

WASH

Has it addressed Menstrual Health and Management related challenges faced by women?

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2019

CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a thesis titled: *Evaluation of SWASH: Has it addressed Menstrual Health and Management challenges facing school girls in Muheza District?*, in partial fulfillment of the requirements for award of the degree of Master of Science in Health Monitoring and Evaluation.

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DEAN/CHAIRPERSON

DECLARATION AND COPYRIGHT

I, **Syabo Mwantimwa**, declare that this thesis is my own original work and that it has not been presented and will not be presented to any other university for a similar or any other degree award.

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DEDICATION

I dedicate this work to GOD, my beloved mother Greena Buponde, my father Allymon M. Mwaisengela and my lovely daughter Greena Syabo Mwaisengela for their immense love, tolerance, prayers and financial support. With their help this work is successful.

LIST OF ABBREVIATION

ANOVA	Analysis of Variances
AOR	Adjusted Odds Ratio
DSEO	District Secondary Education Officer
DWE	District Water Engineer
FGD	Focus Group Discussion
IDI	In-depth Interview
MHHM	Menstrual Health and Hygiene Management
NSMIS	National Sanitation Management Information System
ODK	Open data Kit
QGIS	Quantum Geographical Information System
SLO	Statistics and Logistics Officer
SS	Secondary school
SWASH	School Water Sanitation and Hygiene
WINS	Wash in Schools
WSDP	Water Sector Development Program

DEFINITION OF TERMS

Sanitation is conditions relating to public health, especially the provision of clean drinking water and adequate sewage disposal (Oxford Dictionary).

Hygiene is conditions and practices that help to maintain health and prevent the spread of diseases. Medical hygiene therefore includes a specific set of practices associated with this preservation of health, for example environmental cleaning, sterilization of equipment, hand hygiene, water and sanitation and safe disposal of medical waste (WHO, 2010).

Secondary schools: A day/boarding or government/private secondary school

Latrine is a toilet, especially a communal one in a camp or barracks (Oxford Dictionary).

Sanitation Facilities these are the facilities which used to stop transmission of diseases by removing the fecal matter from the environment, that prevents the pathogens from entering waterways. These facilities are flush toilet, piped sewer system, septic tank, flush/ pour to pit latrine, ventilated improved pit latrine, pit latrine with slab and composting toilet.

MHHM: This refers to menstrual health and hygiene management, for the purpose of this study, students were assessed in terms of their knowledge on menstrual health and menstrual management as separate but related issues.

School category: Refers to categorization of studied schools as researchers' construct. Government urban are the ones located at Muheza town, Government rural are the ones located at three rural divisions of Muheza i.e Amani, Ngomeni and Bwembwera.

ABSTRACT

Introduction: Many countries especially in Africa and Asia lack menstrual hygienic facilities in public places especially in schools where it is needed the most. At least 500 million females, both women and young girls, do not have access to adequate facilities as part of managing menstrual hygiene (World Bank, 2018). This goes in hand to low level of MHHM understanding among both girls and boys. Hence this evaluation study aimed at ascertaining MHHM awareness among girls, schools' adherence to SWASH MHHM guidelines, school boys peer support, availability of funds for implementation, implementers commitment and responsiveness to challenges and socio demographic and geographic factors affecting MHHM knowledge among school girls.

Methodology: The study was a concurrent mixed method with analytical cross-sectional study design where a formative evaluation approach was employed to ascertain contribution of SWASH project in addressing MHHM related challenges facing school girls in Muheza district. 8 private and government secondary schools were purposely selected where 503 respondents were involved out of which, 458 girls were used as quantitative sample while 42 girls students were selected for in depth interviews out of quantitative sample, 5 FGD's each comprised 8 girls' students, 3 FGD's for boys each comprised 8 students, 16 teachers and 5 District Managers were used in this study as a part of qualitative sample. Data were quantitatively analyzed with the help of Stata 13, Python and QGIS for geospatial analyses. Qualitative analysis involved content analysis technique with the help of Atlas ti.

Results: it was found that none of 8 schools has met 100% MHHM requirements as envisaged, mean students ratio per pit hole were observed to be 52 with the worst situation in government schools (>100 for some schools). Operations and maintenance was another challenge where non availability of soaps, emergency pads, water and dilapidated infrastructure were prevalent in government schools. Age were observed to have a weak positive relationship to students' performance ($r=0.35$) while menstrual experience years moderate ($r=0.52$). "Form II", "Form III" and "Form IV" are 1.04, 1.36 and 1.39 respectively times likely to have desirable awareness level ($\geq 50\%$) compared to "Form I" ($p>0.05$). primary and secondary level educated mothers are 10% and 6% less likely to have desirable MHHM understanding compared to university educated mothers ($p=0.732$ and 0.33 respectively) whereas Mothers who have not gone to school are 80% less likely to have a good understanding level than University/College mothers ($p=0.033$).

Conclusion: Unreliable funds, lack of awareness on SWASH project, poor sectorial coordination and non-consideration of MHHM issues as vital are major challenges impinging smooth implementation of SWASH project. Considerable measures are to

be taken by government and project designers in areas of scale up, implementation and progress monitoring so as to ensure achievement of envisioned outcomes.

Keywords:SWASH, Muheza, Schools, Menstrual hygiene, Awareness, Pit hole, Infrastructure

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CHAPTER ONE

INTRODUCTION

1.1 Background

According to a report by The World Bank, “at least 500 million” females, both women and young girls, do not have access to adequate facilities as part of managing menstrual hygiene.¹

More than that, many countries especially in Africa and Asia lack such menstrual hygienic facilities in public places where it is needed the most. These include schools, places of work, and public health facilities, the facilities entail sanitary pads, water to wash hands, clean toilets with locking doors, and disposal areas for sanitary pads, as a result, a lot of women and girls are left to have no “dignifying” ways to maintain their menstrual hygienic routine (WorldBank, 2018)

Hence; Due to the lack of menstrual management facilities and poor knowledge on menstruation and menstrual management, many girls choose to drop out or miss school due to their “inability to manage their menstrual hygiene in schools,” the same World Bank report added (Ibid, 2018)

In fact, a separate report from UNESCO revealed that 10 percent of girls in Sub-Saharan Africa miss school during their menstrual days. Since menstruation occurs every month (assuming that a girl has a regular menstrual cycle), just imagine how many classes these girls miss in an entire school year (Janelle, 2018)

An estimated 1.9 billion school days could be gained if the Millennium Development Goals (MDGs) related to safe water supply and sanitation are achieved and the incidence of diarrheal illness is reduced. One way of achieving this is by providing schools with safe drinking water, improved sanitation facilities and hygiene education that encourages the development of healthy behaviors for life.

¹<https://www.worldbank.org/en/news/feature/2018/05/25/menstrual-hygiene-management>

This strategic approach is known as Water, Sanitation and Hygiene Education (WASH) in Schools (Hilton & Haller, 2004)

Furthermore, lack of separate and adequate sanitation and washing facilities for adolescent girls discourages them from attending school due to failure of meeting hygiene needs during menstruation, which in turn affects their school performance and increase their risk of dropping out. At this particular moment, they need changing room, adequate water and facilities for disposal of sanitary pads²

Hence, WASH in Schools not only promotes hygiene and increases access to quality education but also supports national and local interventions to establish equitable, sustainable access to safe water and basic sanitation services in schools.

While the impact of poor sanitation and hygiene is known to be disastrous for small children, it also has an important impact on the health of school-age children including adolescents' girls who undergo menstruation period. For this case, It is obvious that lack of sanitation and hygiene is a public disaster that deserves the highest priority (Burgers, n.d).

1.2 Statement of the problem

Menstrual hygiene is fundamental to the dignity and wellbeing of women and girls and an important part of basic hygiene, sanitation and reproductive health services for which every woman and girl has a right. According to (WSSCC, 2012), every day, 300 million women including school girls experience menstrual flow.

Shortage of water and poor infrastructure in school latrines is a highly contributing factor of school girls dropping out of school due to the hardships they face during their menstrual periods (Tinograph, 2009).

In Tanzania, more children than ever before are attending school. This is the result of increased parents' awareness on importance of education especially to girls and a number of successful policy initiatives including abolition of school fees in 2002 in Primary schools, subsidization of day secondary school fees in 2004 and free education program in 2016. As spoken by MS Samia Suluhu Hassan (A Vice

²MoEVT. (2012). *National Strategic Plan for Schol Water Sanitation and Hygiene 2012 -2017*. *pg1*.

president of URT) during TGNP festival, one of positive outcomes of 2016's free education program is increased enrollment of girls in secondary schools (from 873,799 to 901,059 in 2012 and 2016 respectively). The same case is observed in Muheza District where there is observed increase in girls enrollment from 4549 to 4686 in 2013 to 2017 respectively).

This increase has mounted a huge demand for facilities particularly classrooms, chairs, laboratories, latrine and water supply, but unfortunately, water and latrine facilities did not receive equal attention like others³

Apart from adequate infrastructural facilities, awareness creation on menstrual health and menstrual management is essential towards eliminating poor beliefs and myths as well as enhancing proper self-handling of school girls during menses (National Strategic Plan for SWASH, 2012 – 2017).

A baseline survey report on menstrual hygiene management conducted in Tanzania at the districts of Serengema, Chato, Magu, Njombe, Iringa, Karatu and Babati reveals that 82% of adolescence girls lack sufficient knowledge about their body changes and especially on how they can handle and manage themselves during menstruation.

According to (Pillitteri, 2012) it is obvious that this awareness should not only be on girls attention but also be focused to school boys since Physical and verbal bullying was one of the main grievances of girls interviewed in Malawi.

With all these challenges, among others, this evaluation aimed at exploring schools adherence to SWASH guideline, school boys support to ascertain existence of bullying to girls, MHHM awareness and understanding among girls students as well as effect of socio demographic and geographic factors towards MHHM knowledge among girls students in Muheza District.

³MoEVT. (2012). National Strategic Plan for School Water, Sanitation and Hygiene (SWASH) 2012 - 2017. *page No. 1.*

1.3 Description of SWASH program

Since 2002 up to 2009 the Government of Tanzania has been implementing Primary and Secondary Education Development Program, the main aim being to ensure there was further education accessibility as well as improved quality of education to all school children. The MoEVT has been trying to improve accessibility to education to all people but improving quality remained a very big challenge (National SWASH guideline, 2012).

1.3.1 Rationale for establishing school WASH program

Different studies showed that poor performance in schools was associated with poor sanitation facilities that results to pupils falling sick or dropping schools. According to Tinograh (2009), shortage of water in school latrines was a highly contributing factor of school girls dropping out of school due to the hardships they face during their menstrual periods. Likewise the severity of sanitation could also be reflected in that 60 to 80% of all cases in hospitals are related to poor sanitation and hygiene and inadequate water supply.

More importantly, 90% of children in Tanzanian districts use toilets but they don't have access to washing their hands as a result they get back to class with dirty hands which exposed them to poor hygiene related diseases that affects the quality of their education (Waddington, 2009). This was then among the many reasons that brought together the MoEVT, MoHSW, and other government Ministries as well as other development partners to join efforts and direct their attention on improving the quality of school WASH in Tanzania through the school WASH project.

1.3.2 Overall goal of school wash program

The overall goal for the SWASH program was to promote good environmental health, safety, and well-being of school communities through the provision of adequate and accessible safe water, sanitation and hygiene services in schools (SWASH strategic guideline, 2013).

1.3.3 Specific objectives of the wash program

- i. To rehabilitate the school latrines and ensure they are in line with the national standards
- ii. To increase access to sanitary facilities from less than 10% to 50% to schools by 2017
- iii. To appoint coordination team of School WASH interventions at all levels by 2017 facilities
- iv. To improve multi-sectoral and multi-level approach to implement WASH activities at all levels.
- v. To provide conducive, accessible and inclusive environment for school children with special needs
- vi. To improve hygiene practices among school children, their families and communities
- vii. To improve water, sanitation and hygiene facilities.

The school WASH project is carried out in all regions in Tanzania under NSC with an intent of achieving the same above stated objectives. This evaluation study focused at:-

- i. Evaluating implementation of rehabilitation of school latrines with respect to national standards, Accessibility to sanitary facilities
- ii. The state of awareness on hygiene practices
- iii. Implementers' commitment and responsiveness towards implementation of school WASH program and perceptions of school boys towards school girls menstruation since teasing from school boys has been among the challenges that school girls face in schools.

1.3.4 Education on Menstrual Hygiene Management

As elaborated in the National Guideline for School Water Sanitation and Hygiene for Tanzanian schools (2016), the management of menstruation hygiene by adolescent girls is also an essential component of sanitation and hygiene education. Although education on menstruation is delivered in the normal science lessons, details of how to manage menstruation are not part of the curriculum. The health teacher or the

school matron should provide this education on how to manage menstruation to the girls in menstruating age outside the normal classroom setting. If possible, the school can invite a nurse from the nearby health facility to facilitate the discussion. This is because for adolescent girls to practice successful Menstrual Hygiene Management (MHM) in school, they need to feel supported by teachers, families and peers, and to have school environments that are conducive to MHM. The education on menstruation hygiene management should aim at enabling adolescent girls to:

- Understand the menstruation cycle, know the age ranges when adolescence begins and have a good understanding of emotional and natural body changes that result from adolescence.
- Know how to take care of themselves during menstruation period. For example, they should know the different types of sanitary materials (cloths and pads) which help them to feel safe and free during their menstrual days.
- Establish a coordination process on how to maintain both body and environmental hygiene during their menstruation days at school. For example, girls should know how to dispose sanitary materials after use/how to clean and dry them.

Hygiene education on Menstruation Hygiene Management (MHM) should consider the following essential components for supporting girls:

- Teacher sensitization, awareness and understanding of girls' monthly discomfort and/or need to use latrines more frequently than usual. Teachers should be discreet in their support as girls may only mention they feel unwell, without specifying that menstruation is the issue (due to local taboos or girl's shyness). This includes girls' possible hesitation to stand and respond to questions during class time.
- Female matrons, teachers or school administration should privately assure that all school girls have adequate monthly sanitary materials, and are not missing school or class due to insufficient supplies of sanitary pads or cloths. Girls may also need underpants and/or under shorts for comfort about preventing menstrual leaks during school hours.

- Making the school built environment appropriate for MHM, including adequate latrines with dustbins inside and locks on the door, nearby burning facilities, water for hand washing inside of latrines, and a private space for washing of menstrual stains and/or washing, drying and ironing used menstrual cloths (in a boarding school setting).
- Teaching and sensitizing boys about girls' need for privacy, respect and support during their monthly menstruation, to minimize teasing and mocking that may occur.
- As appropriate, the referral of girls to a school nurse or matron for emergency sanitary material, for pain relievers, and a space for resting when menstrual-related discomfort is significant.

1.3.5 Programme activities and resources

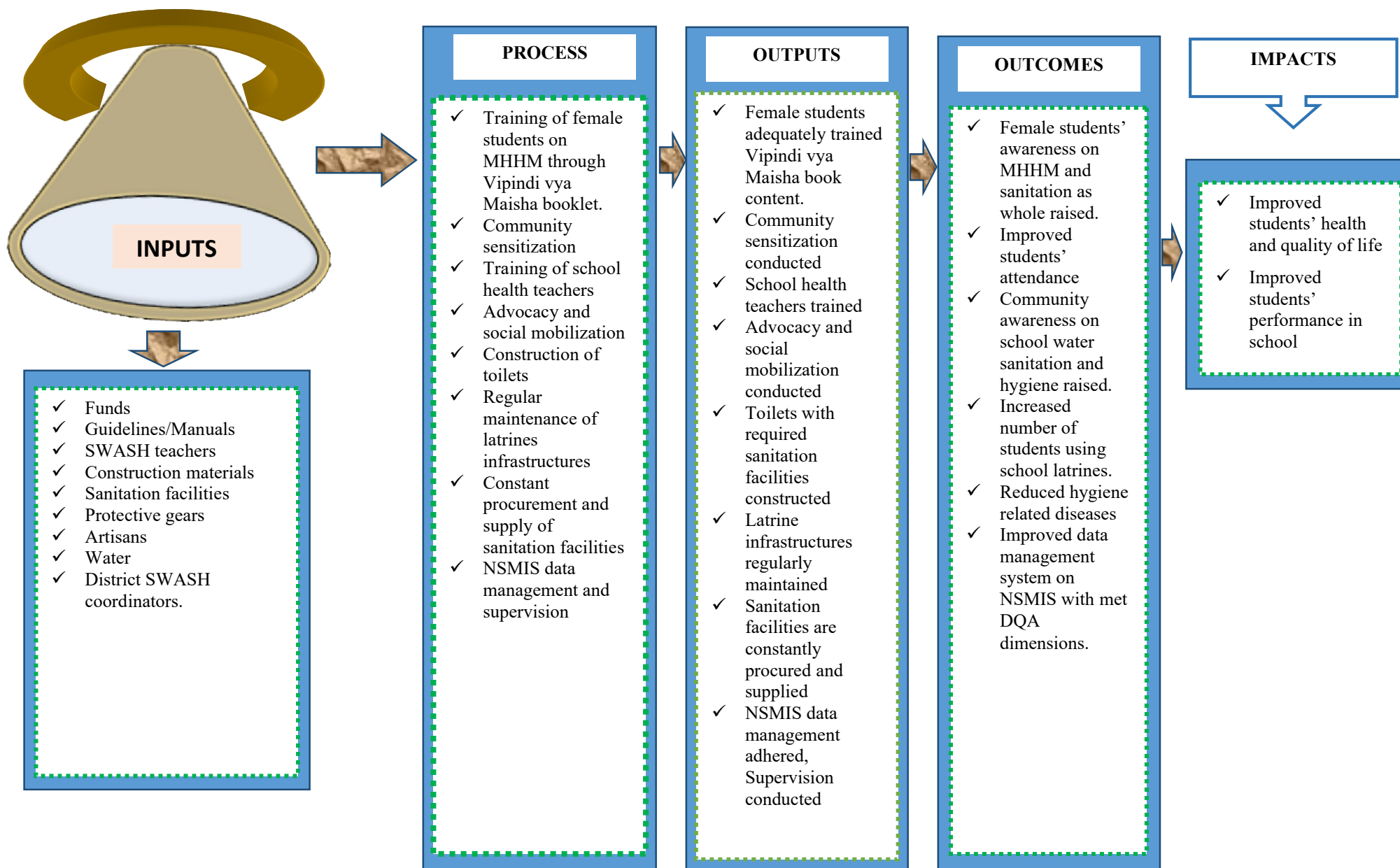
The activities that were carried out in School WASH were in line with the objectives. These include training of teachers and students on School WASH, construction of new latrines, impartation of students awareness on hygiene and sanitation, rehabilitation of latrines, other improvements like building or purchasing hand washing facilities for the students and teachers and mobilizing communities to participate in School WASH.

Among these activities my study focused at whether construction and rehabilitation has been conducted with respect to national standards as well as whether students' awareness on hygiene especially on menstrual hygiene and management has been imparted adequately to girls students in secondary schools.

Resources that are needed to ensure that these activities are a success include fund for construction of latrines and hand washing facilities including water and soap. Human resource was also needed like Trainers of Trainees for the school teachers, artisans for constructions of the latrines and teachers for training and guiding the students. Other resources included latrine construction materials, latrine cleaning materials and water reserving tanks.

1.4 SWASH program logic model

Figure 1.1 SWASH logic model



1.5 Program stakeholders

A person, group or organization that has interest or concern in an organization, stakeholders can affect or be affected by the organization's actions, objectives and policies. Some examples of key stakeholders are creditors, directors, employees, government and its agencies, owners, shareholders, suppliers etc.⁴

⁴<http://www.businessdictionary.com/definition/stakeholder.html>

Table 1.1: Stakeholders in SWASH project

STAKEHOLDER	ROLE IN THE PROGRAM	INTEREST/PERSPECTIVE ON EVALUATION	ROLE IN THE EVALUATION	MEANS OF COMMUNICATION	LEVEL OF IMPORTANCE
MINISTRY OF EDUCATION AND VOCATIONAL TRAINING (MoEVT)	Development of policies and guidelines	Improved attendance and performance in schools	Monitor implementation of national school policies	Reports, telephone, emails and fax.	High
MINISTRY OF HEALTH AND SOCIAL WELFARE (MoHSW)	- Development of policies and guidelines -	Improved sanitation and hygiene in communities/primary schools Formulate standards of sanitation and hygiene in schools	Monitor sanitation and hygiene -evaluate the standards of school water sanitation and hygiene.	Reports, telephones and emails	High
MINISTRY OF WATER AND IRRIGATION (MoWI)	- Development of policies and guidelines -facilitate provision of adequate water in schools	Improved health and hygiene -ensure clean and safe water in schools	Monitor, evaluate and assess quality assurance of water	Reports, telephones and emails	High
LOCAL AUTHORITIES	Participate in planning and budgeting for funds for School WASH development	Improved health of students and community at a whole.	Facilitate resource mobilization for school developments including SWASH.	Telephones and emails.	Medium
TEACHERS	-Implement WASH in schools -educate and guide pupils to adopt good hygiene behavior in schools.	-improved attendance and performance in schools.	-Monitor students practice on hygiene -Attend in sanitation and hygiene trainings and education.	-Emails, telephones.	Medium
PUPILS	Practice sanitation	-To get quality services Change agent to the	-Assess success/failure of SWASH program	-Word of mouth	Low

1.7 Evaluation questions and objectives

1.7.1 Evaluation Questions

1.7.1.1 General Question

- To what extent has SWASH contributed in addressing menstrual health and management related challenges facing school girls?

1.7.1.2 Specific Question

- i. Have secondary schools adhered to stipulated SWASH menstrual management requirements?
- ii. To what extent has awareness on menstrual health and management among school girls been created as SWASH project envisages for?
- iii. Do school boys provide peer support to adolescent school girls during their menstruation?
- iv. To what extent, do socio demographic and geographical factors determine the state of menstrual health, hygiene and management in secondary schools?
- v. Are implementers committed and responsive towards menstrual health, hygiene and management related challenges facing school girls?
- vi. Is there Availability of School WASH Operation & Maintenance funds for menstrual health and management?

