

# Facilities and Misconceptions Concerning Menstrual Health and Menstrual Hygiene Management among Young People in Jos, Plateau State, Nigeria

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## Abstract

**Background:** Globally, women constitute 49.6% of the world population and at least 500 million women and girls lack adequate facilities for menstrual hygiene management. In Nigeria, a quarter of women lack adequate privacy for defecation and menstrual hygiene management. Absence of facilities needed for menstrual hygiene can pose as obstacle to women and girls practicing menstrual hygiene effectively. This study aims to identify the facilities and misconceptions concerning menstrual health and menstrual hygiene management. **Methods:** This was a descriptive cross-sectional study among 169 young males and females of Evangelical Church Winning All (ECWA) Theological Seminary, Jos North, Plateau State. This study sought to identify the facilities and misconceptions concerning menstrual health and menstrual hygiene management among young people in Jos, Plateau State, Nigeria. Simple random sampling technique was used in this study and data was collected using interviewer-administered structured questionnaire to measure availability of facilities/programs for menstrual hygiene management and misconceptions about menstruation. Data analysis was done using the Statistical Package for the Social Science (SPSS) version 20.0 with descriptive statistics, proportions, tables and diagrams used to illustrate findings from the data collected. **Results:** Majority 139 (82.2%) of the female respondents had access to adequate water supply, while 30 (17.8%) did not have access to the adequate water supply. About half, 53.8% had bathrooms with doors and safe locks, 19.5% had a school clinic where menstrual absorbents can be gotten, 10 (5.9%) had Girl's Club/Peer Education teams, 24 (14.2%) had guidance and counselling classes. Programmes available to female respondents for menstrual health and hygiene management were girls club and guidance and

counselling sessions. Majority 94 (97.9) of females have access to some form of menstrual adsorbent material, and 50 (52.1%) had no access to Sanitary pads. Most females 80 (80.3%) have access to soap, 46 (47.9%) do not have access to privacy at home when faced with changing their pads or menstrual adsorbent, while 84 (87.5%) had access to privacy while in school, 46.7% of respondents were aware of misconceptions/taboo, which included that women should not cook when menstruating (19.5% of respondents), and women should stay away from public activities during menstruation (13.6%). **Conclusion:** A sixth of the women had no access to adequate water, half had bathrooms without locks, over half had no access to sanitary pads, there were misconceptions that can be dispelled using health education and enlightenment on proper menstrual health and hygiene.

### Keywords

Menstrual Hygiene, Menstrual Health, Misconceptions, Myths

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## 1. Introduction

Menstruation is a cyclical physiological process in most females, that occurs monthly in the absence of the fertilization. It is the periodic shedding of the uterus and one of the phases of the menstrual cycle. The uterus breaks down into a bloody substance that passes down through the cervix and exits through the vagina. It is a process that usually lasts from 3 - 5 days (could be more or less) and the amount of blood varies from period to period and from woman to woman. [1]

Women, overtime have developed their own strategies and facilities for menstrual hygiene management which vary from place to place based on personal preferences, the availability of resources, the economy, cultures, and educational status. However, menstrual hygiene management is defined by the United Nations as “women and adolescent girls using a clean menstrual management material to absorb or collect blood that can be changed in privacy as often as necessary for the duration of the menstruation period, using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials” [1].

According to the World Bank, women constitute 49.6% of the world population and “at least 500 million women and girls lack adequate facilities for menstrual hygiene management” [2]. In Nigeria, “25% of women lack adequate privacy for defecation and menstrual hygiene management [2]. Globally, 2.3 billion people lack basic sanitation services and in least developed countries, only 27% of the population have a hand washing facility with water and soap at home. [2] [3] The facilities needed for menstrual hygiene management include water, sanitation and hygiene facilities in schools, workplaces or health centres which are public places and their absence can pose an obstacle to women and girls

practicing menstrual hygiene effectively [2] [3] [4].

