ROLE OF MENSTRUAL HYGIENE MANAGEMENT PRACTICES TO ADOLESCENT GILRS: A CASE OF SELECTED PRIMARY SCHOOLS IN BAHI DISTRICT

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MASTERS DEGREE IN DEVELOPMENT STUDIES

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BY

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DECLARATION

AND

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I, **LEAH ALEX MASHALA** declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for similar or any other degree awards.

Signature……..……..

CERTIFICATION

The Undersigned certify that she has read and hereby recommends for acceptance by the University of Dodoma a dissertation entitled ***Role of Menstrual Hygiene Management Practices to adolescent girls: A case of selected primary schools in Bahi District***in partial fulfillment of the requirements for the Degree of Master of Arts in Development Studies of the University of Dodoma.

……

Dr. Okuli W. Swai

(SUPERVISOR)

Date……

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In the name of GOD the more merciful and more precessions, it is the almighty who gave me breath and led me in all my daily routine works especially in this research work which has come to an end. Let his name be praised.

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In the same breadth, I would like to express my gratitude to my colleagues at the University of Dodoma for their lovely hearts to me during the whole period of study.

Thank you and may God bless you.

DEDICATION

This dissertation is dedicated to my lovely husband Denis William, my daughter Gabriella Denis, my father Mashala Alex and my mother Joyce Mshana. Whose encouragement, support, compassion and love were the source of inspiration for this work. You are such wonderful parents and I thank you for making me who I am today and I am proud to call you “Baba na Mama Leah.”

ABSTRACT

This study examined the role of menstrual hygiene management practices to adolescent girls in primary school in Bahi district. Specifically the studies assessed awareness of menstruation to adolescent girls, identify menstrual hygiene management practices in selected primary school and examined the effects of MHM to adolescent girls in selected primary schools. Methods for data collection were Key informants interview, focus group discussion and survey. The data were collected from 10 key informants using checklist questions, 9 focus group discussion using interview guide and 90 respondents using questionnaires. The study involved a cross sectional research design and both qualitative and quantitative data were collected. The qualitative data was analyzed using content analysis and Statistical Package for Social Sciences (SPSS) version 20 software was used to analyze quantitative data. The study revealed that main source of menstrual information was from female parents, other sources were from sisters and other fellow students. Different MHM practices used by adolescent girls were rag cloth, local pads and a few students were using sanitary pads. The MHM practices in selected primary school were inadequate due to, poor toilets, lack of safe water and changing rooms. Effects of menstruation to adolescent girls included feeling sick, uncomfortable and, feel shy; staying away from other especially and absenteeism. The study conclude that there were poor disseminations of menstrual information to adolescent girls, poor MHM practices such as using of rag cloth as absorbent materials, poor toilets and changing rooms. The study recommends adolescent girls to be provided with adequate knowledge on menstruation, provision of sanitary pads at school and improving MHM facilities such as safe water, toilets and changing rooms.

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LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
HIV	Human Immune Virus
MDGs	Millennium Development Goals
MHM	Menstrual Hygiene Management
MoH	Ministry of Health
SLT	Social Learning Theory
SWASH	School Water Sanitation and Hygiene
UN	United Nations
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WASH	Water Sanitation and Hygiene
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background Information

There is increasing recognition of the impact that menstrual hygiene management (MHM) practices have on health, education and psychosocial outcomes for women and girls in low and middle-income countries (Greene, 2009). MHM is practiced differently in accordance with cultural, social, educational and economic status of the community. According to Shanbhag*et al*., (2012) young girls in developing countries often receive minimal instruction on menstrual hygiene management. Menstruation is seen as taboo by many communities, which make it extremely difficult for adolescent girls to acquire necessary information and support from parents and school teachers. This is regardless of the fact that menstruation causes discomfort, high incidences of pain and other complications for the majority of girls, necessitating instructions and good management (Pilliteri 2012; Kabir*et al.* 2012).

Poor management of menstruation can result in health problems such as infections of urinary or reproductive tracts (Bhatti and Fikree, 2002), also increases the risk of contracting blood-borne diseases such as HIV or Hepatitis B (UNAIDS *et al.*, 2004). In addition to health problems, poor MHM has been reported to impact school participation, performance and attendance for many girls and women teachers in developing countries (Bista, 2004; UNICEF, 2005; Nahar and Ahmed, 2006; Sommer, 2010; Sommer, 2011; Pilliteri, 2012; Kabir*et al.*, 2012).

It is estimated that in low-income countries, 200 million menstruating females suffer from poor MHM (Crofts, 2012). Women teachers elsewhere are frequently absent during menstruation due to the inability of the school infrastructure to meet their health and hygiene needs. Given the unavailability of substitute teachers due to teacher shortages all over the developing world, this means that teachers' instruction time in school will be reduced by 10-20% (World Bank, 2005). In a same line ignorance of or being unable to apply proper means of menstrual hygiene has a negative impact on the physical and mental wellbeing of girls, as well as their educational opportunities in developing countries (Ten, 2007). In Iran it was shown that 10% of women missed up to 3 days of work due to dysmenorrhea during menstruation (Poureslami, 2005).

WHO and UNICEF (2013) estimate that 1 in 10 school-age of African girls do not attend school during menstruation. Further literatures show statically that, approximation of the girls' absence at school is of 4 days every 4 weeks (World Bank, 2005). UNICEF (2005) estimated 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. A study undertaken by Water Aid in 2011 in urban secondary school in Malawi revealed that all girls experienced difficulties in dealing with menstruation at schools because of poor toilet conditions (Pilliteri, 2012). Girls miss up to 20% of a school year due to menstruation (Afripads, 2013).

The global education community, ranging from UNICEF, World Bank to local organizations, has noted the challenges for adolescent girls, and specifically the need for girl-friendly water and sanitation facilities in primary schools. UNICEF (2010)

stresses the importance of school toilets, which are built to accommodate menstruating girls' specific needs for privacy, space, washing facilities and correct disposal or cleaning of menstrual pads. In Nepal there are cultural taboos which discourage women from teaching during menstruation (Water Aid, 2009).

However, in a study of every school in 16 districts in Tanzania undertaken in 2009, it was identified that 52% of all schools had no doors on their latrines, 92% had no functional hand washing facilities and 99% had no soap (SNV/Water Aid/UNICEF, 2011) all of which would make it very difficult for a young girl to easily manage her menstrual period. Although there have been efforts to improve the situation through Water, Sanitation and Hygiene (WASH) sector through the improvement of water infrastructures in schools, the rapid increase in primary school enrolment has put a heavy burden on existing infrastructure particularly in WASH (SNV/Water Aid/UNICEF, 2011). The number of schools and pupils in Tanzania has increased tremendously in recent years, particularly in community schools (Mlozi*et al*., 2013). Increase in the number of students is not accompanied with increase in sanitary facilities, including menstruation facilities. This is partly because, until recently, MHM has been largely overlooked by the WASH sector in general, and Tanzania in particular (Seymour, 2009).

In Tanzania the government, institutions and NGOs have realized that without addressing the problems associated with menstruation, the achievement of at least three Sustainable Development Goals (SDGs) (no.3 to ensure health lives and promote wellbeing for all at all ages, 4 ensure inclusive and equitable quality education and promote lifelong learning opportunity for all and 6 ensure availability and sustainable management of water and sanitation for all) will be hampered (Tjon,

2016), for girls' school drop-out, and absenteeism rates will remain high and the dignity of schoolgirls will be compromised.Therefore, any policy that may decrease female dropout and absenteeism from school is in the interest of society. Furthermore, there are health issues with poor MHM not changing a pad often and not ensuring the pad is dry before wearing can lead to reproductive and urinary tract infections (Dasgupta, 2008) along with uncomfortable chafing (Seymour, 2009). Using cloths or cotton wool for menstrual hygiene is a risk factor for bacterial vaginitis (Baisley, 2009). The negative effects of poor MHM on health are important, as it can further decrease school attendance and performance at school, thus needing attention.

1.2 Statement of the Research Problem

Despite the efforts undertaken by the government of Tanzania through Primary Education Development Program (PEDP) to improve the quality of education for primary school girls, still little attention has been made on MHM practices in primary schools. The possible interference with school dropout, low attendance poor academic performance on MHM remains potentially challenging. Diminished academic performance, school dropout and absenteeism are the main complaints attributed to MHM problems (Arko, 2013).On the other hand, adolescent girls attribute some disruption of their academic work due to poor MHM, and report a severe disruption of their performance (Rudd, 2014). As Herrmann (2014) pointed out, it is likely that female students may impose artificial barriers on their performance levels on the assumption that their intellectual functioning is regularly disrupted by MHM factors.

To date there have been limited studies about effects of MHM in Tanzania; particular among adolescent girls in primary school (Gajigo, 2012).The problem of MHM in primary school is not well addressed as a problem which affects adolescent girls in primary school. Studies by Albert, *et al*, (2012;)Arko, (2013;) and Gajigo, (2012) found that poverty, early marriage, pregnancy, long distance of the school, family problems and crowded class rooms are the factors affecting adolescent primary school girls, which contribute to school dropout, poor performance, and absenteeism for adolescent primary girls, but the problem of poor MHM is not mentioned.To address this knowledge gap the study was conducted in 3 public primary schools across three villages in Bahi district.

1.3 Research Objectives

1.3.1 General Objective

Generally, the study examined the role of menstrual hygiene management practices to adolescent girls in primary school in Bahi District.

1.3.2 Specific objectives

In meeting this general objective, the study focused on the following specific objectives:-

a) Assessed awareness of menstruation to adolescent girls
b) Identified menstrual hygiene management practices in selected primary schools.
c) Examined the effects of menstruation to adolescent girls in selected primary schools.

1.4 Research Questions

In order to meet the objectives of this study, answers to the following research questions were sought.

(a) To what extent adolescent aware of menstruation?

(b) What are the MHM practices?

(c) What are the effects of menstruation to adolescent girls in selected primary schools?

1.5.3 Significance of the Study

The significance of the study lies in knowledge contribution, policy contribution, managerial contribution as well as personal benefits. On the side of knowledge contribution, the study will basically improve awareness of the effect of menstrual hygiene management practices for adolescent girls in primary schools. The study has revealed different sources of menstruation information for adolescent girls; MHM practices in selected primary schools; and various effects of menstruation to adolescent girls in primary schools This information is important to policy makers, development practitioners, health sector and NGO`s in promoting awareness on MHM practices, promoting skills on how to make local pads as observed in Chikopelo primary school and ensuring availability of good health infrastructures for adolescent girls in primary schools.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section presents literature related to this study as reviewed from appropriate sources. It starts by providing conceptual understanding of the key terms used in the study. This is followed by theoretical frameworks which are then followed by empirical support. The section winds up by presenting the conceptual framework that is followed by conclusive remarks which shows among others, knowledge gap and the need for actualizing the study at hand.

2.2 Definition of Terms

This section provides the conceptual understanding of the key terms of the study which are menstruation, menstrual hygiene management, adolescence girls and primary school.

2.2.1 Menstruation

Menstruation or bleeding is a natural process, which begins to occur for girls between the ages of 9 and 16 years with a mean of 13 years (Dasgupta and Sarkar, 2008; Jones *et al.*, 2013; Donimirski, 2013).

2.2.2 Menstrual Hygiene Management

Menstrual Hygiene Management (MHM) is the absorption of menstrual blood onto clean material which can be changed in privacy. It also incorporates the availability of soap and clean water to wash reusable sanitary materials and the body, as well as a suitable place of disposal for used materials (WHO-UNICEF, 2012). Ignorance of

or being unable to apply proper means of menstrual hygiene has a negative impact on the physical and mental wellbeing of girls, as well as their educational opportunities in developing countries (Ten, 2007).

2.2.3 Adolescence

Adolescence is understood as a stage in the lives of females, which indicates their transition from girlhood to womanhood. This also constitutes an important milestone, which is marked by the onset of menarche (Dhingra, Kumar &Kour, 2009; Nagar & Aimol, 2011). From this stage onwards until menopause, reproductive health and menstrual hygiene are important aspects in the lives of women.

