



Effects of Girls' Menstruation Cycles on Sustainable School Attendance, a Study of Mvomero District, Tanzania

Saida Mohamed Iddi^{a*} and Omer Solomon Wachara^a

^a *Department of Education, Faculty of Arts and Social Sciences, Jordan University College, P. O. Box-1878, Morogoro, Tanzania.*

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Poor menstrual hygiene has been associated with serious ill-health, including reproductive tract and urinary tract infections. Inadequate water and sanitation facilities are a major impediment to school attendance for girls during menstruation, The objective of the study was to find out the effects of girls' menstruation cycles on sustainable school attendance in Mvomero district. The purposive sampling and simple random sampling methods were used in the determining the sample size of the study. A total of 116 respondents were involved in the study, i.e. Five heads of schools, five class teachers, six matrons and one hundred teenage girls aged 13-15 years from eighteen public secondary schools within Mvomero district. The data were collected through questionnaires and documentary reviews to determine the current situation on teenage girls' awareness of menstruation as a normal biological function, impacts of menstrual cycles on school attendance and the provision of sanitary towels amongst school girls and their influence on sustained school attendance. Validity of data was tested using the pilot study. Cronbach Coefficient Alpha was used to test the reliability where the coefficient of 0.86 was released and it was considered reliable. The quantitative data were analyzed and presented in the APA tables for discussion whereas the qualitative data were analyzed thematically. The study results revealed that most teenage girls have knowledge on menstruation as a normal biological function that occurs periodically. It was concluded that most teenage girls had health challenges during their menstruation which negatively affected their sustainable school attendance.

Keywords: Menstruation; menstrual cycles; teenage girls; school attendance; sanitary towels.

1. INTRODUCTION

Menstruation is a cyclic bleeding occurring in all women under reproductive age. It is characterized by blood flow through female genital organs; normally starts at puberty and stops at menopause [1]. The menstrual hygiene management is crucial for both physical and mental health, education, and dignity of adolescent school girls [2]. On the other hand, when good menstrual hygiene practices are observed they result into good menstrual health. On the other hand, when menstrual management practices are not well controlled the ill effects are likely to be encountered by females. Poor menstrual hygiene has been associated with serious ill-health, including reproductive tract and urinary tract infections [3]. Inadequate water and sanitation facilities are a major impediment to school attendance for girls during menstruation, compromising their ability to maintain proper hygiene and privacy [4]. Most schools in low-income countries either have insufficient toilets for girls or are frequently not very clean. Inadequate knowledge on menstruation and poor sanitation at schools greatly affect girls, especially menstruating girls, and further creates unfriendly school environment for them [5]. One may argue that the challenges caused by poor hygiene management will continue to jeopardize the potentials of girls if they are not properly addressed.

In many parts of the world, menstruation was considered a secret issue, which issue that associated with taboo, and only women could discuss it with their matured girls. This led menstruation to be associated with taboos. Literature review has demonstrated the limits that menstruation put on school attendance and academic attainment for girls [6]. Furthermore, Mahon & Fernandes [2] concluded that poor management of menstruation affects many girls globally, and especially in Low- and Middle-Income Countries. The absenteeism seriously impacted girls' achievements at schools. In essence, menstrual cycles should be taken as a normal biological function of any female who is at puberty to maturity age.

However, poor menstrual hygiene management caused by lack of enough information on menstruation, privacy, washing facilities, and sanitary facilities has caused the girls to be truant. An observation by Bobel & Winkler [7] in

Western Africa revealed that the concept of menstruation is considered as a female issue and thus, responsibility is bestowed to women to educate girls about it. On the other hand, lack of self-awareness on menstruation among teenage girls and ineffective menstrual hygiene management in schools are serious issues that lead to school absenteeism for most girls. Chandra-Mouli, et. al. [8] in Low and Middle Income Countries observed that, many girls across the world enter the adolescence period with knowledge gaps on menstruation thus being unprepared to cope with it.