Some girls face challenges in maintaining their menstrual hygiene if there is a lack of separate toilets with doors that can be closed, there is unavailability of a means to properly dispose of used sanitary pads and water to wash their hands afterwards. Studies have shown that water and sanitation facilities at schools are often inadequate for menstrual hygiene management some girls report carrying plastic bags of drinking water to use in the school latrines [2] [3] [5]. They miss out on the benefits of practicing menstrual hygiene in a private, safe, and dignified way. A growing body of evidence shows that girls' inability to manage their menstrual hygiene in schools, results in school absenteeism, which in turn, has severe economic costs on their lives and on the country [2]. Girls in some places face stigma because some cultures perceive it to be a "dirty" process [3] [4]. Several misconceptions and practices affect how even the girls react to or see themselves when undergoing the menstrual phase and therefore, a need for awareness, adequate knowledge and understanding the menstrual process, accepting it as a normal phenomenon, practicing proper ways of managing it is required and ensuring facilities are available for menstrual management [3] [5].

The consequences of improper management of menstrual hygiene include girls being absent from school, a negative effect on self-esteem and lack of self-confidence in the girls, loss of interest in and avoidance of activities that occur in public places like sports and social events. A study on Ugandan rural schoolgirls showed, "nearly two-thirds said they miss school at least once per month because of menstruation" [6]. Absenteeism seems to be closely associated with lack of privacy and limited availability of water and sanitation facilities at schools. In Malawi, girls who reported that school toilets lacked privacy were more likely to be absent during their menstrual periods than girls at schools where more privacy was available. [7] In India, only 54% of girls reported attending school while menstruating. [8] Apart from having a feeling of being subnormal, diseased or traumatized, improper menstrual management like use of unclean pads, use of a particular worn pad for too long or use of alternatives to pads such as tissue papers, rags or sitting on clay pots can lead to all sorts of infections like urinary tract infections or fungal infections. In a case-control study from India, women with urogenital infections were twice as likely to have been using reusable cloths instead of disposable sanitary pads [9]. Another study show girls feel they must store or hide clothes in places they know are unhygienic so that they are readily available when they need them. [10] There are also situations where girls do not know about the menstrual process and so are unprepared for menarche, making them confused, frightened, or embarrassed at the start of menstruation which could possibly lead to the development of misconceptions or self-hate based on fear.

The general practice that people are comfortable with is to dispose of used menstrual products by throwing in the waste bins. [11] The method of disposal of menstrual waste depends on where the girl/woman is at that point in time,

and it also depends on the facilities made readily available for disposal at that point in time. At household level, disposal can be a problem as open burning may cause foul smell and this is not environmentally friendly. Burying the used pads is subject to digging by stray animals and rodents. There are designs available for convenient and cost-effective incinerators that can be installed in schools, colleges, hostels and at community level.

Historically, there have been numerous misconceptions and Taboos concerning menstruation. Even the word “taboo” comes from the Polynesian term “tapu,” meaning “sacred” and “menstrual flow”. [12] Pliny the Elder stated in his book *Naturalis Historia*, that contact with the monthly bleeding of women causes new wine to become sour, crops touched by it become barren, grafts die, seeds in the gardens dry out, fruits of trees fall off, the bright surface of a mirror becomes dull, the sharp edge of steel gets blunt and the brilliance of ivory becomes lustreless, hives of bees die, iron and bronze starts to rust, and the air is filled with a terrible smell. Dogs that taste the blood become crazy, and their bite becomes as poisonous as rabies. [12] Menstrual hygiene practices were affected by cultural norms, parental influence, personal preferences, economic status, and socioeconomic pressures. Menstrual beliefs refer to misconceptions and attitudes towards menstruation within a given culture or religion. Menstrual beliefs, knowledge, and practices were all interrelated to the menstrual hygiene management [13] [14]. Some of these norms were the barriers in the path of good menstrual hygiene practices. Many women experience restrictions on cooking food, work activities, sexual intercourse, bathing, worshipping, and eating certain foods [15]. These restrictions were due to the overall perception of the people regarding menstruation as they consider it dirty and polluting [16].

In some parts of the country, there were restrictions on bathing and a taboo against burial of bloodied menstrual cloth. Clothes should first be washed and then buried or reused. Washing and drying were taught to be done secretly or in a hidden corner so that they cannot be seen by others [17].

