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KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS MENSTRUAL HYGIENE AMONG PRIMARY SCHOOL ADOLESCENT GIRLS IN MUSANZE DISTRICT, RWANDA

Jean Félix MUHIRE

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Jean Félix MUHIRE

1. School of Public Health (International Health and Development), Mount Kenya University, Rwanda
2. Ministry of Health, Rwanda Biomedical Center, Kigali, Rwanda;

***Corresponding author**

Jean Félix MUHIRE

Email: muhirejeanfelix@gmail.com

Tel: +250783050323

ABSTRACT

Adolescent girls often lack knowledge regarding reproductive health including menstruation hygiene which can be due to socio-cultural barriers in which they grow up. Rwandan population constitute 52% of women and 33% are adolescent girls. The main objective of this study was to examine the knowledge, attitude and practices of primary school going adolescent girls regarding menstruation and menstrual hygiene. The significance is that the study may serve as educational diagnosis of the community and the findings may be used by responsible sectors and stakeholders for the improvement of public health issues related to menstrual hygiene and to help them know about women's attitude toward menstruation related system and as well as by concerned governmental or NGOs to plan, improve, maximize and design project related problems. This was a cross sectional study. The target population was primary school girls in Musanze District. A total of 363 primary school girls were selected using multistage sampling technique. Data were collected using a self-administered questionnaire. The data collected were analyzed using Statistical Package for Social Sciences (SPSS version 22). Descriptive analysis using frequencies and proportions were used and score assessment was done. Chi square and correlation analysis techniques were used to establish factors associated with knowledge as well as practice of menstrual hygiene and study the association between the knowledge, attitudes and practices. The significance level was set at p value < 0.05 and confidence intervals were utilized. The demographic characteristics of the adolescent girls shows that majority are between 11-13 years old (69.4 %), profess the catholic faith (50.9 %), raised by both living parents (54.3%), primary six (57.02 %), are from rural areas (65.01%), has fathers who have secondary education (44.9%) and is from the families with low economic class (46 %). According to menstruation, the study revealed that first age of menarche is13 years of age (34.7%), the menstrual cycle with the interval between 21-31 days (59.2%), and 226 (62.3 %) reported that they had the flow around between 3-7 days. Furthermore, the study reveals 53.03 % were classified with those of moderate knowledge on menstruation and above 70% with high attitude toward menstruation and 67.5% with moderate adequate menstrual hygiene practices. Therefore, the study recommends that there should be health education in the schools regarding menstrual hygiene. Menstrual hygiene should be linked to the hygiene education programme in schools with active involvement of female teachers and caring environment for menstrual hygiene has to be provided both at home and in school. The study suggests also more research on menstruation to study the role of parents and school teachers in equipping adolescent girls on menstruation and girls 'preparedness toward menstruation.

CHAPTER ONE: INTRODUCTION

Background of the study

Adolescence in girls has been recognized as a special period which signifies the transition from girlhood to womanhood. Adolescents are a large and growing segment of the world's population where more than half of the world's population is below the age of twenty-five. Menarche is the most important event in the life of an adolescent girl. It is a significant period in the life of a woman. Adolescent girls often lack knowledge regarding reproductive health including menstruation which can be due to socio-cultural barriers in which they grow up. The need of the hour for girls is to have the information, education and an enabling environment to cope with menstruation issues (Kamath et al, 2013).

In Rwandan societies, culturally discussion on sexuality, including menstruation is often shrouded in secrecy, rarely is such discuss carried out even amongst adults themselves, a situation which may exert little or no influence of mothers on their daughters' attitude to menstrual perceptions and practices. (U. Hilary, a Community health worker (Personal communication, September 28, 2017) was able to confirm that menstruation is often shrouded in secrecy).

It was envisaged that findings from the study will be a pointer to some adolescence reproductive health needs in northern Rwanda, and will also provide foundation for policy makers and program managers to make rational decision on improving adolescence reproductive health in Rwanda.