1.7.2 Evaluation Objectives

1.7.2.1 General objective

- To assess contribution of SWASH in addressing menstrual health and management related challenges facing school girls in Muheza District Council.

1.7.2.2 Specific objectives

- i. To determine secondary schools' adherence to stipulated SWASH menstrual management requirements.
- ii. To determine level of menstrual health and management understanding among school girls.
- iii. To examine peer support of school boys on adolescent girls at menstruation
- iv. To find out the influence of socio demographic and geographic factors towards the state of menstrual health and hygiene management.
- v. To explore implementers' commitment and responsiveness towards addressing menstrual health and management challenges facing school girls.
- vi. To examine Availability of School WASH Operation & Maintenance funds for menstrual health and management.

1.8 Significance of the Evaluation

- i. The study revealed the insights on challenges facing school girls in terms of menstrual hygiene that the program had to tackle.
- ii. M and E framework with automated School girls MHHM understanding evaluation tool developed to aid District teams and schools' management to assess the progress of SWASH in the area of MHHM.
- iii. It is a partial fulfillment for requirements of MSc in Health Monitoring and Evaluation.
- iv. In a district, there was no schools distribution map, hence through this evaluation, a thematic district map showing distribution of schools with wards and school type category were developed as assisted by Quantum GIS software.
- v. This study will be a reference source for other proceeding studies on more or less the same subject matter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Importance of School Sanitation and Hygiene

In many countries there exists a high prevalence of water and sanitation related diseases, causing many people, children in particular, to fall ill or even die. Improved hygiene practices are essential if transmission routes of water and sanitation related diseases are to be cut. Whereas appropriate hygiene education can bring about the intention to change hygiene behavior, for most hygiene behaviors appropriate water and sanitation facilities are needed to allow people to transform intention to change into real change.

This manual on school sanitation and hygiene (SSH) deals with both hardware and software aspects needed to bring about changes in hygiene behavior of students and, through these students, in the community at large. The hardware is the total package of sanitary conditions and facilities available in and around the school compound. The software are the activities aiming to promote conditions at school and practices of school staff and children that help to prevent water and sanitation-related diseases (UNICEF, 1998)

2.2 Why is it important to focus on schools?

After the family, schools are most important places of learning for children; they have a central place in the community. Schools are a stimulating learning environment for children and stimulate or initiate change. If sanitary facilities in schools are available, they can act as a model, and teachers can function as role models. Schools can also influence communities through outreach activities, since through their students, schools are in touch with a large proportion of the households in a community (Ibid, 1998)

2.3 Why is it important to focus on children?

A survey among school children in India revealed that about half of the ailments found are related to unsanitary conditions and lack of personal hygiene. Such survey results show the need for a focus on children. Also, it is generally recognized that childhood is the best time for children to learn hygiene behaviors. Children are future parents and what they learn is likely to be applied in the rest of their lives. They have important roles in the household, taking care of younger brothers and sisters, and depending on the culture, they may also question existing practices in the household. If children are brought into the development process as active participants, they can become change agents within their families and a stimulus to community development. They are eager to learn and help, and if they consider environmental care and their role in this as important, they will take care of their own health and the health of others. Being tomorrow's parents, children are also likely to ensure the sustainability of a program's impact (**Ibid, 1998**)

2.4 Gender issue in school wash

2.4.1 School wash and gender

Girls are likely to be affected in different ways by inadequate water, sanitation and hygiene conditions in schools, and this may contribute to unequal learning opportunities. For example, lack of adequate, separate private and secure toilets and washing facilities may discourage parents from sending girls to school. In addition, lack of adequate facilities for menstrual hygiene can contribute to girls missing days at school; this can even lead girls to drop out of education altogether at puberty(**WHO, 2009**)

2.4.2 Meaning of menstruation

Menstruation is a biological phenomenon that women experience every month on average between the ages of 12 to 50 (USA Department of Health and Human Services, 2009). owing to traditional and cultural beliefs and practices in Africa, it is one of the subjects that cannot be discussed publically and as a result, support for girls and women both at home and outside is not sufficient to effectively manage

menstruation (UNESCO, 2014). African schoolgirls are the most challenged by this biological fact of life. As the baseline survey in five African countries of revealed, on average, 50 per cent of girls are not attending school during menstruation.

2.4.3 Starting of menstruation

In most cases, girls experience their first menstruation between the ages of 9 to 15. However, there are times whereby some start earlier than nine years or later than 15years. During the menstrual period, there is a flow of blood from the vagina and often “cramps” or pain may be experienced as well. Sanitary pads are used to absorb the blood and stop soiling of cloths (AHS, 2015)

2.4.4 Menstruation cycle

The cycle for menses is usually around 28 days but can vary from 21 to 35 days. Each cycle involves the release of an egg (ovulation), which moves into the uterus through the fallopian tubes. The body’s tissues and blood start to line the walls of the girl’s uterus for fertilization. If the egg is not fertilized, the lining of a girl’s or woman’s uterus is shed through the vagina along with blood. The bleeding usually lasts between two to seven days each month, with some lighter flow and some heavier flow days. The menstrual cycle for girls during their first year or two is often irregular.⁵

2.4.5 Pre-menstrual syndrome

This is a mixture of emotional, physical and mood disturbances that occur a few days before the start of a girl’s period. The most common mood related symptoms are getting angry quickly, crying, and feeling happy and sad at the same time. The common physical symptoms include fatigue, bloating, pimples and appetite changes with need for more food. Exercising and eating a healthy diet may help reduce the effects of these symptoms.

⁵House, Cavill, and Mahon. 2012. *Menstrual Hygiene Matters*. UK: WaterAid.

2.5 Menstruation and adolescents

Menstruation is a phenomenon unique to the females. The onset of menstruation is one of the most important changes occurring among the girls during the adolescent years. The first menstruation (menarche) occurs between 11 and 15 years with a mean of 13 years.

Adolescent girls constitute a vulnerable group, particularly in India where female child is neglected one. Menstruation is still regarded as something unclean or dirty in Indian society. The reaction to menstruation depends upon awareness and knowledge about the subject. The manner in which a girl learns about menstruation and its associated changes may have an impact on her response to the event of menarche. Although menstruation is a natural process, it is linked with several misconceptions and practices, which sometimes result into adverse health outcomes **(Dasgupta & Sarkar, 2008)**

Adolescents are a large and growing segment of the world's population. More than half of the world's population is below the age of 25, and one in every two young people in the world is adolescent **(WHO & UNICEF, 1999)**. During adolescence, young people develop their adult identity, move toward physical and psychological maturity. Physiologically, the hypothalamus produces growth hormone and gonadotropins which initiates pubertal changes. Menstruation, the periodic vaginal bleeding that occurs with the shedding of the uterine mucosa is one of the signs of puberty, and occurs one or two years following appearance areas of special concern include choice of the best “period protection” or feminine hygiene products; how often and when to change the feminine hygiene products; bathing care of the vulva and vagina as well as the supposed benefits of vaginal douching at the end of each menstrual period **(Ibid, 2008)**

2.6 The cultural stigma of menstruation

Another challenge young girls and women face in many countries is the cultural stigma of menstruation. Apparently, many cultures consider menstruating girls and women as “dirty” as a result, they are forced to exclude themselves from other

people – even from their immediate families – and other activities during their menstrual period. Such beliefs not only compromise women and young girls’ overall health, but also lead to general misinformation about menstruation.

More alarming is because of this limited information about menstruation and menstrual management many women suffer discrimination and even maltreatment from other people. With all of the above-given situations, adequate promotion is a must especially in less fortunate countries. MHM is more than just maintaining a proper hygiene.

Rather, it also involves giving girls and women a chance to live a life with decency and dignity. More so, MHM is crucial to lessen the number of girls missing school due to their periods, or women living in isolation during their menstrual cycle.

2.7 Engaging men and boys in menstrual hygiene

2.7.1 The role of men and boys in menstrual hygiene

Men and boys can support women and girls to manage menstruation effectively across different social domains including household, community, school, and work. Men and boys influence women’s and girls’ experiences of menstrual hygiene management (MHM) through many roles, including as husbands, fathers, brothers, students, peers, teachers, community leaders, entrepreneurs, employers, development and humanitarian practitioners, and policymakers (Mohon, Tripathy, & Singh, 2015)

2.7.2 The importance of engaging boys and male teachers

Menstrual hygiene research and programs highlight the challenges girls face at school and the need for appropriate water and sanitation facilities and menstrual hygiene materials, pragmatic information, and supportive staff and peers. Interventions that have addressed these needs primarily target girl students and female teachers. Yet one of the critical challenges girls face at school in relation to menstruation is the fear of being teased by boys, which impacts on their self-esteem. Physical and verbal bullying was one of the main grievances of girls interviewed in

Malawi (Piper Pillitteri, 2012). As one girl shared, ‘Boys make you feel ashamed. They are rough with us and go into our bags and would see our cloths if we brought them to school.’ A study in Taiwan (Chang et al., 2012) explored boys’ experiences and attitudes relating to menstruation. One issue was that no one wanted to talk about menstruation with the boys and they could not discuss menstrual issues with their mothers or sisters or their fathers. As quotes from boys interviewed in the study show, they were also discouraged from talking about menstruation with each other at school. ‘If we talk about menstruation and girls hear about it. They snitch to teacher and seize us to see the teacher. Our teacher will admonish us, shake her head at us and punish us.’

2.8 Challenges girls face during menstruation⁶

Attending school during menstruation can often be challenging for girls. Challenges have been identified as the experiences girls have at school during menstruation that make this time more difficult than other days at school. Challenges were identified through conversations with research participants. Girls were asked what their experiences were generally like at school during their period and how days at school during menstruation might be different than other days. Other participants were asked about their perceptions of girls’ experiences at school during menstruation.

Hence these challenges include: Confusion about effective management practices, due to lack of accurate knowledge about MHM practices, Difficulty managing menstruation, leading to anxiety if girls did not have the necessary resources and facilities to effectively manage menses at school, Leaks, stains, and fear of leaks and stains associated with concern about revealing menstrual status by having a leak, and potentially a more permanent stain, on their school uniform, Teasing, shame and embarrassment, which led to not wanting their menstrual status known for fear of being teased. Girls felt embarrassed when teased or when others knew about their menstruation, menstrual odor, which girls reported as a result of following traditional beliefs about restricted bathing. During the first three days of menstruation girls are

⁶https://www.unicef.org/wash/schools/files/Philippines_MHHM_Booklet_DM_15__Nov_1010_Single_Philippines.pdf

instructed to only bathe with three dippers of water, menstrual pain, discomfort and fatigue, including headaches and cramps.

2.9 Determinants of menstruation-related challenges⁷

Challenges girls face while attempting to manage menstruation at school are determined by factors that are largely preventable. Determinants are the factors that contribute to girls' challenges at school during menstruation and were identified through conversations with participants. When girls described these challenges, they often explained why they occurred. If specific challenges were noted and not elaborated, follow-up questions were asked by the research team. Crucial determinants of the challenges girls face include: -

- i. Inadequate WASH facilities in schools that entails Inconsistent access to water, poor sanitation conditions, including insufficient number of toilets fit for use; poor facility maintenance; lack of privacy; and limited access to facilities, Lack of disposal systems for used absorbent materials, poorly located and inconsistently functioning hand-washing facilities.
- ii. Insufficient knowledge, practical guidance and support entailing deficient information provided prior to and at first period, misinformation and inaccurate guidance about behaviours during menstruation, limited menstruation education in the school setting, lack of accurate practical guidance for effective management, variable access to support from teachers in school, deficit of puberty education for boys.
- iii. Poor access to preferred absorbent materials.

2.10 Poor menstrual hygiene implications

Hygiene-related practices of women during menstruation are of considerable importance, as it has a health impact in terms of increased vulnerability to reproductive tract infections (RTI). The interplay of socio-economic status, menstrual hygiene practices and RTI are noticeable. Today millions of women are sufferers of RTI and its complications and often the infection is transmitted to the

⁷UNICEF, WASH in Schools Empowers Girls' Education in Masbate Province and Metro Manila, Philippines an Assessment of Menstrual Hygiene Management in Schools, 2012

offspring of the pregnant mother. Women having better knowledge regarding menstrual hygiene and safe practices are less vulnerable to RTI and its consequences. Therefore, increased knowledge about menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of women (Ibid, 2008)

2.11 Learning Menstrual Hygiene

2.11.1 Importance of learning menstrual hygiene

Learning about hygiene during menstruation is a vital aspect of health education for adolescent girls as patterns that are developed in adolescence are likely to persist into adult life.

It was against this background that this study was planned to evaluate adolescent secondary school girls' knowledge of menstruation and menstrual hygiene, as well as their practices of menstrual hygiene.

2.11.2 Menstrual hygiene areas of concern

Areas of special concern include choice of the best “period protection” or feminine hygiene products; how often and when to change the feminine hygiene products; bathing care of the vulva and vagina as well as the supposed benefits of vaginal douching at the end of each menstrual period. Provisions for good menstrual hygiene include home-made remedies like pieces of cotton cloth which are either placed on a woman's undergarment or on a homemade belt that wraps around the waist. These cloths can be washed, dried and used again. Available commercial products for women's hygiene during menstruation include pads, tampons and cups (Yusuf & Musa, 2010).

2.11.3 Menstrual products

Sanitary pads / napkins: Are special cotton filled, plastic lined pads used to catch menstrual blood. They come in different sizes for the different flows. Also, some pads come with wings that wrap around the leg openings of the underwear. Most

have a sticky strip that holds the pad to the underwear. Pads should be changed often. Also it is important to choose pads that are unscented. Panty liner: Similar to pads.

Panty liners are used to catch light menstrual flow or vaginal discharge.

Tampons: Are another way to catch menstrual blood. Many young women like to use tampons as they can be worn for sports including swimming. They are made of soft cotton and have a string attached to the bottom. Tampons are inserted into the vagina with the string hanging down through the vaginal opening. The tampon is removed by pulling gently on the string. Tampons need to be changed often (every 4 – 6 hours). Choose unscented tampons. A common mistake people make when using tampons for the first time is not inserting the tampon into the vagina far enough. If you are wearing a tampon properly, you should not be able to feel it.

Menstrual cups: Made of silicone these small cups fit inside the vagina to catch the menstrual flow. They can be kept in for up to 12 hours at time and can be worn for sports including swimming. Some of the cups are reusable when cared for correctly (AHS, 2015)

2.11.4 Disposing or keeping the pads

During period, girls should make sure that sanitary materials (cloths/ pads/ tissues/cotton) are disposed in a pit latrine. If they are to reuse the cloth while are at school, they should carefully fold the cloth and put it in a plastic bag before putting it in school bag then after getting home washing it with hot water and soap is a necessity and hence dried in the sunshine and ironed.

2.11.5 Menstrual hygiene management

Menstruation has critical implications for girl's educational outcomes. Menstrual hygiene materials must be made available linkages to health services must be formed and safe latrines with water and soap, adequate sanitation and disposal mechanisms must be provided. These objectives benefit all members of the school community, including learners and staff. Furthermore, failure to meet them puts girls at risk of not having a high-quality educational experience.

MHM in school includes the facilities, products, education, training, and support necessary for girls to manage their menstrual periods away from home. MHM is gaining recognition globally as a critical human rights and development problem, one that influences poverty levels and even a country's GDP. Around the world, stigmas and taboos have defined how menstruation is viewed and experienced. Now, a movement is growing, bringing the topic into the open and addressing menstruation as a normal part of being female.⁸

Good menstrual hygiene management entails use of preferable sanitary pads, changing the sanitary pads regularly and disposing the used sanitary pads in the pits to prevent from bacterial infections, washing the genital areas and keeping the areas between the legs dry to avoid soreness and chaffing development, and taking balance diet with lots of fruits and vegetables to replace the blood loss and prevent anemia.⁹

2.11.6 Disposal of hygiene materials

Used sanitary materials should be disposed of in a separate container located inside each latrine, and subsequently taken to be burned. Each school should provide either a drum incinerator or fenced off pit for burning of used sanitary materials, both of which will burn the pads to ash. Girls should be educated not to dispose used sanitary materials into the latrine pits as this might quickly fill up the pits (in case of pit latrines) or block the system (in case of pour flush latrines). Given the need for privacy around disposal of used sanitary materials, the location of the incinerator or pit should be relatively close to the girls' latrine block so the dustbins with used materials can be carried for burning in a private manner. The incinerator and/or burning pit should be sufficiently fenced off so that small children do not burn themselves (SWASH Guideline, 2016)

⁸SPLASH, 2015. Menstrual Hygiene Management Toolkit. Washington D.C., USA. USAID/WASHplus Project.

⁹<http://www.rspnbhutan.org/menstrual-hygiene-management-MHHM-awareness-program-conducted-in-yoeseltse-mss-conducted>

2.11.7 Girls friendly design features

Girls at school have particular needs, these include: safety and security when using the latrine to prevent sexual attack, privacy when using the latrine, facilities which allow the girl to deal with menstruation with privacy and dignity.

Privacy screen in front of the doors, lockable doors from the inside, water available at the latrine for personal hygiene. Ideally it is best to have water inside the latrine to aid privacy during menses, hand-washing and water available in private area (for cleaning blood from hands if soiled), private room or area for washing or bathing in the latrine block, somewhere to discretely dispose of sanitary pads or to wash soiled menstrual cloths – the containers should not be see through and the bin should have a lid (Technical option for school wash Tanzania, 2010).

Figure 2.1: Types of incinerators for disposal of sanitary materials



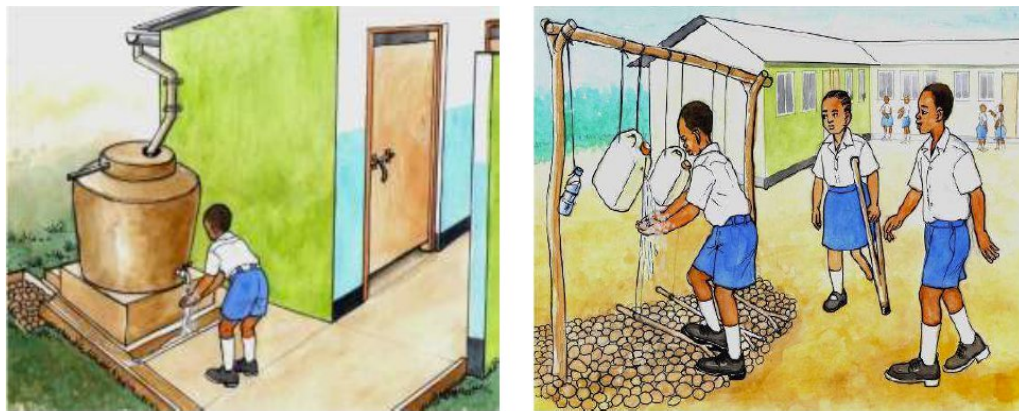
(Taken from SWASH Guideline, 2016)

2.11.8 Hands washing facilities

There are different hand washing facilities options; the simplest of which is tippy taps also known in Kiswahili as Kibuyu Chirizi usually installed outside the toilets although these have a small volume and need filling regularly during the day. Another form may be a drum of water fixed with a tap and a soap dish. In all the

facilities the container has to be filled with water by responsible users once the water is finished. All hand washing facilities should have drainage or a soak pit to prevent the area becoming muddy. Wastewater from hand washing facility can be led through a drain to a garden area. A modern hand washing basin can also be used if the school can afford it and if tap water is available. A hand washing basin can be installed inside the toilet or at a convenient location within the school yard (SWASH Guideline, 2016)

Figure 2.2: Hands washing facilities



(Taken from SWASH Guideline, 2016)

2.12 School water supply, sanitation and hygiene

The provision of water supply, sanitation and hygiene education in schools has an impact on the school environment and the quality of learning. Schools with inadequate water, sanitation and hygiene education (WASH) present a number of risks to pupils, including the risk of contracting diseases associated with poor sanitation, lost school days due to illness or for menstruating girls.

Schools also have a key role to play in providing hygiene education which can have wider influence on families and communities and a long term impact on future generations – helping Tanzanians to live healthier and more productive lives.

The benefits of improved water, sanitation and hygiene include: - Increased cognitive function and attention due to reduced health problems, hydration and nutrition; increased wellbeing for girls, in particular, who may be concerned over where to go to the toilet or how to manage menstruation, Reduced days missed from school due

to a reduction in WASH related diseases and infections such as diarrhea, worms, schistosomiasis, or urinary tract infections.

