

## Research Article

# Menstrual Hygiene and School Attendance among Adolescent School Girls in Rundu

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**Abstract**

A study to assess menstrual hygiene and its impact on school attendance among adolescent school girls was conducted in selected combined schools in Rundu. The aim of the study was to assess menstrual hygiene and the impact of menstruation on school attendance among adolescent school girls in Rundu. A cross sectional study was conducted with 138 study participants. A self-administered questionnaire and Focus Group Discussions (FGDs) were used to collect data. Questionnaires were analysed with SPSS version 24, while FGDs were analysed thematically. It was found that girls use a wide variety of materials during menstruation ranging from pads, tampons, toilet paper, cottons and pieces of cloth. There were lapses in knowledge and misconceptions regarding menstruation. There was reasonable knowledge regarding menstrual hygiene and most girls (76%) used sanitary pads in their last period. Almost half of the girls (49%) however found sanitary pads unaffordable. Some girls missed classes or did not concentrate in class due to lack of sanitary materials, pain and discomfort and this affected their performance. The study shows that ensuring access to appropriate sanitary materials improves school attendance, academic performance and the girls' potential success in life. Providing information to girls on menstrual hygiene is necessary to empower and prepare girls for menstruation and a healthy reproductive future, while preventing RTIs and circumventing challenges that could compromise their academic pursuits. Education authorities should consider providing sanitary pads to girls in school to ensure universal access. Stakeholder involvement is necessary due to the multi-dimensional nature of menstrual hygiene management.

**Keywords**

- Menstruation
- Menstrual hygiene
- Adolescent
- Sanitary materials
- Sanitary facilities

**ABBREVIATIONS**

FDG: Focused Group Discussion; RTI: Reproductive Tract Infections; UTI: Urinary Tract Infections; SPSS: Statistics Packaging for Social Sciences; UNICEF: United Nation Children's Fund; WHO: World Health Organization

**INTRODUCTION**

Menstruation is the natural flow of blood originating from the monthly shedding of the uterine lining as part of the cyclical variations in hormonal levels. The onset of menstruation is a life-changing event for adolescent girls across the world. However, the knowledge girls have regarding menstruation, availability of products or facilities to manage menstrual hygiene, along with advice and support from the society seems to be lacking. Due to challenges girls face, unhygienic practices during menstruation seem to be a common problem.

World Health Organization defines adolescents "as the period between 10 to 19 years of age, in their second decade of life" [1]. This is a phase during which they undergo puberty, which heralds

their sexual and reproductive maturity. One of the major changes girls have to go through in this stage is the commencement of menstruation, known as 'menarche'.

Menstrual hygiene involves managing the menstrual flow in an effective, appropriate, comfortable and hygienic manner. Issues around menstruation and menstrual hygiene have not received adequate attention in developing countries, especially among adolescent girls. Female sanitary materials and menstrual hygiene has been identified as a major concern that has the potential to affect school attendance and academic performance of adolescent girls.

Umar, Yusuf & Musa's study on menstruation and menstrual hygiene among adolescent school girls in Kano, Nigeria found the average age of menarche was  $12.9 \pm 0.8$  years [2]. Most of the girls had fair knowledge of menstruation; however, most parents expected their children to learn about menstrual hygiene at school because they felt they were not knowledgeable about menstrual hygiene and felt uncomfortable discussing menstruation with their children. Knowledge that preceded menstruation is one of

the important factors that affected positively the Egyptian female adolescent's attitude toward menstruation [3].