Hence, this study will be to evaluate the knowledge, attitude and practice of menstrual hygiene among primary school adolescent girls in Musanze District.

Statement of the Problem

In Rwanda, menstruation, though a natural process, has been, and still is a taboo and dealt with in secrecy. The community health workers confirm that menstruation is dealt in secrecy. Hence information and knowledge about menstruation and menstrual hygiene among adolescent girls there is inadequate.

Most girls are at risk of getting genitourinary tract infections due to their unhygienic practices during their menstruation period which may lead to further complication if left untreated (Sharma et al, 2008).

It has also been largely neglected by the Rwandan societies and other sectors focusing on sexual and reproductive health, and education. As a result, the practical challenges of menstrual hygiene are made even more difficult by socio-cultural factors and many girls continue to be denied their rights to water and sanitary health, sexual education, dignity and gender equity and this leads to the development of sexual diseases due to poor menstrual hygiene and may be accompanied by discomfort, smelling and embarrassment among others (Ministry of Health, 2011).

Today, Rwandan girls are sufferers of health related problems such as dysmenorrhoea, fungal infection, urinary tract infection, reproductive tract infection and its complications and often the infection is transmitted to the offspring of the pregnant mother. RTI's and UTI'S might lead to cervical cancer. Unhygienic practices also leave women vulnerable to infertility. Hospital nurses confirmed that RTIs among girls are generally due to poor menstrual hygiene practices.

Many Rwandan schools do not support adolescent girls or female teachers in managing menstrual hygiene with dignity. Inadequate water and sanitation facilities make managing menstruation very difficult, and poor sanitary protection materials can result in blood-stained clothes causing stress and embarrassment. Teachers (and male members of staff in particular) can be unaware of girls' needs, in some cases refusing to let them visit the latrine. As a result, girls have been reported to miss school during their menstrual periods or even drop out completely (Ministry of Health, 2009).

Despite others studies that have been conducted in Rwanda among adolescent girls such as psychosocial effect of early pregnancy among teenagers, Knowledge, Attitudes, Practices (KAPs) studies also conducted in Rwanda among secondary school girls no study conducted in primary school adolescent girls.

Critically reviewing and identifying gaps, several research works on hygiene rely on identifying the prevalence of hygiene in Rwanda.

Therefore, in light of this problem, this study seeks to assess the knowledge, attitude and practice of menstrual hygiene among primary school going adolescent girls in Musanze District.

General Objective

To assess the knowledge, attitude and practices towards menstrual hygiene among primary school adolescent girls in Musanze Distric

Specific Objectives

a. To assess the level of knowledge of menstrual hygiene among primary school adolescent girls of Musanze District, Rwanda.
b. To determine the attitudes of primary school adolescent girls on menstrual hygiene at Musanze District, Rwanda
c. To determine the practices of menstrual hygiene by primary school adolescent girls of Musanze District, Rwanda.
d. To establish the factors associated with practice of menstrual hygiene among adolescent primary school girls.

Chapter two:

CHAPTER TWO: REVIEW OF RELATED LITERATURE

Theoretical framework

The biopsychosocial model, also known as the mind-body connection, is an extension of the biomedical model of medicine (Ritter & Lampkin, 2012). It proposes that biological, psychological, and socio-cultural processes operate in a matrix of embedded and inextricably connected subsystems that influence all aspects of mental and physical health (Suls, Krantz & Williams, 2013). Biological factors include all genetic, physiological and health related factors.

Psychological factors include all internal perceptual, cognitive, emotional and personality factors. Socio-cultural factors include interpersonal, societal, cultural, and ethnic factors (Cavanaugh & Blanchard-Fields, 2011).

In 1977, George Engel expressed the view of a biopsychosocial model as a challenge to the traditional and dominant biomedical model of the time, in which biological or psychological processes were thought to be sufficient to explain disease and its treatment (Suls et al., 2013). The need for a new model was suggested because psychology researchers and clinicians realized that the traditional biomedical model fell short of adequately explaining many health outcomes (Suls et al., 2013). In proposing the biopsychosocial model, Engel challenged the health care field to broaden its approach to include the biological, psychological and socio-cultural effects on patient welfare. This was proposed because biomedicine could not adequately account for the effect that practitioners had on the outcomes of their patients (Suls et al., 2013).