In Tanzania, menstruation is still a debatable issue. Several Non-government Organizations (NGOs) show their concerns in raising the awareness about it. Various researches have been conducted on menstrual hygiene management, advising the government on the importance of policy formulation regarding menstruation as well as supporting the school girls through provision of sanitary pads [9]. Furthermore, the Tanzanian government has made several strategies towards the MHM. In the year 2019, the Ministry of Health Science and Technology agreed to incorporate menstrual hygiene management as a specific policy issue in the revised national health policy which commits to continue reform and resources towards menstrual hygiene issues into the future [10]. The measures help the marginalized groups to access sanitary products thus influencing their sustainable school attendance. Management of menstruation is still a challenging issue among secondary school girls in Tanzania, and it involves psycho-social and physical challenges. The findings by Guya, et al. [11] & Gabrielson [12] focused on menstrual hygiene management among secondary school girls in Tanzania. This leaves the gaps on the sustained school attendance by girls and effects of truancy or irregular school attendance.

The objectives of the study were to determine if teenage girls in Mvomero district are aware of their menstruation cycles as a normal biological function, to find out if menstrual cycles have an impact on girls' sustainable school attendance and to determine if girls in Mvomero District are provided with sanitary towels during their menstruation for sustainable school attendance. Further, the study highlighted the effects of menstrual cycles on girls sustained school attendance as well as making suggested remedial measures.

1.1 Analytical and Theoretical Framework

The study was guided by the Social Learning Theory by Albert Bandura. The theory explains the development of behavioral pattern for humans. Bandura considered stimuli as a source of behavior; an individual is likely to develop a pattern of behavior following the external environment or behavioral models. According to this theory, behavior is termed as a broad sense to include motoric, cognitive and physiological sense of response. It has been shown in a series of studies that self-monitoring reinforcement system can be readily transmitted to children through exposure of the self-reinforcement patterns displayed by adults and peers [13]. The theory assumes stimulus contiguity as a necessary, but not a sufficient condition for acquisition and performance of modeled pattern of behavior. Inter-personal relationship factors are necessary preconditions for identificatory learning; that parents serve as decisive role models during early developmental period (Children adapt behavior exhibited by parents but not the vice versa). During the later stages of development, people adopt behavior from peers, media and surrounding community. The theory further explains that observational learning involves two representational systems- an imaginal and verbal one.

In this study the social learning theory is relevant in determining the awareness of adolescent girls in menstrual cycles and its impacts on sustainable school attendance. It implies that parents are expected to be primary source of information on menstrual cycles to their children followed by peers, mass media and school. According to this theory, the adolescent girls would learn about menstruation through verbal explanation and seeing their parents and community at large considering menstruation as a normal biological phenomenon and it should not impede girls from attending to school to acquire knowledge and attaining their carriers. If the parents, peers and the entire community have wrong perception on menstruation, perceiving it as secrecy and something that should be hidden, the concept will be inherited and passed down to the next generations. The current study was set to find out the effects of teenage girls' menstrual cycles on their school attendance as described in the developmental pattern of behavior in social learning theory.

1.2 Conceptual Framework

In the conceptual framework, it is hypothesized that; lack of awareness on menstruation,

unfavorable cultural factors, lack of sanitary materials in schools, poor school environment for girls, lack of parental involvement and professional counseling are independent variables that negatively affect sustainable school attendance for girls. However, awareness creation towards menstruation, provision of sanitary materials and hygienic environment for girls, parental involvement and professional counseling would enhance sustainability to school attendance.

Biljon and Burger [14] in South Africa observed that menstruation does have the repercussions for girls aged between 12-13 years' school attendance. However, the study observed that older girls do not have a higher probability of being absent during their menses. Thus, encountering menstruation for the first time presents challenges for girls in relation to school attendance. It is therefore imperative that effects of girls' menstrual cycles be highlighted and intervened on to avoid hindrance to regular school attendance.

2. METHODOLOGY

The study adopted a descriptive design based on mixed method approaches. Both quantitative and qualitative research approaches were used. This is due to its relativeness to the study as the researcher investigated the effects of girls' menstrual cycles and its impacts to the sustainable school attendance. Thus, in employing this design, the researcher went to collect data in order to see the picture of the situation as could be. That is, to find out if the menarche has any impact on the sustained school attendance. The respondents were to say what happens and the researcher would not manipulate or treat the data but give it as the situation prevails. The purposive sampling and simple random sampling methods were used in determining the sample size of the study. A total of 116 respondents were selected i.e. five heads of schools, five class teachers, six matrons and one hundred teenage girls aged 13-15 years from eighteen public secondary schools within Mvomero district. The data were collected through questionnaires and documentary reviews to determine the current situation on teenage girls' awareness of menstruation as a normal biological function, impacts of menstrual cycles on school attendance and the provision of sanitary towels amongst school girls and their influence on sustained school attendance. Validity of data was tested using the pilot study.

