Magna Scientia Advanced Biology and Pharmacy

eISSN: 2582-8363

Cross Ref DOI: 10.30574/msabp

Journal homepage: https://magnascientiapub.com/journals/msabp/

(RESEARCH ARTICLE)

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Menstrual hygiene management practices among secondary school girls in Ifakara Town, Kilombero District, Tanzania

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Magna Scientia Advanced Biology and Pharmacy, 2022, 07(01), 018–025

Publication history: Received on 14 June 2022; revised on 27 July 2022; accepted on 29 July 2022

Article DOI: https://doi.org/10.30574/msabp.2022.7.1.0078

Abstract

Background: In developing countries many adolescent girls lack appropriate information, materials and access to the right sanitary facilities to manage menstruation. Therefore, this study aimed to assess menstrual hygiene management practices among secondary school girls in Ifakara Town, Kilombero District, Tanzania.

Methods: A school based cross-sectional study was conducted from April to June 2021 among secondary school girls Ifakara Town, Kilombero District, Tanzania. A total of 138 girls were selected randomly and interviewed using a structured questionnaire.

Results: Overall, 67.4% of the girls had good knowledge on menstrual hygiene management practices. Out of these, 94.2% used commercial disposable sanitary pads as absorbents, 92.7% Changed pads more than three times a day during menstruation, 96.4% Cleaned external genitalia with soap and water during menstruation.

Conclusion: In this study, the practice of menstrual hygiene management of secondary school girls was good. This highlights the need of education on menstrual hygiene management to all secondary school girls country wide.

Keywords: Menstrual Hygiene Management Practices; Absorbent Pads; Secondary School Girls; Tanzania

1. Introduction

Menstruation is a recurrent, normal physiological phenomenon in women's reproductive life [1]. Menstrual Hygiene Management (MHM) refers to 'Women and adolescent girls using a clean menstrual management material to absorb or collect blood that be changed in privacy as often as necessary for the duration of the menstrual period, using soap and water for washing the body as required, and having access to facilities to dispose of used menstrual management materials [2]. Globally, about 500 million women and girls lack adequate facilities for menstrual hygiene management like water, sanitation, and hygiene, particularly in public places, such as schools and workplaces, this pose a major obstacle to women's and girl's menstrual hygiene [3]. Also, societal myths, and stigmas surrounding menstruation, discriminatory social norms, cultural taboos, poverty and inadequate basic services often cause adolescent girl's menstrual hygiene needs to go unmet [2].

In developing countries, the problem of menstrual hygiene gets worse, as adolescent girls face significant challenges in managing their menstruation, particularly when attending school [4].Girl's inability to manage their menstrual hygiene in schools results in school absenteeism, poor school performance, drop-out and reduced educational attainment [4].

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Studies shows that, absence of affordable menstrual absorbent materials makes adolescent girls use inappropriate and unhygienic absorbent materials such as news paper, old rags, underwear, homemade clothes, sponges, or socks to collect menstrual blood and manage their periods [5]. Unhygienic Menstrual Hygiene Management predisposes adolescent girls to reproductive tract infections with potential long term effects on their reproductive health [6]. It is suggested that, during menstruation, girls need to change their sanitary absorbent regularly and menstrual absorbent materials should be changed three or four times a day, and girls need to wash their genital area at least twice a day with soap and water [7].

In Ethiopia, most school adolescents practiced unsafe menstrual hygiene during menstruation [8], and only 1 in every 4 girls knew about menstruation before their first period [9]. UNICEF reported that about 10% of 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 in schools[10]. A study done in Nigeria reported that, there is global evidence of lack of adequate facilities for girls to manage their menstruation in schools. Facilities like toilets, adequate clean water for washing hands, facilities for drying clothes and the absence of sanitary menstruation hygiene materials prevent girls from safe hygienic management of their menstruation [11].

In Tanzania, a study done showed that adolescent girls need more information on Menstrual Hygiene Management which should be provided in schools [12]. Another study showed that shortage s of soap and hand washing facilities, privacy in the toilet and free pads to attend emergency needs are main challenges in schools [13].