Social constructionists also acknowledge the role that the social environment plays in the process of creating knowledge and practice, as it replaces the concept of cognition with conversation (Talja, Tuominen & Savolainen, 2005). Therefore, what people perceive as truth significantly depends on the social relationships that they engage in (Gergen, 1999). This framework speaks directly to the socio-cultural factors focused on in the present study. However, it does not include the biological and psychological processes, which are also considered to play a role in the development of knowledge and practice of menstrual hygiene. Moreover, social constructionism places significant emphasis on language (Augustine, 2002), which does not tie in with a study that is quantitative in nature. Therefore, the biopsychosocial model was used.

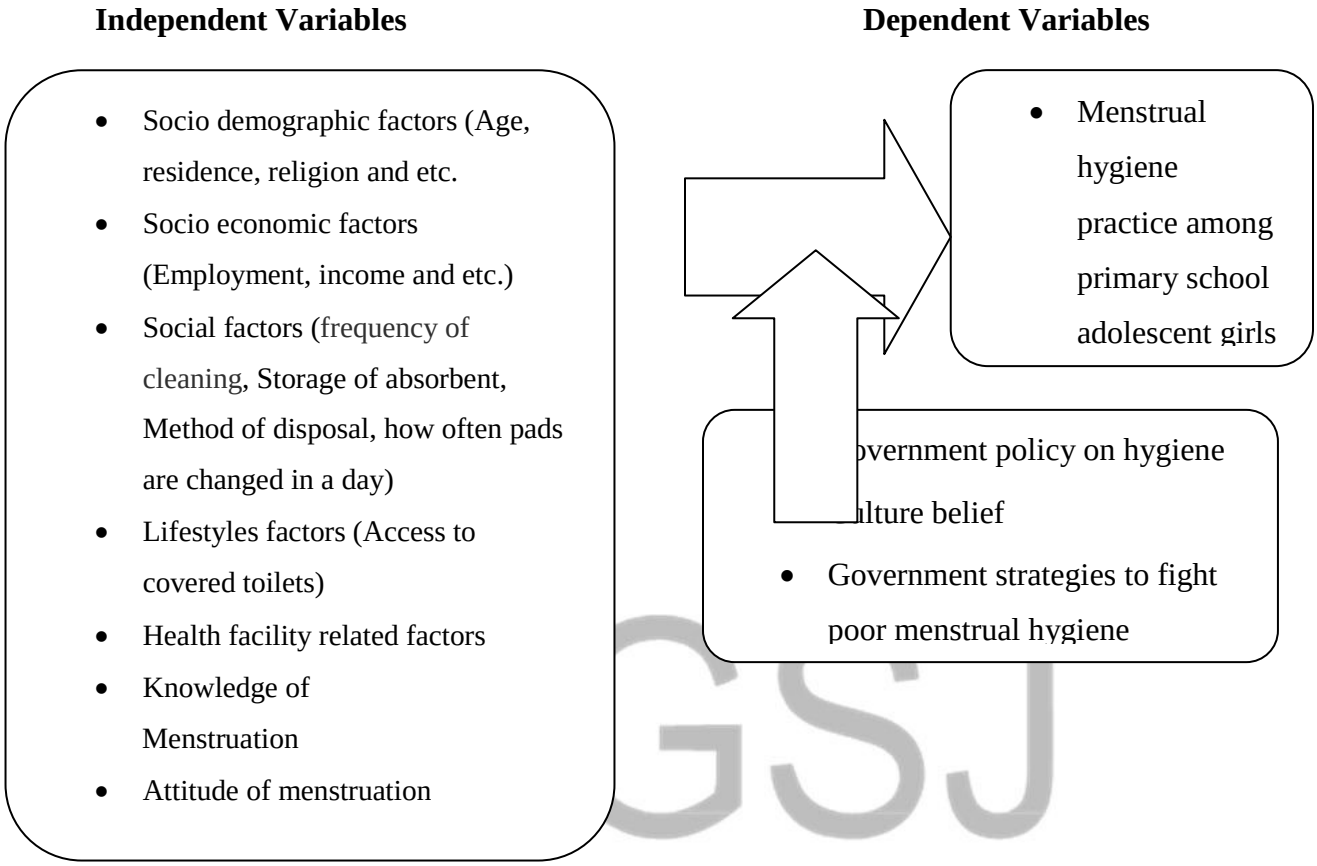
The menstrual cycle is a perfect example of a biopsychosocial process as it is a normal aspect of physiology that both affects behavior and is affected by behavior (Chrisler, 2013). Women's behavior is affected by beliefs and attitudes, which are in turn affected by psychological experiences (Chrisler, 2013). Knowledge, attitudes and beliefs about other female biological processes, such as menopause are similarly viewed as affecting and being affected by behavior. Women's cyclic, menarcheal, menstrual hygiene and menopausal experiences occur, their knowledge about them are learned and their practice toward menstrual hygiene are formed within a cultural context (Chrisler, 2013). Therefore, although many women around the world may share the same physiology of menstruation and menopause, each woman will experience it differently. Biopsychosocial factors contribute to women experiencing the menstrual cycle and menopause differently because women are products of their inner biological and psychological environment as well as their external, contextual, socio-cultural environment (Tiwari et al., 2006).