It was also believed that menstrual fluids may be misused for black magic, so women should wash the wrapper/cloth worn during menses only at night when others were asleep [18]. Menstrual flow was seen as dirty, polluting, and shameful, so women hide menstrual clothes for fear of being cursed. In similar findings, it was believed that menstrual waste was linked to witchcraft and danger, so it must be buried unless witches would go after human blood and find the menstrual wrapper/cloth and destroy the women by causing infertility [14]. From all these beliefs, it was clear that education plays a key role in menstruation hygiene management. By educating both men and women regarding menstruation, we can overcome these false beliefs and taboos.

Even touching menstruating women was considered toxic; they were prohibited from cooking and taking certain foods like pickles. These prohibitions are more in the rural areas than in the urban areas. They were also not allowed to participate in religious activities or to contact religious articles [19]. Menstruating girls were also not allowed to bathe and wash hair, as it is believed to impede

blood flow. Due to cultural expectations and restrictions many girls were not adequately informed about the realities of menstruation. As a result, they feel subnormal, diseased, or traumatized [20]. Unprepared girls were frightened, confused, and felt embarrassed by menarche and were likely to develop negative attitudes towards menstruation [21].

Menstruation has also been related to suicide as studies from 2005 show suicidal attempts were the most frequent among females during menstrual phase. The most common diagnosis in females who have attempted suicide was situational reactions which dominated in patients aged 14 - 21 years [22]. Recently, a 14-year-old schoolgirl in Kenya took her own life after a teacher allegedly embarrassed her for having her period in class [23]. Girls are exposed to all kinds of body-shaming, and this affects their self-esteem. Indeed, the existence of so many misconceptions brings about fear and uncertainty, especially among young girls and these pose challenges causing difficulty in menstrual hygiene management in girls and women.

This study seeks to identify the facilities and misconceptions concerning menstrual health and menstrual hygiene management among young people in Jos, Plateau State. The findings will be useful in planning programs, activities and strategies for improving young people's knowledge level of good menstrual hygiene management.

## 2. Methods

The study was done among 169 young males and females at the Evangelical Church Winning All (ECWA) Theological Seminary, Jos (JETS) which is located at Jos North Local Government Area, Plateau State, Nigeria. The study design was descriptive cross-sectional study. Males were included in the study to understand the misconceptions and inclusion of males will boost the knowledge of menstrual hygiene in males, and this would enable them to give support to the females rather than making jest of them or stigmatizing them.

The sample size of 169 was determined using the Cochran's formulae below;

$$n_0 = (Z^2 pq) / e^2$$

where;

$p$  = Estimated proportion of young people who had good practice of Menstrual Hygiene present in the population.  $p$  is 88.7% [5].

$n_0$  = minimum sample size.

$e$  = desired level of precision.

$$q = 1 - p$$

$z$  = standard normal deviant at 95% confidence interval.

$$\begin{aligned} & (1.96)^2 \times 0.887 \times (1 - 0.887) / (0.05)^2 \\ & = 3.8416 \times 0.887 \times 0.113 / 0.0025 \\ & = 154 \end{aligned}$$

Attrition

$$10/100 \times 154 = 15.4$$

$$= 154 + 15.4 = 169.4$$

The sampling technique used in this study was simple random sampling technique, with the list of all students as the sampling frame. Each participant was selected by balloting, using the registration number of the students. An interviewer-administered structured questionnaire was used to collect relevant information from all students of the stated age group and informed consent was obtained. Confidentiality was maintained throughout the study.

The questionnaire did not contain personal information of the respondents like names and areas of residence to ensure confidentiality. Questionnaire contained marital status, level of education, availability of facilities/programs for menstrual hygiene management, access to menstrual material, sanitary pad, soap, water, privacy at home & in school, reasons for absenteeism, types of misconceptions/taboo regarding menstruation among male and female respondents. Data collection for each respondent was done individually to ensure confidentiality. The questionnaire was pretested before use. Data was analyzed using Statistical Package for the Social Science (SPSS) version 20. Descriptive statistics were presented as proportions, tables and charts used to illustrate findings from the data collected.

