled their clothes with blood show how society views menstruation. Soiled uniforms can provoke ridicule from both boys and girls putting the girl at great risk of experiencing stigma and discrimination (Kirk and Sommer 2006). Secondly, menstruation has for a long time been considered to be a female issue, yet it directly or indirectly affect both males and females. According to Kirk (2005) male teachers and students show insensitivity to the challenges girls face in managing menstruation. Male teachers, for example, do not always understand a girl's urgent need to go to the bathroom, and may insist that she wait until the end of class. Worse still male teachers and male students may tease girls because they lack pragmatic knowledge about normal biological and maturational processes of a woman.

Health behavior practices among girls during menstruation have been concerns of many researchers. Kirk and Sommer (2006), contend that in Asia and sub-Saharan Africa, physical, socio-cultural, and economic challenges may render girls' menstrual management in school quite difficult. In Kenya, for example, millions of adolescent girls from disadvantaged families cannot access, sanitary towels, and opt to use unsanitary methods (Muvea 2011).

A study conducted in Korogocho slums in Nairobi, Kenya, showed that most girls prefer using sanitary towels during menstruation, but they result of using torn mattress because they cannot access sanitary towels (Ochako 2010). The study revealed that the use of crude materials caused discomfort, irritation and rashes, embarrassment, anxiety and shame to the girls. And girls who cannot afford sanitary pads engage in transactional sex to raise money for the items putting them at risk of HIV and STI infections, or skip school during menstrual period to avoid the inconveniences of buying pads or using cloths (Biriwasha 2008).

Beyond health issues there are considerable cultural issues related to menstruation. Different cultures manage menstruation differently. Poor rural girls who receive minimal

instruction on menstruation have had a frightening, confusing and shame-inducing experience. Feminist theorists of the body (Martin, 1992; Rich, 1976) have argued that in patriarchal cultures, women’s inferiority is characterized by what separates them from men. Roberts et al (2002) argues that a patriarchal perspective on gender differences affirms that since men hold the power to name, they define their own bodies and behavior as “normal” and “good,” whereas features that differentiate women from men are viewed as inferior. Menstruation therefore becomes an insignia of women's inferiority and the subject of derogation. Thus, what should be a rite of passage into womanhood has been used as a tool for sexual harassment.

4. MATERIALS AND METHOD

The research used a descriptive survey method to understand the beliefs, norms, values, attitudes and other behavior patterns of the study population. Individuals who fitted the study criteria were interviewed on a face to face to collect primary data. The study is limited to the geographical setting of the Kakamega County in western Kenya. The study’s unit of analysis is secondary school girls who have already experienced their monthly periods. The inclusion of secondary school boys in this study was to help bring out the attitudes of males towards menstruation in addition to their understanding of menstruation issues. In order to get a proper insight on the subject matter the study also interviewed four teachers from these schools - two males, two females; and health workers in the schools. The research was conducted in Shinyalu, Kakamega County of Western Kenya. The county is inhabited mainly by the Luhya people and has a population of 1,660,651 inhabitants (Kenya National Bureau of Statistics, 2009). The study targeted from one to form four girls and boys from three public secondary schools in Kakamega County, to gather information about girls experience with menstruation and the boys thoughts on the same. Teachers and health workers in the same schools constituted key informants.

4.1 Sample Data and Sampling Procedures

Purposive sampling was used to select a girls’ boarding, a boys boarding, and a mixed day secondary school. Given the nature and sensitivity of the research, few respondents were willing to participate in the study. The researcher sets a quota based on grades, gender, and type of school to yield a suitable sample of 32 students. Purposive sampling was also used to select key informants comprising two female and two male teachers. Two health workers, one from the girls’ boarding school and the other from the mixed day school were also added to the key informant list making the total sample size to be 46.

Table 1: Distribution by Composition of Gender and School Type

Type of school	Student Respondents		
	Male	Female	Total
Girls Boarding		8	8
Boys Boarding	8		8
Mixed Day	8	8	16
TOTAL	16	16	32

Source: Research Survey 2012

The research employed qualitative technique to explore the knowledge, health behavior practices, attitudes and culture in relation to menstruation. The research was concerned with subjective assessment of attitudes, opinions and behaviors in order to make proper impressions and acquire extra insights to the problem of menstruation among secondary school students. In-

depth open ended interviews were conducted to find out how adolescent girls managed menstruation and, the reasons behind the formation of attitudes towards menstruation by both males and females. Additionally, open ended questions were administered to the key informants to shed more light on the study. Additionally, we observed non-verbal communications shown by respondents during interviews. We then utilised observation checklist to record what was observed. We defined what was observed and developed a detailed list of behaviors and environmental conditions. This permitted us to spend time thinking about what was occurring rather than how to record it, which helped enhance the accuracy of the study. Four students not participating in the study were also purposely selected for piloting instruments. This was to gauge whether respondents would understand the formulated questions without much difficulty.