2.2.4 Primary school

Is a school in where children receive basic or elementary education. In most parts of the world, primary education is the first stage of compulsory education, and is normally available without charge, but may be offered in a fee paying independent school (Gajigo, 2012).

According to this research a primary school comprises student, teachers, school infrastructures and the school committee.

2.3 Theoretical Framework

This is the basic theory in which the researcher used to base the study. Although there are various theories discussing the menstrual hygiene issues as per surrounding effects. This study used important theory to meet research objectives such as Social Learning Theory

2.3.1 The Social Learning Theory

Social Learning Theory was developed by Russian psychologist Ivan Pavlov in 1920s. According to this theory, a person's behavior is determined by prior learning. The theory considers the primary agent of socialization to be the family where a child learns the attitudes, values and actions appropriate to individuals as members of a particular culture. From this perspective Social learning theory is linked to objective number one whichassessed the awareness of school girls on MHM. As the theory consider the primary agents of socialization to be the family, therefore awareness on MHM also start from family level. Social learning theory shows awareness towards menstrual hygiene management starts from family level to community level. This is because the family is the primary agent of socialization. The study used social learning theory to study about MHM in primary school starting from family by considering values and attitude that a student acquired from the family. The school, peer groups, religious groupings, and mass media are regarded as secondary agents of socialization.

2.4.1 Menstrual hygiene Management practices

The time has come to promote loudly and unashamedly the role of good Menstrual Hygiene Management (MHM) as a trigger for better, stronger development of women and girls, personal, educational and professional (Ali &Rizvi, 2009). There is also clear evidence to show that ignoring good menstrual hygiene is damaging not just women and girls directly but also for schools, businesses and economies (Bharadwaj and Patkar, 2004). Globally about 52% of the female population is of reproductive age, meaning menstruation is part of their normal life and menstrual hygiene is therefore an essential part of basic hygienic practices (House, 2010;

Mahon & Cavill, 2012). The majority of them have no access to clean and safe sanitary products, or to a clean and private space in which to change menstrual cloths or pads and to wash. Millions of girls and women are subject to restrictions in their daily lives simply because they are menstruating (Mudey*et al.,* 2010). The following are among of menstrual hygiene management practices.

2.4.1.1 Water and sanitation

According to Kjellen*et al.,* (2011) the best place to make an impact on improving the lives of girls and women is in water and sanitation. Water, sanitation and hygiene services recognize that users have different needs across the human lifecycle by age, gender and physical ability and explicitly provide for a supportive environment and facilities that cater to these needs (*ibd*). Hygiene programmes 'teach' girls and women how to be hygienic without explicitly providing materials, spaces, water and washing agents that cater to menstruation (Kabir*et al.,* 2012). By ignoring disposal facilities and mechanisms for soiled materials, they reinforce the stigma and shame surrounding menstruation. WASH projects across the world focus on women because they are de facto managers and ensure proper use of water, maintenance and sustainability (Kirk & Sommer, 2006).

2.4.1.2 Sanitary Protection Materials and Disposal

The choice of sanitary protection is very much a personal decision based on cultural acceptability (Hughes & McCauley, 1998). It is often influenced by women or girl's environment and access to funds, water supply and affordable options. It is critical that any programme aiming to support women or girls with sanitary protection materials involves them in the planning and decisions about the options to be

supported (APHRC, 2001). Disposable sanitary towels are the most frequently used methods of managing menstruation. In resource-poor settings they are often prohibitively expensive, bulky to transport and difficult to dispose of (Mlozi*et al*, 2013). Many women and adolescent girls from poor families cannot afford to buy these hygienic towels. Some girls may even be led to trade sex for small amounts of money in order to purchase sanitary protection materials (Gajigo, 2012).

Cloths or cloth pads may be a sustainable sanitary option, but it must be hygienically washed and dried in the sunlight. Sunlight is a natural steriliser and drying the cloth pads on sunlight sterilises them for future use. They also need to be stored in a clean dry place for reuse. Good management of menstrual hygiene should obviously include safe and sanitary disposal. In developing countries, which frequently have poor waste management infrastructure, this type of waste will certainly produce larger problems. For this reason, encouraging menstrual hygiene in developing countries must be accompanied with calculated waste management strategies (Donimirski, 2013). Neglecting menstrual hygiene in WASH programmes could also have a negative effect on sustainability. Failing to provide disposal facilities for used sanitary materials can result in blocked latrines becoming blocked and quickly filling pits (Donimirski, 2013).

2.4.1.3 Private space to change menstrual cloth or pads

TEN (2007) argues that it is very important for school to have separate functional latrines for girls, away from boys latrines with adequate space to change their menstrual cloth or pads, water and soap for washing. Furthermore,House *et al,*. (2012) asserted that all schools and colleges must have adequate and appropriate sanitary facilities for washing and changing, management and disposal of menstrual

waste. These facilities must offer privacy, safety and dignity to menstruating girls and lady teachers.However, a baseline study conducted by Netherlands Development Organization, SNV in 4 districts in Southern Ethiopia revealed that, the school environment is not conducive for menstrual hygiene management because 90% of the schools lack water supply, separate toilet for boys and girls and the existing toilets lack privacy (Zinash*et al.*, 2011). The situation also prevails in Tanzania (SNV/Water aid/UNECEF, 2011).

2.4.1.4 Use of menstrual cup

The menstrual cup may be an appropriate new technology for poor women and girls (Omidwarand and Begum, 2010). It is a cup made of medical silicone rubber that is inserted into the vagina to collect menstrual blood. It needs to be removed and emptied less frequently than sanitary pads. That reduces the problems young women face in lacking privacy and facilities to change and dispose of sanitary products in schools and other contexts.

This technology may offer a sustainable, practical and cost-effective alternative. It is recommended that when using the menstrual cup one needs to maintain a high standard of hygiene especially during insertion, removal and general cleaning. Although water shortages could present challenges for its use, the amount of water required when using the menstrual cup is minimal compared to other methods (APHRC, 2010).

2.4.1.5 Provision of menstrual education

Yet, adequate facilities and sanitary protection materials are only part of the MHM practices. In addition, it is necessary to go beyond the practical issues of menstrual

management in schools and workplaces, and to use the vehicle of education (Shoemaker, 2008). Education and information (in combination with hygiene and sex education) empowers women and girls with factual information about their bodies and how to look after them (Kirk and Sommer, 2006) (for example through school campaigns or part of school curriculums). Presently, teachers are rarely trained in teaching menstrual hygiene and consequently rarely teach it. Male teachers may feel cultural norms forbid them from discussing such topics with young girls. As a result, MHMis either taught late or not at all *(*WSSCC, 2013).

Teaching menstrual hygiene management in schools can help learners better understand themselves and deal with the changes they are experiencing, and hence gain the self-esteem to overcome daily challenges they may face with teachers and peers in school (Thakre, *et al.*, 2011). Adolescents also become more conscious of socially-constructed myths and taboos built around puberty, such as negative perceptions of menstruation or dismissal of emotion as un-masculine. A better understanding of puberty and life skills helps young girls to make independent decisions and better cope with pressure from peers, family, community and media messages (Shannon *et al.*, 2011).

2.4.2 Menstrual hygiene management and academic performance

Donimirski (2013) noted that menstruation is a particularly salient issue because it has a more pronounced effect on the quality and enjoyment of education than do other aspects of puberty. It involves a learning component as well as elements affected by the school environment and infrastructure. These include access to menstrual hygiene materials, latrines and places to change, safe water and sanitation, and good hygiene practices like hand washing with soap. Without these, the school

environment is unhealthy, gender discriminatory and inadequate facilities for menstrual hygiene management (Donimirski, 2013). The following are the effects of menstrual to adolescent girls

2.4.2.1 Absenteeism from school

UNICEF (2005) estimated 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. A study undertaken by Water Aid in 2011 in urban secondary school in Malawi revealed that all girls experienced difficulties in dealing with menstruation at schools because of poor toilet conditions (Pilliteri, 2012). Similar findings were reported by a survey carried out by Water Aid in India, in which 28% of girls did not attend school during menstruation due to lack of facilities. In Uganda, FAWE (1999) reported that 1 in 3 girls missed all or part of a school day during their menstrual cycle.

Besides the health problems due to poor hygiene during menstruation, the lack or unaffordability of facilities and appropriate sanitary products may push menstruating girls temporarily or sometimes permanently out of school, having a negative impact on their right to education. Sanitary pads reduce the barriers for girls to stay in school, which are multiple: fear of soiling, fear of odour, and even if there are WASH facilities at school, fear of leaving visible blood in the latrine or toilet (WSSCC, 2013).

2.4.2.2 Poor academic performance

Many school girls and women teachers in developing countries struggle to find appropriate places and facilities in their school to deal with menses, which may

impact their school participation, performance and attendance (Bista, 2004; UNICEF, 2005; Nahar and Ahmed, 2006; Sommer, 2010; Sommer, 2011; Pilliteri, 2012; Kabir*et al.,* 2012). The monthly menstruation period also creates obstacles for female teachers. They either report themselves sick or go home after lessons as fast as possible and do not have enough time to give extra attention to children who need it and it may result to poor performance of students. The gender–unfriendly school culture and infrastructure and the lack of adequate menstrual protection alternatives and/or clean, safe and private sanitation facilities for female teachers and girls undermine the right of privacy, resulting in a fundamental infringement of the human rights of female teachers and girls. Consequently, girls and women get left behind and there is no equal opportunity. Due to this obstacle, MDG 5 (promote gender equality and empower women) cannot be achieved either (TEN, 2007)

2.4.2.3 Health problems

Poor management of menstruation can result in health problems such as infections of urinary or reproductive tracts (Bhatti and Fikree, 2002), Menstruation can cause discomfort and high incidences of pain for a majority of women. It can also cause shifts in mood, depression, vomiting, pyrexia, endometriosis, haemorrhage, migraines, anemia and fibroids (Dalton, 1964; Donimirski, 2013). Menstruation can potentially cause cancer if cells mistakenly divide uncontrollably (Donimirski, 2013). The potential risk of contracting blood-borne diseases such as HIV or Hepatitis B through unprotected sex is also increased during menstruation because the highest concentrations of virus are found in blood (UNAIDS *et al.,* 2004). As a result, many girls suffer from these diseases and their complications can even lead on to the infection being transmitted to the offspring when they conceive

(Shanbhag*et al*., 2012). Therefore hygiene related practices of girls during menstruation are of considerable importance, as it has a health impact in terms of increased vulnerability to health (Pilliteri, 2012).

2.4.3 Role of school in MHM

Schools present an opportunity to reach thousands of children with safe water and hygiene and health messages (NAGPAL 2010). They provide unique opportunities for awareness rising as they bring large groups of people together for learning purposes and usually have systems for production and dissemination of educational material (SCHAAP and VAN STEENBERGEN, 2001). Schools can also provide an entry point to the community as a whole, for example, the introduction of latrines and hygiene-education at schools, for example by using the participatory approach, may trigger the development of improved hygiene norms in the household, because children take back to their families concepts and practices on menstrual management(Dalton, 2004). Furthermore, Onyegegbu (2009) argued that ,education sector has a large educated workforce that can, if properly trained, provide accurate knowledge and develop a relationship of trust with students. The school setting promotes relationships and social interaction with peers and teachers or other school staff, which can lead to a feeling of school connectednesst (*ibd*).

2.4.3.1 Provision of safe water

The provision of safe water and sanitation facilities in schools is a first step towards a menstrual hygiene management (SNEL, 2003). In schools, education aims to promote those practices that will help prevent water and sanitation-related diseases as well as promoting the wise use of water and favourable hygiene behaviour in the

future generation of adults. The combination of adequate facilities, correct behavioural practices and education is meant to have a positive impact on the health and hygiene conditions of the community as a whole, both now and in the future. The success of a school hygiene programme is therefore not determined only by the number of latrines constructed and the number of hand pumps installed or water connexions built. Nor is the success of a programme determined simply by what children know (SNEL, 2003).