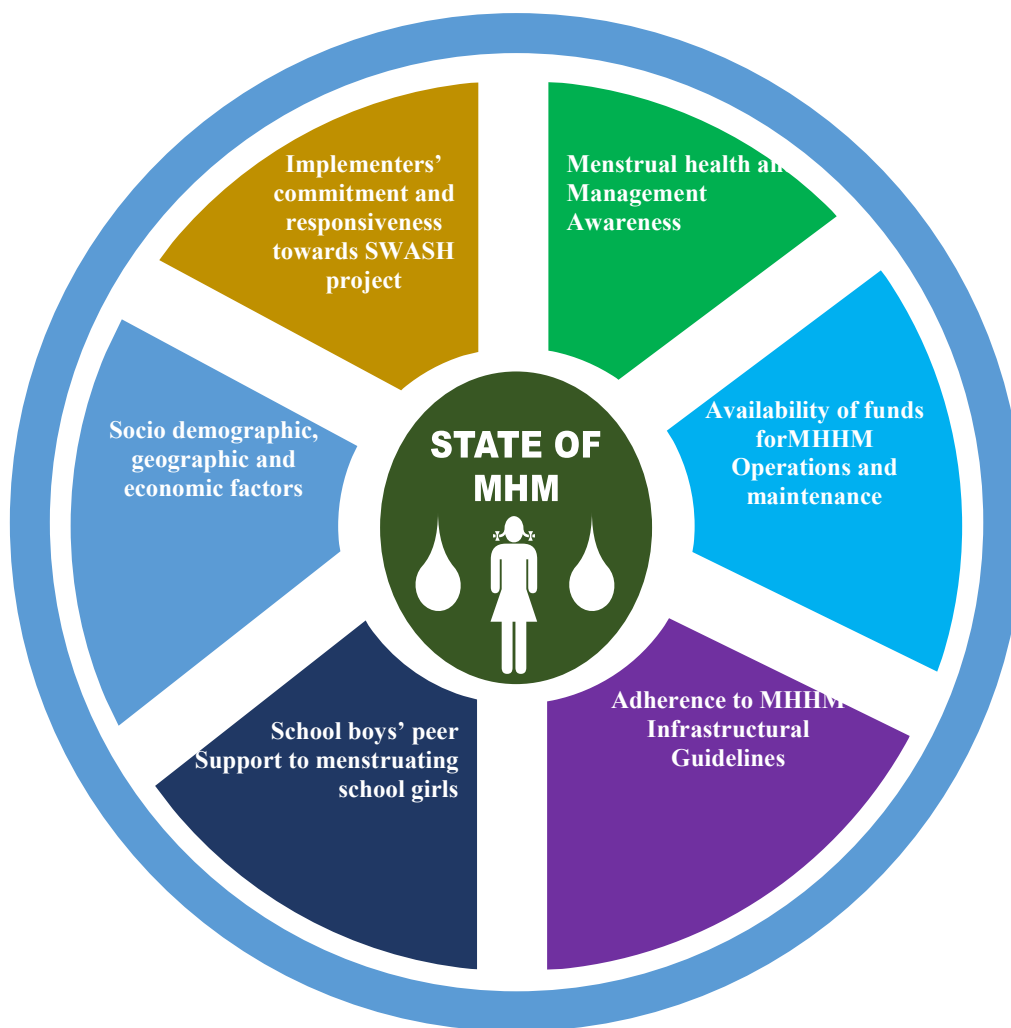
Emerging evidence suggests a correlation between girls' attendance at school and adequate facilities to deal with girls' hygiene needs, in particular during menstruation, More time on the learning task due to access to safe water and sanitation on site. Schools which lack access to water result in children carrying water long distances to school, thereby reducing actual class teaching time and /or fatiguing the children with a resulting negative impact on learning, Increased dignity and safety particularly for girls and for people with disabilities—Accessible design and construction of facilities, appropriately sited latrines, segregated by sex, result in increased privacy and reduced risk of sexual harassment, More effective school feeding programs—Better hygiene and access to clean drinking water can result in increased nutritional benefit (WINS, 2019)

2.13 Conceptual framework

Miles and Huberman (1994) defined a conceptual framework as a visual or written product, one that “explains, either graphically or in narrative form, the main things to be studied—the key factors, concepts, or variables—and the presumed relationships among them”¹⁰

¹⁰https://www.sagepub.com/sites/default/files/upm-binaries/48274_ch_3.pdf

Figure 2.3: Conceptual framework showing relationship between study variables



Source: Researchers' own construct from field experience and review of related literature

2.14 Description of variables

Both dependent and independent variables to be used in the study are indicated in the conceptual framework above. These are described in the table below based on definition and measurement:-

Table 2.1: Description of variables

SN	VARIABLE NAME	DEFINITION	MEASUREMENT
1	Schools adherence to National Guidelines for MHHM	Refers to set standards for SWASH of which each school has to be adhered to as provided in National SWASH strategic guideline.	This were measured by availability of school health and nutrition teachers, Guidance teacher on MHHM, MHHM training to all teachers, WASH club with MHHM activities, availability and number of toilets for girls, space for pads keeping in toilets, availability of emergency pads, trash bin for pads disposal, separate blocks for Male and Female, Wall front of the door, soap and water near latrines, cleaning materials, hands washing facility inside latrines, adequate running water, Drum incinerator of fenced off pit near girls latrines, approved medication for menstrual pain, MHHM mentoring by older school girls to younger girls, school funds set aside for MHHM support, local pads production program.
2	Implementers' commitment and responsiveness towards SWASH project	Responsive management with routine supervision and checks, facilities maintenance and data management is crucial towards desirable state of school girls' MHHM	Supportive supervision and surprise checks, data feeding to National Sanitation Management Information System (NSMIS), MHHM issues prioritization in budgeting, facilities maintenance.
3	Menstrual health and Management awareness	This refers to awareness in terms of menstrual health (menstruation knowledge as whole) as well as menstrual management related practices. There was a set of questions to be asked with aggregated performance depending on number of correct responses.	This were measured by looking at students knowledge and understanding on menstruation and menstrual management, a list of 8 questions were a part of menstrual health awareness among students (Including menstruation, cause of menstruation, menstruation cycle, blood source, normal and cessation age for menses, normal duration etc.) while 9 questions focused at menstrual hygiene and management (Such as knowledge on MHHM sanitary materials, ideal materials, materials frequency change, disposal of sanitary materials, hands washing procedures etc)

4	Availability of School WASH Operation & Maintenance funds for menstrual health and management.	Entails availability of funds sources for infrastructure repair and maintenance and procurement of sanitation facilities.	Presence of funds sources and budget set aside for infrastructure repair and maintenance, MHHM sanitation facilities (Soaps or ashes, Menstrual pads etc), adequate water supply
5	School boys peer support to menstruating girls	School boys' perception and support is essential in achieving the goal, negative perception is detrimental to physical and psychological support to school girls	This were measured by school girls responses in as far as their experiences on embarrassment/teasing showered by boys at their menstruation is concerned. Moreover, boys were interviewed on their perceptions and support to girls at the time when girls are menstruating.
6	Socio demographic and Geographic factors	These are determinant factors that whether directly or indirectly affect school adherence to SWASH requirements and awareness on menstrual health and management among school girls. These are age, students' class, school category, school locale, religion, parents' level of education and parents' livelihood earning activity	These factors were measured in the sense of their determination towards the state of awareness on MHHM as whole. Numerical and recoded categorical MHHM scores were treated as dependent variable while social demographic and geographic factors were treated as independent variables and were statistically tested for logistic regression, pairwise correlation and one way ANOVA to see direction and strength of relationships and whether there is a difference in MHHM scores with regard to socio demographic and geographic factors.

CHAPTER THREE

EVALUATION METHODOLOGY

3.1 Study area

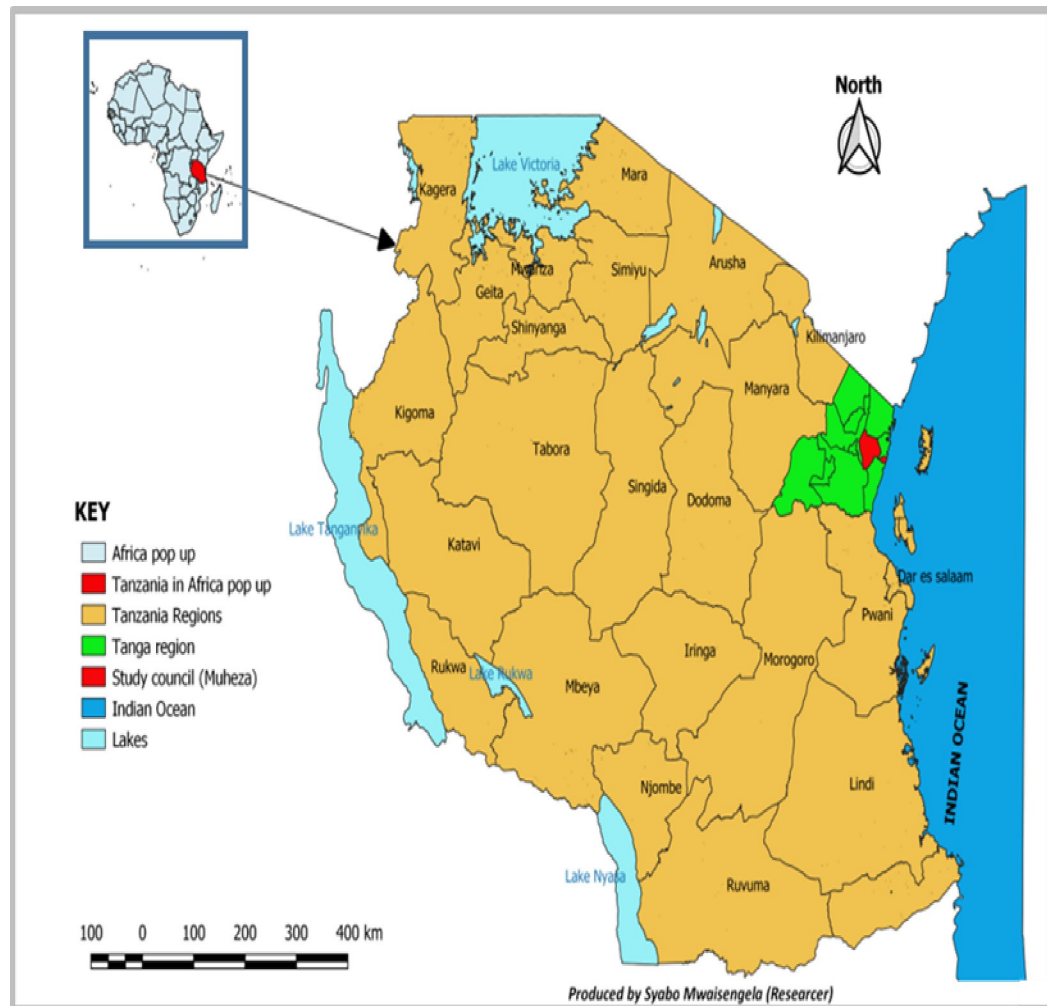
Muheza is one of the nine Districts in Tanga Region. It has a total area of 1,974 square kilometers and a total population of 204,461(2012 census) whereby male 100,843 (49.3%) and female 103, 618 (50.7%), the number of household is 47,920 with household size 4.3. Muheza District divided into 4 divisions comprising 33 wards 135 villages and 522 hamlets.

Muheza District is located in Northeastern Tanzania. The district lies west south of Tanga City, and bordered by Mkinga to the north, Pangani in the south and Korogwe District to the west.

The District has thirty-one (31) Secondary schools where 25 are government owned with 10004 students (4571 Male and 5433 Female) while six (6) are private owned with 11363 students (5327 Male and 6036 Female). As of 2017 Education report, in these schools there is a shortage of 440 pit latrines where two (2) do not have latrines at all.

Tracing back to 2012 where there was a shortage of more than 811 pit latrines, this deemed necessary scaling up of School WASH in this district to ensure that the standards are met.

Figure 3.1: Map of Tanzania showing study site



Source: Researcher, 2019

Figure 3.1; Map of Tanzania tracing location of study area from continent, country to regional level, this map is designed in QGIS 3.8.1 Zanzibar datum WGS 84.

3.2 Evaluation period

This evaluation process began with an evaluation plan in October 2018, where a pilot study was conducted by studying the area where evaluation was expected to be conducted. An evaluation proposal was prepared in March 2019 and all the

stakeholders were earmarked. Data collection started on 27th May 2019 towards July 2017 followed by data analysis and interpretation.

3.3 Evaluation approach

The study employed a formative evaluation approach in assessment of implementation of the School WASH program specifically in the area of menstrual health and Management in Muheza District Council. The aim was to assess whether School Wash project addresses menstrual health and Management challenges among school girls.

3.4 Evaluation design

A concurrent mixed methods analytical cross sectional evaluation was employed to all eight schools visited, a snapshot on what is going on in the field were identified. Based on findings, relationships were created in hand to comparative analyses, these were achieved by conducting statistical tests of one-way ANOVA, Two sample ttest, one sample test of proportion, pair wise correlation and binary logistic regression.

3.5 Focus of evaluation and dimensions

This evaluation looked at whether SWASH project has addressed menstrual health and Management related challenges facing school girls in Muheza District Council. It was focused on checking adherence to MHHM guidelines, school girls' awareness on menstrual health and Management, School boys' perception and peer support to school girls during menstruation, availability of operations and maintenance funds for MHHM area of school WASH, influence of socio demographic and geographic factors on the state of menstrual health, hygiene and Management. Nevertheless the evaluation examined implementers' commitment and responsiveness towards SWASH implementation.

3.6 Population and Sampling

Target for this study were eight (8) secondary schools in Muheza District embracing six (6) government schools (Three each from urban and rural) and two (2) private owned secondary schools. Selection of these schools were purposive based on diversities in their location and type of ownership.

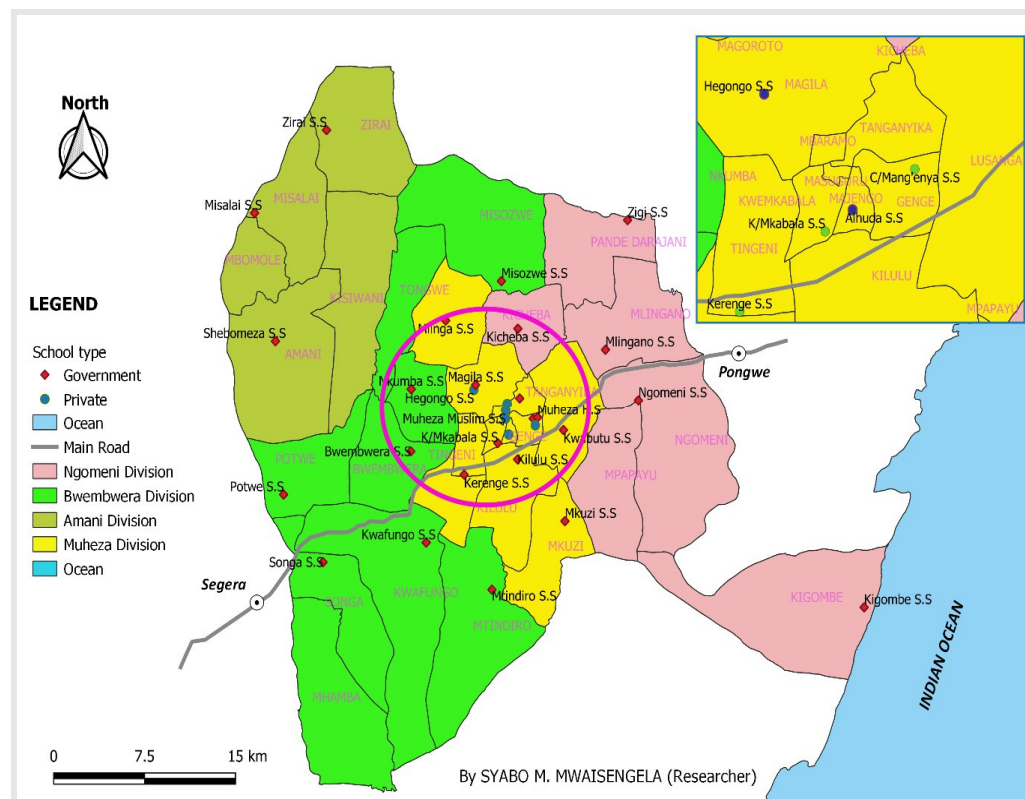
3.6.1 Target population

Target population refers to all the people that are affected by the study. The results gathered from this evaluation are expected to be transferred to all secondary schools in Tanzania

3.6.2 Source population

The source population of this study was government and private owned secondary schools where a sample of 458 girls' students were involved in a survey where by 42 were interviewed to inform quantitative findings. Moreover, few school boys (3 FGDs), school health teachers, Head masters and District Managers were interviewed to saturate questionnaire survey findings and give insights on procedures and challenges upon SWASH implementation.

Figure 3.2: Map of Muheza showing distribution of all schools in the district



Source: Researcher, 2019 designed in QGIS 3.8.1 Zanzibar, datum WGS 84

Above figure shows distribution of schools in Muheza based on ownership. From these schools, a sample of eight (8) schools were drawn.

3.6.3 Study population

Data collection based on Muheza district council, secondary school boys and girls, headmasters, school health teachers from the eight (8) selected schools and District Managers (DSEO, DWE, SLO and DSHCO)

3.6.4 Study units and sampling units

Data were collected from students that at all levels from form 1 to form 4 because in secondary schools nearly all girls have reached a puberty age.

The schools were purposively selected as representative of the whole district, of eight (8) selected schools, six were government schools while two (2) were private schools. For government schools three (3) are located at rural areas of the district and three (3) in urban area. The two (2) private schools are located in Urban areas. The reason of selecting schools from rural and urban was to observe existing differences between urban and rural government schools as well as urban government and private schools in terms of menstrual health, hygiene and Management awareness and adherence to SWASH MHHM guidelines.

3.6.5 Sample size

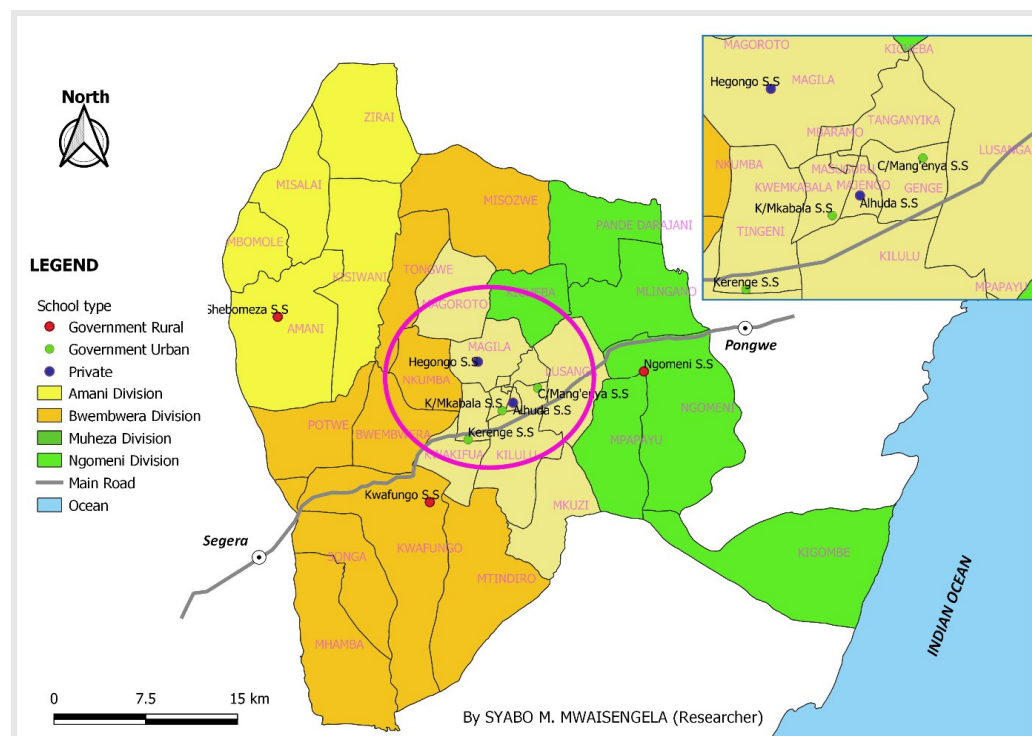
Selection of schools

Schools were purposively selected in order to ensure that a sample contains schools that meets wider range of characteristics in terms of location (Urban, rural), Distribution (in terms of divisions), school type (Private or Government) and religious affiliation (Christian or Moslem). This was done for the sake of ensuring representativeness.

Hence, Schools were selected based on the following characteristics based on authors' construct: -

1. Government Urban. These are the ones that are owned by government and are located in Muheza urban areas at Muheza division. Schools that were included in this category for this study entails ChifuMang'anya, Kwemkabala as well as Kerenge Secondary schools.
2. Government rural. These are the ones that are owned by government and are located in Muheza rural areas at Amani division (Shebomeza secondary school), Bwembwera division (Kwafungo Secondary school) and Ngomeni division (Ngomeni Secondary school).
3. Private schools: These were the non-government owned schools, In Muheza all private schools that involves girls are religious affiliated. Hence it deemed necessary to consider one Christian affiliated school (Hegongo secondary school) and one muslim affiliated school (Alhuda secondary school)

Figure 3.3: A Map of Muheza showing distribution of sampled schools



Source: Researcher, 2019 designed in QGIS 3.8.1 Zanzibar, datum WGS 84

Qualitative sample determination

i. School girls

A total number of 42 school girls were purposely selected for exploratory interviews. These came out of 458 respondents who were administered through a questionnaire survey method and had a proved capacity to express themselves or had scenarios of interests for the study.

A total number of five (5) focus group discussions were conducted where by two (2) were for government rural schools (Shebomeza and Ngomeni), two (2) for Urban government schools (Chief Mang'enya and Kwemkabara) and one (1) for private school (Hegongo SS).

ii. School boys

A total number of 24 school boys were organized for FGDs in Shebomeza, Ngomeni and Hegongo secondary schools whereby each group contained eight (8) number of respondents. With this number, saturation as per research objectives were achieved.

Figure 3.4: A Focus Group Discussion with boys at Ngomeni Secondary School in Ngomeni Division



Source: Field, 2019

School administration

In all eight schools, a matron/school health teacher and school heads were in depth interviewed giving a total number of 16 interviewed respondents.

District Managers

In the study, it was necessary to interview District managers so as to get an overview as to how SWASH project is implemented, hence in this study, District Managers who were interviewed include District Coordinators for School Health from both education and health departments, District Water Engineer, District Secondary Education Officer as well as District Statistics and Logistics Officer for secondary education department.

Quantitative sample determination

Since my sample frame for school girls is finite i.e 1625 respondents in all eight (8) schools, quantitative sample size were calculated by using YAMANE formula of sample size calculation where its calculation based on individual schools and summed up to obtain a sample size for all schools. With this approach a large sample size had to be achieved unlike when the calculation could have based on just a summed number of students in all schools as a sample frame.