Conducting research on menstruation is an opportunity to explore what young women know about their bodies, to investigate myths and misinformation they may have learned, and explore the extent of the impact of culture and social cognition on elements of biological processes, such as menstruation (Chrisler, 2013).

The investigation of a complex phenomenon such as menstruation demands a multidimensional perspective that employs a multivariate approach to data analysis. This theory is therefore appropriate for my research as it will assist in understanding how age at menarche, religion, population group, and preparedness, are associated with knowledge and practice towards menstrual hygiene. In particular, this theory will frame our understanding in terms of biological

(age at menarche), psychological (preparedness) and socio-cultural (religion and population group) factors, and how these factors affect the knowledge and practice towards menstrual hygiene. The following section will outline the methodology used to carry out the proposed study.

Conceptual Framework



The above Figure describes the conceptual framework of the study. Socio-demographic characteristics, (such as primary pupil's age, religion, classes, family situation, boarding situation, Status of the School, School location) are independent variables. Coping strategies (like Government policy to fight poor menstrual hygiene, sex education, Hygiene Guidelines, social reintegration, school reintegration, family support, etc) are the intermediate variables. These independent and intermediate variables directly or indirectly affect the outcome variable which is knowledge and practices towards menstruation among primary school girls. Among those effects due to poor menstrual hygiene we may have the following: School absenteeism, avoidance, shame, isolation, anxiety, feelings of failure, guilt, anger, denial, hopeless, etc.

CHAPTER THREE: RESEARCH METHODOLOGY

Research Design

A cross-sectional study was employed using quantitative approach

Target Population

The population to be chosen to provide information to research questions in the study is primary school going adolescent girls in Musanze District

Sample Size determination

A sample is a segment of the population selected to represent the population as a whole. The eventual sample size is usually a compromise between what is desirable and what is feasible.

The sample size was calculated using Fischer's *et al* (2003) formula and the following points are considered:

- Prevalence of menstrual hygiene practice will be taken to be 39.9% based on a study done among adolescent girls in Ethiopia (Upashe et al., 2015)
- Marginal error (d) =5%
- Confidence interval= 95%
- To minimize errors arising from the likelihood of non-compliance, ten percent of the sample size will be added to the normal sample.
- Based on the above assumption, the desired sample size is determined by the single population proportion using Fischer's formula as follow:

$$N = \frac{(Z\ \alpha\text{-}½)^2\ p\ (1\text{-}p)}{d^2}$$

$$= \frac{(1.96)\ (1.96)\ 0.399\ (1\text{-}0.399)}{(0.05)\ (0.05)}$$

$$= 363$$

Sampling Technique

The primary school adolescent girls were selected using the multistage sampling technique. In the first stage, a list of all primary schools within Musanze District were selected randomly proportional to the geographical location and four schools were randomly selected from each of the two categories using simple random sampling. In the second stage, girls were selected systematically from P5 and P6 aged from 11 years and above and purposive sampling method was applied in selecting 45 female adolescents from both the P5 and P6 class female adolescents totaling 90 respondents from each school. This method was used in obtaining eligible students in each school till the subjects required for the study was gotten. Data on the students' knowledge of menstruation and menstrual hygiene and their practices of menstrual hygiene were collected using pretested self-administered questionnaires

Data Collection Methods

Data Collection Instrument

Structured questionnaire was used in collecting data for the study. The structured questionnaire was administered to three hundred sixty tree (363) respondents to adolescent females. This

selection was done to get the view of those who are likely to be affected by the phenomenon under study.

In this study, the researcher used a self-administered questionnaire that helped to assess knowledge, attitude, and practices that primary school going adolescent's girls have on menstrual hygiene. Questions were closed-ended and a participant responded by choosing a statement that describes her relevant experience in relation to the assessed factor.

Data analysis procedure

This study was quantitative. Descriptive statistics included frequencies; mean and percentages were conducted to describe participants' demographic characteristics. Primary data was analyzed using Statistical Package for Social Sciences (SPSS). Descriptive statistics using frequency and percentage was used to tabulate and describe the data.

A score assessment was computed to determine the level of knowledge, attitude and overall practice towards menstrual hygiene. Six items were used for level of knowledge and the correct answer was given a score "1" and for the incorrect was "0". Overall score was generated by aggregating the scores and a percentage score was generated and classified as Low knowledge ($\leq$50%), Moderate knowledge (50 – 69%), and High knowledge (70 – 80%) as presented in Appendix xx.

Similarly, 14 Likert scale were used to assess the level of attitude. For positive statement a score 1 was used for 'strongly disagree'; 2 = 'disagree'; 3 = 'neutral'; 4 = 'agree'; and 5 = 'strongly agree'. However, for the negative statements the opposite was used (5 = 'strongly disagree'; 4 = 'disagree'; 3 = 'neutral'; 2 = 'agree'; and 1 = 'strongly agree'). Then the overall score was generated by aggregating the scores. The maximum attainable total score was 70. A mean score of 38.0 was generated and classified as positive attitude (Mean =>38.0) and negative attitude (< 38.0) see Appendix xx.

For practice score assessment, 4 items on menstrual hygiene were used as demonstrated in Appendix xx. The overall score was generated by aggregating the scores. The maximum attainable total score was 7. A mean score of 5.0 was generated and classified as adequate practice (Mean >4) and in-adequate (=<4).

Chi square (X^2) test was used to determine the factors associated with adequate practice. Then to assess the independent factors associated with dependent variable, multiple logistic regression where all the significant variables in the bivariate analysis were considered together in multivariate analysis. Inference was made using a 95% confidence interval and a p-value < 0.05. The results were presented in frequency, cross tabulation tables, and bar charts.

CHAPTER FOUR: RESEARCH FINDINGS AND DISCUSSION

Socio-demographic characteristics of respondents

4.1. Socio-demographic profile of primary school adolescent girls in Musanze District

Variable	Frequency (n= 363)	Percent (%)
Age in years		
12 to 13	113	31.1
14 to 15	120	33.1
16 to 18	130	35.8
Residence		
Rural	234	64.5
Urban	129	35.5
Religion		
Catholic	146	40.2
Adventist	52	14.3
Protestant	112	30.9
Muslim	30	8.3
Others	23	6.3
Mother's level of education		
Illiterate	23	6.3
Primary	106	29.2
Secondary	167	46.0
Tertiary	67	18.5
Father's level of education		
Illiterate	21	5.8
Primary	123	33.9
Secondary	163	44.9
Tertiary	56	15.4
Mother's occupation		
Self-employed	209	57.6
Private employed	35	9.6
Government employed	106	29.2
House wife	13	3.6
Father's occupation		
Self-employed	159	43.8
Private employed	100	27.5
Government employed	104	28.7