Studies on menstruation and its hygienic management are limited in Ifakara town. Therefore, this study was conducted to assess the prevailing knowledge about menstruation and its hygienic management among secondary school girls in Ifakara Town, Kilombero District, Tanzania.

2. Material and methods

2.1. Study area

Ifakara is a small rural town in the Kilombero District, Morogoro Region, south central Tanzania. It is the headquarters of the Kilombero District administration and the main trading centre for Kilombero and Ulanga districts. The town is located near the Tanzania-Zambia Railway (TAZARA) line.

Ifakara Town Council borders Kilombero District Council to the North, south and south west, Ulanga District to the south east (along Kilombero River) and Kilolo District in North West.

The area of Ifakara town Council lies along the Kilombero Valley and part of it in the Rufiji Basin and Selous Game Reserve which extends to the Udzungwa Mountains National Park.

The Council lies within one main agro-ecological zone called “Central zone” that suit the cultivation of such crops as Paddy, maize, cassava and vegetable. Ifakara Town Council has an area of 3,893 km sq. Administratively Ifakara Town Council has one division which is subdivided into nine (9) wards, 11 villages, 33 streets and 64 Sub villages. The Town Council is divided into urban and rural area; out of nine wards, five are urban and four are in rural areas. According to national census of year 2012, Ifakara Town Council has a population of 49,532. There are 14 Secondary schools, 7 schools being owned by the Government and the rest are non- governmental schools. Ifakara people main sources of income depends on four types of economic activities those are agriculture, livestock and fisheries, Industrial and Commercial Sector and Informal Sector.

2.2. Study design

A cross-sectional survey was conducted in this study from April to June 2021. The survey was conducted among female adolescent students in Form one to Form four. The interviews explored female students about menstruation and its hygienic management and influence of menstruation on girls academic performance, school absenteeism and school drop-out.

2.3. Sample size

The sample size was obtained using Kish Leslie formula.

$$N = (Z^2\, p(1 - p)/D^2$$

N = Total number of subjects required in the sample
Z = A standardized normal deviation value that correspond to a level of statistical significance equal to
P = Estimate of prevalence 10%
D = Marginal error which corresponds to the level of precision of the results desired
Z = 1.96, p = 10%, D = 0.05

Therefore, $N = 1.96^2 \times 0.10\ (1 - 0.10)/0.05^2 = 138$

The sample size in this study is 138

2.4. Sampling technique

Simple random sampling was applied in this study. First three secondary schools were randomly selected from the total number of secondary schools in Ifakara Town Council to be involved in the study. The randomly selected secondary schools were KwaShungu, Bravo and Lumemo. Each Secondary school 46 female students were selected to participate in the study and from each class (Form 1 to Form IV) 11 female students were randomly selected to participate in the study considering the list of female students as a sample frame.

2.5. Inclusion criteria

- Girls who were present at school during the day of study.
- Girls who were willing to participate in the study.

2.6. Exclusion criteria

- Girls who were not at school during the day of study.
- Girls who were not willing to participate in the study.

2.7. Data collection

Structured questionnaire was used to collect information from each student interviewed. The questionnaire consisted of sections A, and B. Section A was about demographic data while section B consisted questions based on menstruation and how to manage and challenges faced during menstrual period as well as school attendance while on menstrual period.

2.8. Data analysis

Questionnaires were checked for errors and completeness. Data were analyzed using SPSS (version 20).

2.9. Ethical consideration

A letter from St. Francis University College of Health and Allied Sciences ethical committee was obtained. The letter was submitted to the Executive Director of Ifakara Municipal Council who forwarded the letter to the Municipal Medical Officer who granted permission of research to be carried out in the selected secondary schools.

3. Results

A total of 138 female students participated in this study. Out of these 18 (13.0%) aged 11 – 14 years, 114 (82.6%) aged 15 – 18 years and 6 (4.4%) aged 19 and above. Classes of female students who participated in the study, 19 (13.8%) were in Form I, 45 (32.6%) were in Form II, 29 (21.0%) were in Form III and 45 (32.6%) were in Form IV. Students living with parents were131 (94.9%), Mother's education: no formal education were 4(2.9%), primary education were 97 (70.3%), and secondary and above were 37 (26.8%). Father's education: no formal education 2 (1.5%), primary education 86 (62.3%), and secondary and above 50 (36.2%) as shown in Table 1.