A good School Campaign will find an optimal combination of different objectives and a balance between provision of safe water and sanitation facilities, and educational, behavioural and promotional aspects such as including the issue in the school's curriculum (SCHAAP and VAN STEENBERGEN, 2001). Shoemaker (2008) reported that increase in number of students was not accompanied with increase in sanitary facilities, including menstruation facilities in school. This is partly because, until recently, MHM has been largely overlooked by the Water, Sanitation and Hygiene (WASH) sector in general, and Tanzania in particular. Failure to provide appropriate menstrual hygiene facilities at home or school could prevent WASH services being used as intended (Shoemaker, 2008).

2.4.3.2 Menstrual hygiene infrastructures

A study undertaken by Water Aid in 2011 in urban schools in Tanzania revealed that all girls experienced difficulties in dealing with menstruation at schools because of poor toilet conditions (Pilliteri, 2012). It is very likely that women teachers elsewhere are frequently absent during menstruation due to the inability of the school infrastructure to meet their health and hygiene needs. Sewage backups, quick fill of pit latrines and land pollution is common as a result of improper menstruation

product disposal (Shoemaker, 2008). Studies in Tanzania, Uganda, Kenya and Zimbabwe which was conducted between 2009 and 2011, highlights the challenges to physical management of menstruation in low income settings, and in particular the prevalence of overcrowded and overflowing toilet cubicles currently existing in many sub-Saharan African schools (Rockfeller, 2011). In accordance with LaFraniere (2005), over 50% of primary school pupils in Ethiopia lack proper latrines and water supply facilities, which are not only inadequate, but also poorly managed.

2.5 Research Gap

Ten (2007); Albert *et al*. (2012); Gajigo(2012)and Donimirski (2013) studied linkages between poor school-based sanitation and girls' low attendance rates with the interdependence of the gender, education and sanitation; and attributed poor performance of school girls with early marriage, poverty, long distance from school and family problems. However, the studies did not consider effects of menstrual hygiene management practices in relation to low attendance rate to adolescent girls. In addition,McMahon *et al.*, (2011) reported that drop-out rates among schoolgirls accelerate at the onset of puberty and menstruation", but the researcher did not consider the effect of menstrual hygiene management practices in relation to poor school attendance which may affect academic performance of school girls. Therefore, this study aims to bridge the gap that exists by examining the role of menstrual hygiene management practices to adolescent school girl.

2.6 Conceptual framework

Figure 1 presents conceptual framework of the study. Conceptual framework shows the relationships existing between independent, intermediate and the dependent variables. This is the summary of the literature as understood by the researcher which is normally put in a pictorial form. The conceptu.al framework that guided the study is hereby presented pictorially (Fig 1).

Independent variable

Independent variable is a predictor variable or controlled variable and represent the inputs or causes. It is presumed to affect or determine a dependent variable and it can be changed as required, and its values do not represent a problem requiring explanation in an analysis, but are taken simply as given (Kothari, 2004). In this study the independent variables included; awareness on menstruation, MHM practices and effects of menstruation.

Intervening variable

Intermediate variable is a causal pathway that causes variation in the dependent variable and is itself caused to vary by the independent variable (Kothari, 2004). The study perceived policy and legal framework, laws and regulation as an intermediate variable to regulate MHM in primary school. It is considered that if policy and laws as well as respective regulation are in place to regulate MHM in primary school will result to increase school attendance and reduce school dropout .

Dependent variables

According to Cohen and Manion, (2000), dependent variable is known as responsive variable, measured variable or responding variable, refer to what a researcher intended to measure in the experiment and what is affected during the experiment.

Dependent variable responds to the independent variable. It is called dependent because it depends on the independent variable either indirect or direct via intermediate variable. In this study the dependent variables include; improvement of girl's school attendance, and reduce school dropout where MHM practices are inadequate and vice versa.

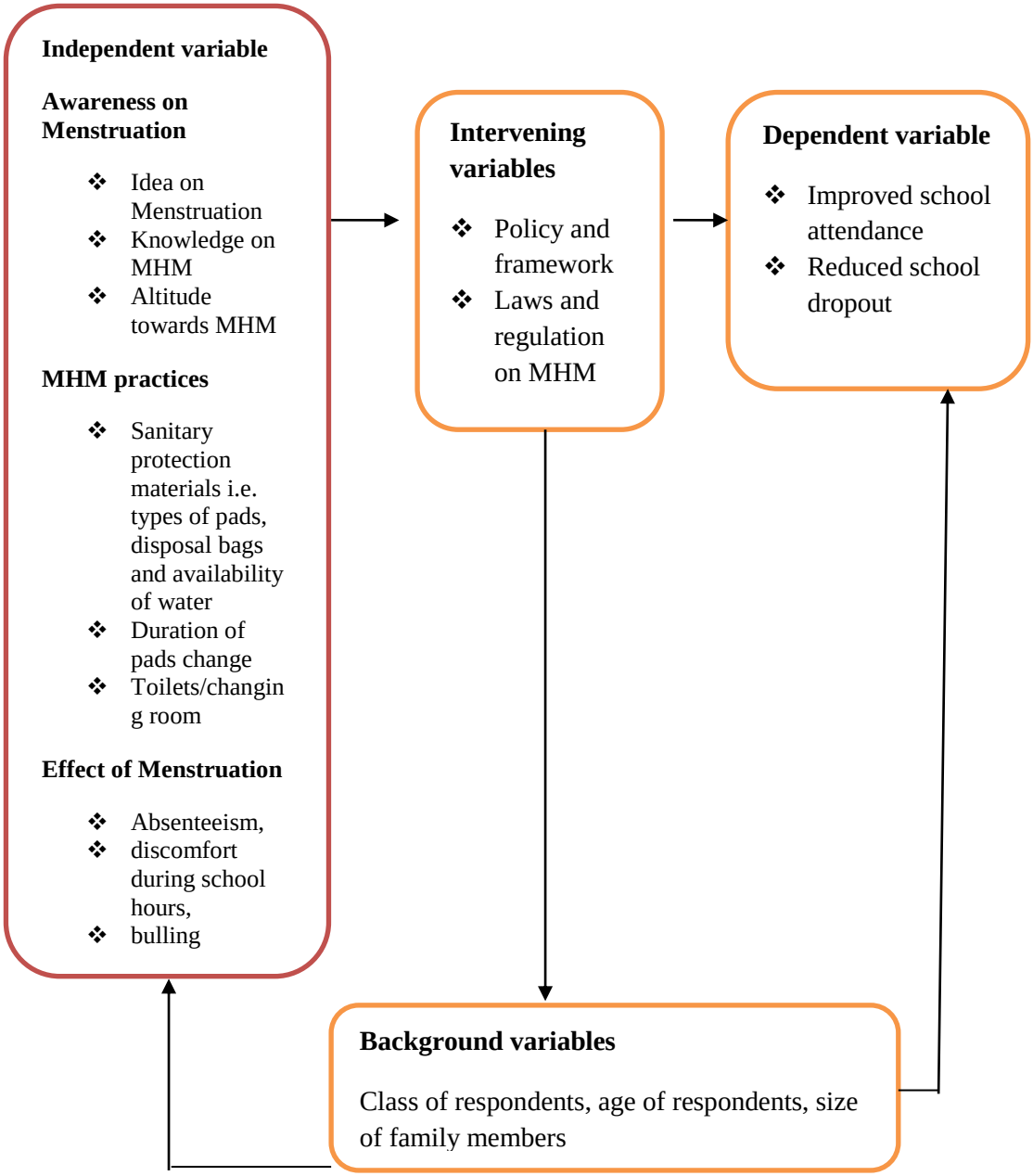

Figure 2.1: Conceptual Framework for the Study

Source: (Ten, 2007)

CHAPER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section describes how the research was conducted. The section appears in sub-titles; the study area, the research approach, research design, population of the study, sample selection, sampling, purposive sampling, random sampling, sample size, types of data, data collection methods, data validity and reliability of the study, ethical consideration and data analysis plan.

3.2 Study Location and its Selection

This study was carried out in Bahi District which is one among the seven administrative districts in Dodoma region.Bahi District is bordered to the north by Chemba District, to the east by Dodoma District and Chamwino District, and to the west by Singida Region. Its administrative seat is the town of Bahi. Its geographical coordinates are 5° 59' 0" South and 35° 19' 0" East. Three villages were selected for this study which included Chikopelo village, Chali Isanga village and Chali Igongo village. In each village there was one community primary school where by data was collected. Presences of community primary school in each village determined its selection. Chikopelo Village was selected because of Chikopelo primary school, Chali Isanga village was selected because of Chali Isanga primary school and last Chali Igongo village was selected because of Chali Igongo primary school.

The following were the criteria used to select the study area. First, Bahi District is among of Dodoma district which have poor hygiene management in community primary schools, second Bahi is faced with shortage of water supply in community

primary schools and third community primary schools in Bahi district are faced with the challenge of poor toilets. Furthermore, this research setting has been found modest because the researcher was promised accessibility of data and information. That is, there was possibility to learn from the study area.

3.3 Research approach

Cresweel, (2003) argues that there are three different research approach; qualitative, quantitative, and mixed methods approach. Thus, this study was employ at largely qualitative approach which was considered appropriate to meet the demands of research questions guided the study which needs deep explanation about the phenomena.

Qualitative approach was used to give more description on what to be obtained from the field based on research objectives i.e. to assess awareness of school girls on MHM, to determine MHM practices and to examine the effects of MHM to adolescent school girls.

3.4 Research Design

Cohen *et al.,* (2000) defines research design as the design which is concerned with how social reality or phenomenon can be studied. Furthermore, Bryman and Bell (2007) advocates that, research design is the element which provides the framework for the collection and analysis of data. Actually, this research adopted a holistic descriptive case study design. Because the study was intended to be in-depth study which provided clear picture about the phenomenon at hand. Yin (1994) has identified various strategic models of case studies as Exploratory, Explanatory and Descriptive case study strategies. According to Yin (1994), descriptive case studies

attempt to describe a situation regarding what happens currently according to the phenomenon. Apart from being a descriptive case study, this study adopted a holistic case methodology as opposed to multiple embedded methodologies because it was conducted in only one District Council.

In this type of research, a subset of the population was selected, and from these individuals, data was collected to help answer research questions of interest. Cross-sectional research design was applied to determine whether there was a relationship between age and grade of respondents.

3.5 Population

Polit and Hungler (1999) refer to the population as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. In this study the population was primary adolescent girls, teachers of selected primary school, and school management board.

3.6. Sample selection

3.6.1 Sampling

The sample frame for this research was the adolescent girls of primary schools. Sampling frame for adolescent primary school girls were obtained from respective school attendances from each school. The sampling frame was checked for accuracy before used.

3.6.1.1 Purposive sampling

Purposive sampling was used to select for adolescent girls in primary schools. The aim of using purposive sampling was to get information from adolescent girls who

were already in puberty age because not all girls in primary school were in puberty age. Purposive sampling was also used to obtain the key informants such as school teachers, DHO, and school board members who provided information on MHM since they had experience on MHM practices experience and abroad understanding on the topic.

3.6.1.2 Simple random sampling technique

Simple Random sampling was applied to selecting adolescent girls in primary school from selected class. Random sampling provided an equal chance of each adolescent girl student to be included into the study.

3.6.2 Sample Size

The sample size was drawn by using the formula n= N/(1+n) $(e)^2$ quoted from Yamane (1967) Kothari (2004). Yamane provides simplified formula for calculating sample size and a Table that contains estimated population size. For example Chikopelo primary school had population of 158 for three classes, Chali Igongo had a population of 168 for three classes and Chali Isanga had a population of 156for three classes account a total of 482. The populations were for adolescent girls acquired through purposive sampling. By using Yamen formula it is very easy to calculate the simple size since the population is known. The formula is $n = \frac{N}{1+N(e^2)}$

Whereby

N= total population

e= precision level (error detection) 1-10%

n= sample size to be included in the study

1= constant

A sample was calculated as follows.

$$n = \frac{N}{1+N(e^2)} =$$

$$n = \frac{482}{(1+482)(0.1^2)} =$$

$$n = \frac{482}{(483)(0.01)} =$$

$$n = \frac{482}{(4.83)} = 99.79 \approx 100$$

n=100

However for the purpose of facilitating comparison where necessary, only 30 students were selected randomly from each school.