Cronbach Coefficient Alpha was used to test reliability where the coefficient of 0.86 was released and it was considered reliable. The quantitative data were analyzed using Statistical Packages for Social Sciences (SPSS v.28) and presented in the APA tables for discussion whereas the qualitative data were analyzed and coded thematically for easier interpretation.

3. RESULTS AND DISCUSSION

3.1 Teenage Girls' Awareness on their Menstruation Cycles as a Normal Biological Function

The study was set to determining girls' awareness on their menstruation cycles as a normal biological function. The respondents were asked to indicate by choosing the appropriate answer of the level of their awareness on menstruation by selecting the same on the alternatives provided. Table 1 presents the summary of the respondents' views on the awareness of their menstruation as a normal biological function.

Table 1 shows that the girls who proved their knowledge on menstruation as a normal biological function that occurs monthly or periodically were 89(89%). While those who displayed ignorance that menstrual cycle is not a normal biological function were 11(11%). It seems that majority of the teenage girls are aware of the meaning of the menstruation cycles although this knowledge might not be sufficient because the other 11(11%) indicated their lack of knowledge of the same. It is the role of all and sundry that, the school management and parents to ensure that girls obtain the correct information about menstruation so that they are prepared to handle the situation appropriately.

Findings by Schmitt, et. al. [15] shows that majority of teenage girls across three cities in USA have some basic knowledge on menstruation, Bhattacharjee, et. al. [16] in West Bengal-India, found that only 23.4% (187 out of 798) knew about menstruation before menarche. Another study by Abreu-Sánchez, et. al. [17] in Spain highlights the gaps in knowledge and/or self-evaluation among young people in relation to their menstrual normality or abnormality.

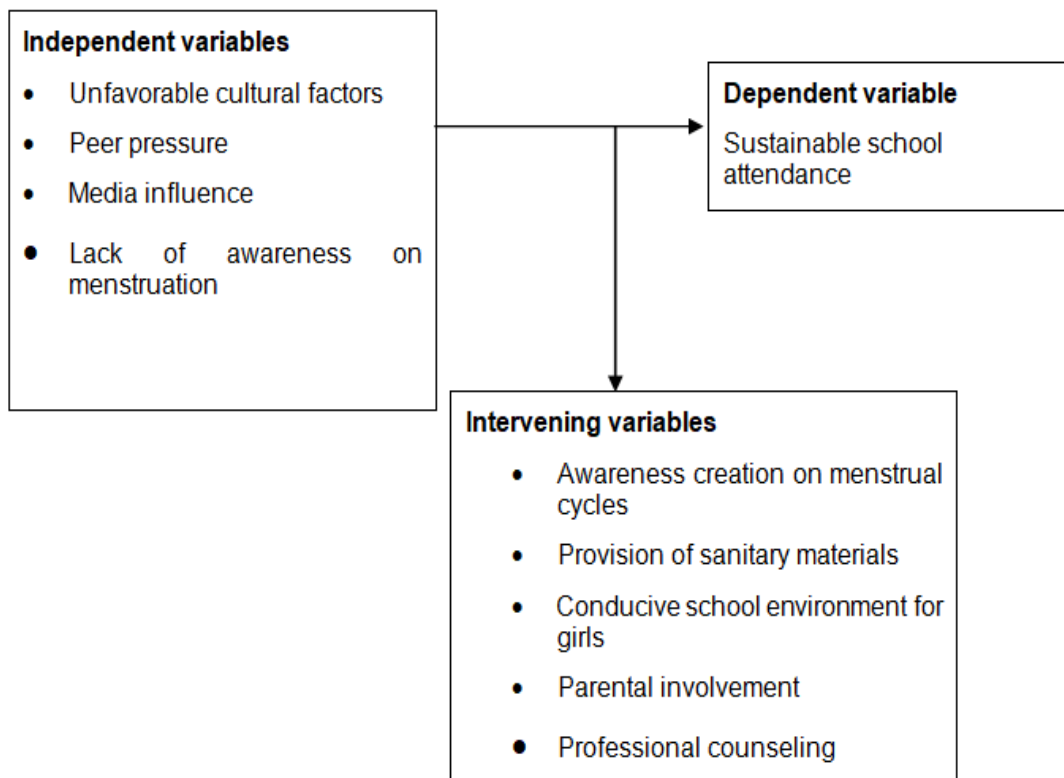


Fig. 1. Conceptual framework on Factors affecting sustainable school attendance for teenage girls