In this study participants who knew menstruation was a physiological process were 118 (85.5%), those who knew the cause of menstruation was hormones were 126 (91.3%), those who answered the source of menstrual blood was uterus were 112 (81.2%), those answered it was important to take care of personal hygiene during menstruation were 130 (94.4%), those answered sanitary pads were good absorbent during menstruation were 133 (96.4%) and the overall knowledge of the participants was good 93 (67.4%) as shown in Table 2.

Table 1 Socio-Demographic characteristics of female students participated in the study

Variable	Frequency	Percentage
Age (in years)		
11 - 14	18	13.0
15 - 18	114	82.6
19 and above	6	4.4
Class		
Form I	19	13.8
Form II	45	32.6
Form III	29	21.0
Form IV	45	32.6
Living with		
Parents	131	94.9
Not with parents	7	5.1
Mother's education		
No formal education	4	2.9
Primary education	97	70.3
Secondary and above	37	26.8
Father's education		
No formal education	2	1.5
Primary education	86	62.3
Secondary and above	50	36.2

Table 2 Knowledge of menstruation and its hygiene practices among secondary school girls in Ifakara Town Council

Variable	Frequency	Percentage
Menstruation is		
Physiological process	118	85.5
Pathological process	15	10.9
Do not know	5	3.6
Cause of menstruation		
Hormones	126	91.3
Disease	5	3.6
Do not know	7	5.1
Source of menstrual blood		
Uterus	112	81.2
Vagina	11	8.0
Bladder	6	4.3

Do not know	9	6.5
Important to take care of personal hygiene during menstruation		
Yes	130	94.2
No	3	2.2
Do not know	5	3.6
Good absorbent during menstruation		
Sanitary pads	133	96.4
Old cloths	2	1.4
Do not know	3	2.2
Overall knowledge status		
Poor	5	3.6
Moderate	40	29.0
Good	93	67.4

Participants responded to use commercial disposable sanitary pads were 130(94.2%), changing pads more than three times a day during menstruation were 128 (92.7%). Takes bath daily with soap and water during menstruation were 134 (97.1%), cleans external genitalia with soap and water during menstruation were 133 (96.4%). The overall menstrual hygiene practices, poor were 6 (4.4%), and good were 132 (95.6%) as shown in Table 3.

Table 3 Menstrual hygiene management practices of secondary school girls in Ifakara Town Council

Practice related questions	**Frequency**	**Percentage**
Uses commercial disposable sanitary pads	130	94.2
Changes pads more than three times a day during menstruation	128	92.7
Takes bath daily with soap and water during menstruation	134	97.1
Cleans external genitalia with soap and water during menstruation	133	96.4
Overall menstrual hygiene practices		
Poor	6	4.4
Good	132	95.6

4. Discussion

This study aimed to assess the practice of Menstrual Hygiene Management (MHM) among secondary school girls in Ifakara Town, Kilombero District, Tanzania. It was observed that 82.6% were of age between 15 to 18 years old. This is similar to the study done in Adama Town, Ethiopia, where 59.4% of school girls were above 16 years of age [14]. This finding indicates that the starting age of school for girls in all countries is universal.

Formal education for girls on practical ways of managing menstruation in a hygienic way is crucial. In this study it was noted that majority of girls who participated in the study had menstrual hygiene knowledge after attaining menarche. Only 85.5% girls in this study knew menstruation as physiological process, 91.3% knew the cause of menstruation is hormones, 81.2% knew source of menstrual blood was uterus, 94.2 % responded that it was important to take care of personal hygiene during menstrual period, The overall knowledge of the girls participated in this study was good (67.4%). This finding is similar to a study conducted in Nekemte town, Western Ethiopia, where 57% and 39.9% of the girls practiced good menstrual hygiene management [15].