3.7 Types of data collected

Both primary and secondary data were collected from different sources which were employed to gather the required information for this study.

3.7.1 Primary data

Primary data is the first hand information collected in the field through various research methods including survey, interview, focus group discussion, participatory observation taking of photographs etc. Primary data were mainly collected by the researcher in order to answer research objectives such as awareness of menstruation, MHM practices in primary schools and the effects of menstruation to adolescent girls?

3.7.2 Secondary Data

These were already existing information. It refers to information collected and analyzed by someone else. During the study Secondary data was retrieved from different sources such as books, journals, articles, media, online information and research reports. The researcher was able to read and summarize different sources of secondary data.

3.8 Data collection method

This study employed various techniques of data collection for both primary and secondary data. Techniques for primary data collection were questionnaires survey, key informant interview, focus group discussion, and observation (nonparticipant observation); and documentary review for secondary data collection.

3.8.1 Questionnaire survey

A questionnaire is a set of carefully prepared questions designed with the aim of collecting reliable data from selected participants (Remenyi*et al*., 2005). The study employed a semi-structured questionnaire which comprised both close and open ended questions to obtain information from respondents. This particular vehicle of data collection was used to collect data and information from adolescent girls from three schools at Bahi District. The information which was gathered by using questionnaires were background information of the respondent, awareness on menstruation, such as idea on menstruation, sources of menstruation information before menarche, MHM knowledge/education and students behaviour during menstruation at school. Questionnaires also were useful to collect information on MHM practices in primary school e.g. use of sanitary pads. Furthermore,

questionnaires were used to collect information on the effects of menstruation to adolescent girls in primary schools such as absenteeism, uncomfortable at school, feel shy at school and feel sick. The challenge encountered during questionnaires survey was language problem whereby the most of respondents were speaking Kigogo and did not speak Kiswahili very well. The researcher found a researcher assistant who was familiar with Kigogo, Kiswahili and English in order to translate the questionnaires to respondents to overcome language problem.

Plate 3.1 Questionnaires administering by the researcher in the study area.

3.8.2 Interview

Cooper and Schindler, (2008) define interview as a primary data collection technique for gathering data in qualitative methodologies. Saunders *et al*. (2007) classified interviews in to three types as; structured interview, semi-structured interview and unstructured interview. The study used both semi structured and structured interview for key informants interview. Interview guide were used to collect information from school teachers who were required to give information on how they had been supporting students during menstruation and MHM practices at school, education provided to adolescent girls before puberty in primary school etc.

Other key informants were District health officer (DHO) and the information gathered were support from district to school in order to solve problems related to MHM practices such improvement on water supply at school, construction of changing rooms and good construction of good toilets. However there were challenges encountered during data collections from key informants especially (DHOs) whereby they were not available on time, but the researcher solved this problem by being passion and send high request to have an appointment with the (DHOs) on time.

3.8.3 Focus Group Discussion

The focus group discussions (FGD) captured information about role of MHM on adolescent girls in primary school. The information included awareness of menstruation, perception on menstruation, practices of MHM and effect of menstruation. From the study area, three FGDs were conducted in each of the three schools in each village making a total of nine FGD. Groups of adolescent students of 7 to 8 members involved from age of 10 and above. Note book and FGD checklist were used to collect information during discussion. The researcher was the main leader of the whole process of discussion with the help of research assistant; students were allowed one by one to contribute by giving her opinion on proceeding topic.

The challenge encountered during FGD was to get students who were serious to sit and make a discussion this problem was observed in Chali Isanga and Chali Igongo primary school. But, this problem was solved by a researcher by asking teacher on duty to help organize students and make them quiet and start discussion.

3.8.4 Observation (Non participant observation)

Observation technique was a good strategy for conducting the study. This is because it helped the researcher to identifying issues that could have been omitted in the study questions and interviews. It was useful during this study for discovering things that cannot easily be expressed in words which were relevant for issues like body language etc. A part from that, observations was also convenient because the method did not required planning and much specific time.

Specifically, this technique was helpful to the researcher by creating a good data analysis according to what had been replied by the respondents and what had been physically viewed by the researcher. For example, the researcher observed all school environments as schoolyard, teachers' office, toilets, changing rooms if were available; also water sanitation and areas for waste disposal. During participant observation the researcher encountered the challenge of long distance walking from one school to another and this challenge was solved by a researcher by using a motorcycle known as Bodaboda to move from one school to another.

3.8.5 Documentary Review

During the study documentary review for secondary data was retrieved from different sources such as books, journals, articles, media, online information and research reports. The researcher was able to read and summarize different sources of secondary data in order to answer research questions. The information related to MHM was obtained from different documentary review. Documents range from public through private to personal documents. The list of public document sources included government publications such as Acts of Parliament, policy statements,

census reports, and statistical bulletins, reports of commissions of inquiry, ministerial or departmental annual reports, and consultancy reports.

3.9 Data Collection Procedure

Before data collection, instruments (questionnaire for students and study protocol (interview) for management were prepared. After that, the instruments were pilot tested in order to improve both validity and reliability. According to Appiah-Adu*et al*. (2000), it becomes more vital for qualitative study to undertake pilot testing of instruments because both validity and reliability measures are more qualitative than they are quantitative. Therefore, it was very important to take measures to improve validity and reliability at the beginning of the study. After pilot testing of the study instruments, they were amended as per the findings to be obtained. Also the instruments were further translated into Swahili language for providing clear understanding of the questions to the respondents during data collection.

3.10 Data analysis

Data Analysis is the process of systematically applying statistical and or logical techniques to describe, illustrate, condense and recap, and evaluate data. Since the study applies qualitative approach, then data was analyzed qualitatively.

3.10.1 Analysis of quantitative data

The quantitative data was verified, compiled, coded and summarized before carrying out statistical analysis based on the objectives of the study. Responses for each question in each questionnaire were clearly screened to ensure clarity, then Statistical Package for Social Sciences (SPSS) Version 20 computer program was

employed as a tool for data coding and analysis. Descriptive statistics that is, frequency distribution and percentages were used to describe and summarize the data; the results were presented by using graphs, tables and pie charts. Inferential analysis was done by using chi-square test at $P<0.05$ level of significance to determine association between age of respondents and grade.

3.10.2 Analysis of qualitative data

Content/thematic analysis was used in the analysis of qualitative data whereby the data was summarized into themes basing on the objectives of the study.

3.11 Validity and reliability

Patton (2002) states that, validity and reliability are two factors in which any qualitative researcher should be concerned about while designing a study, analysing results and judging the quality of the study. Also, Validity and reliability are two important aspects in order to approve and validate the quantitative research. Moskal &Leydens (2002) define the validity as the degree to which the evidence supports that the interpretations of the data are correct and the manner in which interpretations used are appropriate. Validity means that correct procedures have been applied to find answers to a question (Dawson, 2002). Reliability on the other hand, refers to the quality of a measurement procedure that provides repeatability and accuracy (Dawson, 2002). According to Joppe (2000), reliability is the extent to which results are consistent over time and an accurate representation of the total population under study.

Reliability in this study has been improved by pilot testing the data collection instruments as suggested by Yin (1994) as well as Janesick (1998). This ensured that

respondents understand the questions in the same way. On the other hand, as regard to the qualitative research, three methods were suggested for validation, these were; triangulation of data, pilot testing and respondent validation (Silverman, 1993). Due to the nature of this study, three methods have been used for improving validity of the findings. These were pilot testing of the study instruments, triangulation of data collected from students, management and from documentary sources.

3.12 Ethical Consideration

Ethical issues are more colossal in research (Dörnyie, 2007). Cohen *et al*, (2007) introduced a cardinal point of view regarding ethics in research by stating that: the difficulty and yet the strength with ethical codes is that they cannot and do not provide specific advice for what to do in specific situations. Therefore, the administration of the instruments preceded by securing the required research permit from the Directorate of Research, Publications and Postgraduate Studies of the University of Dodoma. The permit helped the researcher to obtain permit from the Bahi District Council as well as the schools to conduct research work. Beside the official permission to conduct the research, confidentiality maintained as it obviously touched the freedom of the respondents. This enabled the respondents to participate freely in data collection. The instruments administered carefully without interfering the progress of the other daily routine activities in the departments.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents and discusses results of the study based on specific objectives. The chapter has four sections which are background information of respondents, perception of school girls on MHM, menstrual hygiene management practices, and effects of MHM to adolescent girls in primary schools.

4.2 Background information of respondents

Information on background of respondents from the study area was collected by using questioners (Appendix 1). The information was based on the grade of respondents, age of both respondents, and the head of household of the respondents, size of the household, parents` or guiders` occupation, marital status of household and education level.

4.2.1 Grade and age distribution of respondents

The respondents of this study were adolescent girls in primary school where by Table 4.1 presents grade and age distribution of the respondents. According to the results shown in the Table, 57% of respondents were in grade seven, 29% were in grade six and 14% of respondents were in grade five. The number of respondents in grade seven was high as compared to those in grade six and five.

The findings in Table 4.1 further shows that 66.7% of the respondents were 13 years old and above, whereas 27.8% were between the age of 11 and 12 years. Only 5.6% of the respondents were between the age of 9-10 years old. The results indicate that most of the respondents were adolescent (i.e. 13 and above years), while very few were at 9 and 10 years. The findings were also supported by Dasgupta and Sarkar (2008) that menstruation begin to occur for girls between the age of 9 and 16 with a mean of 13 years old.

Table 4.1: Age of respondents and grade distribution of respondents

Grade of students	**N**	**%**	**X^2**	**P<0.05**
Grade five	13	14	17.296	0.01
Grade six	26	29		
Grade seven	51	57		
Total	**90**	**100**		
Age of students				
9-10 Years	5	5.6		
11-12 Years	25	27.8		
13 Years and above	60	66.6		
Total	**90**	**100**		

Source: Field data 2017

The inferential analysis was done by using Chi-square test statistic at $p<0.05$ level of significance to determine association between the grade of respondents and age. The result revealed that there was significant association between the grade of students and age (X^2 17.296; $p\leq 0.01$), indicating further that, adolescence differed with the age of respondents. That is the higher the grade the higher the age of students which determined the menarche stage.

4.2.3 Distribution of respondents according to household size

Findings introduced in Table 4.2 indicates that 47.8%of the household size of respondents was 4-5 members whereas 28.9% of the household size was 6-7 and only 5.6% of the household of respondent had 2-3 members. The findings indicate that majority of respondent household size were between 4-5 members which comply to the Tanzania census (2012) with estimation of 4.9 to 5 members per household.