Interviews with the respondents and key informants were recorded through a tape recorder. Some of the quotations verbalized by the informants are cited in the discussion. Through the test-retest method, the student’s interview schedule was administered twice to the same group of informants, before and after conducting the interview with the intended respondents in a space of four weeks. The collected data were coded and computed using descriptive statistics. Qualitative information was represented in words instead of numerical analysis.

Table 2: Distribution by Composition of Gender and Grade

Class	Male	Female	Total
Form One	4	4	8
Form Two	4	4	8
Form Three	4	4	8
Form Four	4	4	8
Total			32

Source: Research Survey 2012

5. RESULTS

Forty five out of the 46 respondents and informants agreed to provide information. The explanatory variables examined included age, religion, ethnic background, class, school type, family composition, academic qualifications, and teaching experience of informants. The 32 respondents were 16 females and 16 males, with 8 boys from the boys’ boarding school and 8 girls from a girls’ boarding school, and the rest of the mixed day school. The researcher selected eight students from each class so as to gauge the degree of understanding of menstruation among the respondents of the same level and between different levels. The study population was classified into four age groups of 15-16 years, 17-18 years, 19-20 years, and 21 years and above. Sixty two point five percent respondents were aged 15-18 years compared to 37.5% who were 19 years and above. The respondents were therefore mature enough to understand the subject matter. Nineteen (59.37%) were Protestants 19 (59.37%), Catholics 10 (31.25%), Muslims 2 (6.25%), and Legio Maria 1 (3.13%). More than 78% of the respondents were from the Luhya ethnic tribe. This information was vital to the research in order to assess whether cultural background of individuals correlates with attitude and practices in relation to menstruation. The family composition was also studied in order to establish whether family members impact any knowledge about menstruation to the students. About 35% respondents lived in a nuclear family setting. With the exception of one student who lived alone, more than 80% respondents lived with their mothers. Twelve respondents (37.51%) had absentee fathers compared to 6 (18.75%) with absentee mothers (table 3). Six male and five female informants turned out for the interview, which translates to 95.83% return rate. Ten had post secondary

education and 11 were over 28 years, meaning that they were experienced enough to handle students’ menstrual concerns. The average age of the nurses was 31.5 years.

Table 3: Distribution of the Respondents According to Family type

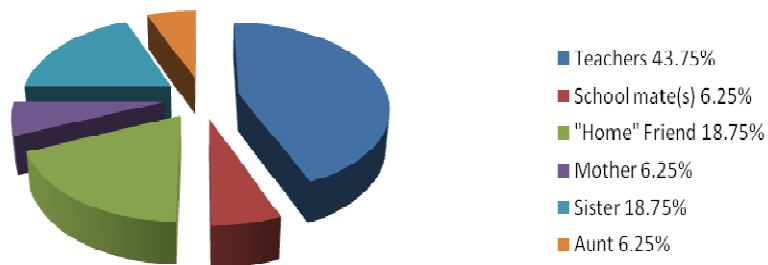
Family Type	Frequency	Percentage
Mother Only	1	3.13
Mother and Siblings	2	6.25
Mother, Father and Siblings	11	34.37
Mother, Father, Siblings and Extended Family	7	21.87
Mother, Siblings and Extended Family	1	3.13
Extended Family only	5	15.62
Alone	1	3.13
Total	32	100

Source: Research Survey 2012

5.1 Girls’ Preparedness to Manage Menstruation

Out of the 16 respondents, 10 (62.5%) said they first heard about menstruation in school setting. Ten (62.5%) respondents heard about menstruation for the first time at ages 13-16 years, while 6 (37.5%) first heard about it before they were 12 years; 7 (43.75%) respondents reported that teachers are their predominant educators on the subject. Fifteen (93.75%) respondents had been taught about menstruation in school with 13 (86.67%) of them having been taught at primary school level and 2 (13.33%) at both primary and secondary school levels. Only one respondent said she had not received formal school instructions on menstruation. All girl respondents from the mixed day school compared to 7 (87.5%) of girls from the boarding school had been formally schooled about menstruation.