Calculation of quantitative sample size (YAMANE) is given by: -

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

Where;

n = SAMPLE SIZE

N = SAMPLE FRAME

e = LEVEL OF SIGNIFICANCE

Hence at each school the sample size of school girls was as shown in table below:-

Table 3.1: Sample size calculation at each school to be involved in the study

Level of significance		0.1	
SN	NAME	SAMPLE FRAME (N)	SAMPLE SIZE (n)
PRIVATE (URBAN)			
1	ALHUDA	91	48
2	SWAFAA	53	35
3	HEGONGO	52	34
GOVERNMENT (URBAN)			
1	KWEMKABALA	345	78
2	MANG'ENYA	302	75
3	KERENGE	193	66
GOVERNMENT (RURAL)			
1	NGOMENI	252	72
2	BWEMBWERERA	110	52
3	SHEBOMEZA	227	69
GRAND TOTAL		1625	528

Expected quantitative sample to be achieved were 528 respondents but due to field inconveniences including exclusion of Swafaa SS that posed restrictions in conducting a study of this nature, a total number of 458 respondents were reached for a survey. These were asked a total number of 52 questions face to face through blank forms deployed from kobotool box server and accessed to ODK collect application in mobile phones.

Figure 3.5: Schoolgirls receiving instructions for questionnaire survey at Kwemkabara Secondary school.



Source: Field, 2019

3.6.6 Sampling procedure/technique

This study was a concurrent mixed method, hence sampling procedures were conducted in both qualitative and quantitative samples in as follows: -

On a qualitative sample, purposive selection was employed where by 42 girls' students were purposely selected out of 458 quantitative sample size. Their selection based on richness of information and this were identified during the survey.

Moreover, boys were conveniently spotted where they are found and gathered for Focus Group Discussions. Purposive selection were also kept into account for school leaders (Headmasters and school health teachers) as well as District Managers (DWE, DSEO, DSHCO and SLO).

On a quantitative part of the study, school girls were altogether gathered and conveniently selected to participate in the study until the required number were more or less achieved.

Figure 3.6: Students gatherings for quantitative sample in Shebomeza and Alhuda secondary schools



Source: Field, 2019 (Photographer: Principal Evaluator)

3.6.7 Inclusion and exclusion criteria

This study involved government (Rural and Urban) and private (Urban) secondary schools where by school girls were interviewed through questionnaire, few of them were selected to respond to exploratory questions through in-depth interviews. Moreover, few school boys were interviewed on their perception and peer support to school girls' menstruation. District managers and school management were in-depth interviewed on management issues and challenges towards implementation of the project.

3.6.8 Data Collection

Quantitative data were captured using mobile devices i.e Samsung galaxy tab A6 and Etrex 10 Garmin GPS (for capturing coordinates) whereby a questionnaire survey were deployed to a humanitarian Kobo toolbox server account and data were collected by using ODK collect.

Adequate training on ODK Collect/Kobo collect were provided to two (2) research assistants whereby real time data were gathered and aggregated to web based interface in a humanitarian Kobo toolbox server account.

These data were exported to MS excel and cleaned using logical operators and then imported to Stata ready for descriptive and Inferential statistical analysis.

To ensure quality of collected data, crucial responses were labelled as mandatory and adequate training on data collection were provided to research assistants for the sake of ensuring quality of collected data in all dimensions (Accuracy, reliability, integrity, completeness, timeliness etc). This was followed by a pretest of developed survey questionnaire, customizations, redeployment and ultimately data collection in the field.

Figure 3.7: Training to evaluation assistants on ODK and Coordinates capture using Garmin Etrex GPS collector.



Source: Field, 2019 (Photographer: Mr. Godfrey Bongi)

But Qualitative data were collected through the following methods: -

- i. Observation checklist that were deployed in Kobo toolbox server account where geo points were taken for the sake of mapping research sites, the checklist based on schools' adherence to stipulated MHHM requirements.
- ii. In in-depth interview data were also audio recorded (Through pause and resume from last respondent) and thereafter transcribed in MS word, deductively coded in atlas ti and content analyzed.

3.7 Data Management and Analysis

Quantitative data were extracted from Kobo tool box server and cleaned (using MS excel logical operators) and then imported into Stata 13 for inferential statistical analyses followed by visualization using Python Jupiter lab, MS excel and data driven info graphics charts and diagrams. Spatial data analysis was conducted by using QGIS 3.8.1 Zanzibar.

Data were descriptively analysed using MS excel where percentage distributions were also visualized using designer excel and info graphic charts and diagrams.

In inferential statistical analysis, Stata 13 and Python Jupiter lab were used whereby $p \leq 0.05$ were considered as a margin of error.

For the sake of inferential statistical analyses, statistical tests that were taken into account entail: -

- Two samples ttest to determine whether there is a significant difference between girls who ever heard on Menstruation before and after menarche.
- Pair wise Correlation where a correlation matrix heat map was visualized in Jupiter lab in python (within Anaconda Navigator) to observe strength and direction of relationship between students' performance, age and years experienced menstruation. Linear regression model were not established due to multi collinearity of independent variables i.e age and years experienced menstruation were highly correlated ($r=0.73$).
- One-way ANOVA. This were conducted to observe whether there exist mean differences amongst schools and school categories i.e Government Urban, Government Rural and Private schools (Attached appendix VIII).
- One samples test of proportions to determine statistical significance of proportions related to several dichotomous variables in a data set.
- With regard to these statistical tests, comparison of the groups and influence of Independent variables to Dependent variables were determined.
- Logistic regression. This were conducted to observe as to what magnitude does students' class and mothers' levels of education influence MHHM understanding among girls students. With respect to this, Pearson and Hosmer-Leme show goodness-of-fit tests for the logit model were conducted ($p=0.26$ and 0.67 respectively), hence a model is a good fit. Outputs are attached as appendix VII.

3.8 Ethical issues

Ethical consideration coupled with confidentiality of gathered information is unavoidable in any evaluation study. Participants' willingness is essential and their identities should be kept anonymous. In this evaluation study, these considerations were met.

3.9 Permission from Authority

The evaluation proposal was submitted to Mzumbe University and Muheza District Council to be reviewed before data collection begins. The approval was given from both sides before the data collection process begins.

3.10 Informed consent

All the participants of this study were well informed about the data collection process and were willing to participate themselves. Heads of schools were given paper to sign as proof of their willingness to allow this study to be conducted on behalf of students. None of the students were unwilling to be involved in this study.

3.11 Confidentiality and anonymity

An evaluator or researcher is obliged to respect the study participants and the location of the researcher. After offering information all participants must remain undisturbed, ensuring their privacy was observed and security ensured (Creswell, 2003). All the information gathered from the study are going to be treated with high confidentiality. A report will only be used when authorized by Mzumbe University.

3.12 Possible limitations of evaluation

- i. Limited accessibility to rural schools. This were evident in Amani division route where accessibility to Shebomeza secondary school were a bit challenging due to road infrastructural challenges. Researcher and his assistants opted the use of Bodaboda (Motorcycle) to face the challenge.
- ii. Poor cooperation from private schools. This led to non-granting of permission from Alhuda SS
- iii. The study was conducted in Muheza District where water is still a challenge to most schools and households as whole. This being a big among the factors

of hygiene practices the results might not be transferred to schools with availability of water.

Figure 3.9 A picture showing Ubembe and UWAMA areas infrastructural obstacles towards accessibility to Shebomeza secondary school in Amani Division.



Source: Research findings, 2019 (Photographer: Mr. Rasmo Msabaha i.e Assistant)

CHAPTER FOUR

RESEARCH FINDINGS

4.1 Introduction

This chapter presents study findings that emanates from qualitatively and quantitatively analyzed data based on explorations concerning Evaluation of School Water Sanitation and Hygiene program in secondary schools whereby the purpose was to ascertain whether Menstrual Health, Hygiene and Management related challenges are adequately addressed at the welfare of schoolgirls in Muheza District from Tanga region located at eastern zone of Tanzania in East Africa.

The study was a concurrent mixed method with analytical cross-sectional study design where a formative evaluation approach was employed. Eight (8) private and government secondary schools were purposely selected to be involved where 503 respondents were involved out of which, 458 girls were used as quantitative sample while forty two (42) girls students were selected for in depth interviews out of quantitative sample, five (5) FGD's each comprised eight (8) girls students, three (3) FGD's for boys each comprised eight (8) students, sixteen (16) teachers and five (5) District Managers were used in this study as a part of qualitative sample.

4.2 Respondents characteristics

On the side of female students who were the main concern of this study, an evaluator made considerations on age, students, class, mothers' education levels, Fathers' education levels and mothers' occupations/Livelihood activities as crucial and influential characteristics in as far as Evaluation of SWASH in the area of MHHM is concerned. The detailed description of these characteristics/variables is indicated in Table 4.1 below.

Table 4.1: Characteristics of respondents

Variables	Groups	Frequency	Percent (%)	Cumulative Percent (%)
Age groups	11 – 14	107	23.36	23.36
	14 – 17	212	46.29	46.29
	17 and above	139	30.35	30.35
Class	Form I	64	13.97	13.97
	Form II	162	35.37	49.34
	Form III	122	26.64	75.98
	Form IV	110	24.02	100
Mothers' education	College/University	83	18.12	18.12
	Primary	344	75.11	93.23
	Secondary	22	4.8	98.03
	None	9	1.97	100
Fathers' education	College/University	50	10.92	10.92
	Primary	399	87.12	98.03
	Secondary	6	1.31	99.34
	None	3	0.66	100
Mothers' Occupation	Business	119	25.98	25.98
	Farming	232	50.66	76.64
	Government	78	17.03	93.67
	Private	28	6.33	100

Source: Field data 2019

4.3 Secondary schools' adherence to stipulated SWASH menstrual management requirements

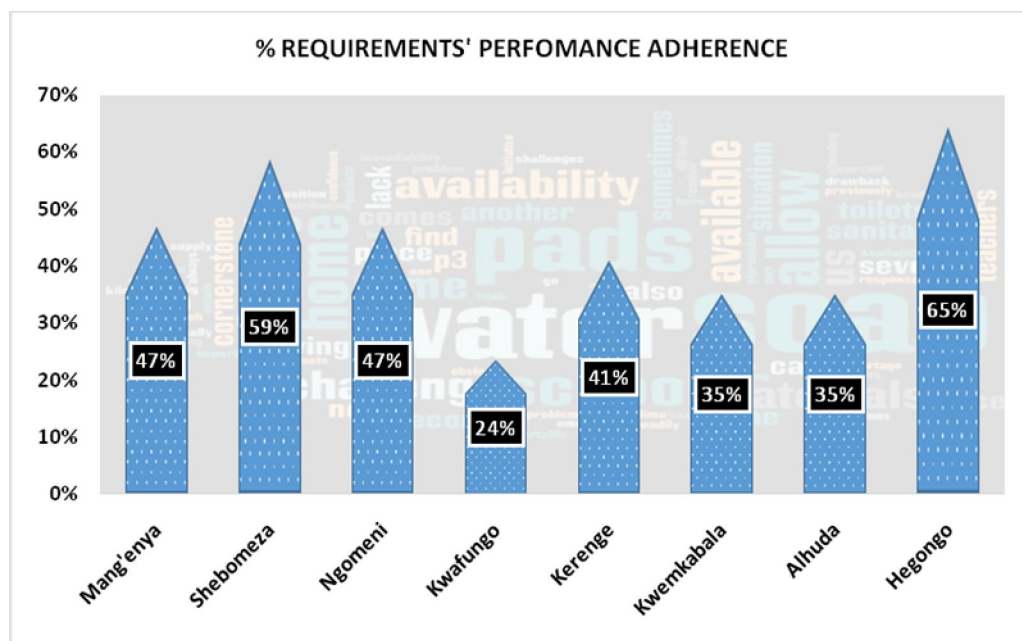
In regard to adherence to MHHM requirements, several aspects that are envisioned in SWASH guidelines were taken into account (See attached appendix VII), these were more or less related to infrastructural requirements, availability of guidelines, availability and activeness of School WASH clubs with MHHM based activities and sessions as well as MHHM operations and maintenance as whole.

It was found that no school has met all requirements set in the guidelines, bad enough only 2 schools i.e Shebomeza and Hegongo has at least met half of the minimum requirements in the checklist. As per study findings, requirements that were 100% met are; Availability of girls' toilets, wall front of latrines and presence of guidance teacher on MHHM but none of the schools had reserved space for pads in toilets, incinerator near latrine and Growth and changes guidance for MHHM and

puberty knowledge impartation. The rest of the elements' scores range from 18% to 88%.

A column chart below shows the aggregate percentage performance score for each school based on adherence to 17 elements enlisted in an observation checklist on envisaged requirements.

Figure 4.1: Performance scores for schools' adherence to minimum MHHM set standards



Source: Field data, 2019

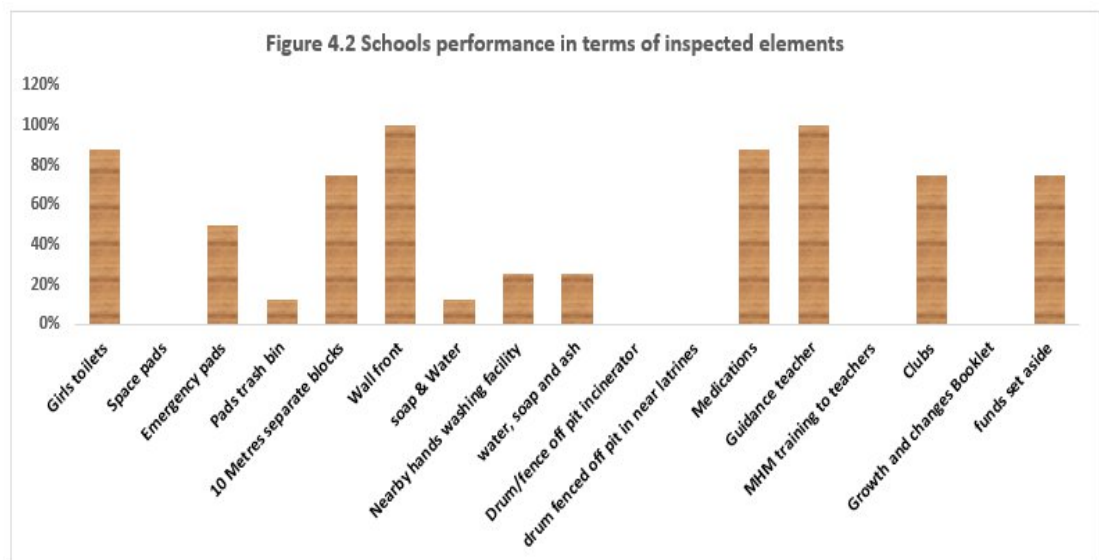
Hence as shown by the figure above, the performance of Hegongo and Shebomeza Secondary Schools seems relatively higher as compared to its counterparts. The worst performance is observed at Kwafungo Secondary School with a percentage score of 24%.

4.3.1 Performance on inspected elements

Seventeen (17) elements were taken into account for observation checklist, among the elements 0% percent were observed in the availability of space for pads, availability of incinerators as well as growth and changes booklet that may serve as a guideline for puberty and MHHM knowledge impartation. 100% score was observed

in the availability of girls' toilets, wall front of the door and availability of guidance teachers. In other elements, the scores range from 12.5% to 87.5% (see attached appendix VII to see adherence to each element and performance by each school). The column chart below visualizes the performance of schools as whole on inspected elements:-

Figure 4.2 Schools performance in terms of inspected elements



Source: Field data, 2019

4.3.2 Students per hole ratio

The official Government standard is 1:20 and 1:25, for girls and boys respectively but initially this could be 40-50 in order to alleviate the urgent demands as reflected in MKUKUTA II (SWASH guideline, 2016 pg. 12). Hence for girls it is required that one latrine is shared by 20 students.

But in Muheza DC, students' latrine ratio per hole is a challenge indeed the mean ratio for all schools is 53 girls' students per latrine. The challenge is tremendously high in government schools.

As it can be seen, all government schools (Mang'anya, Shebomeza, Ngomeni, Kwafungo, Kerenge, and Kwemkabala) have poor performance(> 20 girls per pit hole) as per what is envisaged Toolkit 1 i.e Assessment and Monitoring Tools for School WASH. This is not a case for private schools (Alhuda and Hegongo) which are both good performers with a ratio of 18 and 5 students per hole respectively.

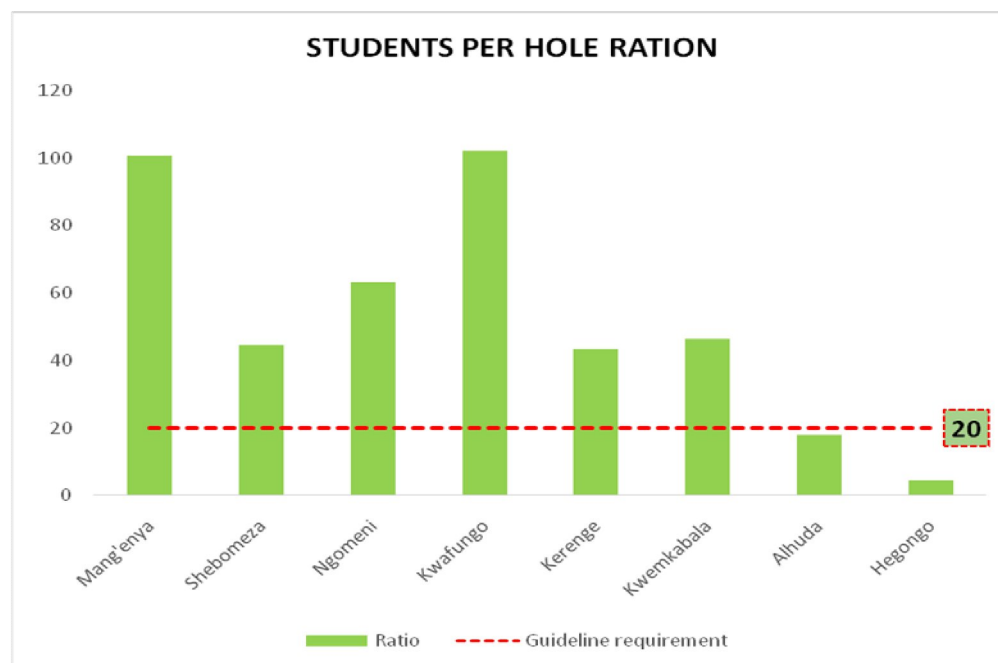
With this challenge in government schools, queuing in toilets among school girls becomes eminent. The worst situation is observed in Kwafungo and Mang'anya secondary schools with 102 and 101 students' ratio per latrine respectively. The situation in Kwafungo is worst to the extent that, both girls and boys share the same toilets with only one (1) pit hole.

School matron from Kwafungo SS was quoted saying;

“ erm...to be honest, it's obvious that students are really facing challenges. You can't believe that boys' toilets are damaged, hence we only have girls' toilet with only one pit hole, and this brings about queuing among girls and boys in the same toilet. With this situation, we see it's better to allow them going home while at menstruation because the environment is unsafe for their management.”

As assisted by Stata 13, a one-sample test of proportion conducted revealed that with overwhelming evidence to reject Null hypothesis that proportions are the same ($p < 0.01$ with 95% C.I 0.1 – 0.2), approximated 0.18 (18%) is the proportion of students who are satisfied by school environment while at menses leaving 0.82 (82%) dissatisfied. The figure below shows adherence to this requirement in all eight (8) schools.

Figure 4.3: Shows number of students per one hole, private schools i.e Alhuda and Hegongo have performed well as per SWASH guideline requirements.



Source: Field data, 2019

4.3.3 Availability of SWASH clubs and guidance teachers

All government schools have guidance teachers on MHHM issues but private schools do not have SWASH specific teachers, rather school matron have roles to play on the issue. None of the teachers in both government and private schools underwent any training on MHHM as it is envisioned in the project guideline.

School health clubs and clubs of FEMA and Girl Guide are operating in government schools in both urban and rural. None of these operates in private schools.

A matron from one of the private schools was quoted saying: -

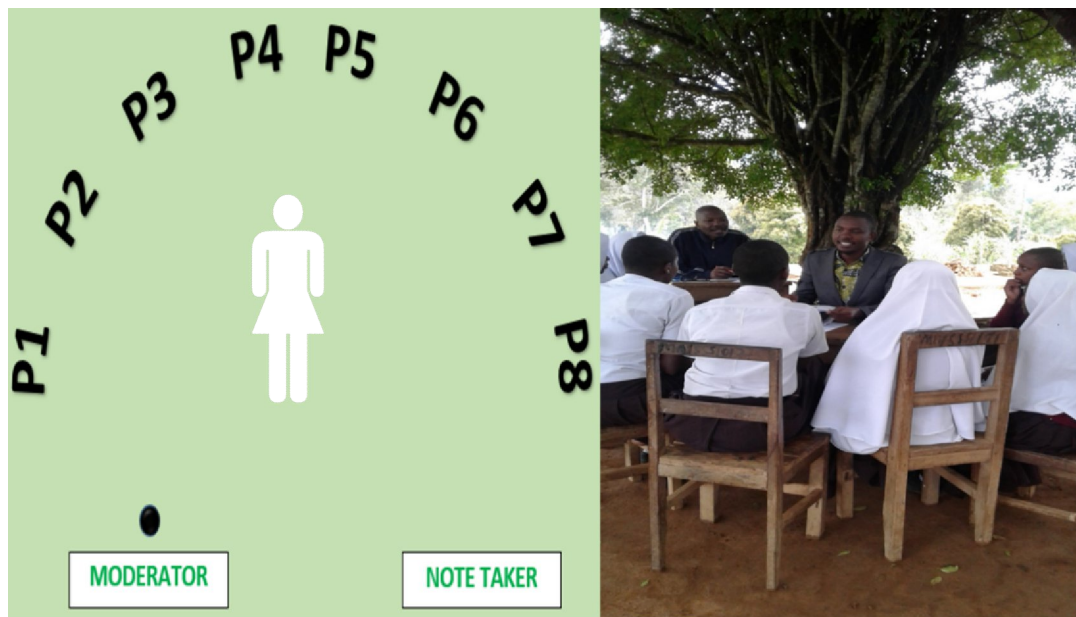
“You know, its very sad that the clubs are not emphasized in our schools. In government schools the emphasis is high and we always see different stakeholders coming to emphasize on issues related to puberty and MHHM in our neighbor government school but not to us as if our students do not have the right to access such education. Few days ago, there was Menstruation day commemoration but stakeholders concentrated on that neighbor school and we didn't know anything that is going on. I advise that emphasis should

be put to both of us since children are all having equal right to access such education.”