Source: Primary Data

As indicated in Table 4.1, the highest percentage (35.8%) were aged 16 to 18 years followed by those aged 14 to 15 years (33.1%) then 12 to 13 years (31.1%). Majority (64.5%) were rural residents with the highest percentage 40.2% and 30.9% were Catholic and Protestants followers respectively. About half (46.0%) indicated that their mothers' attained secondary school and likewise 44.9% of their father's attended secondary level of education. Regarding occupation of their mothers and fathers, the biggest percentage (57.6%) and (43.8%) were self-employed respectively.

Presentation of the findings

Objective one. Level of knowledge regarding menstruation

Table 4.3 shows the distribution of primary school adolescent girls of Musanze District according to the knowledge about menstruation.

Knowledge about menstruation

Variable	Frequency (n= 363)	Percent (%)
Menstruation definition		
Bleeding	63	17.4
Discharge	96	26.4
Don't know	204	56.2
Causes of menses		
Biological process	119	32.8
Don't know	244	67.2
Causes of delay of menses		
Don't know	242	66.7
Changing birth control	12	3.3
Losing more or less blood	34	9.4
Stress	24	6.6
Too much exercise	19	5.2
Weight loss	32	8.8
The normal frequency of menses		
Don't know	270	74.4
Monthly	93	25.6
The normal length of cycle		
Don't know	94	25.9
About one week	269	74.1
Origin of menstruation fluid		
Vagina	136	37.5
Uterus	100	27.5
Urethra	79	21.8
Fallopian	48	13.2

Source: Primary Data

As illustrated in Table 4.3, about half (56.2%), did not know how to define the menstruation. About a quarter (26.4%) knew the menstruation as discharging of menses while 17.4% stated as bleeding from the female`s womb. Most (67.2 %) expressed the lack of knowledge on causes of menses and only 32.8% were aware that the cause is due to biological processes. Majority (76.7%) of the adolescent girls did not know the causes of delay of menses. Only about a quarter (25.6%) knew the normal frequency of menses while the remaining (74.4%) did not know. Concerning the knowledge about the length of cycle, 74.1% knew the normal length of cycle. However, the highest number (37.5%) stated that the origin of menstrual fluid was from vagina and only 27.5% indicated the correctly indicated from uterus.

Objective two: Attitudes towards menstrual hygiene

Table 4.4 shows the distribution of primary school adolescent according to attitudes towards menstruation. It was assessed using 14 statements with 4 positive and 10 negative statements as shown in the Table below.

Table 4. 1. Assessment of attitude towards menstrual hygiene

Statements	Strongly Disagree, n(%)	Disagree, n(%)	Neutral, n(%)	Agree, n(%)	Strongly agree, n(%)
Positive statement					
Avoid swimming while in periods	0(0.0)	0(0.0)	0(0.0)	170(46.8)	193(53.2)
Discussing the topic of periods at school with boys and girls together	202(55.6)	94(25.9)	0(0.0)	67(18.5)	0(0.0)
Avoid exercising during periods	0(0.0)	0(0.0)	0(0.0)	200(55.1)	163(44.9)
The period is something that girls have to bear	0(0.0)	0(0.0)	0(0.0)	247(68)	116(32)
Negative statement					
The period affects the ability to do housework	0(0.0)	45(12.4)	0(0.0)	156(42.9)	162 (44.7)
Must hide anything that shows periods	0(0.0)	0(0.0)	0(0.0)	197(54.2)	166(45.8)
The period affects performance at work	102(28.1)	97(26.7)	0(0.0)	85(23.4)	79(21.8)
Wishing that the period would last for a few minutes	57(15.7)	165(45.5)	100 (27.5)	20(5.5)	21(5.8)
It is important to buy sanitary pads without being seen	34 (9.4)	20(5.5)	0(0.0)	179(49.3)	130(35.8)
Wishing that girls did not have periods	0(0.0)	135(37.2)	20(5.5)	204(56.2)	4(1.1)
It is important to keep the period a secret	0(0.0)	0(0.0)	0(0.0)	340(93.7)	23(6.3)
It is uncomfortable for girls to have periods	0(0.0)	0(0.0)	0(0.0)	234(64.5)	129(35.5)
The period is really annoying	0(0.0)	0(0.0)	0(0.0)	363(100)	0(0.0)
Girls must stay away from men while having periods	0(0.0)	0(0.0)	0(0.0)	234(64.5)	129(35.5)