In the present study it was observed 94.9% of the respondents were living with parents. This result is almost similar to the study done in Ethiopia, which showed 69.5% of the respondents were living with their parents [14]. This can be explained that Secondary school girls who are living with their parents get continuous education and on Menstrual Hygiene Management.

Regarding education of mothers, 70.3% of the mothers had primary education. This is in line with the policy of education in the country which states that Primary Education in Tanzania is compulsory and free to all citizens [16].

In this study more than half (67.4%) of the female students who participated in the study had good knowledge about menstruation and its management. Also there is a knowledge in areas like why girls have menstruation (cause) and where the blood comes from (origin) during menstruation. The knowledge of the respondents in this study is almost the same to a study done in Nigeria [17]. Participants mentioned sanitary pads were good absorbent during menstruation were 96.4%. This result is due the programme which government is advocating the supply and use of sanitary pads to school girls in the country. This project has created awareness of the use of sanitary pads to school girls. Therefore, this study is in agreement to the studies which showed that mother's education [18], residence [19] and socioeconomic status [20] was significantly associated with menstrual hygiene management and utilization of disposable sanitary napkins.

In this study, 94.2% used commercial sanitary pads. This study, shows that the parents of the school girls participants had money to support their girls to buy sanitary napkins. This result is the similar to studies reported on the use of sanitary napkins by school girls to be 98.3% in Indonesia [21], 92.2% in Nigeria [22], and 80.4% in India [23]. Second, this could be the sanitary pads which are distributed to school girls by the Government project.

Regarding the frequency of changing menstrual absorbent pads, only 92.7% of the girls changed absorbent pads three times a day. This is higher than in studies from South Ethiopia [24] where 62.4% of the girls changed absorbent pads more than three times a day and other study from Kenya, 60.6% of the girls changed absorbent pads every 3-4 hours a day [25]. The difference in frequency of changing menstrual absorbent pads could be due to the difference in access to sanitary absorbent pads and sanitary facilities such as water and private latrine at school.

In this study, 97.1% of the girls participated in the study took bath with soap daily during menstruation. This result is higher than a study done in Kenya that reported 47.5% of the girls took bath during menstruation [25]. The difference could be explained being related to availability of sanitary facilities in the study areas.

Regarding cleaning external genitalia with water and soap during menstruation, 96.4% of the girls participated in this study cleaned external genitalia with water and soap during menstruation. This result is higher than a study conducted in Ethiopia [22] where 69.5% of the girls cleaned external genitalia with water and soap. This could be explained to be due to cultural beliefs about menstrual hygiene management.

This study revealed that 95.6% of secondary school girls who participated in the study had good knowledge on menstrual hygiene management. This result supports other studies done in Nigeria [26] and India [27]. Therefore, sufficient knowledge of menstruation could empower the girls to overcome the negative influence of cultural beliefs regarding menstruation and its hygienic practices.

5. Conclusion

In this study it was found that Secondary School girls who participated in the study had good knowledge on Menstrual Hygiene Management. The menstrual hygiene management included change of absorbent pads, taking bath with water and soap, and cleaning external genitalia with soap and water during menstruation were well practiced.

Recommendation

There is a need of education about menstruation and management for all girls who are in Secondary Schools in the country. Policymakers and stakeholders should also give special attention towards making the school environment a comfortable place for girls to manage their menstrual hygiene.

Compliance with ethical standards

Acknowledgments

I wish to thank the management of St. Francis University College of Health and Allied Sciences for the support to this study. Also, I thank the management of the schools and students who participated in this study. This study was funded by the St. Francis University College of Health and Allied Sciences, Ifakara, Tanzania.

Statement of ethical approval

In this study no animal or human material was used. The only study tool used to collect data was questionnaire. However, ethical clearance was obtained from the respective authorities to conduct the study. The research committee of St. Francis University College of Health and Allied Sciences, Executive Director of Ifakara Municipal Council, Municipal Medical Officer and Head Masters of selected Secondary Schools gave permission the study to be conducted.

Statement of informed consent

Informed consent was obtained from all girls who participated in the study. Participating girls were coded with numbers, no names were used. All the information collected remained confidential and was used for the purpose of the study only. Participation was voluntary and no incentives were given.

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