Table 4.2: Size of household

Size of household	N	%
2-3 Members	5	5.6
4-5 Members	43	47.8
6-7 Members	26	28.9
8 Members and above	16	17.7
Total	90	100

Source: Field data (2017)

4.2.4 Number of girls and boys in the household of respondents

Findings introduced in Table 4.3 shows that more than half (53%) of the household of respondent household had 3-4 girls while 30% of respondents reported to have1-2 girls in their household and only 4% of the household of respondent had 6 girls and above. The findings revealed that each household had maximum of 4 girls and minimum of 1. The findings further indicate that 41% of household respondents had 1-2 boys whereas 30% of the household respondents had 3-4 and 20% of the households` respondents had no boys.The maximum number of boys in each household was four and the minimum number of boys in each household were two. During FGD respondents argues that in the household with many girls than boys

there was sharing of MHM information between older sisters and young sisters, this statement was supported by one of the respondents who declared that;

> *"My sister instructed me to take a bath and throw away the underpants, I followed her instructions and put on the underpants she prepared with a pad attached"*

Furthermore, during FGD it was revealed that for the household with many boys than girls, sharing of MHM information was difficult. One of the respondents had to say,

> *"I am the only girl in our household with three brothers therefore; I get trouble during my menstruation because I do not have any sister to share anything concerning MHM."*

Table 4.4: Number of girls and number of boys in respondent`s household

Number of girls	**N**	**%**
1-2 girls	27	30.0
3-4 girls	48	53.3
4-5 girls	11	12.3
6 girls and above	4	4.4
Total	**90**	**100**
Number of boys		
None	18	20
1-2 boys	37	41
3-4 boys	27	30
5 boys and above	8	9
Total	**90**	**100**

Source: Field data 2017

4.2.4 Household head of respondents

This part captured information on head of household whereby Figure 4.2 indicates that 84% of the household of respondents were headed by male and 16% were headed by female. The result implies that most of the household were headed by

male. During interviews with the key informants it was revealed that males were responsible in decision making in the household, however it was noted during FGD that male had little contribution to their daughters on MHM compered to females this was supported by the statement of one of the respondents said that;

> *"When my mother taught me about menstruation, she told me not to tell my father and brothers."*

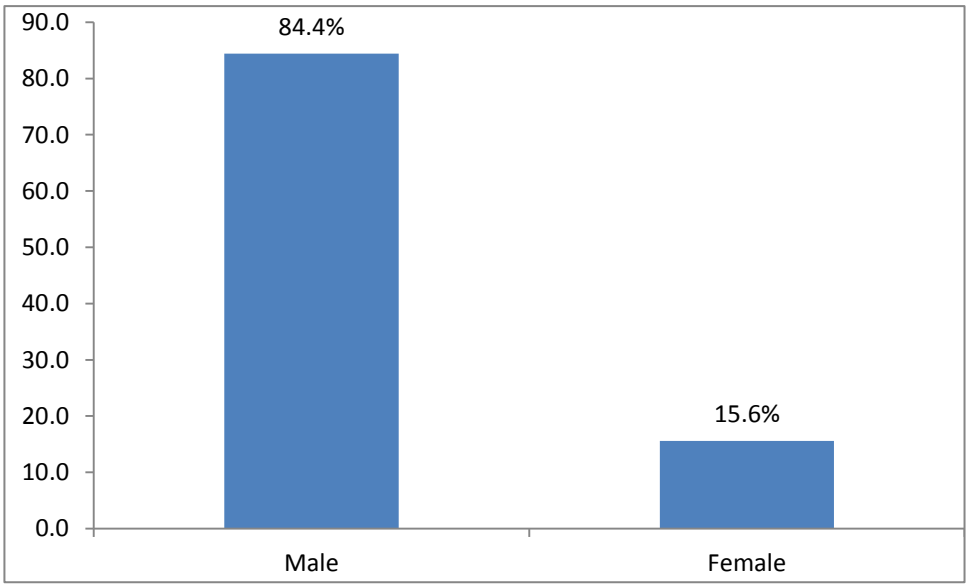

Figure 4.2: Head of respondent's family

Source: Field data 2017

4.2.5 Parents or guider`s level of education

The information captured under this part was based on the education level of parents or guiders and the findings in Figure 4.3 show that 64.4% of respondent's parents/guiders had attained primary education while 11.1% did not attend any formal education. Only 24.5% attended secondary education. During FGD it was revealed that parents or guiders with primary education had little understanding on modern MHM practices. These results comply with the study of Nagar (2011)who

argued that the level of education has impact on menstruation that is increasing education, increases awareness about MHM practices.

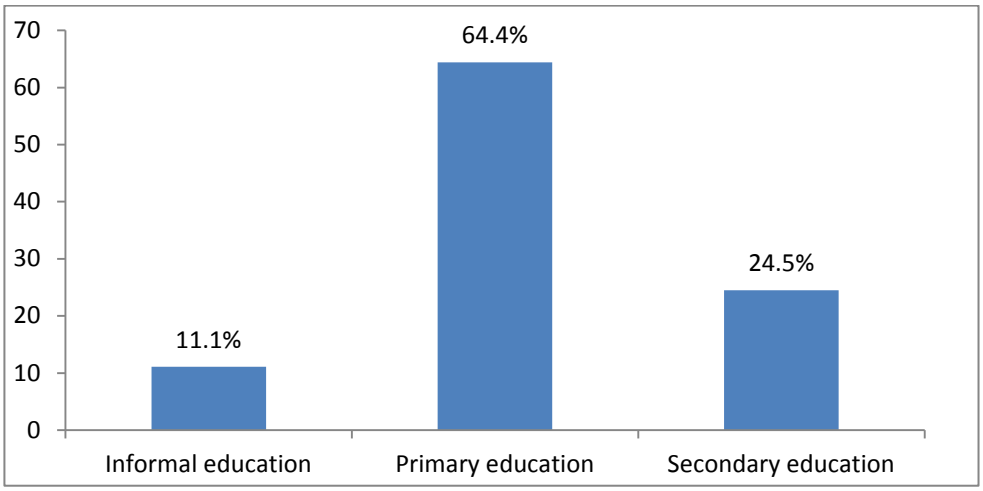

Figure 4.3: Parents/guiders level of education

Source: Field data, 2017

4.2.6 Parents or guider`s occupation

Findings introduced in Table 4.4indicate that 56.7% of parents were engaged in farming and livestock keeping as a source of their food and income, 24.4% were dealing with petty business i.e. charcoal selling and Bodaboda, while only 18.9% of the parents/guiders were employees in either government sectors or NOGs. The findings indicate that the majority of parents or guiders were dealing with farming and livestock keeping. These findings comply with the study by Oche, *et al.*, (2012) who argued that both farming and livestock keeping are the primary sources of food and income to many Tanzanian societies.

Table 4.4 Parents or guiders occupation

Occupation	n	%
Farming and livestock keeping	51	56.7
Employees (Government employee, NGOs)	17	18.9
Petty business (Bodaboda and Charcoal selling)	22	24.4
Total	90	100.0

Source: Field Data 2017

4.3 Discussion of results by research objectives

This part presents results and discussion of specific objectives. Whereby results for each objective are presented and discussed.

4.3.1 Specific objective I

This objective examined awareness of students on menstruation. Under this specific objective data were collected basing on the following aspects; having an idea or knowledge on menstruation before menarche, source of information on menstruation first menstruation experience, and family perception on menstruation.

4.3.2 Awareness of menstrual information before menarche

This part captured information on awareness of menstrual management before menarche. The results in Table 4.5 show that 81.1% of respondents were aware of menstruation before menarche while 18.9% were not aware. Furthermore, the findings revealed that the main source of information about menstruation before menarche was female parents (48.9 %) followed by 24.4% of fellow students other

sources of information were teachers (14.4%) and 12.2% were sisters. The findings were supported by the information collected from the interview with key informants and FGD who declared that female parents always advise their daughters not to be afraid when they see blood for the first time, they should know it is normal, and they should tell an older woman who is close to them even a neighbor who can help them. They were also advised to seek knowledge and advice from parents and appropriate relative before first menstruation

Table 4.5Awareness and source of menstrual information

Whether respondents were aware	**n**	**%**
Yes	73	81.1
No	17	18.9
Total	**90**	**100.0**
Source of menstrual information		
Female parents	44	48.9
Teachers	13	14.4
Fellow students	22	24.4
Sisters	11	12.3
Total	**90**	**100**

Source Field data 2017

4.3.3 First menstruation experiences

Findings introduced in Table 4.6 indicate that 60% of the adolescent girls were worried during their first menstruation, while 38% were discomfort. In the FGD girls discussed their own experience on the first day of menstruation. One girl in Chikopelo primary school said that*;*

"The first day I menstruated I felt very bad. I thought I was dying, I didn't know anything about puberty. I thought I wanted to urinate, but when I went to the latrine I saw my underpants were bloody"

Meanwhile other respondents continued to express their first menstruation experience whereby majority were uncomfortable and other were worried about losing a lot of blood that could lead to death. The other respondent from Chali Igongo said that;

''The first day I menstruated, I really felt bad I was very unhappy. At first I thought I was sick and I couldn't tell anyone I kept a secret because I dint know what it was''

Other girls have seen their colleague stain blood on their skirts and gave them assistance of jacket/sweater before sending them to matrons' office. Very few, only 2% claim that they have never come across such situation at school. These results were supported by Olayinka, and Akinyinka (2004) that, it is very likely that girls' elsewhere are experiencing similar situation during their first menstruation.

Table 4.6 First menstruation experience

Experience	n	%
Discomfort	34	37.8
Worried	54	60.0
Normal	2	2.2
Total	90	100.0

Source: Field data 2017

4.3.4 Level of perception from fellow students during menstruation

Students were asked to rate their level of perception from fellow students when they menstruate. This information was captured using Likert scale whereby 1= strongly positive 2= positive 3= neutral 4= negative 5= strongly negative. The results from Table 4.7 show that 55% perceived menstruation positively, 15% perceived

menstruation negatively while 12% perceived menstruation very positive and only 16% were neutral. The findings indicate that more than half of respondents perceived menstruation positively.

Table 4.7 Level of perception from other students during menstruation

Perception	n	%
Very positive	11	12.1
Positive	50	55.6
Neutral	15	16.7
Negative	14	15.6
Total	**90**	**100.0**

Source: Field data 2017

4.4 Specific Object II:

This objective examined menstrual hygiene management practices in primary school. It intended to explore different MHM practices by adolescent students in primary school. Students were asked to write **YES** if they were aware of MHM practices listed and to write **NO** if they were not aware. Table 4.9 shows that 89% of respondents were aware of MHM practices while 11% were not aware. The following were various management practices explored: use of sanitary pads, use of local made pads, use of rag cloth, changing rooms, toilets condition and water availability in primary schools. Results from Table 4.6 indicate that 55.6% of respondents were using rag cloth as absorbent material during management of menstruation, 27% of respondents were using local made pads to manage menstruation and 16.7% of respondents were using sanitary pads. The findings show that the majority of students were using rag cloth than any other absorbent materials.

The findings were also supported by FGD members whereby during FGD it was revealed that adolescent students were using rag cloth more often compared to other absorbent materials. Moreover, it was pointed out that the use of rag cloth was due to easy accessibility and low costly. During interviews with the key informants in Chikopelo primary school it was revealed that adolescent girls were using local made pads whereby teachers were helping students on how to make them. Few adolescent students reported to use sanitary pads, in FGD the respondents pointed out that sanitary pads were scarce and cost while other argued that sanitary pads can cause cancer and may make them unable to have a baby. These findings comply with the study by Mlozi*et al*. (2013) who noted that sanitary pads are often influenced by women or girl's environment and access to funds, water supply and affordable options.

Table 4.9 Awareness on MHM practices

Awareness on MHM practices,	**n**	**%**
Yes	80	89
No	10	11
Total	90	100
MHM practices.		
Sanitary pads	15	16.7
Rag cloth	50	55.6
Local made pads	25	27.7
Total	90	100.0

Source: Field data 2017

Plate 4.1: Demonstrations by teachers on how to make local pads from Chikopelo primary school

Source: Field data 2017.

4.4.1 Frequency of changing absorbent material

Figure 4.5 show that 52% of respondents changed their absorbent materials in the interval of 8-10 hours, while 37% of respondents changed their absorbent materials in the interval of 6-8% hours. The findings indicate that students stayed with absorbent materials for a very long time. This was also revealed during the interviews with key informants and FGD that adolescent students were not aware on how long they should stay with absorbent materials. One of the respondents argued that she had to change absorbent material when she got back home. Pilliteri (2012) argues that the recommended time for women/girls to change their absorbent material should be in the interval of four hours.