Access to appropriate absorbent materials to collect blood, is a huge determinant of menstrual hygiene. Menstrual blood should be absorbed by safe sanitary materials, but these sanitary materials are not as easy accessible to everyone especially those of low socioeconomic background. For too many women in developing countries, studies have shown that girls are forced to use rags, old cloths, pieces of old clothes, saris, cotton wool, toilet paper, or even pieces of mattress. In poor rural areas, girls even reported digging a hole in the ground to sit on for the duration of the menstrual flow or using leaves and cow dung. Some use soft grass that they place in their underwear or sit on to manage their menstrual flow. It was also reported that some girls do not use anything, but they rather isolate themselves during menstruation [4,5]. Inappropriate materials are commonly reused and their integrity and assurance of hygiene, highly questionable. Being unsuitable for menstrual use, these materials allow for decomposition processes setting in, which provides a suitable environment for colonization by microbes. Prolonged use or infrequent changing of these materials therefore, could pose potentially serious personal and health risks such as foul odor, discomfort and self-esteem issues, reproductive tract infections (RTIs) and urinary tract infections (UTIs). These are health issues that are already common in this age range under normal circumstances as described by Kerubo et al, who found that 28% of girls had one or more bout of RTI. These conditions also increase the risk of future infertility in women [6,7].

In Africa the practice of menstrual hygiene is still poor and the issue is not given due importance. Menstruation is also associated with school absenteeism and increase school drop-out rates [8]. United Nations Children's Fund estimates that about 1 in 10 school age African girls do not attend school during menstruation, or drop out at puberty because of the lack of clean and private sanitation facilities to manage their periods hygienically [9]. Lack of privacy in toilet facilities to change the sanitary materials is an important factor which encourages prolonged retention of absorbents. Lack of water for sanitation and hand washing also contributes to unhygienic practices during menstrual periods. In Rukungiri district in Uganda, 61.7 % girls reported missing school each month for menstruation-related reasons [10]. Guerry also found the mean school days missed during menstruation was 1.3 days per month and reasons such as lack of suitable disposable sanitary pads, lack of changing facilities at school and the pain they feel were given for their absence [4]. Further, 39% of the girls agreed that menstruation had negatively affected their academic performance or they had performed poorly compared to before they started menstruating.

Proper management of menstrual hygiene is a multi-faceted issue that must be addressed at individual, family, community and school levels. This is especially important due to the impact it has on education and reproductive health. Involvement of various stakeholders to address issues of menstrual hygiene management ranges from addressing knowledge regarding menstruation, improving access to sanitary materials, access to sanitary facilities, privacy and general support at school. According to Adika, Ayinde and Jack-Idel menstrual hygiene and

self-care information should be provided to all relevant parties to ensure the needs of adolescent girls are addressed, to safeguard their health and ensure their pursuit of a sound education goes unhindered [11].

Not much is known regarding menstrual hygiene among adolescents and how it impacts school attendance and performance in Namibia, despite this being a prerequisite for future health and wellbeing. The study is being conducted to will reveal what is known about menstruation and the practice of menstrual hygiene including the types of materials used during menstruation and its effect on school attendance and performance among adolescent girls. The study will therefore increase awareness regarding the impact of this physiological process on the girls' academic pursuits, as well as its impact on their present and future reproductive wellbeing, such that steps are taken to improve knowledge regarding menstrual hygiene and its impact among the girls, the community, school authorities and other relevant stakeholders. In addition, the study will stimulate dialogue and action among communities, school authorities and other relevant stakeholders to provide support for menstrual hygiene, to help girls stay in school during their periods, and hence potentially improve school attendance and performance among adolescent girls. Improved awareness regarding menstrual hygiene will herald improvement in reproductive health outcomes among the girls, who will become healthy mothers in the future, with the capacity to pass on healthy practices to future generations of girls. The study will also stimulate discussions in the community about menstrual hygiene and hence demystify this natural process which is often not discussed openly in families and communities.

## Study objective

To assess menstrual hygiene and the impact of menstruation on school attendance among adolescent school girls in Rundu.

## MATERIALS AND METHODS

### Study design

A cross-sectional design was used for the study. Both quantitative and qualitative methods were employed in the study.

### Study subjects

Rundu is the capital city of Kavango east region in the northern east of Namibia. The 138 study participants were drawn purposively from 4 combined schools in Rundu with a variety of cultural and economic backgrounds. Eligibility criteria were girls 16 years above who had already experienced menarche. Approval for the study was obtained from the Health Sciences Department. Permission to conduct the study was obtained from the management of the combined school that allowed the study to be conducted among girls 16 years and above. Informed consent was obtained from each participant. Strict confidentiality was maintained.