Ethical approval was obtained from the Bingham University Teaching Hospital Ethics Committee before commencement of the study. Permission to carry out the study was also taken from the administrator of ECWA Theological Seminary. Informed consent was gotten from each respondent before commencement. Each respondent was informed that there was no punishment for not participating. Health education was given to each respondent at the end of the session, this was to ensure participants benefited from participating in the study.

### 3. Results

#### 1) Sociodemographic Characteristics of respondents

**Table 1** shows that majority, 149 (88.2%) of the respondents were single, 20 (11.8%) were married. Majority, 132 (78.1%) of the respondents were Students, 22, (13.0%) were artisans, 2 (1.2%) were unemployed, 13 (7.7%) others (petty traders, teachers, and photographers).

Majority 155 (91.7%) had tertiary level of education, 9 (5.3%) had secondary level, 1 (0.6%) had primary, 4 (2.4%) had no education.

#### 2) Availability of facilities/programs for menstrual hygiene management

**Table 2** shows that 91 (53.8%) of the respondents stated that they had access to bathrooms with doors and safe locks, 33 (19.5%) stated that they had a school clinic where menstrual absorbents can be gotten. 10 (5.9%) had Girl's Club/Peer Education teams, 24 (14.2%) had guidance and counselling classes, 84 (49.7%) did not respond to the question (**Figure 1**).

#### 3) Distribution of female respondents with access to menstrual material,

**sanitary pad, soap, privacy at home & in school**

**Table 3** shows Majority 94 (97.9) of females have access to some form of menstrual adsorbent material, 2 (2.1%) do not have any menstrual material, while 50 (52.1%) had no access to Sanitary pads. Most females 80 (80.3%) have access to soap, 16 (16.7%) do not have access to soap. 46 (47.9%) do not have access to privacy at home when faced with changing their pads or menstrual adsorbent, while 84 (87.5%) had access to privacy while in school, 12 (12.5%) did not have the required privacy.

**4) Distribution of Respondents by sex with access to adequate water supply**

**Table 4** shows that 139 (82.2%) of the respondents had access to adequate

**Table 1.** Sociodemographic characteristics.

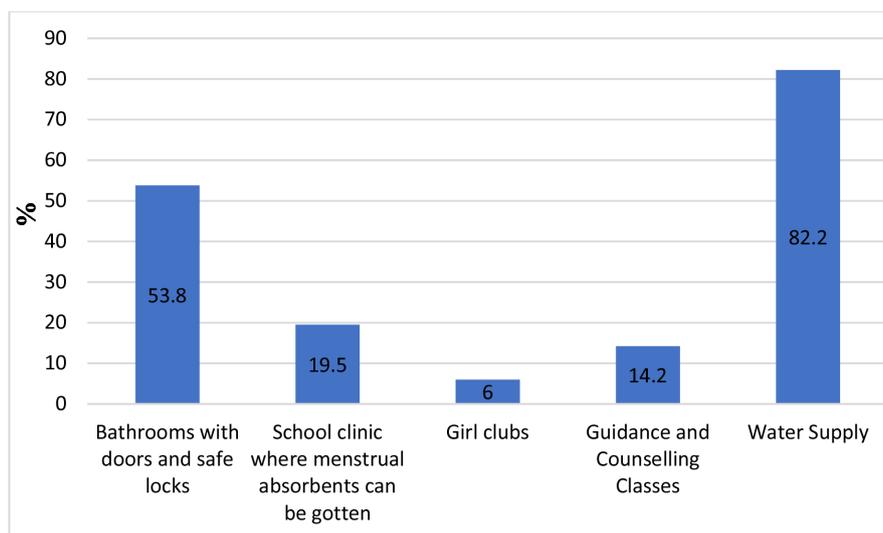
	Males	Females	Total
<b>Marital Status</b>			
Single	68	81	149 (88.2)
Married	5	15	20 (11.8)
<b>Occupation</b>			
Student	56	76	132 (78.1)
Artisan (Carpenter, Tailor, Barber, Hairdresser)	10	12	22 (13.0)
Others*	7	6	13 (7.7)
Unemployed	0	2	2 (1.2)
<b>Level of Education</b>			
Tertiary	70	85	155 (91.7)
Secondary	0	9	9 (5.3)
Primary	0	1	1 (0.6)
None	3	1	4 (2.4)
<b>Total</b>	<b>73</b>	<b>96</b>	<b>169 (100.0)</b>

\*Others include petty traders, teachers, and photographers.