Nevertheless, with conducted in-depth interviews and FGDs, students complained that, clubs are largely inactive as compared to previous times since teachers do not impose strict rules in regard to non-attendance, therefore students’ attendance to clubs is very weak. On top of that, discussions on MHHM issues on how girls can manage themselves during menses are rarely in place, hence MHHM issues are occasionally discussed in class sessions and in rare times as determined by particular situations.

All clubs are operating in a particular day, students belong to clubs of their interests, and hence it’s not a necessity that they must be members of health clubs where awareness on health issues including MHHM will be created on them. Students suggested that, it should be a must that all girls participate and become members of health clubs and other clubs of FEMA and Girl Guide so that even when MHHM education is provided, accessibility will be to all of them.

Figure 4.4 A focus group discussion with students at Shebomeza Secondary school



Source: Research findings, 2019 (Photographer: MS Zena i.e School health teacher)

Figure 5.4 shows a FGD at Shebomeza SS where sound discussions on MHHM issues were held, several challenges were identified and ways forward were suggested by students themselves.

4.3.4 Latrines set up and operations

As per SWASH guideline 2016 provision, it is required that each school should have separate latrine blocks for girls and boys. These blocks should be a minimum of 10m apart for the purposes of privacy and security and should have a privacy wall in front of the doors.

In Muheza schools, all latrines are having front walls for the sake of ensuring privacy. With exception of Kwafungo SS of which both girls and boys share one pit hole, all other schools had reasonable distances between girls and boys toilets (More than 10 meters apart as per guideline requirements).

But in some schools toilets had neither slabs nor water inside latrine and toilet floor seemed hard to clean. With the exception of Hegongo SS, neither soaps, space for keeping pads and pads disposal bins were observed to be found in all schools.

With all these challenges it becomes hard for the schoolgirls to attend classes as one of the students were quoted saying;

“I am not comfortable to cming to schoool due to several challenges related to MHHM such as lack of water, poor sanitation situation and lack of facililties”

Figure 4.5: Latrines situation in government schools



Source: Research findings, 2019 (Photographer: Principal Evaluator)

As it is shown above the toilet has no slabs with no containers or with containers but without water and poor internal arrangements, this was observed in Ngomeni SS

But in private schools, the situation is a bit good since the infrastructures of the latrines are satisfactory. Toilets are clean and no smell is being detected in latrines, moreover, adequate water supply was in place with some adhered internal arrangements as per guidelines like a trash bin for pads disposal, special arrangements on disposing of sanitary pads based on students' cleanliness duty roster where students on duty are responsible for collecting and burning used sanitary pads.

Figure 4.6: Interior latrine operations and setups in Hegongo and Alhuda (Private schools)



Source: Research findings, 2019 (Photographer: Principal Evaluator)

Above figure shows, interior setup of private schools' latrines i.e Alhuda and Hegongo SS; is satisfactory since, they have at least met some guidelines requirements such as hands washing facilities, toilets cleanliness and pads disposal bins. This is a good practice and it should be maintained.

4.3.5 MHHM training to SWASH coordinators and school health and nutritional teachers

The guideline provides that SWASH coordinators and teachers are to be trained on MHHM with a package and modality that will be suitable for training girls at school. But none of the training was conducted to coordinators from district to school, none of the teachers had been trained on MHHM issues, therefore knowledge impartation to girls relies on female teachers' womanhood experiences.

District coordinator were quoted saying;

“No training ever conducted to us, therefore we can't impart anything to teachers. On 28th May 2019 there was a world menstrual day, we were told to make preparations. We did not even know what to do. In our region it was fortunate that one of coordinators from Handeni DC participated in MHHM training but she struggled to organize us for knowledge impartation but her efforts became unsuccessful.”

Regarding this issue, Ngomeni secondary school teacher was also quoted saying; *“We have never been trained on MHHM and we do not even have any guide, we train them based on our own experiences since we are also women”* With this prevailing situation, students cannot be imparted with adequate knowledge with a relevant package to them. With no MHHM specific lessons trained to students, practice and understanding level on Menstruation and menstrual management is expected to be an obvious challenge.

4.3.6 MHHM training to school boys

As stipulated in the guideline, knowledge impartation is to be extended to schoolboys as peer community to girls at school. But with gathered findings, knowledge on MHHM to boys is only obtained through class lessons in Biology subject as a portion of form three (3) topic namely reproduction of which MHHM issues are not adequately covered.

Moreover, when a need arises to impart knowledge on girls especially newly coming Form one (1), girls are called separately, hence boys are normally being disregarded. This implies that those who have not reached form three can never access the knowledge, even those who access knowledge through the reproduction topic in form three (3) it is not adequate to sharpen their understanding and awareness on MHHM.

4.3.7 MHHM Facilities and operations related challenges that girls face at school

While at school girls face several challenges mostly related to the shortage of facilities such as soaps, sanitary pads, water, poor infrastructures, and many others. With these existing challenges, it becomes hard for them to manage their periods while at school.

One of female students was quoted saying that:

“Here in school you can’t access soap and water, this necessitates us into coming with our own soaps from home. Sometimes soaps are there but you have to go and beg from matron for you to use it. Stated reasons are that, when soaps are left in toilets, students have a tendency of taking it away.”
(Student from Kerenge SS)

Another challenge that prompts towards pronounced non-adherence to requirements was observed to be a lack of enough funds located for school health promotion and rehabilitation, but school administration had to influence parents to contribute some small amount of funds to cover some gaps. But since government restrictions came about, all contributions were banned and therefore previously existed challenges returned into being.

One of headmaster were quoted saying;

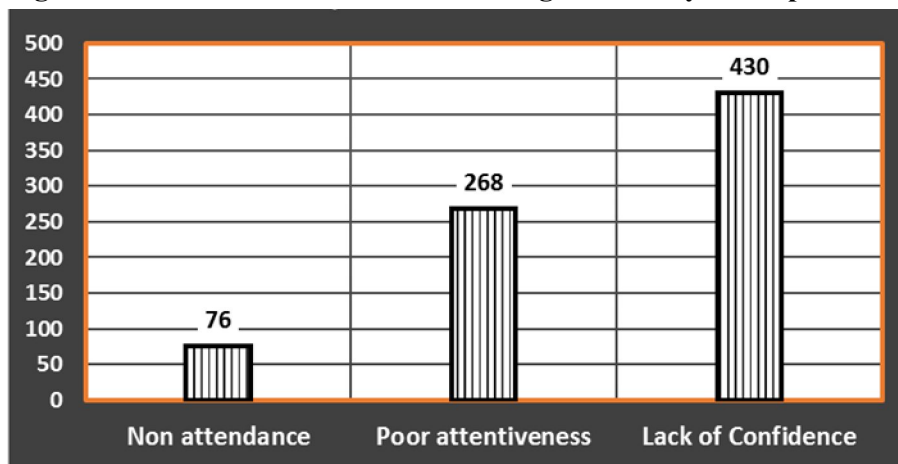
“You know, earlier we used to mobilize contributions to our students regarding challenges like rehabilitations and water supply shortage. Here in school students are forced to go more than 3 kilometres to fetch water. For this case we decided to organize 100/= contribution at each month to every student, this amount is relatively affordable to parents but since restrictions came into being, all contributions had to be banned and the challenge that we tried to escape has come again.”

4.3.7.1 Poor MHHM resulted challenges that may affect academic performance

As a result of above mentioned challenges, Students' attendance, attentiveness and confidence in class are highly affected. Prevalence of all these has negative effect in as far as performance in class is concerned.

After being asked a multiple choice question (select many), students' frequencies on such challenges is visualized by Figure 4.8 below: -

Figure 4.8: Poor MHHM resulted challenges that may affect performance



Source: Field data, 2019

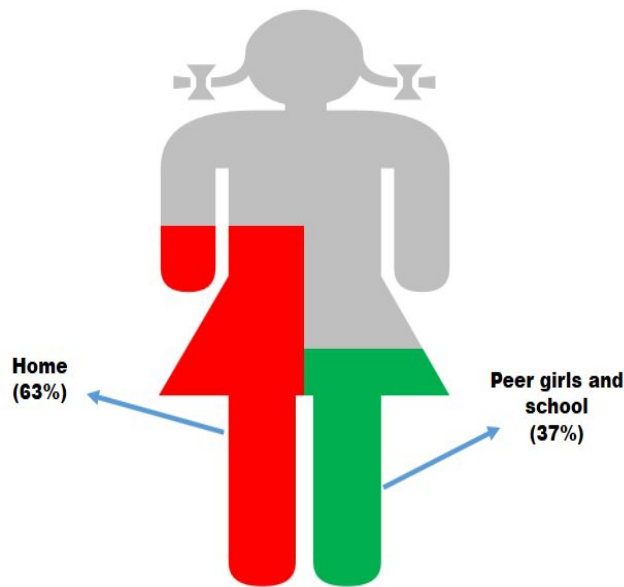
As shown by a figure above, lack of confidence is the highest frequency. This has an impact on students' performance as resulted from their dissatisfaction on school environment which is coupled with lack of water, dilapidated infrastructures and sanitation facilities.

4.4 Level of menstrual health and management understanding among school girls

4.4.1 Students MHHM experience

All surveyed 458 students had already had their menarche with the age range between 12 to 17 years. Among these respondents, 290 students (63.3%) learned on menstruation at home, 87 (19%) at school's sessions and 81 students (17.7%) from fellow peer girls.

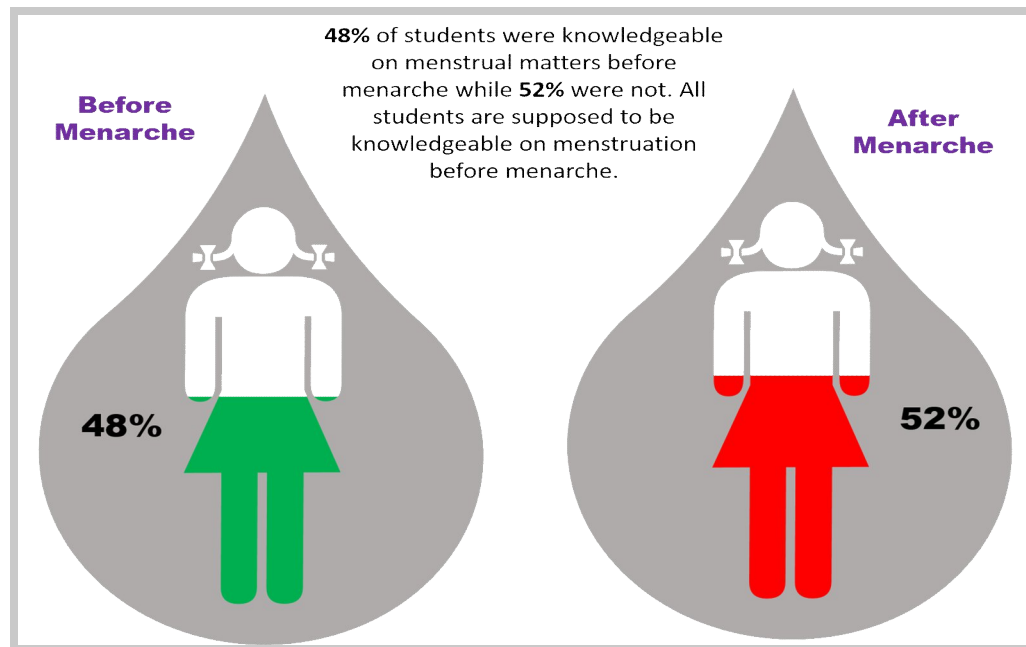
Figure 4.9: An info graphic design showing the place where girls had learned about menstruation, as it is shown, most of them have learned it at home.



Source: Field data, 2019

Moreover, the SWASH guideline (2016) emphasizes on adequate impartation of MHHM knowledge to girls before their first menstruation (Menarche). All girls are to be aware and have insights on MHHM before the onset of Menstruation. But as per findings, many students (52%) learning succeeds first menstruation as most of them had learned on it after their first menstruation and it seemed so strange to them, only 48% did not perceive menstruation onset strangely.

Figure 4.10: MHHM learning among female students`



Source: Field data, 2019

An info graphic figure above shows the time when girls had learned about menstruation, as it is shown, most of them have learned after Menarche.

One of students was quoted:

“At the first day I was at home and it was during night. When I woke up in the morning I was shocked of blood spill in bed sheets, I was so worried and didn’t know what to do. I cried so loud thereby my mother came and I told her on what happened to me. She then sent me to my aunt and grandma who looked so happy and instructed and told me that I am now a grown up woman” (Girl from Shebomeza SS)

Another respondent who were aware on the state quoted saying:

“I remember, it happened to me at the holiday time while in form one. Since i was already taught in class it was never a problem to me. i asked my mom money pretending it is for buying open rubber shoes and hence went to buy sanitary pads in shop. Eight months passed before telling my mother on the state.” (student from Kerenge SS)

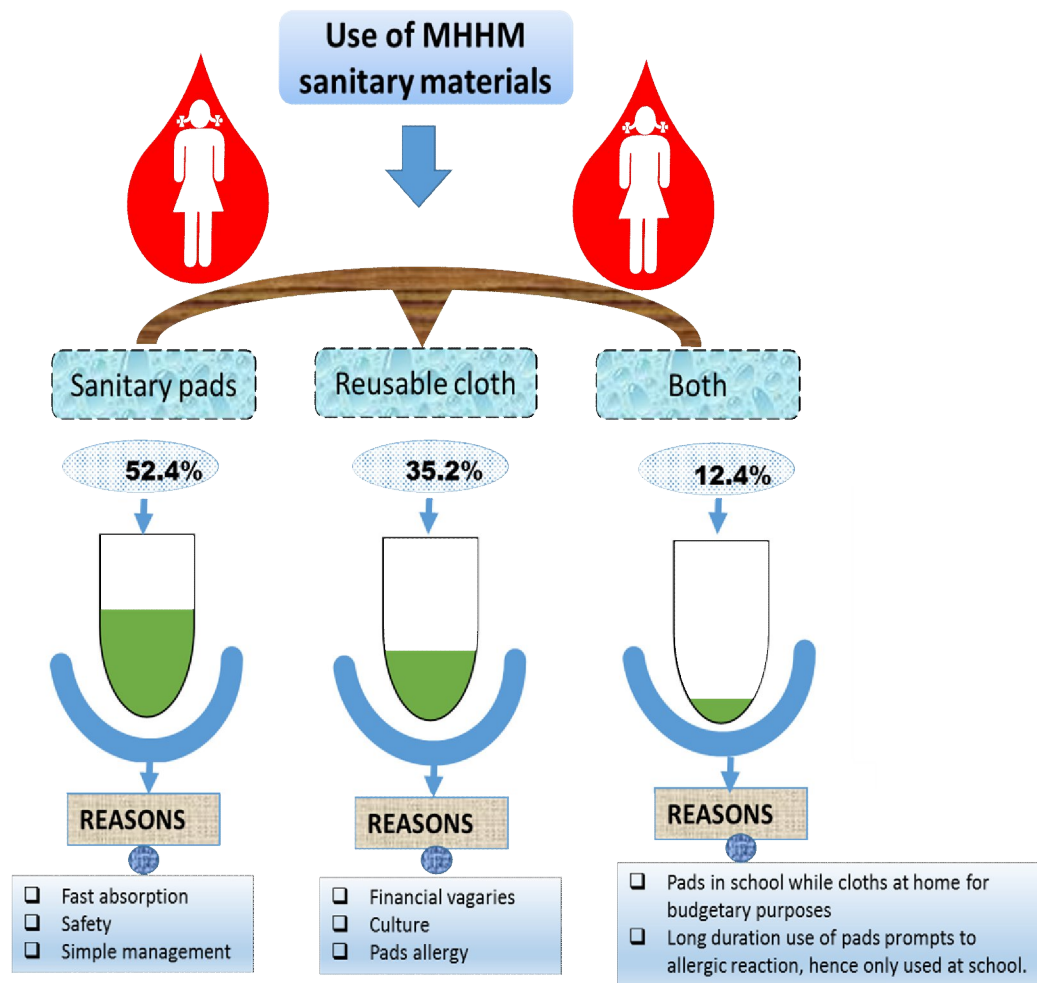
Hence, menstruation is still not regarded as normal in the sense that, students who know about it, they cannot become free to share menstrual situation even to their parents. Despite low knowledge on MHHM, school girls' perception of menstruation is still a challenge that's why some of those who are knowledgeable are not at free will to share it even to their parents.

4.4.2 Menstrual Sanitary materials used by students

Menstrual sanitary materials are the ones that are used by girls and women as a whole to manage menstruation. These entail sanitary pads, tampons, tissues, cotton wool, special cloth pieces, menstrual cups and cloth pieces out of torn out clothes.

In Muheza all students use or have ever used sanitary pads and homemade cloth pieces. But most of them use pads, followed by cloth pieces and others uses both sanitary pads and clothes pieces as proportionally shown in a figure below: -

Figure 4.11: Diagrammatic presentation of sanitary materials used by students in Muheza District



Source: Field data, 2019

When asked about reasons for using sanitary pads, students said that it's more ideal to use it since it absorbs menstrual leaks more effectively compared to other sanitary materials.

One of respondents was quoted saying;

“Sanitary pads are good and comfortable to use since it promptly absorbs menstrual leaks unlike pieces of cloths. I feel safe with using pads than cloths” (Student from Ngomeni SS)

Students who responded on the use of homemade cloths gave several reasons embracing cultural issues (1.9%), pads ineffectiveness (8.6%) and cost implications (89.5%).

Respondents quotes:

“I like using sanitary pads but I fail to do so because my grandma has got no money to buy it for me, therefore I cut pieces of cloths from old khangas and use it” (Respondent from Kwafungo SS)

Another respondent:

“My grandma restricted me from using sanitary pads because when I use it and dispose it, I will not be able to get pregnancy later” (Kwafungo SS student)

4.4.3 The role of government and development partners towards sanitary pads accessibility

As it is observed from the findings, most of the students who use homemade pieces of cloth are not happy because they are forced to use it due to financial challenges prevalent in their families. That’s why the government through the ministry of finance withdrew Value Added Tax for sanitary pads in order to enhance accessibility to sanitary pads at cheap prices.

Minister for Finance in URT were quoted saying:

“I suggest withdrawal of VAT for sanitary pads for the financial year 2018/2019, the aim of this step is to enhance accessibility of this important product at a more affordable price for the sake of protecting health of women and girls especially those who are in schools and rural areas. It is a governments’ expectation that sellers will sell them at cheap prices after this exemption. Whatsoever, the government is going to waste Tshs 219.1 million”

Some other initiatives by private organizations were in place, a good and most widely known is an initiative namely “*Msichana Initiative*” which means “*Girls’ Initiative*” with a slogan of “*# Namthamini*”, a Swahili word meaning “I value her”. This was a campaign organized by East Africa Television (EATV) in collaboration with East Africa Radio to donate sanitary pads to 1500 young girls in Tanzania, the campaign was launched on 6th March and ended on 31st March 2018 for the commemoration of international women’s day.

Figure 4.12: A poster for Msichana initiative



Source: msichana.or.tz, 2018

As shown by a figure above, the Msichana initiative had the aim of enhancing accessibility to sanitary pads among school girls. This is an important step towards achieving better health, attendance and consequently performance in schools among female students.

4.4.4 Implementation of tax exemption step by government

4.4.4.1 How far has it gone?

In the course of implementation of this governments' decision, sanitary pads retailers seemed to be unfaithful since most of them took it for granted as they did not lower the price of sanitary pads.

This being a case, the government of the United Republic of Tanzania had to revert its previous decision of tax exemption for a financial year 2019/2020.

Minister for Finance, Dr. Philip Mpango, during a presentation of 2019/2020 budget estimates for revenues and expenditures on 14 July 2019 in Dodoma said;

“The government has decided to remove VAT exemption for sanitary pads, this is all because it has not led to affordable accessibility of the product to targeted individuals as envisioned by the government but instead it is beneficial to sanitary pads producers who did not reduce the price”

4.4.4.2 Reactions from community and civil society organizations

After the government decision to remove VAT for sanitary pads, individuals and civil society organizations rose against such a decision. It was claimed that menstruation is determined by nature and not willing, why would VAT be imposed on it? It was, therefore, suggested that, instead of re-imposing VAT on sanitary products, measures should be taken to enforce sanitary pads retailers in as far as adherence to lowering prices is concerned.

Some quotes from social networks about this include:- *“Its not right. We as women didn't Ask for this. If it's for anything it should be free from the first place”*
(Facebook subscriber)

“All women deserve the right to have access to pads that we have no choice in and especially if it's for the better of our healthcare and hygiene”
(Facebook subscriber)

Hence, concerning this challenge, a petition was rose. The aim is to mobilize communities towards advocating the withdrawal of VAT for sanitary pads.

Figure 4.13: A petition rose against VAT imposition on sanitary pads



Source: changetanzania.org, 2019

As above figure shows the term “pedi bila kodi” is a Swahili phrase entailing “pads without tax” This were established as a demand for government to rethink on the its decision.