### Data collection method

Data was collected by questionnaire and focus group discussions (FGD). A structured, non-coded, interviewer-administered questionnaire with both closed- and open-ended

questions was used. The questionnaire elicited information such as the types of feminine materials used, knowledge and practice of menstrual hygiene, as well as the effects of menstrual cycle on school attendance. FGDs obtained information on knowledge regarding menstrual hygiene, the reasons for choosing the types of sanitary materials used, source of information about menstruation and ways to make school more convenient for menstruating learners.

### Data management

The questionnaire was analyzed with Statistical Packaging for the Social Sciences (SPSS) version 24. Data was summarized in descriptive statistics using tables and charts. FGDs were analyzed thematically.

### Limitations

Purposive sampling was used to select study participants; therefore sampling bias may influence results and is duly acknowledged.

## RESULTS AND DISCUSSION

### Sample demographic characteristics

School girls between 16 to 22 years participated in the study with mean age being 17 years and the modal age being 16 years (33%). All the study participants were Christian. The mean age at menarche was 14 years, with majority (33%) attaining menarche the age of 15 years. Duration of the menstrual period ranged from 1 to 6 days, mean duration being 4 days.

### Knowledge on menstrual hygiene

All the girls had received information on menstruation before menarche. Sixty percent had received this information from mothers, while 23% received their information from school. This is consistent with findings from Thakre, Thakre, Reddy, Rathi, Pathak, Ughade, of 71.33% receiving information from their mothers [12]. The information received included how to discard soiled items (34%), how often menstruation occurs (25%), what causes menstruation (20%), while only 10.14% were told what absorbent materials were suitable to collect menstrual blood, and 2.9% were told about the relationship between menstruation and reproduction. More than half of the girls (57%) said the information they received prepared them for the menstrual experience. Regarding what they knew about menstruation, majority of the girls (77%) understand menstruation as a normal life process for women, 65% knew it was caused by hormones, though 41% thought menstrual blood comes from the vagina, and while 23% knew menstrual blood comes from the uterus and others thought the blood comes from the bladder (13%) and abdomen (8%), and 15% did not know where the blood comes from. Some misconceptions regarding menstruation were also mentioned such as one girl who said, "It is caused when you lose your virginity....by engaging in sexual activities".

All the girls however knew that menstrual hygiene was important. On why menstrual hygiene was important, they mentioned preventing foul smell (41%), preventing itching and infections (32%) and preventing getting sick (27%). Forty one percent believed that poor menstrual hygiene caused

reproductive problems, shame and low self- esteem (32%), foul odour (11%) and cultural problems (3%). This is in contrast to 56% of respondents in India who thought it was unnecessary to do anything for menstrual hygiene [13]. When asked what constituted menstrual hygiene, they mentioned using the right materials to collect blood (46%), frequent washing of genitals (36%) or frequent changing absorbent materials (17%).

### Access to menstrual hygiene materials

Figure 1 show the materials used as absorbents, of which sanitary pads constituted 33%, while Table 1 shows the reasons for choice of absorbent materials, including durable protection (38%), comfort (28%), and affordability (15%). When asked what they used for their last period, most used sanitary pads (76%), cotton (7%), toilet papers (6%) and a combination of tampons, pads and toilet papers (1%). Majority (67%) felt the materials used met their needs; however, almost half of the girls (49%) thought the materials were not sufficiently affordable or available, as was mentioned during the FGD, "The materials I use are pads, cottons and sometimes toilet papers. The reason I use them especially cottons is because sometimes I cannot afford to buy pads since they are now expensive. The expensive of cotton also leads me to use toilet papers if the cottons are not available". Another said, "Sometimes it's not easy to get money for you to buy these materials, so that is why we end up using cottons that are naturally growing or use toilet papers that are available in the toilet room". Adika, Ayinde and Jack-Idel similarly revealed that girls use different materials ranging from pads, pieces of cloths, grass and tree branches [11]. These findings indicate finance as a major determinant to using appropriate sanitary materials [8].