**Table 2.** Availability of facilities/programs for menstrual hygiene management.

Facility/Program	Males	Females	Total
Bathrooms with doors and safe locks	41	50	91 (53.8)
School clinic where menstrual absorbents can be gotten	15	18	33 (19.5)
Girl clubs/Peer Education teams	5	5	10 (5.9)
Guidance and counselling classes	15	9	24 (14.2)
No response	47	37	84 (49.7)
<b>Total*</b>	<b>76</b>	<b>82</b>	<b>158 (93.4)</b>

\*The total is the sum of all participants with responses and is less than the total sample size and percentage because not all participants responded to the questions and among those that responded, some had multiple responses.



**Figure 1.** A bar chart showing the availability of facilities/programs for menstrual hygiene management.

**Table 3.** Distribution of female respondents with access to menstrual material, sanitary pad, soap, privacy at home & in school.

	Frequency	Percentage
<b>Access to Menstrual Material</b>		
Yes	94	97.9
No	2	2.1
<b>Access to Sanitary Pads</b>		
Yes	46	47.9
No	50	52.1
<b>Access to Soap</b>		
Yes	80	83.3
No	16	16.7
<b>Access to Privacy at home</b>		
Yes	46	47.9
No	50	52.1
<b>Access to Privacy at school</b>		
Yes	84	87.5
No	12	12.5
<b>Total</b>	<b>96</b>	<b>100</b>

water supply while 30 (17.8%) had inadequate water supply.

##### 5) School absenteeism during menstruation and reasons for being absent among female respondents

**Table 5** shows that 34 (35.4%) had missed school due to menstruation in the

**Table 4.** Distribution of Respondents by sex with access to adequate water supply.

Access to water supply	Males	Females	Total
Adequate water supply	54	85	139 (82.2)
Inadequate water supply	19	11	30 (17.8)
<b>Total</b>	<b>73</b>	<b>96</b>	<b>169 (100.0)</b>

**Table 5.** School absenteeism during menstruation and reasons for being absent among female respondents.

	Females	Percentage
<b>School absenteeism during Menstruation</b>		
Respondents who miss school	34	35.4
Respondents who do not miss school	62	64.6
<b>Total</b>	<b>96</b>	<b>100</b>
<b>Reason for Missing school</b>		
Mood swings	4	11.8
Abdominal cramps	16	47.1
Heavy menstrual bleeding	8	23.4
Fear of getting stained in public	6	17.7
<b>*Total</b>	<b>34</b>	<b>100</b>
<b>Number of days Missed</b>		
1 day only	11	32.4
2 - 4 days	8	23.5
≥5 days	15	44.1
<b>Total</b>	<b>34</b>	<b>100.0</b>

past, while 62 (64.6%) had not missed school during menstruation. Most important reason for missing school was mood swings 4 (11.8%), Abdominal cramps 16 (47.1%), Heavy menstrual bleeding 8 (23.4%), Fear of getting stained in public 6 (7.7%).

Of those who missed school, majority 15 (44.1%) missed school for 5 days or more, 11 (32.4%) missed for 1 day only, 8 (23.5%) missed for 2 - 4 days (**Table 6**).

#### **6) Misconceptions/taboo regarding menstruation among male and female respondents**

79 (46.7%) of respondents had misconceptions about menstruation, 90 (53.3%) of the respondents had no response on misconceptions/taboo.