Source: Researcher's construct in this study, (2022)

Table 1. Teenage girls’ awareness of menstruation as a normal biological function (n=100)

Item	Yes F (%)	No F (%)	Total F (%)
Menstruation is a normal biological function	89(89%)	11 (11%)	100 (100%)

Source: Field Study 2022

Furthermore, Cheng, et. al. [18] in Taiwan observed that most women knew about menstruation cycle before their first period. However, the findings indicate that the girls and or women were not well-prepared to manage the emotions accompanied by it and accept menstruation cycle experiences. Thus, from the current study it is profound that, more efforts are required to make the teenage girls fully prepared to handle menstruation and enhance their comfort ability while at schools.

For the few girls who were not aware of the menstruation as a normal biological function could have been blinded by the misconception towards menstruation in the society or being taken as a taboo associated with it. Many girls across the world enter puberty with knowledge gaps and misconceptions about menstruation, therefore being unprepared to cope with it and unsure of when and where to seek help is a challenge to their attending to school daily [8].

It is observed that, much emphasis is needed to help them be aware of the menstruation as a normal biological function and that it should not create any hindrance in the attainment of their educational goals. Jain, et. al. [19] in India concluded that, a comprehensive awareness program has to be started among all levels of the society to remove misconception and taboos related to menstruation to make it pleasant. The basic knowledge on menstruation for teenage girls was necessary for the current research study which was set to determine the effects of menstrual cycles on the sustainable school attendance.

3.2 Teenage Girls’ Training on Menstruation as a Normal Biological Function

In the current research study, the assessment on the training about teenage girls’ menstrual cycles was established. The respondents, who comprised of school head teachers, matrons and class teachers, were asked to indicate if there are any trainings that are conducted at school to help the girls be aware of the menstruation as a normal biological function. Table 2 presents the summary of the respondents’ ideas on the training about menstrual cycles.

Table 2 shows that majority of the respondents 13(81.25%) agreed that the girls are trained about their menstrual cycle in their schools while 3(18.75%) disagreed to have such training in their schools. Further most respondents 12(75%) agreed to have efforts made by the school to ensure that girls get awareness towards their menstruation cycles while 4(25%) respondents disagreed on the presence of such efforts. Lastly a half the number of respondents 8(50%) showed that there were programs that educate girls about menstruation in schools while the second half 8(50%) of the respondents disagreed on the presence of such programs.

Educating girls about their menstrual cycles in schools is very essential as it prepares the girls to handle the situation and can minimize the truancy rate in schools. An observation by Alam, et. al. [20] in Bangladesh showed that enabling girls to manage menstruation at school by providing knowledge and management methods prior to menarche, privacy and a positive social environment around menstrual issues has the potential benefit to students by reducing school absenteeism.

Despite the claim of the 13(81.25%) respondents that menstrual education is provided in schools, it seems that this education is inadequate or is not continuous so that its impact is known to others who disagreed. A report by Tanzania Water and Sanitation Network (TAWASANET) [21] on improvement of menstrual hygiene management in schools in Tanzania; revealed that adolescent girls still need more information on Menstrual Hygiene Management (MHM), which should be provided in schools. Knowing the status of education concerning menstruation for girls in schools is relevant to the current research study which was set to investigate the effects of girls’ menstruation cycles on sustainable school attendance. In some schools there are some efforts made to ensure that girls get awareness on menstruation cycles. This was done during extra curriculum activities like subject clubs, plays and visiting trainers. Mkumbo [22] decided that this is done following the existence of the gap in the curriculum content concerning the menstruation.