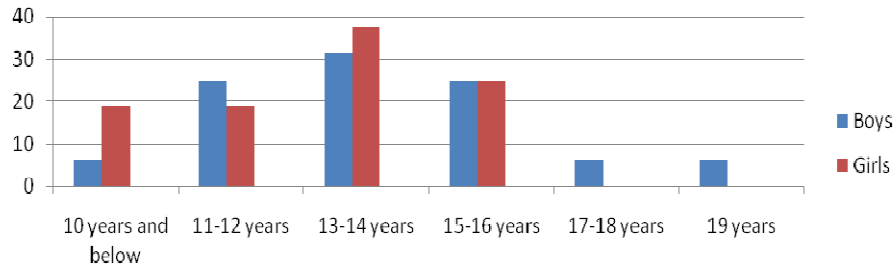
Fig 1: Girls’ Predominant Educators On Menstruation



5.2 Boys’ Awareness on Issues Related to Menstruation

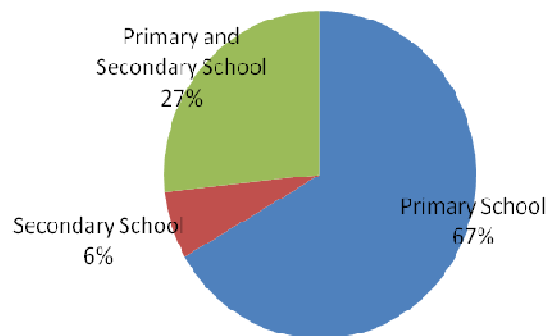
To show that they understood the concept of menstruation all boys remarked that ‘a girl loses blood’ and a few explained the concepts of puberty and ovulation. All said they first heard about menstruation in school. Eleven (68.75%) said teachers are their main educators on the subject compared to 5 (31.25%) who said other school mates were their source of information. Majority respondents 9 (56.25%) first heard about menstruation at age 13-16 years, 5 (31.25%) before they were 12 years and 2 (12.5%) after they were 17 years. All teachers concurred that boys are curious about menstruation topic (fig. 2).

Fig 2: Comparison between girls' and boys' age of first knowledge of menstruation



Because menstruation is a biological process only experienced by females, more girls than boys acquire knowledge about it by the age of 10 years. It is evident that all the girls are knowledgeable about menstruation compared to boys (fig 2). As with the case of girls, 15 boys' respondents said they had been formally schooled about menstruation. Seven boys (46.67%) had been schooled at primary level only, 2 (13.33%) at secondary level and 6 (40%) at both primary and secondary school levels. From our data formal schooling about menstruation takes place at primary school level 20 (66.67%) more than at secondary school level 2 (6.66%). Eight teachers said they teach their student menstruation matters in both class and non-class settings. Those who did not teach anything about menstruation explained that they leave the exercise to the form 3 biology teachers. Much of the initial knowledge about menstruation is communicated in primary school. Only 6% of respondents were first taught about menstruation in secondary school (fig. 3).

Fig 3: Formal Schooling on Menstruation at Primary and Secondary Level



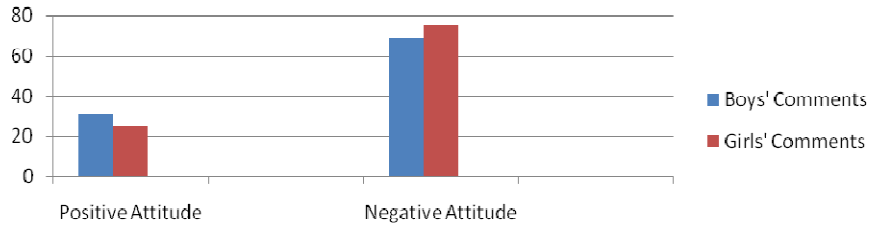
When the boys were asked to state what they thought girls used to manage menstrual flow, 13 said sanitary pads while the rest mentioned toilet paper, mattresses, tampons and papers. More than 85% boys said that menstruation affects girls' class performance. They said lack of proper sanitary protection made girls to lose concentration; feel embarrassed when classmates laugh or talk about girls who soiled dress; miss class due to abdominal or back pains; show restlessness due to bad odor; and, inactive during game time.