Concerning misconceptions during menstruation, 33 (19.5%) felt there should be no cooking, 23 (13.6%) Staying away from public activities, 21 (12.4%) feel it's a Spiritual/Mystical process, 14 (8.2%) felt menstruation is Unclean, 13 (7.6%) felt

**Table 6.** Misconceptions/taboo regarding menstruation among male and female respondents.

	Males	Females	Total (%)
<b>Misconceptions/Taboos</b>			
Respondents who stated misconceptions/taboo	35	44	79 (46.7)
Respondents with no responses	38	52	90 (53.3)
<b>Total</b>	<b>73</b>	<b>96</b>	<b>169 (100.0)</b>
<b>Types of Misconceptions/Taboos</b>			
No cooking while menstruating	16	17	33 (19.5)
Staying away from public activities	12	11	23 (13.6)
Spiritual/Mystical process	5	16	21 (12.4)
Menstruation is Unclean	6	8	14 (8.2)
Menstruating women should not be touched by a male	8	5	13 (7.6)
No going to places of worship when menstruating	8	1	9 (5.3%)
Menstruation is a disease	2	7	9 (5.3)
Menstruation should be kept secret	1	6	7 (4.1)
Not eating certain foods (sugar, groundnut) when menstruating	-	3	3 (1.7)
Others*	1	1	2 (1.1)
<b>Total**</b>	<b>59</b>	<b>75</b>	<b>134</b>

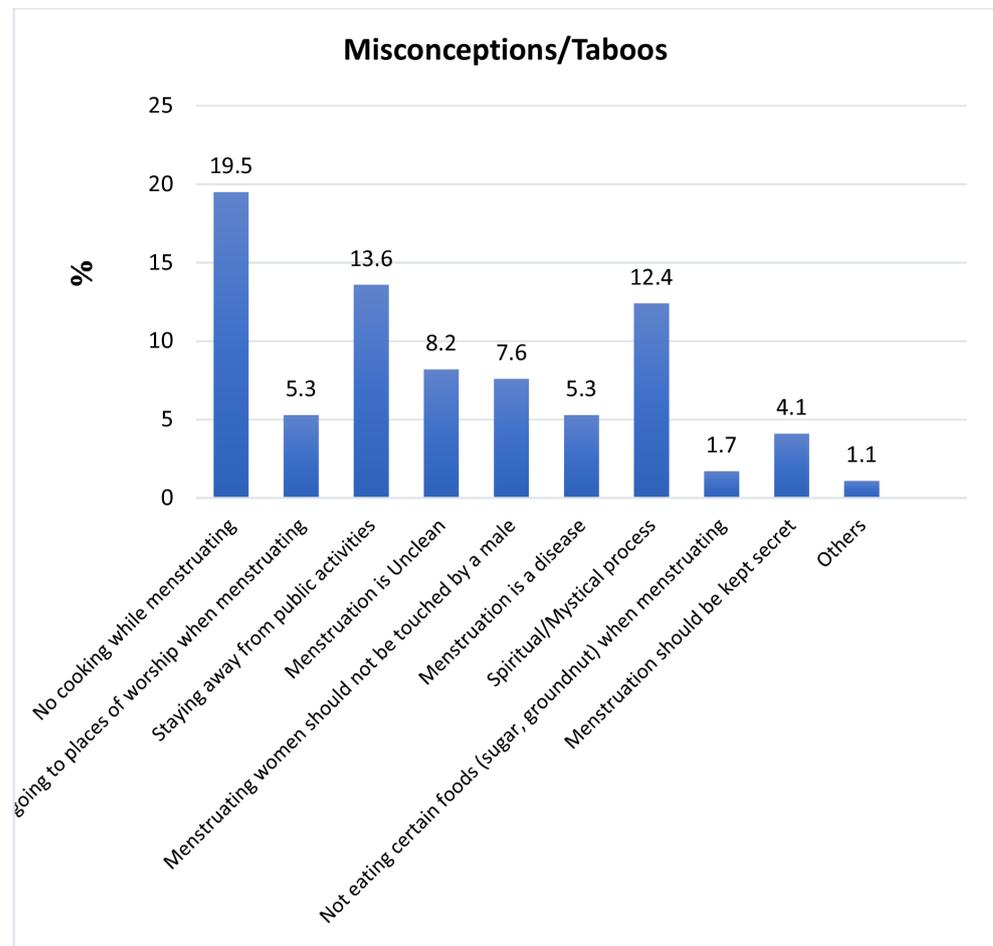
\*Others include those that stated menstrual pain was pretense by women to avoid activity and drug intake to relieve menstrual pain leads to barrenness. \*\*The total and percentage are greater than 79% and 46.7% respectively, because respondents had multiple responses.