Table 2. Teenage girls' training on menstruation at schools (n=16)

Item	Yes F (%)	No F (%)	Total (%)
Menstrual cycles training for girls	13(81.25%)	3(18.75%)	16 (100%)
Menstrual cycles training efforts to girls	12(75%)	4(25%)	16 (100%)
Programs for education girls about menstruation	8(50%)	8(50%)	16 (100%)

Source: Field Study 2022

In the sub item on menstrual cycles training efforts to girls 12(75%) the respondents admitted that there are extra efforts which are made within their schools to train girls to the knowledge of the menstruation. The efforts are very useful to minimize the number of girls who miss classes due to menstruation factors. However, this should be done in all schools to help teenage girls with the similar challenge. The information on the efforts done in schools to help girls about menstruation is appropriate to the current research study which was set to investigate the effects of girls' menstrual cycles on sustainable school attendance.

In the sub item of Programs for education girls about menstruation 8(50%), it was found that there are some NGOs that offer support to school girls by providing education and sanitary facilities. The Netherlands development organization (SNV) implements school girls' menstrual hygiene management projects in eight districts in Tanzania namely Chato, Magu, Sengerema, Karatu, Babati, Siha, Njombe and Mufindi [9]. A half of the respondents 8(50%) admitted to have such programs though they did not specify the existing programs. Usually, these programs are geared to help in bridging the knowledge gaps that exist in schools and support girls thereby minimizing truancy rates in schools.

3.3 Impacts of Menstruation on Girls' Sustainable School Attendance

The study aimed at finding out if menstrual cycles have any impact on girls' sustainable school attendance in Mvomero district. Respondents were asked to express by choosing among the given responses how they felt at the onset of their menstruation. It was assumed during this study that the first menstrual cycle would set the trend for girls' behavior on whether to attend school during the menarche or not. Table 3 presents the summary of respondents' perception at the onset of their first menstruation.

Table 3. Respondent's perception on the first menstruation (n=100)

Feelings	F (%)
Normal	12 (12%)
Scared	53 (53%)
Perceived to be Sick	35 (35%)
Total	100 (100%)

Source: Field Study 2022

Table 3 shows that majority of respondents 53(53%) were scared during the onset of their first menstruation followed by those who had sickness thoughts 35(35%) while a handful of the respondents 12(12%) felt normal. It is evident that majority of teenage girls 53(53%) were scared during their first menstruation because probably they were not prepared to handle that situation in which they found themselves. This implies that most of teenage girls experience their first menstrual periods with little or no knowledge about the body change. Thus, they do not know how to perceive or behave during this vital change in their teenage and or adolescence age. This might have consequences on girls' attendance to school as they may decide to escape going to school due to fear of the unknown, shame and or the perception that they are sick. Biljon and Burger [14] observed that menstruation does have the repercussions for girls aged between 12-13 years. However, the study observed that older girls do not have a higher probability of being absent during their menses. Basically, menstruation should remain as a natural phenomenon thus should not create any disturbance towards the girls' activities including normal school routine.

The study revealed that teenage girls who had sickness thoughts 53(35%) held the second position. The girls who thought that they were sick could have decide to stay at home and ultimately miss classes during the menstruation days while others could remain passively sitting in the back row of their classes due to fear of leakage and then being teased by boys at school. Studies by Sommer, et. al. [23] in Kenya and Adimna & Admna [24] in Nigeria opined that lack of suitable changing opportunities,

ineffective sanitary products, fear of leaking, shame and stigma impede girls' fullest participation in their schooling. It is therefore imperative that the government and community members should break the silence towards menstruation as it is considered to be one of the many causes of the increased truancy for school's girls. This forms the necessity of this study which was set to determine if menstrual flows have any impact on girls' sustainable school attendance.

On the other hand, few respondents 12(12%) considered their first menstruation with normal perception might. It seems that the girls might have obtained the menstrual information from some reliable sources and thus prepared them enough to manage menstruation. A study by Bhattacharjee, et. al. [16] in West Bengal found that only girls, who knew about the menstruation before menarche, neither scared nor failed to perform their daily activities including school attendance. It is therefore recommended that it is significant for the teenage girls to have a prior knowledge on their biochemical changes so that on the menarche they do not get shocked at what has befallen them, they instead manage the situation appropriately for their comfort and progress. Furthermore, additional interventions need to be employed to help these teenage girls. Such help should range from awareness creation, menstrual facilities accessibility as well as supportive infrastructure for menstruation management at schools.