Source: Primary Data

All the adolescent girls were in agreement that avoidance of swimming is necessary with 46.8% agreed and 53.2% strongly agreed. More than half (55.6%) strongly disagreed about discussing menstruation at school with their boys and girls together. All of the girls agreed and strongly agreed on avoiding exercise during exercise. Similarly, all were in agreement that they should bear with the menstrual cycle (Table 4.4).

Regarding the effect of period to do housework, only 12.4% disagreed with the statement. All of the girls were in agreement with the statement that they must hide anything that shows periods. The highest percentage (28.1) strongly disagreed with the period that affects performance at work. However, about half (45.5%) did not agree with wishing that the period would last for a

few minutes. Majority (85.1%, strongly agree and agree) were in agreement that it is important to buy sanitary pads without being seen. About 56.2% of the girls were against to having period. All girls were in agreement with keeping the period secret; that the period is uncomfortable; the period is really annoying as well as that girls must stay away from men while having periods (Table 4.4)

Objective three: Menstrual hygiene practices

Table 4.5 shows the menstrual hygiene practices among primary school girls.

Table 4. 5. Menstrual hygiene practices among the primary pupils

Variable	Frequency (n= 363)	Percent (%)
Frequency of changing sanitary pads in a day		
Once a day	211	58.1
Twice a day	87	24.0
Thrice a day	65	17.9
Method of wrapping pads		
Paper	351	96.7
Plastic	12	3.3
Dispose methods of the sanitary pads		
Using dustbin	213	58.7
Burning	12	3.3
Burying	35	9.6
Throwing on the road	24	6.6
Throwing on the open area	79	21.8
Mode of cleaning for external genitalia		
Only water	95	26.2
Soap and water	268	73.8

Source: Primary Data

Most of the girls (58.1%) change the sanitary pads once a day followed by those changing twice a day (23.9%) and three times a day (17.9%). Large percentage (96.7%) were using papers to wrap sanitary pads in order to have a safe menstrual hygiene while only (3.3%) were using plastics. More than half (58.7%) were using dustbin to dispose the sanitary pads, while considerable percentage (21.8%) just through on the open area. About three quarter (73.8%) were using soap and water as a mode of cleaning the external genetalia.

Objective four: Factors associated with menstrual hygienic practices

Association between socio-demography and menstrual hygiene practices

Chi-square test was used to establish association between socio-demographic characteristics and menstrual hygiene practices among primary school adolescent girls as shown in Table 4.6.