menstruating women should not be touched by a male, 9 (5.3%) believe females should not go to places of worship when menstruating, 9 (5.3%) believe menstruation is a disease, 7 (4.1%) feel menstruation should be kept secret, 3 (1.7%) believe there should be no eating certain foods (sugar, groundnut) when menstruating (**Figure 2**).

#### 4. Discussion

This study revealed that majority, of the participants were students (78.1%) and had tertiary level of education (91.7%) and (88.2%) of the respondents were single. With this level of education, these young people can form an important group that can advocate for proper menstrual health education and management among their peers and to government. Sexuality education is critical for menstrual hygiene and health management literacy for both females and males, this education in addition to having appropriate resources and facilities for the hygienic management of menstruation can boost the self-esteem of girls and keep them in school thereby contributing to socioeconomic development and achievement of some of the Sustainable Development Goals. [24]

Of the female respondents who participated in the study, 35.4% have missed



**Figure 2.** A bar chart showing the total percentage response of respondents on misconceptions/taboo concerning menstruation.

school activities during their menstruation for different reasons such as mood swings, abdominal cramps, heavy menstrual bleeding, and fear of getting blood stains in public. They missed school usually for 5 days which is the average duration of the menstrual period. The cumulative consequence of missing school for two to five days monthly results in huge deficits in the education of the girl child. This is similar to a study done in India [25] where result showed that 40% of the respondents reported that they have missed school activities during their menstruation as a result of menstrual pain, anxiety, shame, and fear of staining their uniform, and also lack of privacy at school. Literature has shown that girls' school attendance and participation in physical activities were compromised when menstruating due to fear of being teased and embarrassment from being stained by blood [26] [27] [29]. Boys said they could tell when girls were menstruating by the smell and their behaviour, for instance, moving less and isolating themselves from their peers during normal daily activities. [26]

In this study, 53.8% of the respondents stated availability of bathrooms with doors and safe locks which was similar to a study done by Salve *et al.* [27] where 54.0% of adolescent girls in a rural setting had access to bathroom facilities. Ma-

majority (82.2%) of the respondents in this study indicated they have access to adequate water which contrasts with the study done by Salve *et al.* [27] where 45.0% stated that water supply was adequate. The facilities that were stated in this study to be available were inspected and not all bathrooms with doors had safe locks and the school clinic did not make provision for menstrual absorbents as stated by 19.5% of the participants giving the conclusion that participants probably responded based on assumptions rather than actual knowledge of their availability. Some studies have reported, toilets did not have soap and water or doors and locks for privacy and had a bad odour [26]. Only, 6% of participants had access to girls' clubs or Peer Education teams, this proportion must be increased to create opportunities for education on menstrual health and hygiene. Peer support is necessary for menstrual hygiene management especially to discuss common issues and provide place based solutions to challenges of menstrual cycle.

About half of both males and females had misconceptions/taboo about menstruation. One in five of the respondents mentioned no cooking while menstruating and 13.6% stated staying away from public activities was misconception. This proportion is lower than findings in a study done by Tiwari *et al.* [28] where 36.2% of the respondents stated that restriction from cooking during menses was a major taboo, others stated that they were restricted from social activities included being in gatherings and playing with friends. These restrictions resulting from menstruation have far-reaching and harmful impacts on girls and women. The challenges that menstruating girls and women face go beyond the availability of facilities and are rooted in social norms and beliefs. Therefore, the need to use opportunities provided by addressing the issues of Menstrual Hygiene Management (MHM) to promote efforts to safeguard the dignity, bodily integrity and the overall life opportunities for women and girls.