3.4 Respondent's Sources of Sanitary Materials in a Month

In the current research study, the respondent's source of sanitary material in a month was established. The respondents, who were composed of school girls only, were asked to outline by choosing among the given alternatives the sources of their sanitary materials monthly. Table 4 presents the distribution summary of the respondents' source of sanitary materials in a month.

Table 4. Respondents' source of sanitary material in a month (n=100)

Source	F (%)
Par Parents	85 (85%)
Friends	9 (9%)
School	2 (2%)
Pocket money	4 (4%)
Total	100 (100%)

Source: Field study 2022

From Table 4, it was found that respondents who obtained sanitary materials from their parents formed the majority 85(85%), whereas few respondents obtained sanitary materials from their friends 9(9%) while least respondents 4(4%) and 2(2%) obtained them from their own pocket money and schools respectively. It is evident from the table that parents 85(85%) act as the major source of sanitary materials for their girls. This shows that parents play their great roles in supporting their girls with sanitary materials. However, it is not stated what kind of sanitary materials parents offer to their girls. If parents offer poor sanitary materials to their girls, the girls might not use them and find those of their preference. On the other hand, there is variation in the economic level among the families; this may create classes among the girls at school as some girls might afford to buy expensive sanitary stowels while others would not. The same way some girls are living with their parents while others are not; thus, those who are not living with their parents may find it difficult to obtain the sanitary materials of their preferences.

A similar observation was made by Malhotra, et. al. [25] in Uttar Pradesh, India that parents' socio-economic status played a great role in comprehensive menstrual hygiene. Parents' education and financial status can influence knowledge and monetary support to girls during menstruation. The variation might create bias among the teenage girls at schools, as a result the girls may respond differently to such condition; some girls may decide to engage themselves to unsafe sexual relationships to get sanitary materials, while others may decide to stay at home during their menses due to inferiority complex.

Furthermore, it was observed that 9(9%) of the respondents obtain their sanitary material from their friends. It is good for the friends to help one another in different circumstances. However, this might bring temptation for the girls as they may involve themselves in unsafe sexual relationships which in turn it may lead to early pregnancies and or diseases transmission. A study by Nabikindu [26] in Uganda claimed on the health problems as the result of unsafe sex amongst youths including sexually transmitted diseases, unplanned early pregnancies and related health complications. In addition, Phillips-Howard, et. al. [27] in Kenya observed that lack of adequate sanitary hygiene products forces some girls to use un-hygienic materials, potentially increasing urogenital infections. New but limited evidence

also suggests that this need leads adolescent girls to engage in transactional sex in order to buy menstrual products.

Furthermore, 4(4%) of respondents indicated that they obtained their sanitary materials from their pocket money. It seemed that girls are comfortable once they obtain sanitary towels of their own preference. However, the socio-economic factors influence the choice for sanitary materials. A study by Garikipati, et. al. [28] in India found out that a significant proportion of young girls entering menarche are directly adopting disposable sanitary pads.

Lastly, schools were proved to have least involvement 2(2%) on the support for teenage girls' menstrual management. It seemed that the current policies on hygiene management in schools did not put much emphasis on the importance of sanitary facilities for school girls. It is suggested that teenage girls should obtain safe and quality sanitary materials from reliable sources. Thus, the government should work out on the policies that would ensure the availability of sanitary towels for girls and this should be included in the government capitation. The policy would help to reduce bias among girls at schools, ensure sustainable school attendance and hence promote learning. A study by House, et. al. [29] in Tanzania suggested that menstrual hygiene management need to be integrated into programs and policies across key sectors including water, sanitation and hygiene (WASH).

3.5 The Help that Girls Need at Start of their Menstrual Flows at Schools

In the current research study, the help that girls need at the start of their menstrual flow at school was established. Teachers who formed the bulk of the respondents were asked to give their views by choosing among the given alternatives on how they help girls who start their menstrual flow at school. Table 5 presents the distribution summary of the respondents' responses.