4.4.5 Level of MHHM understanding

4.4.5.1 Performance of schools

To assess the level of MHHM understanding an evaluator had to establish a list of 15 questions based on YES/NO responses of which all respondents were asked to respond. The questions were established based on SWASH guideline (2016) and a booklet on puberty namely Growth and Changes.

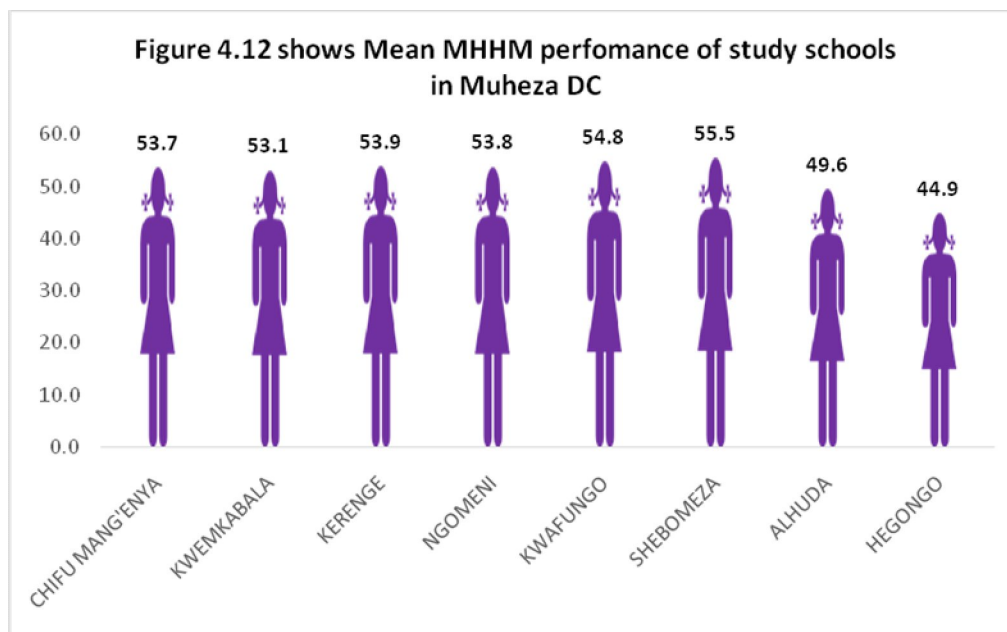
At the end responses for each respondent were calculated for proportions and percentage scores based on right responded questions as numerator and total number of asked questions as denominator.

Calculated proportions were re-coded in Stata/IC 13.0 and hence turned to Dichotomous categorical variables of “YES” when the score is greater than or equal to 50% and “NO” when its less than 50%. A researcher considered 50% as a floor for good performance since it is at least half of a desirable score i.e 100%.

As per findings, all eight government rural, private and government urban schools had a mean performance score of 53.4%.

Scores for individual schools entails, Chifu Mangenya (53.7), Kwemkabala (53.1), Kerenge (53.9), Ngomeni (53.8), Kwafungo (54.8), Shebomeza (55.5%), Alhuda (49.6%) and Hegongo (44.8) whereby $prob>F=0.15$, *Bartlet test for equal variances: $chi^2(7)=13.5962$ with $prob>chi^2=0.059$* . After conducting oneway ANOVA test (Consider Appendix VIII), data was visualized as shown by Figure 4.11 below;

Figure 4.14: Column chart showing schools mean performance among girls students in Muheza



Source: Field data, 2019

4.5 Peer support of school boys on adolescent girls' menstruation

4.5.1 Guideline provision

SWASH guideline (2016) emphasizes that teaching and sensitizing boys about girls' need for privacy, respect and support during their monthly menstruation is important to minimize teasing and mocking that may occur.

Hence: the Support of schoolboys is of paramount importance in as far as school girls' welfare at menstruation is concerned. A good understanding of what menstruation is all about is of importance to enhance their support to school girls at a time.

But in schools, school boys are not considered in MHHM knowledge impartation. The only expectation is a reproduction topic from Biology subject in form III that's why most of form one (1) and two (2) were a bit unaware on menstruation. This is a challenge in deed, since boys awareness and knowledge on MHHM as whole is not

guaranteed, hence with this challenge avoiding teasing/mockery may not easily be achieved as SWASH project envisions.

In an FGD conducted at Shebomeza secondary school, one of schoolboys in the group were quoted saying:

“We have never been taught on Menstruation as a specific lesson in class unless with Biology while in form three. May be girls are taught because it is concerning them because most of the times are called by matron and we as boys are left in class, they come back after some time.”

Regarding to this, a matron from the Hegongo Holy Cross secondary school, had a constructive suggestion on this. She advised that, MHHM issues should be integrated in subjects like English and Civics as passages and burning issues where all students should participate in answering questions, this will enforce both boys and girls to learn on menstruation and hence have a desirable level of understanding.

She was quoted saying:

“You know, thank you for your reminder that boys also need to have knowledge on the matter. I would advise that: in order to enhance menstruation understanding among both girls and boys at once is to establish questions related to it vital exams like English and even Civics. Since I am English teacher, in some terminal and annual examinations, I will be composing a passage enriched with all menstruation basics for students to comprehend and respond to questions”

4.5.2 School boys support to girls

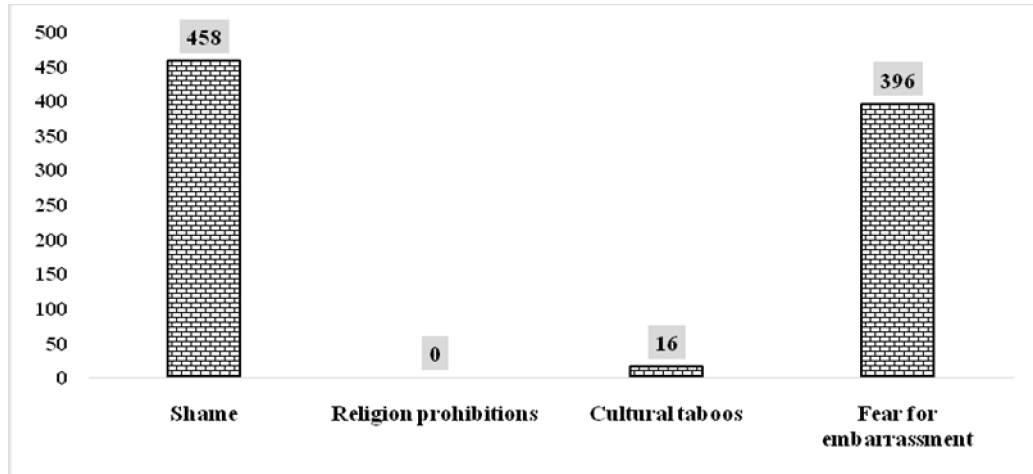
According to findings, none of 458 surveyed school girls mentioned boys as supporters during their menstruation, rather all of them responded that its only teachers and peer girls who are giving them support during menstruation.

4.5.3 School girls’ willingness to share menstrual situation to boys

Only 12 out of 458 school girls responded as willing to share with some boys in case of emergency and non-availability of peer girls, rather the rest of them revealed to be unwilling to have shared their menstrual situation to boys in whatever situation.

Several reasons were given as prompting to such lack of willingness to share menstrual situation to boys, these are summarized in a figure below:

Figure 4.15: Reasons for School girls' lack of willingness to share menstrual situation to boys



Source: Field data, 2019

Hence as shown by a figure above, schoolgirls cannot share menstrual situation to boys more specifically due to shame (all of them) and fear of embarrassment (396 of them).

Nevertheless, it was reported that girls are being restricted to share their menstrual situation to boys since, when boys know that a girl is already at menses, it will persuade them to be involved in love affairs with a girl.

It is even considered unethical to allow boys or any male to see a menstrual cloth and hence, are not exposed to direct sunlight.

The following quote from a school girl evidences this;

“My grandma told me not to tell boys on menstrual situation since they will want to have sexual contact with me, she also told me that it is a taboo to allow boys to see the cloth, if that happens they will automatically know that I am already grown up.” (Student from Kwemkabara SS)

Hence male parents and siblings are always being escaped from either knowing menstrual situation or seeing the cloths. In this case, homemade menstrual clothes are normally kept inside the room at a hidden place. This is a challenge indeed since even fathers' and siblings' support will never be guaranteed.

One of respondents was quoted saying:

“Eeeerm, of course we are not allowed to expose our menstrual cloths to be seen by anybody, my mother told me that I should always hide it so that my father and two brothers don’t see it.” (Student from Alhuda SS)

The non-exposure of reusable cloths to direct sunlight prompts to lower suitability for its use provided that most of them do not consider ironing of the cloth for suppressing bacterial and fungal infections.

4.5.4 School boys training on MHHM issues

Findings denote that, training on MHHM seems to be more focused on school girls themselves and not boys. When specific sessions are held, girls are being called separately in the absence of boys and menstrual issues are referred to as “Girls matters”. The only expectation for boys to acquire the knowledge is through class sessions with the only hope of reproduction topic in form three (3) which also does not cover the content of MHHM as exhaustively as per existing knowledge gaps.

One of school boys was quoted saying;

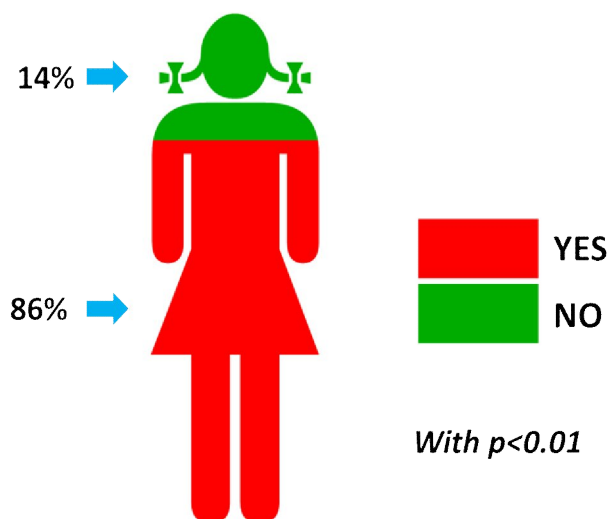
“On the issue of MHHM, only girls are being called and instructed by school matron in our absence, we have never been just taught on MHHM issues perse unless its part and parcel of subject package such as in reproduction topic” (From Shebomez SS)

4.5.5 Teasing/embarrassment experience from boys

Teasing from schoolboys is one of the reported challenges in many studies. According to (Pillitteri, 2012) Physical and verbal bullying were one of the main grievances of girls interviewed in Malawi. This same case applies in many Tanzanian schools including Muheza schools since findings suggest that, teasing and embarrassment from boys are highly prevailing among girls.

A column chart below shows the extent to which the problem exists.

Figure 4.16: Girls experiences on teasing/embarrassment



Source: Field data, 2019

As shown by the figure above, the teasing experience is a huge problem in Muheza district since 0.862 (86%) is the proportion of students who experienced or ever observed embarrassment from schoolboys to girls at menstruation ($P < 0.001$)

One of girls were quoted saying;

“It once happened that, there were some menstrual leakage in girls’ skirt, all boys were laughing at her but she didn’t know about it as it were strange to her. Some girls who ever experienced it took her to school matron where she were given emergent sanitary pads for management and allowed to go home.” (A girl from Ngomen SS)

On the other hand, girls themselves are not self-aware and determined, since when a fellow girl experiences embarrassing menstrual leakage they also become part and parcel in laughing together with boys. Hence with this situation, it’s a bit hard for boys to take the matter as serious and normal as it is.

Ngomeni SS head girl quoted:

“Changes should start with us as girls, girls ourselves are not considering this matter as sensitive. In several circumstances I have ever observed, you will find that when a girl’s menstrual leakage is exposed in public, girls are also laughing instead of helping their fellow girl to escape from such a shame”

4.6 Influence of socio economic and geographic factors towards the state of menstrual health and management.

4.6.1 Geographical location and school category as determinant factor towards MHHM

This study involved eight (8) schools which were purposively selected based on their location (Urban/Rural) and ownership (Government/Private).

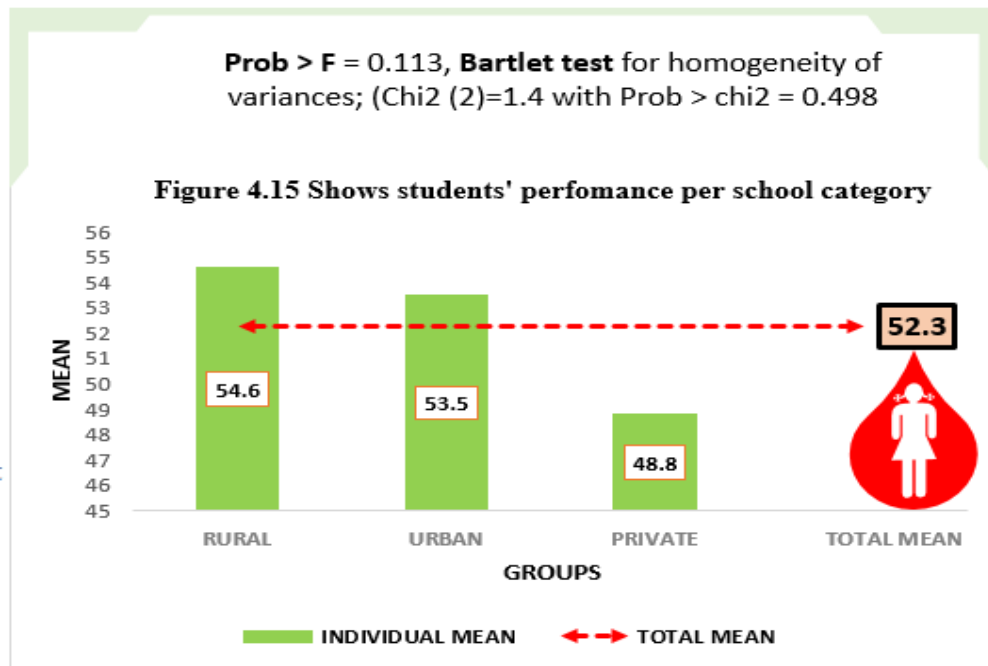
Hence for this study, schools were categorized as follows:-

1. Government Urban. These are the ones that are owned by the government and are located in Muheza urban areas at Muheza division. Schools that were included in this category for this study entails Chifu Mang'anya, Kwemkabara as well as Kerenge Secondary schools.
2. Government rural. These are the ones that are owned by the government and are located in Muheza rural areas at Amani division (Shebomeza secondary school), Bwembwera division (Kwafungo Secondary school) and Ngomeni division (Ngomeni Secondary school).
3. Private schools: These were the non-government owned schools, In Muheza all co-education private schools are religious-affiliated. Hence it deemed necessary to consider one Christian affiliated school (Hegongo secondary school) and one Muslim affiliated school (Alhuda secondary school) for the sake of representativeness consideration.

The intention of this disaggregation was to observe whether there is an existence of any differences amongst these schools in terms of adherence to SWASH guidelines and MHHM levels of understanding among students. Explored differences would cater to the needs for rational decision making in as far as allocation of resources is concerned.

Hence according to findings, with one-way analysis of variances for students' (refer Appendix VIII), mean performance based on schools' categories i.e Government Urban, Government Rural and Private was observed to be 53.5, 54.6 and 49 respectively as clearly shown by a column chart below:-

Figure 4.17: Column chart showing students' performance per school category



Source: Field data, 2019

As observed from the above figure, the mean performance for government schools is greater than 50. This is not a case for private schools that had a mean performance of 49 which is less than 50. A major reason may be that, in government schools, the operationalization of school health clubs, FEMA and Girl Guide is highly emphasized which may have a significant outcome on imparting knowledge to students. This is not a case in private schools.

4.6.2 Relationship between performance vs age, years spent in menstruation

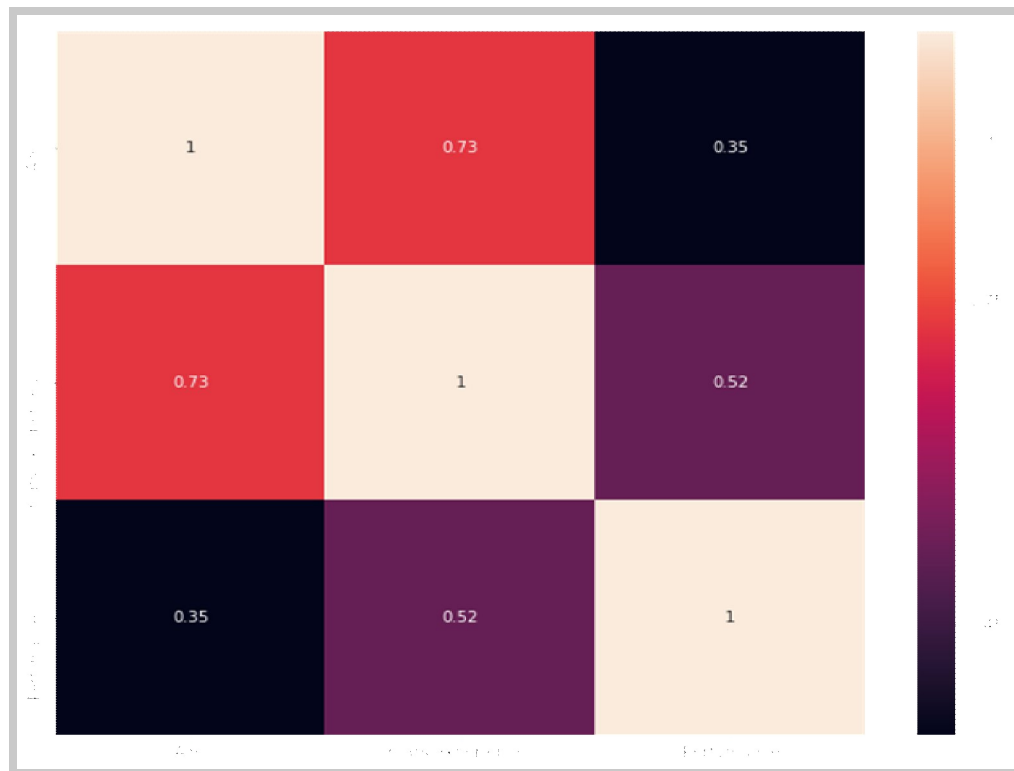
With a correlation matrix heat map visualized using Python Jupiter lab, Age was observed to have a weak positive relationship to students' performance (with coefficient of correlation = 0.35) but on the other hand, years spent in menstruation which was obtained by calculating the difference between students' current age and the age when menstruation started had also a positive (strong) relationship (with correlation of coefficients = 0.52). Such differences in strengths of relationships are because school girls reached their puberty age and hence menstruation at different

ages. Some of those started earlier (12 years of age) while others very late (16 years of age).

Therefore, with such a relationship, it implies that as the age of students and spent menstruation time increases, so students' performance does.

The figure below which is a correlation matrix heat map shows as to how the relationship is all about.

Figure 4.18: Correlation matrix heat map showing strength and direction of relationship between students' performance as dependent variable vs age and spent years in menstruation.



Source: Field data, 2019

4.6.3 Menstruation learning before and after Menarche

In the analysis, this was also taken into consideration whereby with a two-sample t-test, it was found that students who learned about menstruation before menarche had a good mean performance (54.9) compared to those who learned after it has begun

(52.1). This difference was statistically significant ($p < 0.05$). Stata output below shows these results.

Figure 4.19: A two sample test with equal variances on menstruation learning before and after menarche.

Two-sample t test with equal variances						
Group	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
BEFORE	219	54.85975	.8842317	13.08543	53.11701	56.60249
AFTER	239	52.10799	.8258595	12.76748	50.48106	53.73492
combined	458	53.42379	.6064907	12.97947	52.23193	54.61565
diff		2.751762	1.20862		.376607	5.126918
diff = mean(BEFORE) - mean(AFTER)				t =	2.2768	
Ho: diff = 0				degrees of freedom =	456	
Ha: diff < 0		Ha: diff != 0		Ha: diff > 0		
Pr(T < t) = 0.9884		Pr(T > t) = 0.0233		Pr(T > t) = 0.0116		

Source: Field data, 2019

Therefore, with above analysis it is obvious that early knowledge impartation on MHH is an influence towards MHHM understanding among girls.

4.6.4 Other determinant factors towards MHHM understanding

As told by the findings, students' class and mothers' or female guardians' levels of education have in one way or another influence towards MHHM understanding among girls' students.

Students performance numeric variable observations were recoded into categories based criteria shown by the function below: -

$$f(x) = \begin{cases} 0, & \text{where } x \geq 50 \quad \dots\dots\dots \text{Good performance} \\ 1, & \text{where } x < 50 \quad \dots\dots\dots \text{Poor performance} \end{cases}$$

As the function shows, numeric variables were recorded into 0 and 1 categories which were a label defined as poor and good performances respectively. Therefore, those who scored less than 50 were considered as poor performers while those who scored 50 and above were considered as good performers.

After conducting binary logistic regression test (refer Appendix VII), the findings suggest that, on the side of students' class, "Form II", "Form III" and "Form IV" are 1.04, 1.36 and 1.39 respectively times likely to have desirable awareness level ($\geq 50\%$) compared to "Form I" ($p > 0.05$) at all categories.

But mothers' education also seems to be influential since primary and secondary educated mothers or guardian students are 10% and 6% less likely to have desirable understanding level compared to mothers who have reached university/College level with insignificant p values i.e 0.732 and 0.33 respectively. Mothers who are not educated are 80% less likely to have a good understanding level than University/College mothers with strong evidence to tell the difference ($p = 0.033$).

Table 4.2: Logistic regression of students' classes and mothers' education levels as influencing factors towards MHHM levels of understanding.