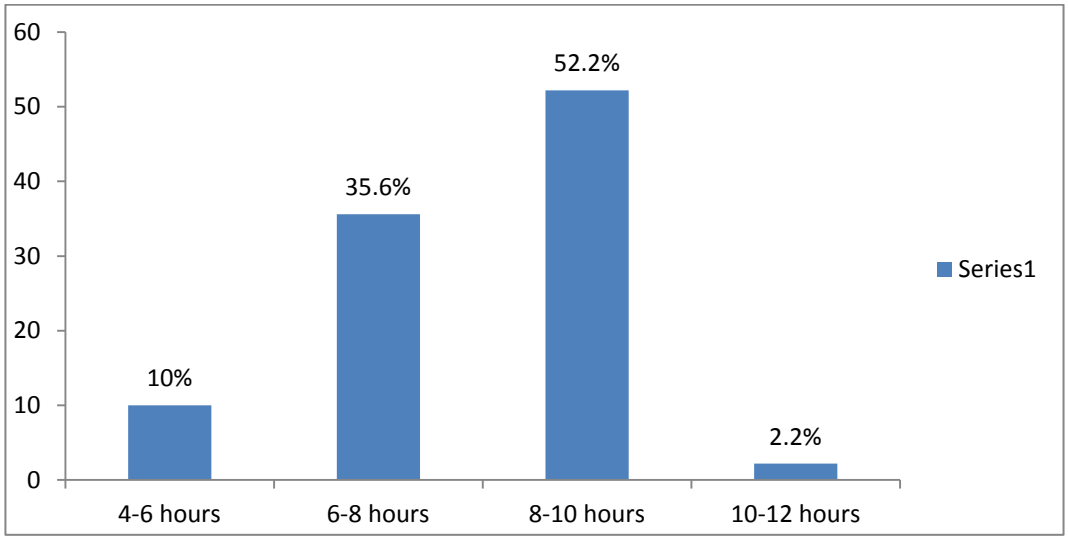

Figure 4.5 Frequency of changing absorbent materials

Source: Field data 2017

4.4.2 Level of support from teachers during menstruation

Students were asked to rate the level of support from their teachers during menstruation. Figure 4.4 show that 44% of respondents testified that teachers were supportive during menstruation while 36% of respondents affirmed that teachers were not supportive. In addition, 11% of respondents declared that teachers were neutral and 9% of respondents confirmed that teachers were very supportive. The findings indicate that more than half of students (44%+9%) acknowledge that their teachers were supportive.

During the interview with one of the key informant, it was revealed that teachers provided both materials support and moral support to students during menstruation. In Chikopelo primary school, teachers provided skills to students on how to make local pads by using piece of cloth, cotton and gauze. Similar supports from teachers were observed in Chali Isanga primary school while in Chali Igongo was noted that

teachers were not providing local pads, but they were providing other support such as pain killer tablets.

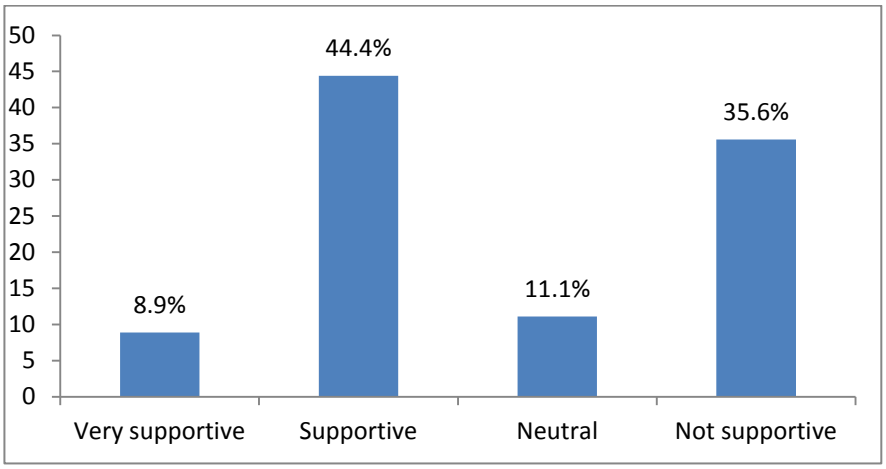

Figure 4.4 Level of support from teachers during menstruation

Source: Field data 2017

4.4.3 School management support during menstruation

Findings from Table 4.10 indicated that 57% from Chikopelo primary school received sanitary pads and 20% pain killer tablets as school management support during menstruation while only 13% declared to have not received any support. Conversely, 60% of students from Chali Isanga and 63% from Chali Igongo reported that they were not receiving any school support during their menstruation. These findings indicate that majority of adolescent girls in Chikopelo primary school received support from school management during menstruation. Furthermore the interview with key informants at Chikopelo primary school revealed that teacher were providing advice to adolescent students on how to manage menstruation. The following were advised adolescent girls to do during their menstruation, you can put a hot water bottle on your stomach area when you are resting, you can try to do some exercise and keep your body active, you can take pain killer medicine every 4 to 6

hours on the most painful days and you can have a hot cup of tea or water The situation was different in Chali Isanga and Chali Igongo primary school whereby the majority of adolescent students did not receive support from school management. During FGD in Chikopelo primary school it was revealed that, the school management was able to provide support to school girls compared to other two schools because of the capacity building provided by the SWASH project that was undertaken in Chikopelo primary School under plan international.

Plate 4.4. The researcher interviewing school teachers on MHM school support.

Table 4.10: School management support

School management support										
Name of school	Provision of Pain killers		Provision of Sanitary pads		Permission to stay at home		No any support		Total	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Chali Isanga	5	17%	3	10%	4	13%	18	60%	30	100%
Chikopelo	6	20%	17	57%	3	10%	4	13%	30	100%
Chali Igongo	5	17%	4	13%	2	7%	19	63%	30	100%

Source: Field data 2017

4.4.4 Availability of MHM facilities at school

4.4.4.1 Toilets/ latrines

Findings from Table 4.11 indicate that 70% of respondents from Chali Isanga and 50% from Chali Igongo were using toilets for changing their absorbents during menstruation. It was observed that, though students were using toilets during their menstruation, infrastructures of the toilets were very poor. The infrastructures had no privacy, the toilets had no doors and the walls were not durable (plate 4.3). Such situation frightened girls to use school toilet during menstruation. It was pointed out during FGD that, some of students were not comfortable to use school toilets during their menstruation due to poor condition. In Chikopelo primary school it was reported that only 30% of students were using toilets as facility for changing their pads during menstruation. During the interviews with key informants it was revealed

that the number of students who were using toilets in Chikopelo was less compared to other schools because in Chikopelo there were changing rooms apart from toilets. In addition, during FGD it was revealed that lack of clean water and soap in the toilets was the most frequently mentioned challenge faced by adolescent students after using the toilets.

Plate 4.3: Improved toilets in Chikopelo primary school

Source: Field data (2017)

Poor toilets observed in Chali Igongo primary school

Sources: Field data (2017)

4.4.4.2 Changing rooms

Through observation it was revealed that, Chikopelo primary school had good toilets and changing room which were supported by SWASH project under Plan international. Table 4.12 show that 100% of respondents from Chikopelo primary school had changing room while other two schools Chali Igongo and Chali Isanga had no changing rooms. The interview with one of the key informant revealed that some of students from Chali Isanga primary school were using teacher's toilets to change their pads because they had no privacy. Mason (2013) supported that it is very important for school to have separate functional rooms for girls, away from boys' latrines with adequate space to change their menstrual cloth or pads, also water and soap for washing.

4.4.4.3 Water sanitation

Findings from Table 4.12 indicate that 27% of respondents from Chikopelo primary school, 23% from Chali Igongo primary and 13% of respondents from Chali Isanga were able to access water during menstruation. Findings show that the situation of water in all primary school was not good.

4.4.4.4 Areas for waste disposal

Results from Table 4.12 indicate that 10% of students from Chali Igongo and Chali Isanga reported that schools had areas for waste disposal while only 3% of students from Chikopelo reported to have area for waste disposal. During FGD respondents revealed that teachers were providing education on how they were supposed to dispose of the cloth/pads/tissue/ cotton after use and the following were mentioned; after using a pad or cotton wrap it in per so it is a clean package and drop it in the latrine pit or put into the dustbin so it can be burned later and after using a cloth put it into a plastic bag until you can wash it with hot water and sop, dry it in the sunshine, and iron it. However, according to the key informants throwing absorbent materials in latrine leads to fill pits that results to eruption of diseases like cholera, indicating that throwing absorbent materials in latrine pits is not a proper way to dispose used absorbent materials.

Table 4.12: MHM facilities at primary school

MHM facilities at primary school										
Name of school	Toilets/ Latrines		Changing rooms		Water sanitation		Area for waste disposal		Total	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Chali Isanga	21	70%	2	6.6%	4	13.4%	3	10%	30	100%
Chikopelo	9	30%	12	40%	8	27%	1	3%	30	100%
Chali Igongo	15	50%	5	16.7%	7	23.3%	3	10%	30	100%

Source: Field data 2017

4.4.4.5 Availability of MHM facilities at home

Figure 4.6 shows 44.4% of respondents had access to pads at home, 25.6% had toilets, 18.9% had access to water and 11.1% had areas to dispose their absorbent materials. During FGD it was revealed that adolescent students had access to pads because they used pieces of clothes, local made pads and sanitary pads. It was noted that respondents were receiving assistance of absorbents materials from their sisters and mothers. Again the challenge of waste disposal area was observed from all respondents, whereby respondents showed that there were no proper places to dispose their absorbent materials after use. From the study area the shortage of clean water was observed during the interview with key informant revealing that people had to walk for a long distant to fetch water for domestic use**.**

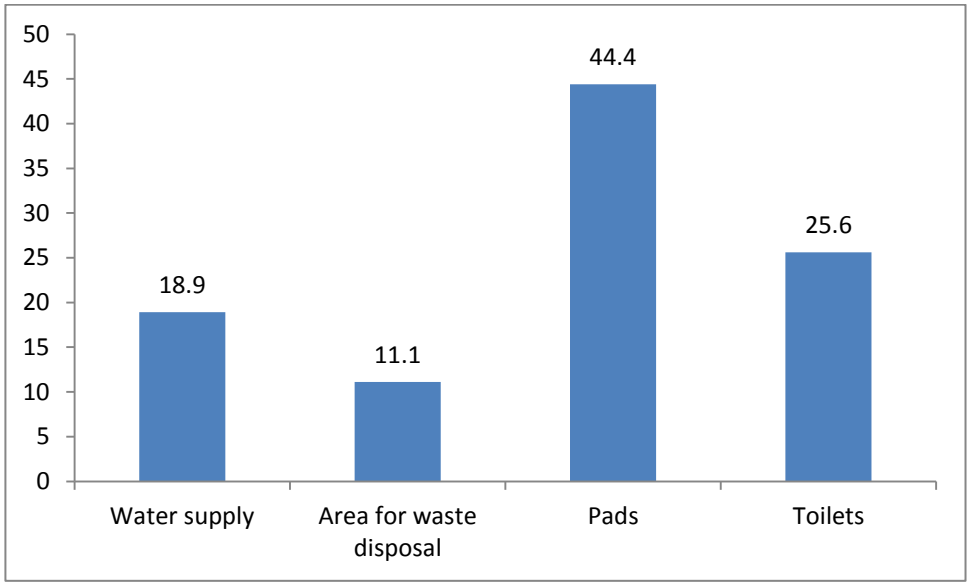

Figure 4.6 Availability of MHM facilities at Home

Source: Field data 2017

4.5. Specific objective III. This objective examined the effect of menstruation to adolescent girls in primary school. It intended to explore different effects faced by adolescent girls in primary school during menstruation. Various aspects explored including effect of menstruation on health, on school attendance and effect of menstruation on school life.