As for problems encountered with their chosen absorbents, girls who used other materials (excluding sanitary pads and tampons) mentioned they were difficult to remove once they were full (30%), they got full quickly (28%) or materials were not protective at all (4%). On how regularly they changed the absorbents, 61% changed the materials twice a day, 10% once a day, 20% used the materials for more than a day, while 0.72% indicated that they did not change at all for the entire period. A girl mentioned, "If it is a normal flow, you change twice a day but if it is a heavy flow, change 3 or 4 times a day". Another however said, "I honestly stay with one pad for the whole day, it does not matter if I have a heavy flow or not". All participants however washed their genitals during their menstrual period. Majority (65%) said they washed twice a day and 19% washed once a day. Infrequent changing of absorbents is known to increase the risk for RTIs and infertility, and seems to be a practice despite knowledge regarding the risks involved.

### Impact on school attendance and performance

Most girls (90%) went to school while menstruating and only 8% stayed home. A girl who stayed home said, "Personally, it affects my attendance because when I do not have pads and this means no school for me as a result I miss out on my lessons for that day". Yet another said, "It does affect our attendance and performance. Because some of us, you feel sick when you are on your periods. My back hurt so badly and if I am in class while the teacher is teaching but I will just be concentrating on the pain that I am feeling. It is an unbearable pain so I sometimes

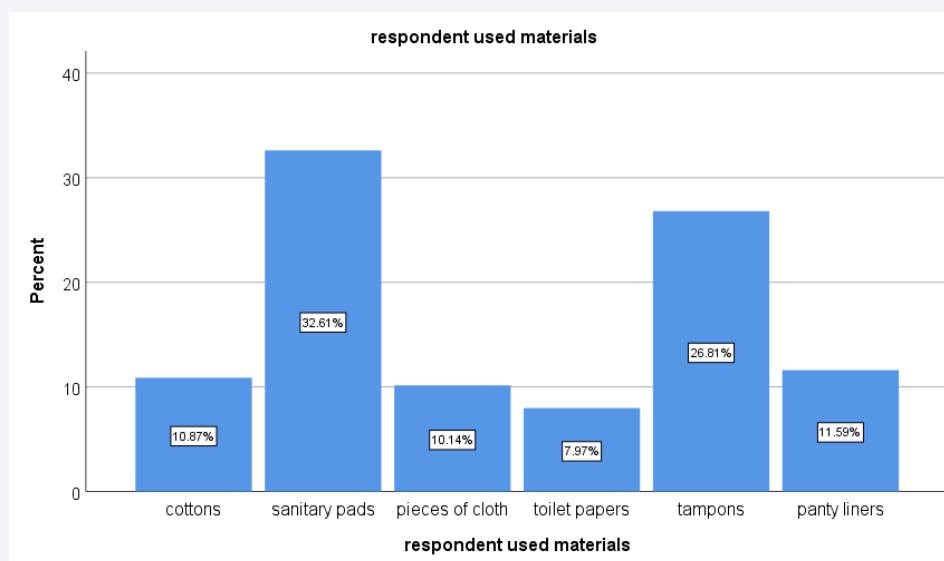


Figure 1 Absorbent materials girls use during menstruation, Rundu, 2017.

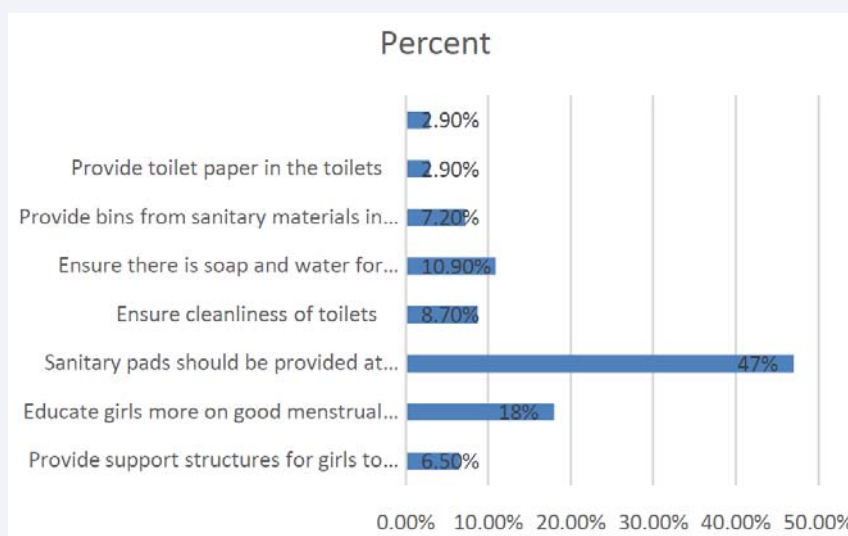


Figure 2 Girls' suggestions to schools on improving menstrual hygiene, Rundu, 2017.