STUDENTS' CLASS			
Categories	AOR	P VALUE	Reference Category
FORM II	1.04	0.89	FORM I
FORM III	1.36	0.26	
FORM IV	1.4	0.32	
MOTHERS' EDUCATION			
Categories	AOR	P VALUE	Reference Category
PRIMARY	0.9	0.73	COLLEGE/UNIVERSITY
SECONDARY	0.94	0.33	
NONE	0.2	0.04	

Source: Field data, 2019

4.4 Implementers' commitment and responsiveness towards menstrual health and management challenges facing school girls

4.7.1 Awareness on SWASH project

SWASH guideline (2016), defines school as primary and secondary schools; boarding/day or both; Rural or Urban located; Public or Private school whereby each district must have SWASH coordinator for coordinating activities including MHHM related ones. In Muheza District Council a SWASH coordinator from the primary education department is available and he plays part in coordinating SWASH activities in both primary and secondary schools.

When it comes to knowledge on SWASH project, the coordinator knows about the project availability but the challenge is that she only knows that, the project is only for primary schools and not secondary schools. This is contrary to guideline provision as stated above. Since she is from primary schools, her activities are more based on primary schools than secondary schools. Hence more efforts are invested in primary schools.

She was quoted saying; *“SWASH project is for primary school, it is not yet implemented in secondary schools at the moment, may be it will be implemented in consequent phases”*

This is contrary to the guideline, whereby the guideline requires implementation in both primary and secondary schools, government and private schools intending to safeguard the lives of students. Regarding this, some of the requirements of the project are considerably met in some secondary schools such as the availability of emergency pads, sanitation facilities, and MHHM awareness sessions through school health clubs. All of these are being implemented unknowing that it is part and parcel of the project requirements.

As strange as it may seem, implementers from the education department did not seem to even know if the project is in existence for them. They just claimed that all resources of SWASH specifically water sector development program funds, are directed to primary schools and hence the project is meant for primary schools.

District Secondary Education Officer was quoted saying;

“I always hear about SWASH in our groups but I have always been asking myself what is the relevance of the project to secondary schools, because I know that it’s for primary schools and even a coordinator is from primary schools department. They always say that secondary schools have capacity to handle operations, this is not true at all because the challenges are all over.”

Implementers from school to district levels know partially about requirements that the SWASH project requires. This is because they do not have guidelines for school WASH.

4.7.2 Data feeding to NSMIS

SWASH data are to be fed in the National Sanitation Management Information System database, this is to be done after quarterly supervision conducted. These data are to be fed at a dataset of School WASH for secondary schools. Out of fed data, a dataset report can be generated in the system to view the status of each stated data element in the dataset.

The data elements included in a dataset are in the form of output indicators and are under the themes of sanitation, hygiene and hygiene promotion, water safety as well as safety management.

Some of the indicators that are to be tracked are in one way or another having effects on the state of Menstrual Health and hygiene management such as availability of sanitation facilities, friendly infrastructures for MHHM among girls, availability of soaps and clean water.

Hence having known the status of each indicator, the magnitude of challenges in schools can easily be spotted and hence intervened.

The figure below shows part of the stages needed to produce a dataset report based on data elements that are in the form of output indicators.

Figure 4.20: A picture showing dataset report extract

Data Set Report ?

Data criteria

Data set
School Wash for Secondary

Report period
Yearly
2018

Prev year Next year

Use data for selected unit only ☐

Report organisation unit

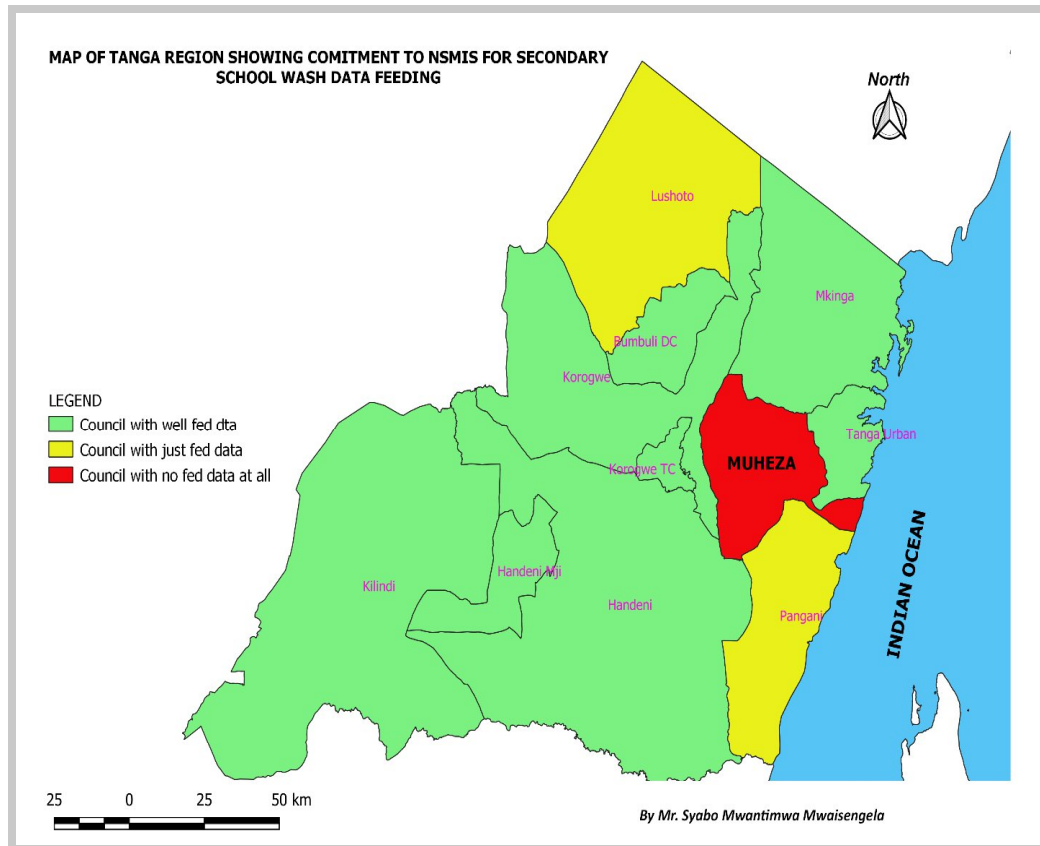
- Tanga
 - Bumbuli District Council
 - Handeni District Council
 - Handeni Town Council
 - Kilindi District Council
 - Korogwe District Council
 - Korogwe Town Council
 - Lushoto District Council
 - Mkinga District Council
 - Muheza District Council**
 - Pangani District Council
 - Tanga City Council

Source: NSMIS, 2019

According to the findings, it was observed that in the whole year of 2018 to date, no data are being fed in the system. In the Tanga region, Muheza District is the only district that does not feed any data in the NSMIS database. Other councils' datasets for the year 2018 are fed with data though some have data that are openly unrealistic such as Lushoto and Pangani.

This is clearly shown by a thematic map of Tanga region with district councils' boundaries below.

Figure 4.21: Map of Tanga showing councils' commitment to feeding data as per year 2018



Source: NSMIS data, 2018 designed in QGIS 3.8.1 Zanzibar, datum WGS 84

As above map shows, Muheza District is the only district that have not fed any data in NSMIS secondary school WASH dataset at all.

When asked, SWASH coordinator from education department said that;

“We don’t know how to use the system since we don’t even have passwords for it and we have never seen it, no body trained us on how to use the system. We just hear about it from Health Department, I think they are the ones who are using it.”

4.7.3 Supportive supervision and monitoring for SWASH

The SWASH guideline (2016) stipulates the roles of implementers at the District level as to ensure that assessment (using Tool Kit 1A) of School WASH facilities is carried out once a year. Also monitoring and supervision of the implementation of

School WASH guidelines in schools as part of the routine monitoring and inspection process (using Tool Kit 1B, twice a year).

But according to findings, none of these is conducted, rather an assessment is done once a year by the TSS tool which is comprehensive as it embraces all school elements including sanitation related but not as detailed as SWASH toolkits 1A and 1B are.

School visits are regularly conducted in nearby government schools such as Kerenge, Kwemkabara, Chifu Mang'anya, and Kwafungo. But this is not a case for distant rural schools and private schools since visits are occasionally done. The existing challenge is the inadequate availability of resources especially fuel to facilitate such visits.

Despite these visits, the area of MHHM is often not considered as one of the issues to be looked upon. The focus of visits is mainly on academic matters and some other specific issues as determined by the nature of visits. Statistics and Logistic Officer was quoted saying;

“We understand that we are supposed to visit schools regularly but the challenge we face is scarcity of fuel in the department, this leads us into visiting schools that are nearby Muheza District Council headquarters.”

4.7.4 Implementers' challenges in regard to SWASH implementation

Several challenges pertaining to SWASH project implementation especially in the area of MHHM were revealed, some of these challenges are as follows:-

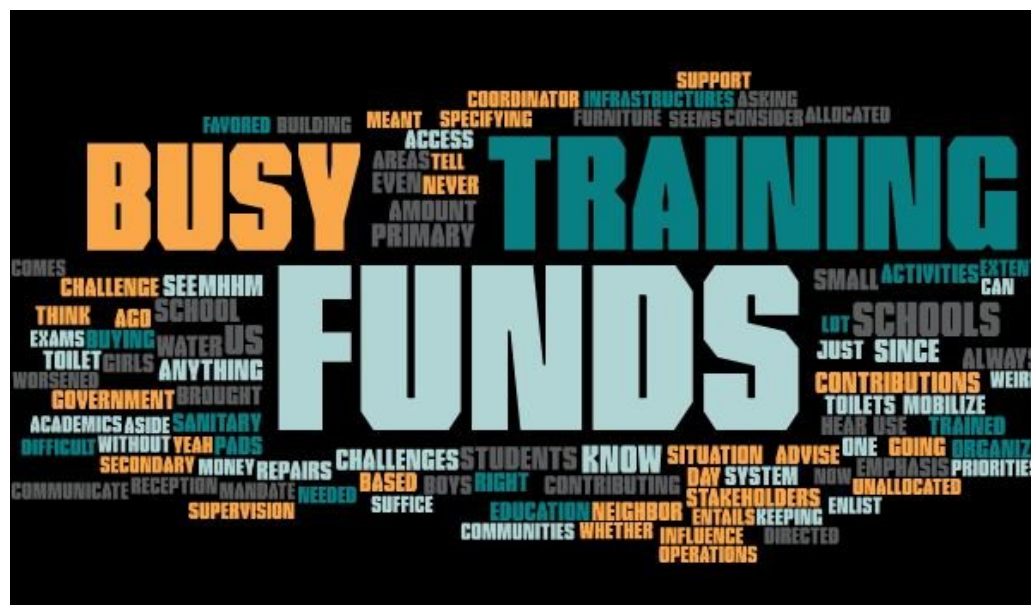
1. Lack of training to teachers on MHHM, this is due to the fact that, even District School Health Coordinator has never attended any training with MHHM content that has to be imparted to teachers
2. Teachers being so busy due to academic responsibilities. School health teachers claimed to be so busy in academic and some other administrative responsibilities, therefore it was suggested that, School health teachers are detached from other responsibilities for them to be effective in assuming their responsibilities.

3. Lack of fuel for facilitating transportation for supportive supervision, this leads to hardships in visiting distant rural schools for supervisory activities.
4. Shortage of funds towards implementation of the project. Budget deficits were said to be one of prominent challenges since
5. The challenge related to resources sharing. This is due to non-allocation of WSDP funds to secondary schools, this is not a requirement since funds are to be allocated to both secondary and primary schools.

One of respondents were quoted saying:

“We are very busy with assuming our teaching responsibilities, you will find that there are a lot of topics to be covered and you are behind time, its sometime hard to consider teaching MHHM instead of subjects because that is what has brought them here, I advice that we as school health teachers are detached from other responsibilities so that we can have enough time invested in school health activities including MHHM related ones”

Figure 4.22: Atag Cloud for implementers quotes showing most repeated words



Source: Field data, 2019

As shown by a tag cloud above, words busy, funds and training were more frequently said by respondents, therefore these are viewed as major challenges towards smooth implementation of MHHM area of SWASH project.

4.8 Availability of School WASH Operation & Maintenance funds for menstrual health and management

4.8.1 Community Contributions

One of the recommended ways of doing this for a school is to introduce a parent/community contribution for the maintenance of School WASH facilities in collaboration with the school committee and the village government.

According to findings, in previous years, school management together with the school committee had the mandate to determine and propose an amount to be contributed by each parent/member of the community at a certain frequency for the sake of simple operations and maintenance for SWASH.

But a new circular directs that any decisions regarding community contributions should be decided in village meetings, this seems to foster some delays and irresponsiveness amongst community members when it comes to these contributions. District School Health Coordinator was quoted saying that;

“It’s now difficult to mobilize communities from contributing to small contributions for operations such as buying of water and emergency sanitary pads. This is because, decisions pertaining to this is no longer under school committees but village meetings. With these challenges, community members seem to be reluctant in contributing”

4.8.2 Water Sector Development Program (WSDP)

This is one of the funds' sources for school WASH where funds are deposited to account of the Councils' water department from the Ministry of Water and Irrigation and then directed for school WASH.

According to findings, in the current financial year, these funds were brought but are not consistently brought since, in Muheza district, were not brought during the last financial year.

But another challenge is that, when brought, these funds are directed to primary schools only with non-consideration to secondary schools.

SLO from secondary education department was quoted saying;

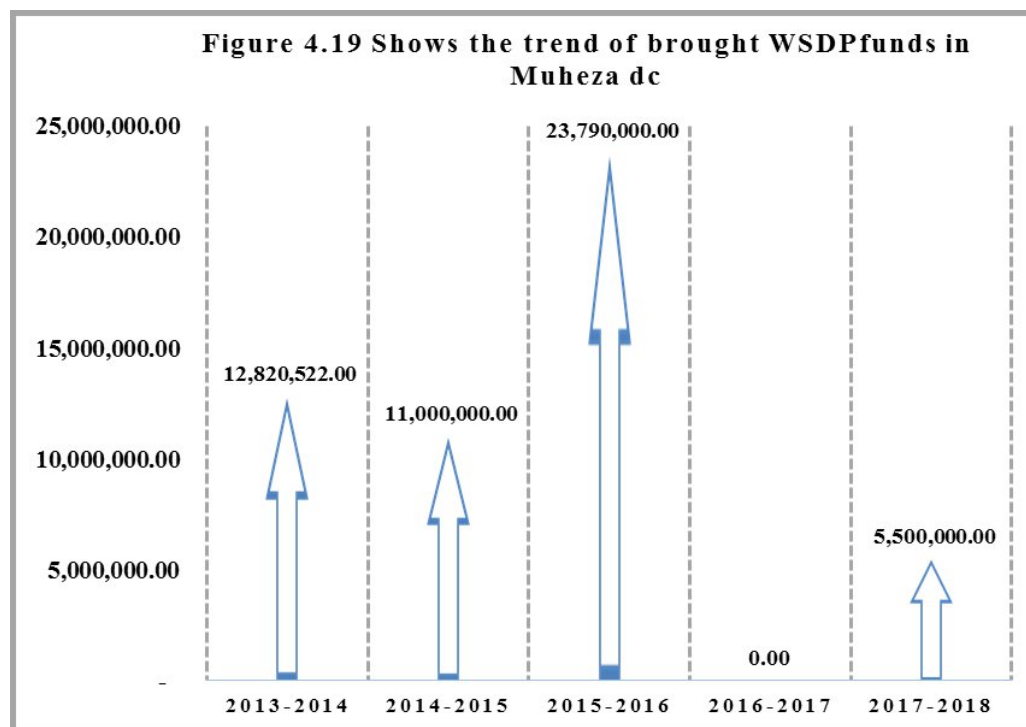
“We always hear about those funds but they are all allocated to primary schools, we have been asking ourselves as to why only primary schools are favored while we are all in the same worsened situation, I advise that funds should be directed to both of us to support supervision of activities”

But the funds are to be allocated to both primary and secondary schools as it may be needed in both departments:-

District Water Engineer were quoted saying:

“Yeah, you know these funds are just brought without specifying whether are for primary or secondary schools, I think they are meant for both of them. With reception of funds, we communicate to coordinator and tell her to enlist priorities. But we always see activities based on primary schools but we do not have a mandate to influence anything.”

Figure 4.23: WSDP funds brought for 5 consecutive years for Muheza District



Source: Field data, 2019

As shown by figure above, in Muheza DC, during financial year 2016/2017 funds were not brought at all.

4.8.3 Capitation and School fee compensation

Contrary to guideline provision, this is as a result of a guideline that was released on December 2015, capitation funds are more directed to academics and procurement of learning and teaching materials including books, biological models and laboratory equipment.

But school fee compensation is to be disaggregated and allocated as follows: -

- i. Administration (35%)
- ii. Academics (30%)
- iii. Exams (15%)
- iv. Adherence to girls' requirements (10%)
- v. Minor repairs (10%)

As it can be seen from above funds sources, number 4 and 5 are the areas of which when intervened leads to adherence to SWASH guidelines.

But the observed challenge from the field is that funds disbursed are not adequate enough to implement all those areas. This leads to violation of a guideline in order to enable implementation of areas that are considered as of great importance mainly those associated with academics.

One of the headmasters were quoted saying;

“Funds that are brought are in small amount to the extent that, some of the areas are to be unallocated, it seems weird to consider buying sanitary pads keeping aside areas of academics and exams. When it comes to repairs, a lot of money is needed and these repairs entails furniture, schools building and toilets infrastructures, how can such small amount suffice all these?”

It is claimed that, at previous times when contributions for desks, buildings, water and any other that is thought about as per arising needs, it was easy since those contributions were helpful in dealing with furniture and general infrastructure rehabilitation. But since restrictions came into being it's a challenge indeed.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Introduction

This chapter is focused on the discussion and interpretation of findings to answer the study research questions. The analytical cross-sectional study was employed whereby a concurrent mixed method of data collection was used to generate useful insights into answering study questions.

The main objective of this study was to assess the contribution of School WASH in addressing menstrual health and management related challenges facing schoolgirls in Muheza District Council while the specific objectives were; To determine secondary schools' adherence to stipulated SWASH menstrual management requirements, to determine level of menstrual health and management understanding among school girls, to examine peer support of schoolboys on adolescent girls' menstruation, to examine adequacy of MHHM related financial resources for SWASH in secondary schools, to explore implementers' commitment and responsiveness towards menstrual health and management challenges facing school girls, to find out the influence of socio-economic and geographic factors towards the state of menstrual health and management.

5.2 Secondary schools' adherence to stipulated MHHM requirements

Different studies showed that poor performance in schools was associated with poor sanitation facilities that results to pupils illness and drop out. Tinograh (2009), has explained the shortage of water in school latrines was a highly contributing factor of school girls dropping out of school due to the hardships they face during their menstrual periods. As according to findings, the same case applies in Muheza since no school has met MHHM requirements by 100% as required.

As per findings only 2 schools i.e Shebomeza and Hegongo has at least met half of minimum requirements in the checklist, these requirements are basic and entails Availability of girls' toilets, wall front of latrines and presence of guidance teacher on MHHM but none of the schools had a reserved space for pads in toilets, incinerator near latrine and Growth and changes guidance for MHHMM and puberty knowledge impartation as whole.

A study conducted by (Waddington, 2009) presents that 90% of children in Tanzanian districts use toilets but they don't have access to wash their hands as a result they go to class with dirty hands. This is the case in Muheza, since shortage of water is a huge challenge that prompted into organizing parents' contributions in Kwafungo Secondary school.

Hence with all these circumstances, welfare of girls while at school is highly affected which may affect attendance to school and consequently their performance due to low comfortability in attend classes.

Government schools have guidance teachers on MHHM issues, private schools do not have SWASH specific teacher rather school matron have roles to play on the issue. None of teachers in both government and private schools underwent any training on MHHM as it is envisioned in the program. School health clubs in line to FEMA and Girl guide clubs are operating in government schools both urban and rural. None of these operates in private schools, therefore it's obvious that students from private schools lack this important knowledge to them. Despite its availability, students complained that, clubs are largely inactive as compared to previous times since teachers do not impose strict rules in regard to non-attendance, therefore students' attendance to clubs is very weak. On top of that, discussions on MHHM issues on how girls can manage themselves during menses are rarely in place. Hence MHHM issues are occasionally discussed in class sessions and in rare times as determined by particular situations. Since all clubs are operating in a same day, students belong to clubs of their interests, hence it's not a necessity that they must be members of health clubs where awareness on health issues including MHHM will be created on them. This is a challenge since students gets scattered in various clubs,

therefore even if education is provided, they will have to miss this important education to them.

It is required that, District School Health Coordinators and teachers are trained on MHHM with a package and modality that will be suitable for training girls at school. But none of the training were conducted to coordinators from district to school, none of the teachers had been trained on MHHM issues, knowledge impartation to girls relies on female teachers' experiences since they are also experiencing the same phenomenon. Therefore, with this challenge its' difficult for them to impart MHHM knowledge to students as required.

Yet one of the critical challenges girls face at school in relation to menstruation is the fear of being teased by boys, which impacts on their self-esteem. Physical and verbal bullying was one of the main grievances of girls interviewed in Malawi (Piper Pillitteri, 2012). In order to solve this challenge, it is required that MHHM training to school boys is considered. Knowledge impartation is to be extended to school boys as peer community to girls at school and community as whole. But with gathered findings, knowledge on MHHM to boys is only obtained through class lessons in Biology subject as a portion of a form three (3) topic of reproduction. This will in one way or another lead to existence of teasing and bullying to girls that will in turn embarrass them and eventually affect them socially and psychologically.

This has ultimate impact of poor performance in class as another study conducted in Ethiopia shows that, Fifty eight percent of girls reported that their school-performance had declined after they had menarche (Tegegne & Sisay, 2014).

5.3 Level of MHHM understanding among girls' students

The same study by (Tegegne & Sisay, 2014) suggests that majority of the girls, 478 (86.75%) had heard about menstruation before they had menarche; where the leading sources of information were sisters, 204 (42.68%), followed by mothers, 183 (38.28%), friends 141 (29.50%) and teachers, 64 (13.39%). This aligns to findings obtained from Muheza District since most of girls students do not learn menstruation at school setting, rather at home with mothers, sisters and grand parents.