Table 4.6. Association between socio-demography and menstrual hygiene practices

Variables	Adequate	In-adequate	Chi-square	df	p

	practice		practice		value		value
	n	%	n	%			
Age in years							
12 to 13	82	72.6	31	27.4	0.04	2	0.98
14 to 15	87	72.5	33	27.5			
16 to 18	93	71.5	37	28.5			
Residence							
Rural	155	66.2	79	33.8	11.55	1	**0.001**
Urban	107	82.9	22	17.1			
Religion							
Catholic	103	70.5	43	29.5	8.44	4	**0.046**
Adventist	32	61.5	20	38.5			
Protestant	90	80.4	22	19.6			
Muslim	19	63.3	11	36.7			
Others	18	78.3	5	21.7			
Mother's level of education							
Illiterate	14	60.9	9	39.1	2.18	3	0.536
Primary	80	75.5	26	24.5			
Secondary	121	72.5	46	27.5			
Tertiary	47	70.1	20	29.9			
Father's level of education							
Illiterate	13	61.9	8	38.1	1.60	3	0.657
Primary	91	74.0	32	26.0			
Secondary	116	71.2	47	28.8			
Tertiary	42	75.0	14	25.0			
Mother's occupation							
Self-employed	152	72.7	57	27.3	0.41	3	0.937
Private employed	24	68.6	11	31.4			
Government employed	76	71.7	30	28.3			
House wife	10	76.9	3	23.1			
Father's occupation							
Self-employed	109	68.6	50	31.4	1.95	2	0.378
Private employed	76	76.0	24	24.0			
Government employed	77	74.0	27	26.0			
Social class based on *Ubudehe*							
Frist class	47	60.3	31	39.7	9.84	2	**0.007**
Second class	88	70.4	37	29.6			
Third class	127	79.4	33	20.6			

Source: Primary Data

As presented in Table 4.6, residence, religion and social class were significantly associated with menstrual hygiene practices among the primary adolescent girls. Girls residing in urban area were significantly more likely to practice adequate menstrual hygiene compared to those residing rural areas (χ^2 = 11.55; df = 1; p value= 0.001). Protestant girls were significantly applying adequate practice on menstrual hygiene than the other followers (χ^2 = 8.44; df = 4; p value=

0.046). Girls belonging to third social class were significantly more likely to adequately practice menstrual hygiene ($\chi^2 = 9.84$; df = 2; p value= 0.007)

Summary

After the description of the socio-demographic profile of adolescent girls, the results were about to study the distribution of girls according to their knowledge, attitudes and practices towards menstruation and assess the factors associated with menstrual hygienic practices. The majority of the respondents do not have an appropriate knowledge about menstruation. There is poor knowledge on menstruation. In fact, the knowledge score was low in the area of knowledge on menstruation which clearly indicates that there has been a need in the knowledge level of adolescent girls regarding menstruation.

Concerning attitude towards menstruation, the study found three different views and perceptions on menstruation and the attitude score was low or moderate in the area of menstruation and menstrual hygiene which clearly indicates that attitude towards menstruation are influenced by proper knowledge on menstruation.

While for menstrual hygienic practices, the majority of primary school girls found practices unsatisfactory and the practice score was of inadequate level in menstrual hygiene which clearly indicates that the knowledge and attitude levels of adolescent girls regarding, anatomy physiology of reproductive system menarche and facts related to the menstruation affects the hygienic practices.

Conclusion

The study found that menstruating girls have inadequate knowledge about menstruation even though the majority got certain information on menstruation from school and family relatives. The attitudes among menstruating towards menstruation were different based on their views and perceptions on menstruation. The practices adopted were found to be unsatisfactory among the majority of primary school girls; which calls upon educating them about menstrual hygiene.

Recommendations

The study recommends the Ministry of Education that there should be a health education in the schools regarding menstrual hygiene and health campaigns in schools to raise awareness for knowledge on hygienic menstrual practices and knowledge about the importance of genital cleanliness with proper and current sanitary materials and show the need for more careful attention to personal cleanliness before and during menstruation will contribute to a girl's comfort and confidence.

Menstrual hygiene should be linked to the hygiene education programme in schools with active involvement of female teachers and caring environment for menstrual hygiene has to be provided both at home and in school.

The menstrual hygiene should be incorporated into school curriculum so that the adolescent girls may acquire the menstrual knowledge which will influence the attitudes and practices toward the menstruation.

The Ministry of Health should support and conduct widely health campaigns that raise awareness on menstrual hygiene in schools throughout the country.

More research studies on menstrual hygiene should be carried out by university institutions and other research institutions in Rwanda especially in the area of the responsibilities of the parents and school teachers to study their role in helping adolescent girls grow in knowledge of menstruation and preparedness toward menstruation.

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