**Table 1: Girls' Reasons for choice of absorbent, Rundu, 2017.**

Reasons for choice of absorbent	Frequency	Percent
They prevent soiling	27	19.6
They are comfortable	38	27.5
They are affordable	20	14.5
They protect longer	52	37.7
Other materials being unaffordable	1	.7
Total	138	100.0

opt to stay at home and miss my classes". Another said, "As for me, if I don't have pads, I always come to school and ask from my female teachers, so I am always at school. Menstruation does not make me stay at home". Tegegne & Sisay found severe pain

related to menstruation, lack of sanitary facilities to manage their hygiene and lack of materials to manage their menstrual bleeding influenced girls' academic attendance and performance [14].

On problems encountered when menstruating on school days, they mentioned unavailability of soap and water in the toilets (44%), lack of privacy in the toilets (25%), dirty or non-functional toilets (24%) and teachers not allowing them to go to the toilets during classes (7%). Those who stayed at home when menstruating on school days did so due to unavailability of protective materials (41%), heavy flow of blood (26%), and discomfort being in class (14%). One girl said, "... in our class we are mixed with boys and you feel vulnerable when you are sitting next to a boy and you are on your menstruation. You even feel shy when you are standing up because you always feel like you messed up". Chi-square test demonstrated a significant

relationship between the type of material used and encountering problems in school ( $X^2=50.87$ ,  $p=0.000$ ), as well as a significant relationship between the type of material used and the choice to stay home when menstruating ( $X^2=28.99$ ,  $p=0.004$ ). Most girls (90.58%) however, were comfortable to discuss menstruation with other people.

Regarding sanitary facilities in the schools, all schools provided female toilets at school, however, most (59%) thought the toilets were not in good condition, and mentioned the lack of soap and water (64%), but 54% were satisfied with the level of privacy in the toilets. Most (82%) thought the schools provide enough breaks for them to change and clean themselves. Some girls (37%) had been bullied by boys when they found out that they were having their periods, while 33% complained of teachers not allowing them to go to the toilet during periods, and 30% experienced discomforting abdominal pain. Majority (71%) know a staff member they could talk to when they experienced problems while menstruating and most girls mentioned the names of Life Skills teachers as people they could talk to. Figure 2 shows the girls' suggestions to the schools on how to support menstrual hygiene; most girls felt the school should provide sanitary pads in school (47%). The girls also favored information provision on menstrual hygiene and other health issues, as one participant mentioned, "It will be nice if the school start up with a girl's club where necessary information will be shared".

## CONCLUSION

Menstrual hygiene is a health and social issue that needs to be addressed at various levels by all relevant stakeholders seeing the impact it has on girls' health and school performance. Menstrual hygiene would therefore improve future outcomes with regards to both reproductive health and educational outcomes. Providing comprehensive information to girls, families, educators, policy makers and other relevant stakeholders on menstruation and menstrual hygiene is necessary to empower and prepare girls for menstruation and a healthy reproductive future, while preventing reproductive tract infections and creatively pre-empting and circumventing possible challenges that could compromise their academic pursuits. Education authorities should consider providing sanitary pads to girls in school to ensure universal access and level the playing field for all learners. Schools should provide supportive structures such as counseling, girls clubs, painkillers and mentoring programmes. Attention should be given to the maintenance and re-stocking of materials in sanitary facilities at schools to ensure that girls are comfortable to maintain menstrual hygiene and limit school absenteeism during

menstruation. Stakeholder involvement is necessary due to the multi-dimensional nature of menstrual hygiene management.

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