Awareness creation and education have a critical role in utilization of facilities for menstrual health and for sustained behavioural changes against misconceptions and false myths surrounding menstruation in general. In this study, 5.3% of the respondents had the misconception that menstruating women should not go to places of worship during menstruation. This is in contrast to a study by Iliyasu Z, *et al.* [29] where 69% of the respondents stated that menstruating women should not go to places of worship. This misconception is discriminatory and can deprive the women of their spiritual and mental development. The reason for this could be that some respondents consider menstruation as unclean. Other misconceptions mentioned by participants include "men should not touch women during menstruation, some even feel menstruation is a disease, and others felt women should not eat food like sugar or groundnut while menstruating. Good MHM education and awareness should focus on dispelling the shame and culture of silence associated with this natural phenomenon. It is hoped that the impetus provided by the annual World Menstrual Hygiene Day on 28<sup>th</sup> day of May which began in 2014, will contribute to more open discussion around men-

stration in general and menstrual hygiene. This will also promote the participation of women and girls in social activities and engender equal opportunities.

Almost all (97.9%) of the females in this study have access to some form of menstrual material during their menstrual period, but about half (47.9%) had access to sanitary pad, which is ideal in modern day settings. They also have facilities like soap (80.3%), adequate water (82.2%). This is in contrast to finding from a study done in Zambian rural schools where these were absent. [30] Half of the young girls do not have access to privacy at home when faced with changing their pads or menstrual adsorbent, but, while in school a higher proportion (87.5%) had access to privacy. It is important to note that while in school 12.5% did not have the required privacy. Availability of these facilities will ensure proper menstrual hygiene management. It becomes a bit strange that females did not have privacy at home, possibly as a result of separate rooms or bathrooms for females in some homes. It is important to consider separate facilities for females to change menstrual materials. Menstrual Health Management (MHM) has related challenges, including the use of non-absorbent and uncomfortable menstrual cloth and inadequate provision of sanitary materials, water and sanitation facilities (WASH) in schools and homes. [31]

The limitations of the study were that data was based on recall information, and possible recall bias. This study included male respondents, this might impact on the sample size required to achieve the desired power of the study. A more homogeneous study group would be considered in subsequent studies.

## 5. Conclusions

Majority (82.2%) of the female respondents had access to adequate water supply, while 17.8% did not have access to adequate water supply. 53.8% of the respondents claimed that there was availability of bathrooms with doors and safe locks, 52.1% had no access to sanitary pads. Programmes available to female respondents for menstrual health and hygiene management were girls club and guidance and counselling.

About 46.7% of respondents were aware of misconceptions/taboo, which included that women should not cook when menstruating 19.5% and that women should stay away from public activities during menstruation, This study has revealed significant lack of adequate menstrual hygiene management among young people in Jos and also widespread misconceptions about menstruation. There is a need for increased awareness among the populace and for the provision of resources needed for good menstrual hygiene.

## 6. Recommendations

1) Government and Non-governmental actors should make available facilities like sanitary pads, private bathrooms for females to change pads, soap and water and adequate points for menstrual waste disposal. A menstruating female should be able to change her sanitary absorbent in safety, comfort and privacy and pro-

vision of private bathrooms with safe locks, soaps and adequate water supply by school authorities is required.

2) Community and Society should be enlightened on the truth regarding menstrual period and people should be able to discuss this publicly. This will be helpful in reducing the misconceptions and taboos surrounding the menstrual period and other reproductive matters affecting women and girls.

3) Programmes like girls' clubs, peer educators on menstrual hygiene and management can be established in schools and communities. This can play a role in the promotion of awareness, changing society's views on menstruation and boosting of confidence of females concerning the subject matter thereby helping to break away from the culture of silence regarding menstruation. It will also help in tackling misconceptions, taboos and ideas in both males and females concerning menstruation and menstrual hygiene. Therefore, the provision of programs like girl clubs and guidance and counselling classes anchored by health personnel and trained schoolteachers where matters like this can be discussed should be made available by schools, the health sector and social organizations.

4) Parents and peers should play a significant role in addressing misconceptions about menstruation.

### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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