5.3 How Attitudes Affect Responses to Menstruation Issues

One of the objectives of the study was to find out the attitudes of secondary school girls and boy students towards menstruation and how such attitudes may shape their behavior towards menstruation. Ten boys and ten girls said that they viewed menstruation positively, while 6 boys and 6 girls said they viewed it negatively. This contrasts the teachers and health workers' beliefs that the students had negative attitude towards menstruation. Students who had a positive view about menstruation, said it is a normal process; it is a sign of health/fertility; it signified maturity; and it is an indication that one is not pregnant. Twenty five percent

respondents who held negative outlook about menstruation explained that it made them think that everyone knew they were menstruating and worse they had soiled their uniforms. Additionally, 25% of the girls felt that other female students viewed menstruation positively while 31.25% males felt that other male students viewed menstruation positively (fig 4).

Fig 4: Girls' And Boys' Opinion On Other Students' Attitudes Towards Menstruation



Those who felt other students viewed menstruation positively explained that it is an indication that a girl is not pregnant, menstruation was normal and girls would soon get used to it. Those who felt otherwise explained that one experiences a lot of abdominal and/or back pain (menstrual cramps) that causes poor concentration in class and during exams; heavy menstrual flow hinders performance of other school activities; lack of enough sanitary towels; prolonged menstrual flow leading to class/school absenteeism; menstruation caused mood swings; and in extreme cases menstruation is seen as a punishment from God.

The boys said other boys viewed menstruation negatively because: blood is a dirty thing; bad smell emanates from those having periods; many girls soil their dresses during menstruation; menstruation prevents girls from concentrating in class; menstruation is one of the excuses girls give for not engaging in sex; and some boys did not fully understand menstruation and found it abnormal. However, most teachers felt that girls and boys alike viewed menstruation negatively. They said that girls lacked concentration in class and used such adjectives like red robber, sickness, and dirt to describe menstrual flow, which also made boys to view menstruation negatively.

The respondents were asked to give their opinion on the position of members of the opposite sex attitude towards menstruation. Six (37.5%) girls felt that boys viewed menstruation positively while 10 (62.5%) felt that boys viewed negatively. The opinion of the boys about the position of the girls about menstruation was the same. Girls who said the boys had a favorable attitude said the latter understood menstruation to be a sign of maturity, an indication that a girl was not pregnant, and it enabled a girl to know her safe days. The girls thought that the boys had a negative attitude because: they mock girls who soil their uniforms instead of feeling sorry for them; menstruation hinders them (boys) from engaging in sexual intercourse; menstruation comes with bad smell that boys do not like; and boys associate menstruation with dirt.

Similarly, boys thought that girls had a positive attitude towards menstruation because they termed it a normal thing; it is a sign of womanhood; and it prevents girls from engaging in sex. Those who felt girls have a negative attitude towards menstruation, said most of them soil their uniforms, which leads to embarrassment; they spend a lot of money on pads; some do not come to school when they are menstruating; girls complain about abdominal pains; and menstruation interrupts certain activities such as swimming (table 4). On the overall 13 (81.25%) girls and 14 (87.5%) boys said that male perceptions about menstruation affects girls.

Table 4: Students Responses on Attitudes towards Menstruation

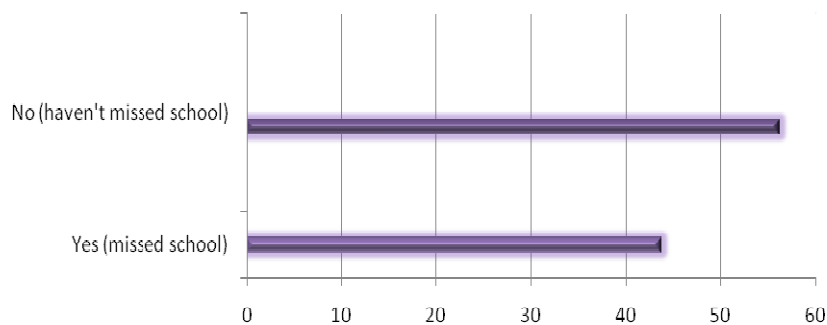
Attitude Item	Positive Attitude	Negative Attitude	Positive Attitude
Perception towards Menstruation	10(62.5%)	6 (37.5%)	10 (62.5%)
View of others towards Menstruation	4 (25%)	12 (75%)	5 (31.25%)
View of opposite gender towards menstruation	6 (37.5%)	10 (62.5%)	6 (37.5%)