Table 5. Help that Girls need at the start of their Menstrual flow at School (n=16)

Help	F (%)
Sanitary towel provision	12 (75%)
Permission for going home	2 (12.5%)
No any consideration	1 (6.3%)
Consideration for needy students	1 (6.3%)
Total	16 (100%)

Source: Field Study 2022

From table 5 above, it is revealed that respondents who said that they help girls by providing sanitary towels formed the majority 12(75%), followed by few respondents 2(12.5%) who said that they help girls by allowing them to go back home whereas equal number of least respondents 1(6.3%) said that they have no any consideration and they have consideration for needy students only. It seemed that in many schools there were sanitary towels kept for girls who experience their menstrual flows at school. This was evident in the study as majority of the respondents 12(75%) proved that they provided sanitary towels for girls who started their menstrual flow at school. This is very useful as it reduces the fear of leakage among the girls who start their menstrual flow at school. Moreover, menstrual hygiene management in schools is a great challenge as it needs diverse strategies like availability of water, soap as well as changing rooms. Lack of suitable changing opportunities, ineffective sanitary products, fear of leaking, shame and stigma impedes girls' fullest participation in their schooling [23, 24]. Furthermore, few respondents admitted that they allowed girls to go back home 2(12.5%). It seems that in some schools there is no any help for girls who start their menstrual flow at school. Sending them back home might be good for girls as it keeps them away from shame. However, this is not right since it creates loop holes for truancy in schools also girls fail to attend the on-going lessons. It was further observed by Miuro, et. al. [30] in Uganda that substantial embarrassment, fear of teasing, menstrual pain, and lack of effective materials for menstrual hygiene management led to school absenteeism among adolescent girls.

It was evident that in some schools there is no consideration made to girls who start their menstrual flows at school as it was proved by least respondents 1(6.3%). It seemed that in some schools the school management does not have any kind of help for teenage girls who start their periods at school. This might be due to the fear or lack of awareness amongst girls that they do not ask for such help and or the school managements do not prepare materials for girls. Patabendi [31] in Sri Lanka revealed that most schools had difficulties in menstrual hygiene management such as lack of facilities for changing and safe disposal of used sanitary napkins.

Lastly, the study has revealed that in some schools only the needy students were considered

for help during their menstrual flows 1(6.3%). Considering the needy students might be a good idea as it ensures that every needy student gets the menstrual help. However, it might create classes and be the source of inequality among girls at schools. It is noted that for effective performance of students at schools, the equality concept should be considered in the provision of social services. Equality of opportunity is generally considered to maximize the total social good, increases social gains, and can lead to diffusion of power to individuals [32].

It is suggested that there should be fair treatment for girls to avoid bias at schools. Menstruation should be considered as an important issue for school girls thus policies should be formulated to help girls on menstrual management. The policies should focus on awareness creation, facilities accessibility as well as supportive school infrastructure for proper and hygienic sanitation. By so doing it would enhance sustainable school attendance for girls and hence promote their learning. Providing better sanitary care and puberty education for school girls is one intervention that might provide rapid effects with long lasting positive consequences and thus should be considered seriously by policy makers [33].

4. CONCLUSIONS

From the current study it can be concluded that most teenage girls have knowledge on menstruation as normal biological function whereas they learned the information from schools. However, majority of the girls were scared during the onset of their first menstruation due to either fear, or the taboo associated with the menarche or a mere fear due to new development and life experience. The study further concludes that, menstruation cycles have negative impacts on sustainable school attendance for teenage girls; the impacts are resulted from health challenges that most teenage girls face during their menstrual flows as well as the menstrual flows management challenges. To ensure sustainable school attendance for teenage girls, on the basis of the study findings the following recommendations are made: the government should ensure that the budget for sanitary towels is included in the government capitation for schools. The school management should ensure that the 10% of the current budget in the free education policy for helping girls who start their menstrual flows at schools be used as planned. The teenage girls

should be made aware and consider the menstrual cycles as a normal biological phenomenon for any maturing woman. Thus, it should not hinder their attendance to school.

SUGGESTIONS FOR FURTHER STUDIES

1. Efficacy of boys' awareness of the girls' bio-physical conditions
2. The impacts of menarche on female students' academic performance.
3. The effectiveness of the supply of disposable sanitary towels in influencing girls' school attendance.

CONSENT

As per international university standards, respondents written consent has been collected and kept by the authors(s)

ETHICAL APPROVAL

During the study all respondents were informed about the study in order to have their willingness to cooperate. The participants were not harmed psychologically and were assured of anonymity and confidentiality of the information which they provided.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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