4.5.1 Effects of Menstruation on health to adolescent girls

This part collected information on effects of menstruation on health to adolescent girls in primary school. Respondents were asked to write **Yes** if menstruation have any effect on their health and **No** if there is no any effect. Adolescent girls were also required to indicate type of effect does menstruation has on their health. Findings from Table 4.13 indicate that 87% of the respondents agreed that menstruation have effect on their health and 12% of respondents argued that menstruation had no any effect on their health. Among of the respondents who agreed that menstruation has

effect on their health, 63% of respondents acknowledged that they were experiencing sickness during menstruation whereas 20% of respondents were undergoing emotional disorder and 17% of the respondents were affected psychologically during menstruation. The findings were supported by the key informants who argued that during menstruation adolescent girls demanding to go back home because they feel sick, uncomfortable and shy.

However, during FGD respondents acknowledged that they have been facing different health problems during menstruation, but some of them did not have access to pain killer tablets or any other medicine. The results indicates that majority of adolescent girls in primary school were getting different health effects during menstruation some which could be reduced or treated if MHM practices improved at schools. Similar findings observed by Olayinka (2014) that menstruation causes high incidences of pain, migraines, vomiting, pyrexia, and discomfort for majority of adolescent girls.

Table 4.13: Effect of menstruation on health to adolescent girls

Menstruation effect	**n**	**%**
Yes	79	87
No	11	13
Total	**90**	**100**
Type of menstruation effect		
Psychological effects	15	17
Emotional disorder	18	20
Sickness	57	63
Total	**90**	**100**

Source: Field data 2017

4.5.2 Effect of menstruation on school life of adolescent girls

Under this part respondents were asked whether menstruation had any effect on their school life or not. Table 4.14 presents results which show that 88% of respondents agreed that menstruation affect their school life, whereas 12% of respondents acknowledged that menstruation had no any effect in their school life. Furthermore, the study aimed to identify effects of menstruation to adolescent girl on school life from those who agreed that menstruation affect their school life whereby, 53% of respondents accredited that, they stayed away from other students especially boys during menstruation;about37% of respondents were uncomfortable during menstruation at school and 10% were shy. During FGD some girls suggested that boys must be educated on MHM, on grounds that boys need to know what is happening to girls and support them where necessary. Some girls reported that boys contribute so much to the girls' discomfort due to their teasing behavior. One of the respondents had to say that, during menstruation she stays away from boys because she feels like boys might recognize her, observe blood on her skirt and laugh at her. Findings indicate that menstruation affect school life of adolescent girls in primary school. however, increasing awareness on menstruation & MHM practices to both boys and girls may minimize the situation.

Table 4.14: Effects of Menstruation on school life to adolescent girls

Effect of Menstruation on school life	**n**	**%**
Yes	80	88
No	10	12
Total	90	100
Type of effect on school life		
Stay away from others especially boys	48	53
Feel shy at school	9	10
Discomfort	33	37
Total	90	100

Source: Field data 2017

4.5.3 Student`s behavior at school during menstruation

Here the study aimed at knowing how students were behaving during menstruation at school. Table 4.8 shows that 51.1% of respondents stayed away from other students especially boys during menstruation at school, 17.8% of respondents were not attending classes during menstruation, whereas 17.8% of respondents were just normal during menstruation while 13% felt shy. Findings indicate that majority of adolescent girls stayed away from others especially boys during menstruation at school. During FGD it was revealed that some of respondents asked permission to go home when they start menstruation. These finding are supported by Donimirski (2013) who argues that, young girls experiences confusions, stress exclusion and fear during menstruation.

Table 4.8 Behavior of students at school during menstruation

Behavior at school during menstruation	(n)	(%)
Stayed away from other especially boys	46	51.1
Did not attend classes	16	17.8
Behave normal	16	17.8
felt shy	12	13.3
Total	90	100.0

Source: Field data 2017

4.5.4 Effect of menstruation on School attendance to adolescent girls

The respondents were asked to write **Yes** if they were missing school during menstruation and to write **No** if they were not missing school during menstruation. The results from figure 4.7indicate that 73% of respondents were missing school during menstruation while 27% of respondents were not missing**.** The findings indicate that most of adolescent girls in primary school missed school during menstruation the problem that has been exaggerated by inadequate MHM infrastructure. These finding comply with the study by UNICEF (2005) estimated 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.

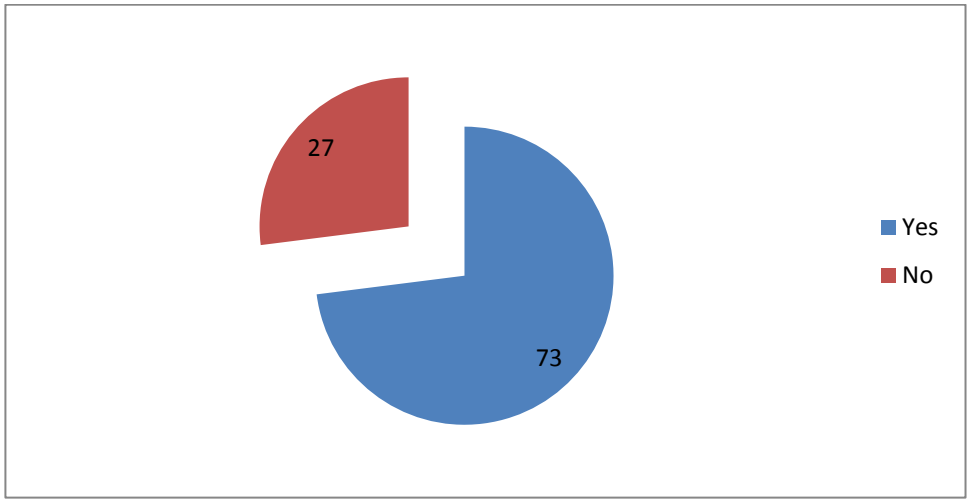

Figure 4.7: Effect of Menstruation on school attendance to adolescent girls

Source: Field data 2017

4.5.4.1 Number of day's adolescent girls missed school during menstruation

Respondents were asked to indicate the number of days they missed school during menstruation. The results from figure 4.8indicate that 40% of respondents missed school for 3-4 days during menstruation whereas 36% missed school for 1-2 days and22% did not miss school during menstruation. Findings indicate that more than half (40%+36%+2%) of respondents missed school during menstruation. Among the reasons highlighted by the FGD members for being absent from school during menstruation were; lack of privacy, unavailability of soap in toilets, water, doors on toilet rooms and bins for disposal of used absorbent pads. Some girls even wondered why government is not addressing these problems that are primarily very fundamental.

The findings were also supported by the key informants who reported that respondents were missing school during menstruation due to poor MHM practices in their schools i.e. poor toilets, no changing rooms, no water supply and lack of

absorbent materials. Respondents argued that they stayed at home to manage their menstruation because when they were at home they had access to some of important MHM facilities such as water, absorbent materials and place to rest.

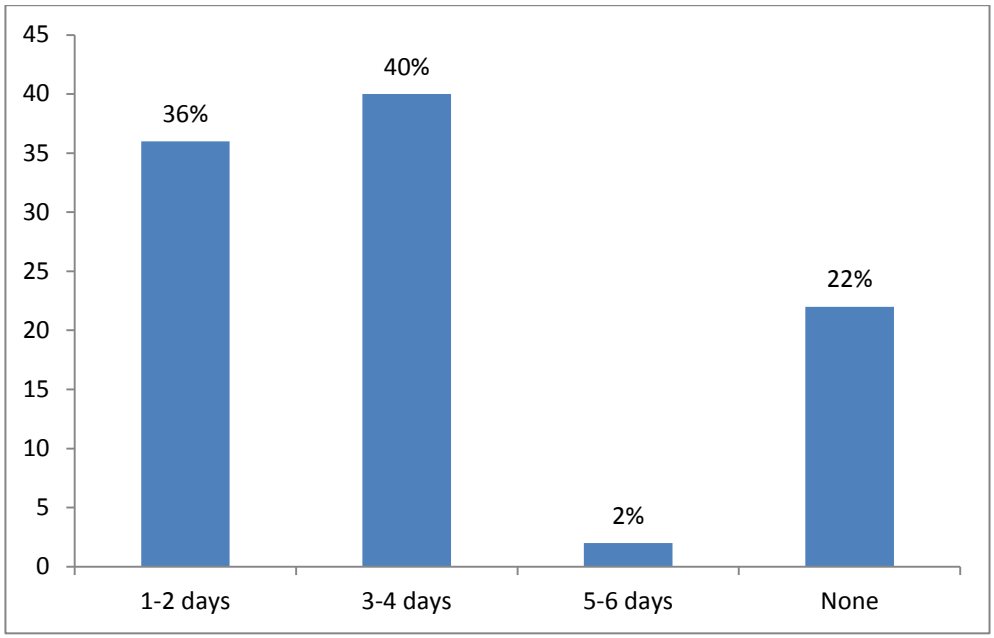

Figure 4.8: Number of days adolescent girls missed school during menstruation

Source: Field data 2017

4.6 Policy, laws and regulations on MHM

The 1992 education policy does not refer water sanitation and hygiene in primary school. The 2012 draft new version has only a weak reverence to it, basically stating that the national government will encourage village and school committees to take appropriate action. However, a national strategic plan has been drafted and a national school WASH progrmme with clear action plan and budget is being prepared. Therefore it is very clear that there is no direct policy that guides MHM practices in primary schools. The current state of affairs in Tanzania reveals that in most cases girls at primary level have not reached their full potentials in provision of

quality education due to inadequate sanitation facilities at schools, despite the acclaimed achievements drawn from implementing the primary education development program (PEDP).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents summary, conclusion and recommendations revealed from the findings obtained in this study.

5.1 Summary of the Study

The aim of this study was to assess the role of menstrual hygiene management practices to adolescent girls in Bahi District. Specifically the study aimed at assessing awareness of menstruation to adolescent girls, determined menstrual hygiene management practices in selected primary school and examined effects of menstruation to adolescent girls in selected primary schools. Basing on the study, the awareness of menstruation was identified by respondents whereby the source of menstruation was from female parents, sisters and other fellow students. Respondents proposed other ways of rising menstruation information at school; some of proposed sources included through teachers, distribution of specific books on adolescent girls and menstruation. The study determined menstrual hygiene management practices in primary school whereby the following practices were identified; use of sanitary pads, use of local made pads and use of rag cloth. The study revealed that in selected primary school there were poor menstrual hygiene infrastructures such as poor toilets, no changing room (privacy), and unavailability of sanitary water. Furthermore, the study examined the effects of menstruation to adolescent girls basin on MHM practiced. Respondents identified effects of menstruation on their school life and effect on their health. Effect on school life included psychological effect, emotional disorder, feeling shy at school, uncomfortable and absenteeism.

In the case of health effects majority of respondents reported to be sick during menstruation.

5.2 Conclusion by Objectives

Objective I: Assessed menstruation awareness to adolescent girls and it was found that majority of respondents were aware about menstruation before menarche and the main source of menstruation information was from female parents, sisters and other fellow students. The findings have implied that there was no formal information on the management of menstruation despite the level of awareness on menstruation before menarche. The information obtained from female parents and fellow students was based on informal information and believe on menstruation, there were no specific school curriculums that provide proper information on menstruation.

Objective II: Determined menstrual hygiene management practices in primary school. The study under this objective discovered that there was a problem in MHM practices in the selected primary schools whereby majority of adolescents girls faced challenges on MHM practices. Some challenges mentioned included, inadequate and unaffordable sanitary material. Majority of the respondents were using rag cloth as absorbent material during menstruation while few were using sanitary pads. Other challenges mentioned were lack of safe and clean water, areas for waste disposal, changing rooms and poor toilets infrastructures.

Objective III: Examined the effects of menstruation to adolescent girls in primary school basing on MHM practiced. The study under this objective discovered that menstruation affect both school life and health of adolescent girls. The majority of

respondents did not attend school during menstruation others were shy and uncomfortable during menstruation. Health effects of menstruation included sickness to majority of respondents and psychological effects. The respondents who did not encounter challenges associated with menstruation were very few.

5.3 Theoretical implication of the study

This study was guided by the Social learning theory which is a tool to determine person behavior in prior learning. The model corresponds with findings of this study, as it has revealed that prior information on menstruation starts from family level, adolescent girls receive prior information from female parents and sisters also MHM practices like use of sanitary pads, rag cloth has being determined by the information received and observation from female family members.