Source: Research Survey 2012

5.4 How Behavior Affects Response to Menstruation

In order to explore how behaviour affects response to menstruation the girls were asked to name the item(s) they commonly use to manage menstruation flow in school and at home. All said they use sanitary pads, 9 (56.25%) said they had used other items other than sanitary pads including cloth 6 (66.67%), piece of mattress 2 (22.22%), and cotton wool 1 (11.11%). Six (66.67%) said they used other items because of lack of money to purchase sanitary pads while 1 (11.11%) said that sanitary towels were not sold in their school shop. More than a third of the girls used scented sanitary towels in order to mask bad odor and also let other girls know that they were attending. Again about 44% compared to 56% girls reported to have missed school because of menstruation. Majority respondents missed school because of severe menstrual cramps 3 (42.86%), lack of sanitary pads 2 (28.57%), and 2 (28.57%) from the mixed school said they were conscious that the boys would make fun of them.

Fig. 5: Number of Respondents who have missed school because of menstruation



5.5 How Culture Affects Response to Menstruation

In response as to whether students discussed openly about menstruation at home, 8 girls and 5 boys answered in the affirmative while 8 girls and 5 boys said no. The girls said the predominant topic of discussions on the matter included how to monitor menstrual cycle, how to avoid soiling clothes, the best materials for sanitary protection, and reasons for missing periods. The boys on the other hand said that they discussed about safe days and their frequency of menstrual periods among girls. Five girls said they discussed the matters with the mother while one girl each said they hold discussions with sister and aunt respectively. Three boys said they discussed the matters with female friends while two said the sisters are the main source of information about menstruation.

Seventeen (53.1%) respondents said their cultures allowed to discuss menstruation with members of the opposite sex. The girls said their cultures permitted them to discuss about menstruation issues with males because they gather useful knowledge about menstruation; some (boys) offer money to purchase sanitary pads during emergency cases; to demystify menstruation; and to let the boys know of safe days. The girls who admitted that they have never discussed menstruation issues with men did so because they didn't shy; want males to know when they get their period; they thought the boys would laugh at them; it was embarrassing; and that boys are also shy. On the other hand they boys who had never spoken about menstruation with members of the opposite gender said they were afraid to do so; it was a female and not a male concern; and that girls are shy to talk about menstruation. Further, 31.25% of the girls' respondents said they were restricted from performing certain religious or non religious tasks during menstruation. Similarly, some 56.25% boys' respondents said that females in their communities are excluded from performing certain religious or non religious tasks during menstruation. However, some of the reasons advanced by the community to prohibit women from certain tasks were not supported by the religious doctrines in question meaning that they were only useful for the communities for the control of females.

6. DISCUSSION

From the research it is evident that that all girls in Kenyan secondary schools possess considerable knowledge about menstruation. The students rely on different sources to obtain information on the subject, but majority respondents admitted that female teachers are their principal educators on menstruation. Home friends, sisters, school mates, mothers and aunts follow in that order. Only a quarter of the girls mentioned their peers as their major educators on the subject. Though a lot of knowledge about menstruation was communicated during their time in the primary school majority of the secondary school teachers thought that the girls did not have enough knowledge about menstruation by the time they join secondary schools. Only one teacher from the girls' boarding school and another from the mixed day school said that the girls had adequate knowledge about the subject by the time they join to form one.

It is true that some of the students who join form one have no menstruation knowledge because they have not yet had their menarche, since some enroll at age 13, and hence do not know how to use sanitary towels or to monitor their monthly periods. The school matrons we interviewed said that girls who have commenced menarche without prior education about it are usually very ignorant about menstruation adding that education on menstruation and sanitation was essential because majority of female students who join form one did not know how to use and dispose sanitary pads.

Though teachers reported that menstruation topics are mostly taught during biology lessons in form three classes more than in any other setting, eight teachers said they teach their student menstruation matters in both class and non-class settings. However, some teachers were not bothered about disseminating knowledge on menstruation and explained that they left the exercise to the form 3 biology teachers. All in all much of the initial knowledge about menstruation is communicated in primary school and only 6% respondents reported that they were first taught about menstruation in secondary school (fig. 3). The responses that were provided by boys indicated that they are aware about the challenges girls face when menstruating. This was more apparent among boys in mixed secondary schools. In this connection one teacher even proposed that lessons on menstrual hygiene should be intensely taught to boys so that they can understand what girls go through during menstrual period.

Though majority of the student's respondents' stance on attitude towards menstruation appear to be positive, their opinion on how others perceive menstruation is negative (table 4). More girls' respondents from the boarding school compared to those in the mixed day school

said that they have positive attitudes towards menstruation. The behaviour was the same for boys in mixed secondary school. This is because those in the single gender schools have fewer interactions with members of the opposite gender compared to those in the mixed school.

There were a lot of instances when girls felt proud when they had their menstrual flow because it accorded them an opportunity to send the signal to their mates that they were mature. In our literature review, we stated that girls who afford scented sanitary pads do so to mask bad odors, but others use them to smell good for the explicit purpose of signaling to others that they were now mature.

Our literature review established that socialization starts at home and it is the family that shapes a child's attitudes and behavior and provides the context in which the first and most long-lasting intimate social relationships are formed. Stories told around us, shape us in terms of what girls should do and what boys should do. As expected our research showed that more girls than boys discuss about menstruation in the home setting because menstruation is biologically a female experience. The way the information was passed to adolescent confirms that much of the information on the subject is obtained through associations and that mothers communicate a particular way of thinking about menstruation.

The girls who did not discuss about menstrual matters at home said they were shy to open the discussions; their cultures do not permit; they had not thought of discussing; and that menstruation is a private issue. The majority of the boys said they were not concerned because menstruation is a problem of girls, while others said they were afraid to talk about it because it's linked to sex, and others were living in a male only household. This shows that some students have been socialized to view menstruation, as something that should not be discussed by members of the opposite gender. The students have therefore developed a perception that they should not discuss matters pertaining to menstruation because family members think it is wrong to do so. In fact the matron of the girls' boarding school confirmed that she faced a lot of difficulties discussing issues about menstruation with the girls because some of them insist that their culture does not permit open talk on the subject. She added that the cultural aspect contributes to poor menstrual responses because some students are afraid to approach teachers/matrons in times of distress. Although our research found that there was ample discussion about menstruation at the home setting, those whose cultures do not permit open discussion about the issue with members of the opposite sex.

On the other hand majority of girls who engaged in discussions about menstruation with members of the opposite gender said they did so to convince their boyfriends that they were attending, while others said they did so to raise concerns to their boyfriends about dangers of having sex while menstruating. The majority of the boys' respondents said they did so because they were curious about what happens during menstruation while the rest said they were complaining to their girlfriends about bad odors. The importance of this open discussion is supported by Cheng, Yang and Liou (2007) in their study that recommends an evaluation of sex education and more open discussions about menstruation among young people. The study adds that open discussion between the genders can help demystify menstruation, and change people's negative perception towards the issue. It is also critical that boys are part of the discussions about menstruation to help them understand what girls go through and to be more sympathetic towards female students (Meyer, 2012).

7. CONCLUSIONS

Although data supports that lack of sanitary towels contributes to class absenteeism among adolescent girls, there are other menstruation related concerns that force adolescents stay out of class. Major authorities on the subject think that lack of sanitary towels among school going girls is a major cause of poor performance in school [Ochako (2010); (2001); Gathigah (2011); Muvea (2011); Kyalimpa (2009); Oywa (2011)], but students' responses indicate that

abdominal and/or back pain, bad smell from menstruation, and fear of ridicule from others after soiling clothes can also contribute to poor performance. Girls attending mixed schools feared to be mocked by boys leading to school absenteeism. The study also found out that the students have a general understanding of what menstruation entails, but their attitudes differ depending on their social interpretation of menstruation derived from their environments. It was established that the majority of the respondents could not openly discuss menstruation at home. As an aspect of culture, religion appeared to play a role in the interpretation of menstruation and a basis of attitude assigned towards menstruation as observed in behavior.

Although students' attitudes about menstruation were positive, their views on what other students felt about the same were negative. The majority of the girls was forced to use crude and unsafe items to manage menstruation because they could not afford sanitary towels. And according to the school matrons some students were unable to raise their concerns to teachers and health workers because their cultures did not allow open discussion about menstruation. All respondents were unanimous that peoples' negative perception towards menstruation ought to change. They said that culture should strive to demystify menstruation, and that menstruation should be seen as a normal occurrence in females. Though it was not part of the objective of the study, it emerged that students were sexually active and their worries were mainly not getting pregnant rather than contracting sexually transmitted infections.

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