5.4 Recommendations for Actions

Objective I

In correspondence to the findings and conclusions the following were recommended; School management should find a mechanism to increase menstruation awareness to adolescents' girls before menarche, especially from low classes as it was observed that adolescent girls from grade seven were more aware on menstruation as compared to other lower grades. Government and other development agencies should make sure that adolescent girls are getting formal knowledge on MHM through debates, health clubs at school, seminars and through other ways. The education sector should make sure that menstruation topics are mainstreamed into syllabus in order to increase awareness on MHM to adolescent girls.

Objective II

The following were recommended so as to Improve Menstrual hygiene management practices in primary school.

To solve the issue of poor MHM facilities such as toilets and changing rooms, school management and other development practitioners should facilitate construction of good MHM fatalities at school. There should be provision of absorbent materials for adolescent girls during menstruation in order to reduce the use of rag cloth, school management should report to central government in order to find a better way of providing sanitary pads with low cost to adolescent girls.

Objective III

To reduce the effect of menstruation to adolescent girls in primary school management should cooperate with ministry of education in order to have enough pain killer tablets for adolescent girls to reduce pain during menstruation. There should be improvement on MHM facilities in order to reduce health effect due to menstruation. School management in cooperation with the government should ensure that there are proper places to dispose absorbent material after use.

5.5 Limitation of the study.

Data collection was conducted in September, 2017 when class seven students were busy with preparation of their National examination. This situation limited the researcher to obtain information in a short time. To offset this researcher had to visit students when they are not busy as instructed by the head of schools repeatedly in the morning and afternoon hours.

Also language barrier during data collection was another limitation during this study, whereby the questionnaires were translated into Kiswahili but some of students mixed Swahili and Gogo language when answering questions this required a researcher to have an interpreter students from Kiswahili to Kigogo and vice versa, who was used to offset this limitation.

5.5 Areas for Further Research

Although the findings suggest that there are some indications that MHM practices affect adolescent girls in primary school, more research work is required to analyze and quantify the extent of such effects in academic performance of school girls. This would shed light on how adolescent girls could increase better management practices on MHM in order to increase their academic performance.

Since this research focused only on role of MHM practices to adolescent girls in Bahi district, there is a need to conduct similar studies in various parts of Tanzania and in other developing countries. Such studies would provide the basis for comparisons and offer grounds for establishing the generality of the findings in the context of a particular country or region.

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Appendix 1: Questionnaires survey for students

This study is based at the University of Dodoma. Its major objective is to assess the role of menstrual hygiene management to adolescent girls in primary school case of Bahi District Council. Therefore; you are kindly requested to participate in this study by filling in this short questionnaire. In case the final account of this work may contain confidential information and its report could be harmful to school or individual, confidentiality is assured by the University. Such report will be seen only by the Supervisor and Examiner for examination purposes.

Name ……Age……

Village…… School……Grade……..

A: Demographic characteristics

A1. How many members are in your family?

(i) 2 (ii) 3 (iii) 4 (iv) 5 (v) [other specify] { }

A2. How many girls are in your family?

(i) 2. (ii) 3 (iii) 4 (iv) 5 (v) other specify { }

A3. How many boys are in your family?

(i) 1 (ii) 2 (iii) 3 (iv) 4 (v) other specify { }

A4. Is your family polygamy or monogamy?

(i) Polygamy (ii) monogamy { }

A5. Who is taking care of your family?

(i) Father (ii) mother (iii)brother (iv) sister (v)other specify { }

A6. What is your parent's or guiders level of education?

(i) Informal education (ii) primary education

(iii) Secondary education (iv) college/university (v) other specify { }

A7. What is your parents or guiders occupation?

(i) Peasant (ii) government employed (iii) none government employed

(iv) Jobless (v)other specify { }

B: Awareness of school girls on MHM

B1 Did you have menstrual idea before your first menstruation?

(i) Yes (ii) No { }

B2. If yes in B1 who provided you with the menstrual education?

(i) Parents (ii) teachers (iii) fellow students (iv) other specify……{ }

B3. How was your first menstruation experience?

(i) Discomfort (ii) worried (iii) nervous (iv) panicky (v) normal (vi) other specify…….

B4. Do you have any idea about MHM?

(i) Yes (ii) No { }

B5. If yes in B4 who provides you with education on MHM?

(i) Teachers (ii) parents/guiders (iii) sisters
(iv) Other students (v) other specify…….. { }

B6. How do you rate level of perceptions from your fellow students (boys/girls) when you menstruate at school? Kindly respond by ticking in the box that best describe your feelings.

Very positive	Positive	Neutral	Negative	Very Negative

B7. How do you rate the level of support from teachers during your menstruation at school? Please respond by ticking √ in the box that best describes your feelings.

Very supportive	Supportive	Neither supportive nor desertion	Not supportive	Very not supportive

B8. How do you behave during your menstruation when you are at school?

(i) Stay away from other especially boys (ii) not attending classes (iii) behave normal (iv) feel shy (v) other specify { }

B9. How do you behave during your menstruation when you are at home?

(i) Sleeping (ii) behave normal (iii) not doing any activities

(iv) Feel shy (v) other specify { }

B10. How does your family perceive menstruation?

(i) They perceive as a taboo (ii) they perceive as normal thing { }

(iii) They perceive as a disease (iv) other specify

C: MHM practices

C1. Are you aware of any MHM practices?

(i) Yes (ii) No { }

C2. If yes in C1 Mention MHM practices that you are practicing

……

C3. How long do you stay with pad?

(i) 4-6 hours (ii) 6-8 hours (iii) 8-10 hours (iv) 10-12 hours { }

C4. Does your school management has any support on MHM practices during your menstruation?

(i) Yes (ii) No { }

C4. If yes in C3 what kind of support does school management have on MHM practices during your menstruation?

……

C5. Does your family have any support on MHM practices during your menstruation?

(i) Yes (ii) No { }

C6. If yes in C5 what kind of support does your family have on MHM practices during your menstruation?

……

C7. Does MHM facilities available at your school?

(i) Yes (ii) No { }

If yes in C7 tick appropriate box if MHM facilities are available at your school.

MHM facilities at school	Yes	No
Good toilets/ latrines		
Good changing rooms		
Water supply		
Good area for waste disposal		
Pads		
Other specified ……..		

C8. Is there MHM facilities at your home?

(i) Yes (ii) No { }

If yes in C8 tick appropriate box if MHM facilitates are available at your home?

MHM facilities at home	Yes	No
Water supply		
Area for waste disposal		
Pads		
Good toilets		
Other specify……..		

D: Effects of MHM on School girls

D1. Does Menstruation have any effect on your school life?

(i)Yes (ii) No { }

D2. If yes in D1 how does menstruation affect your school life?

(i) Absenteeism (ii) feel shy at school (iii) uncomfortable
(iv) Illness (v) other specify. { }

D3. Have you not attend school because of menstruation?

(i) Yes (ii) No { }

If yes in D3 how long did you miss school because of menstruation?

(i) two days per month (ii) three days per month (iii) four days per month (iv) five days per month (v) other specify…… { }

D4. Is there any compensation of the days you did not attend because of menstruation?

(i) Yes (ii) No { }

D5. Does menstruation have any effect on your health?

(i) Yes (ii) No { }

If yes in D5 what are the effects does menstruation have on your health

(i) Psychological effects (ii) emotional disorder (iii) sickness (iv) other specify……..{ }

D6. In your opinion, what measures need to be taken in order to encounter the effects of MHM?.....

Appendix 2: Interview guide for school management

This study is based at the University of Dodoma. Its major objective is to assess the role of menstrual hygiene management to adolescent girls in primary school case of Bahi District Council. Therefore; you are kindly requested to participate in this study by filling in this short questionnaire. In case the final account of this work may contain confidential information and its report could be harmful to school or individual, confidentiality is assured by the University. Such report will be seen only by the Supervisor and Examiner for examination purposes

Designation…….. Age of respondent……

Sex of respondent……..Name of school……..

1. What are MHM facilities available in this school?
2. How are these MHM practices implemented in this school?
3. How does school management support school girl/s during menstruation?
4. What are the effects that Menstruation has on school girls?
5. How would you rate satisfaction of some stakeholders (i.e. parents) on MHM in your school? Please respond by ticking √ in the box that best describes your feelings.

Highly satisfied	Satisfied	Indifferent	Not satisfied	Highly not satisfied

6. Are there any laws and regulation which support adolescent girls during menstruation at school?

7. is there any government policy addressing MHM to adolescent girl at school?

8. If yes what policy addressing MHM to adolescent girls at school?

9. How does the policy addressing MHM to adolescent girls at school?

10. is there any dropout cases of adolescent girls because of menstruation?

11. In your opinion, what measures need to be taken in order to encounter the effects of MHM? .....

Appendix 3: Interview guide for school committee

This study is based at the University of Dodoma. Its major objective is to assess the role of menstrual hygiene management to adolescent girls in primary school case of Bahi District Council. Therefore; you are kindly requested to participate in this study by filling in this short questionnaire. In case the final account of this work may contain confidential information and its report could be harmful to school or individual, confidentiality is assured by the University. Such report will be seen only by the Supervisor and Examiner for examination purposes

Designation ……..Age of respondent……

Sex of Respondents……. Name of the school……..

1. How does school committee support school girls during menstruation?
2. What are the plans for school committee to ensure good MHM facilities in primary school?
3. How does school committee involve other stakeholders for implementation of good MHM practices?
4. How do you rate teachers support to girls' student on MHM at school? Please respond by ticking √ in the box that best describes your feelings.

Excellent support	Good support	Neutral	Poor support	very poor support

5. In your opinion, what measures need to be taken in order to encounter the effects of MHM?.....……..

Appendix 4: Interview guide for key informants

This study is based at the University of Dodoma. Its major objective is to assess the role of menstrual hygiene management to adolescent girls in primary school case of Bahi District Council. Therefore; you are kindly requested to participate in this study by filling in this short questionnaire. In case the final account of this work may contain confidential information and its report could be harmful to school or individual, confidentiality is assured by the University. Such report will be seen only by the Supervisor and Examiner for examination purposes.

Personal particulars.

Name……..…….Age……. Sex…….. Occupation……..

1. What are MHM practices?
2. Please can you mention MHM practices that you know
3. How does school girl perceive Menstruation?
4. How does MHM practice is performed in primary school in this village?
5. How does school management help students during menstruation?
6. What are the effects of MHM for school girl in primary school?
7. Are the environments of primary school in this village conducive for MHM practices?

Appendix 5: Observation check list

This study is based at the University of Dodoma. Its major objective is to assess the role of menstrual hygiene management to adolescent girls in primary school case of Bahi District Council. Therefore; you are kindly requested to participate in this study by filling in this short questionnaire. In case the final account of this work may contain confidential information and its report could be harmful to school or individual, confidentiality is assured by the University. Such report will be seen only by the Supervisor and Examiner for examination purposes

Name of school……..

Things to observe:

1. School environment
2. School infrastructures include;

- Toilets,
- Water supply infrastructures,
- Changing rooms,
- Class rooms
- Desks or chairs

Appendix 6: Group discussion guide

This study is based at the University of Dodoma. Its major objective is to assess the role of menstrual hygiene management to adolescent girls in primary school case of Bahi District Council. Therefore; you are kindly requested to participate in this study by filling in this short questionnaire. In case the final account of this work may contain confidential information and its report could be harmful to school or individual, confidentiality is assured by the University. Such report will be seen only by the Supervisor and Examiner for examination purposes

Name of school……..

1. What are the MHM practices in this school?
2. How does a school girl/s perceive menstruation?
3. How does school management support girl/s during menstruation?
4. Who provide education about menstruation?
5. How does girl/s feel during menstruation?
6. What are the effects of menstruation on school girl/s?
7. In your opinion, what measures need to be taken in order to encounter the effects of MHM?

……