As it is known that, MHHM sanitary materials are the ones that are used by girls and women as whole to manage menstruation. These entails sanitary pads, tampons, tissues, cotton wool, special cloth pieces, menstrual cups and cloth pieces out of torn out clothes.

In Muheza all students uses or have ever used sanitary pads and cloth pieces. But most of them uses pads, followed by cloth pieces and others uses both sanitary pads and clothes pieces as proportionally shown in presentation of findings (Chapter 5).

It was also found that even those who used homemade pieces of cloth wished to use sanitary pads instead, but due to inability to afford buying pads they ended up using cloths. This corresponds to a study conducted in Kenya which suggests that Poverty prevents girls from effectively managing their periods. For example, while girls often state that commercially-available pads are their preferred method for managing their periods, a lack of money inhibits them from purchasing pads and, in two instances, inhibited shopkeepers' or kiosk owners' ability to stock pads (McMahon, et al., 2016).

5.4 Peer support of school boys on girls' menstruation

SWASH guideline (2016) emphasizes that teaching and sensitizing boys about girls' need for privacy, respect and support during their monthly menstruation is important to minimize teasing and mocking that may occur.

Hence: Support of school boys is of paramount importance in as far as school girls' welfare at menstruation is concerned; a good understanding on what menstruation is all about is of importance in order to enhance their support to school girls at a time.

A study in Taiwan (Chang et al., 2012) explored boys' experiences and attitudes relating to menstruation. One issue was that no one wanted to talk about menstruation with the boys and they could not discuss menstrual issues with their mothers or sisters or their fathers. As quotes from boys interviewed in the study show, they were also discouraged from talking about menstruation with each other at school. This corresponds to findings in Muheza Only 12 out of 458 school girls responded as are willing to share with some boys in case of emergence and non-availability of peer girls but the rest of them said that are not willing to have shared

their menstrual situation to boys in whatever situation, this is due to several reasons such as shame (458), fear of embarrassment (396) and Cultural taboos (16).

Nevertheless, it was reported that, girls are being restricted to share their menstrual situation to boys with the reason that, when boys know that a girl is already at menses, will persuade her to be involved in love affairs since, she will be considered as grown up girl. It is even considered unethical to allow boys or any male to see a menstrual cloth and hence, are not exposed directly to sunlight.

Training to boys is very crucial since they are school peers, adequate training to them may sharpen their understanding and hence reduce incidences of teasing and bullying. On the other hand, findings show that training on MHHM seems to be more focused on school girls themselves and not boys. When specific sessions are to held, girls are being called separately in the absence of boys and menstrual issues are referred to as “Girls matters”. The only expectation for boys to acquire the knowledge is through class sessions with the only hopes of reproduction topic in form three (3) which also does not cover the content of MHHM as exhaustively as per existing knowledge gaps.

Teasing from school boys is one of reported challenges in many studies. According to (Pillitteri, 2012) Physical and verbal bullying was one of the main grievances of girls interviewed in Malawi. This same case applies in many Tanzanian schools. As per findings, it was observed that, teasing and embarrassment is highly prevailing among girls where by 0.86 is the proportion of girls who experienced or ever observed teasing/embarrassment from boys ($p > 0.001$, $C.I$ 0.83 - 0.89, $Z = 15.51$). Hence this is a challenge that is to be looked upon.

5.5 Influence of socio demographic and geographic factors towards MHHM knowledge ability

According to findings, with one-way analysis of variances for schools’ performance based on categories i.e Government Urban, Government Rural and Private it was observed that, government schools’ mean performance was better than private ones. A major reason observed for poor performance of private school students is that, in

government schools, emphasis is put on operationalization of school health clubs and other clubs such as FEMA and Girl guide which may have significant outcome on imparting awareness to students. This is not a case at all in private schools. Therefore, stakeholders should take care of this matter in the sense that, private schools should also be considered in as far as investment on MHHM impartation through clubs such as FEMA club and Girl guide clubs is concerned.

A study that conducted in China, 556 teenaged students showed that most had heard that girls should not consume cold foods or drinks during menstruation and that most believed that they should not wash their hair or attend funerals during menstruation (Chang et. al, 2007). This is an indication that age has an influence towards awareness on menstruation and its management. This applies to the same to the findings of this study where age were observed to have a positive relationship to students' performance (with coefficient of correlation = 0.35) and years spent in menstruation had also a positive relationship (with correlation of coefficients = 0.52). Such differences in strengths of relationships may be due to the fact that, school girls reached their puberty age and menstruation at different ages.

5.6 Implementers commitments and responsiveness on SWASH project

SWASH guideline (2016), refers school as to primary and secondary schools; boarding/day or both; Rural or Urban located; Public or Private school whereby each district must have SWASH coordinator for coordinating SWASH activities, in Muheza District Council a SWASH coordinator from primary education department is available and he plays part in coordinating SWASH activities in both primary and secondary schools.

When it comes to knowledge on SWASH project, the coordinator knows about the project availability but the challenge is that, she only knows that, the project is only for primary schools and not secondary schools. Since she is from primary schools, his activities are restricted to primary schools more than secondary schools. Hence more of efforts are invested in primary schools. This is contrary to SWASH guideline (2016) that refers school as to primary and secondary schools;

boarding/day or both; Rural or Urban located; Public or Private school whereby each district must have SWASH coordinator for coordinating SWASH activities, in Muheza District Council a SWASH coordinator from primary education department is available and she plays part in coordinating SWASH activities more at primary school with less commitment at secondary schools. This is contrary to the guideline, whereby the guideline requires implementation in both primary and secondary schools with the aim of safeguarding lives of students that's why some of the requirements pertaining to the project are met in some secondary schools such as availability of emergency pads, sanitation facilities and MHHM awareness sessions. All these are being implemented unknowing that it is a part and parcel of the project, implementers from education department did not seem to even know if the project is in existence for them. This a challenge because, even SWASH guideline is not in existence in District office to both DSEO and School Health Coordinator.

Moreover, it's an obligation that, sanitation data that some includes MHHM infrastructural facilities data are to be fed in National Sanitation Information System database, this is to be done after quarterly supervision conducted. These data are to be fed in the system at a dataset of School WASH for secondary schools at villages and dataset report can be generated in the system in order to view status of each stated data element in the dataset. The data elements are in the form of output indicators and are under themes of sanitation, hygiene and hygiene promotion, water safety and safety management. Some of indicators that are to be tracked are in one way or another having effects on the state of Menstrual Health and hygiene management such as availability of sanitation facilities, friendly infrastructures for MHHM among girls, availability of soaps and clean water. Hence having known the status of each indicator, the magnitude of challenges in schools can easily be spotted and hence intervened. According to the findings, it was observed that no data are being fed in the system. In Tanga region as whole, Muheza District is the only district that does not feed any data in NSMIS database. Other councils' datasets for the year 2018 are fed with data though some have data that are openly unrealistic such as Lushoto and Pangani.

Supportive supervision and monitoring for SWASH is also a crucial component since SWASH guideline (2016) stipulates roles of implementers at District level as to ensure that assessment (using Tool Kit 1A) of School WASH facilities is carried out once a year as well as monitoring and supervision of implementation School WASH guidelines in schools as part of the routine monitoring and inspection process (using Tool Kit 1B, twice a year).

But according to findings, none of these is conducted, rather assessment is done once a year by TSS tool which is comprehensive as it embraces all school elements including sanitation related but not as detailed as SWASH toolkits. School visits are regularly conducted in nearby government schools such as Kerenge, Kwemkabara, Chifu Mang'anya and Kwafungo. But this is not a case for distant rural schools and private schools since visits are occasionally done. The existing challenge is inadequate availability of resources especially fuel to facilitate such visits.

Despite these visits, the area of MHHM is often not considered as one of issues to be looked upon. Focus of visits is mainly on academic matters and some other specific issues as determined by nature of visits. This is detrimental to the state of MMHHM among girls students due to existence of many unintervened challenges on the ground.

5.7 Availability of School WASH Operation & Maintenance Funds

In regard to community contributions, findings revealed that it is now difficult to organize community members towards their contributions for cash, labor and in kind, this is due to a new circular which directs that any decisions regarding community contributions should be decided in village meetings, unlike previous times, this seems to foster some delays and irresponsiveness amongst community members when it comes to these contributions.

Water sector development program is one of funds sources for school WASH where funds are deposited to account of Councils' water department from Ministry of Water and Irrigation and then directed for school WASH. The challenge regarding these funds is that, they are not consistently brought as findings revealed that were not brought for consecutive two (2) years back. Despite inconsistency of the funds, they are only directed to Primary schools. Capitation funds are more directed to academics and procurement of learning and teaching materials including books, biological models and laboratory equipment.

School compensation funds are disaggregated into five (5) areas of which 10% are to be directed to adherence to girls requirements and 10% for minor repairs, but these funds are not adequate enough to implement its areas of specifications. This leads to violation of a guideline in order to enable implementation of areas which are considered as of great importance mainly those associated to academics. With this situation, improvement of infrastructure, operations and maintenance for MHHM will be difficult which in turn may affect health and performance of girls in school.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The aim of this chapter is to cover summary and conclusion of the study, policy implication, recommendations, limitations of the study as well as suggest areas that will need further research.

6.2 Summary

The summary of this study have been discussed based on the six objectives of the study. The main objective of this study was to assess contribution of School WASH in addressing menstrual health and management related challenges facing school girls in Muheza District Council while the specific objectives were; To determine secondary schools' adherence to stipulated SWASH menstrual management requirements, to determine level of menstrual health and management understanding among school girls, to examine peer support of school boys on adolescent girls 'menstruation, to examine adequacy of MHHM related resources for SWASH in secondary schools, to explore implementers' commitment and responsiveness towards menstrual health and management challenges facing school girls, to find out the influence of socio economic and geographic factors towards the state of menstrual health and management in Muheza District Council.

The results show that, adherence to MHHM guidelines among school is still a challenge since none of the school has a 100% score. The main challenge observed is insufficient water supply and poor budget to school health activities that makes hard to execute daily operations and maintenance in the sense of buying emergency pads of which only three schools have met the requirements and buying soaps. These challenges are more predominant in government schools as compared to private schools. The level of menstrual understanding among students is not satisfactory, because it was expected that they all have a good understanding of menstruation and menstrual management with at least 50% of fifteen (15) menstrual score questions but this was not the case because only 0.67 proportion of students have met this.

Availability of active and well-coordinated school health clubs with MHHM focused discussions is another challenge, hence students' expectations of gaining the knowledge is either in class lessons or in special occasions. More over resources availability for operations and maintenance is a challenge since the only source of funds expected to serve this area is fee compensation, due to limited funds adherence to lawful allocations is not considered as a result, in most cases funds are being allocated to other areas. Implementers' commitment and responsiveness is another challenge since, few visits are conducted in rural schools and those visits mainly focus at academic issues as MHHM issues are being considered as minor. Implementers of the project also do not have any guidelines for SWASH and their view is that SWASH is to be implemented in primary schools.

WSDP funds are only directed to primary schools of which in real sense are to be allocated at both schools depending on needs. Nevertheless, socio demographic, academic and geographic factors have found to be influential to MHHM understanding as age has positive relationship to students' performance (with coefficient of correlation = 0.35) and years spent in menstruation which were obtained by calculating the difference between students' current age and the age when menstruation started had also a positive (strong) relationship (with correlation of coefficients = 0.52). this applies the same to students classes as "Form II", "Form III" and "Form IV" are 1.04, 1.36 and 1.39 respectively times more likely to have desirable awareness level ($\geq 50\%$) compared to "Form I" as a reference with ($p > 0.05$) at all categories. Also primary and secondary educated mothers or guardian students are 10% and 6% less likely to have desirable understanding level compared to mothers who have reached university/College level with insignificant p values i.e 0.732 and 0.33 respectively. Mothers who are not educated are 80% less likely to be educated than University/College mothers with strong evidence to tell the difference ($p = 0.033$).

6.3 Conclusion

Low understanding level on MHHM is detrimental to health and welfare of female students, lack of necessary facilities and existence of unfriendly infrastructure to them is a challenge that prompts them to being uncomfortable to school environment due to psychological distortion and this may in turn lead to their poor performance in class. It is therefore a necessity that considerations should be made by the government and development partners in terms of resources allocation and implementation. This will be an assurance towards expected impacts of improved performance and health of students as envisioned by the program.

6.4 Recommendations

According to findings of this study, the following should be taken into consideration for effective implementation of SWASH project in the area of menstrual health, hygiene and management: -

- i. Awareness on SWASH project especially in the area of MHHM should be created as findings shows that implementers do not have thorough understanding on the project. This should go hand in hand to distribution of guidelines and toolkits so as to foster understanding on the project.
- ii. Training MHHM package to District School Health Coordinators and school health teachers is very important, students are taught based on teachers' experiences. This may not include important details as per existing knowledge gap.
- iii. Emphasis should be put on activeness and capacity strengthening of School health clubs; these may serve as important MHHM knowledge source. All students should be obliged to be members of clubs unlike the current situation where only some students are members.
- iv. Council own sources should have established portion allocated to school health matters in area of infrastructural rehabilitation and operations at each financial year.

- v. Coordination in execution of SWASH project duties between health, education and water department should be in place. These departments are not well coordinated in terms of knowledge sharing, for instance NSMIS knowledge is only vested to school health and sanitation campaign coordinator from health department.
- vi. Emphasis on establishment of school health clubs and other clubs that emphasizes on MHHM knowledge like FEMA and Girl Guide in private schools is very important since there is a huge gap pertaining to MHHM training to students. Supervisions from district level on adherence to requirements associated to awareness impartation to students should regularly be conducted.
- vii. Considerations should be made and it should be in circular that, School Health Coordinators should be appointed each from both primary and secondary education for the sake of enhancing focus on SWASH activities in both department.

6.5 Policy implications

Implementation of SWASH project in the area of MHHM is not implemented as envisioned in the guideline, no considerations are made towards improving MHHM level of understanding and infrastructural requirements, MHHM activities are not as considered vital as academic matters are and some other several challenges observed at field. Partner ministries and project designers should review the design of SWASH project in terms of sources of funds definition, clear disaggregation of roles by each ministry, progress monitoring and clear definition of roles of DSEO's from health and education departments pertaining to SWASH implementation in both primary and secondary schools. Consideration of these will cater for achievement of SWASH anticipated outcomes in the area of MHHM.

6.6 Areas for further research

A research should be conducted to identify as to what extent does MHHM challenges facing school girls prompts to absenteeism and poor performance among school girls.

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APPENDICES

APPENDIX: I

QUESTIONNAIRE FOR SCHOOL GIRLS

Dear Informant

My name is **Syabo M. Mwaisengela** a student of **MZUMBE UNIVERSITY** pursuing a MSc in Health Monitoring and Evaluation. I am conducting an evaluation study on **“EVALUATION OF SWASH PROJECT IN ADDRESSING MHHM CHALLENGES FACING SCHOOL GIRLS”** as a requirement for the completion of my studies. This study is for academic purposes and not otherwise. I humbly request your voluntary participation in responding to the attached questions which intend to collect information that will be used as findings of the study. Your answers will be kept confidential.

PART 1: SOCIO DEMOGRAPHIC AND GEOGRAPHIC INFORMATION

1. Name of school
 - a. Chief Mang’anya
 - b. Kwemkabala
 - c. Kerenge
 - d. Kwafungo
 - e. Ngomeni
 - f. Shebomeza
 - g. Alhuda
 - h. Hegongo
2. Age.....
3. Class.....
 - a. Form I
 - b. Form II
 - c. Form III
 - d. Form IV

4. School category locale (Data collector should tick depending on where the school is located)
 - a. Government Urban
 - b. Government Rural
 - c. Private
5. Religion
 - a. Christian
 - b. Muslim
 - c. none
6. Mothers' or female guardians level of education
 - a. University/college
 - b. Secondary
 - c. Primary
 - d. None
7. Fathers' or male guardians level of education
 - a. University/college
 - b. Secondary
 - c. Primary
 - d. None
8. Mothers' or female guardian livelihood earning activity
 - a. Government employment
 - b. Private employment
 - c. Business/petty trader
 - d. Peasantry/farming
 - e. House wife
9. Fathers' or male guardian livelihood earning activity
 - a. Government employment
 - b. Private employment
 - c. Business/petty trader
 - d. Peasantry/farming
 - e. None

PART 2: SCHOOL GIRLS MENSTRUAL EXPERIENCE

10. Have you started Menstruation? (If the answer is No skip to part 3 onwards)
- a. YES
 - b. NO
11. Age that you started menstruating.....
12. At which time did you firstly learn Menstruation?
- a. Before menarche
 - b. After menarche
13. Where have you firstly learned about menstruation and menstrual management?
- a. Home
 - b. School
 - c. Friends
14. Which of the following is the active applicable means used in spreading awareness on menstruation and menstrual management.
- a. SWASH clubs
 - b. Class lessons
 - c. None
15. Do you have active SWASH clubs in your school? (If NO jump to question....
- a. Yes
 - b. No
16. Which MHHM activities do you perform in the club *(Students should explain on SWASH activities that signifies activeness of the club, tick Yes if activities are well stated, otherwise No.)*
- a. Yes
 - b. No
17. Does the club have part in improving your MHHM understanding?
- a. Yes
 - b. No

18. Do you attend classes during your menstruation period?
- a. Yes
 - b. No
19. Are you comfortable attending classes while at your menses? (If the answer is NO, skip to question.....)
- a. Yes
 - b. No
20. Why aren't you comfortable attending classes during your menses? (Tick more than one option)
- a. No privacy
 - b. No facilities
 - c. Teasing from school girls
 - d. No water
 - e. Filthiness in toilets
 - f. Other (Mention).....
21. Which hindrances do you face at menses that are in one way or another affecting you while in class lessons?
- a. Non attendance to class
 - b. Poor attentiveness
 - c. Psychological torture
22. How often are you absent at school due to menstruation
- a. 1 to 3 days
 - b. 3 to 7 days
 - c. Never
23. Do you access water in latrines when at menstruation?
- a. Yes
 - b. No
24. Do you access soap/ash in latrines when at menstruation?
- a. Yes
 - b. No

25. How often do you change sanitary materials while at school?
- Once
 - Twice
 - Thrice
 - Not at all
26. Which materials do you often use when menstruating
- Sanitary Pads
 - Reusable piece of cloth
 - Pain relievers
 - Nothing at all
27. Which among the following supports you or ever supported you while menstruating at school setting?
- Peer girls
 - Peer boys
 - Teachers
 - None
28. Are you ready to share your menstrual situation to school boys in order to obtain their support?
- Yes
 - No
29. If the answer is NO, why so?
- Shame
 - Religious prohibitions
 - Cultural taboos
 - Fear of embarrassment
30. What do you think is the attitude of school boys regarding menstruation?
- Positive
 - Negative
31. Have you ever experienced (Yourself) or observed (other girls) peer support by school boys when at menstruation period?
- Yes
 - No

32. Have you ever experienced (Yourself) or observed (other girls) peer support by school boys when at menstruation period?
- a. Yes
 - b. No
33. Do you have a school program of elder sisters mentoring to younger ones on MHHM?
- a. Yes
 - b. No
34. Has there been any emergent help in case of pronounced menstrual discomfort
- a. Yes
 - b. No
35. Which materials do you often use while at menses
- a. Sanitary Pads
 - b. Homemade Reusable piece of cloth
 - c. Cotton
 - d. Tampons
 - e. Other
36. If answer in question 30 is reusable cloth, why?
- a. It is of no cost
 - b. More effective
 - c. More comfortable using it
 - d. Culture
37. Do you access sanitary materials on time when needed?
- a. Yes
 - b. No

PART 3: AWARENESS ON MENSTRUAL EDUCATION

Select YES if respondent chooses the right answer, NO if chooses wrong answer

38. Truth about menstruation

- a. Physiological process
- b. God's curse
- c. Evil deed

1. Yes

2. No

39. Cause of menstruation

- a. Hormones
- b. Diseases
- c. Excessive blood in the body

1. Yes

2. No

40. False about Menstruation Cycle

- a. 28 days
- b. 35 days
- c. 18 days

1. Yes

2. No

41. Source of menstrual blood

- A. Uterus
- B. Ovary
- C. Urinary bladder

1. YES

2. NO

42. Normal age range for menstruation

- a. 10 – 15 years
- b. 7 – 10 years
- c. 14 – 26 years

1. Yes

2. No

43. Menstrual cessation age range

- a. 25 and more years
- b. 35 and more years
- c. 50 and more years

1. Yes

2. No

44. Normal MP Duration

- a. 1 – 12 days
- b. 3 – 7 days
- c. 1- 3 weeks

1. Yes

2. No

PART 4: AWARENESS ON MENSTRUAL MANAGEMENT EDUCATION

Select YES if respondent chooses the right answer, NO if chooses wrong answer

45. Sanitary product for menstrual protection except

- a. Pads
- b. Tampons
- c. Plastic bag
- d. Cotton

1. Yes

2. No

46. Soap type for WASHING external genitalia

- a. Laundry
- b. Medicated
- c. Soap powder

1. Yes

2. No

47. Frequency of using soap for cleansing internal genitalia at menses
- a. At least once
 - b. Twice
 - c. Not at all
- 1. Yes**
- 2. No**
48. Appropriate reusable cloth material
- a. Wet
 - b. Dry
 - c. Soapy
- 1. Yes**
- 2. No**
49. Materials change frequency
- a. At least 3 times a day
 - b. Once a day
 - c. Twice a week
- a. Yes**
- b. No**
50. Appropriate disposal of used sanitary pads
- a. Wrapping in plastic bag and trashed to incinerator
 - b. Wrapped in plastic bag and thrown to latrine pit
 - c. Wrapping in plastic bag and thrown to refuse pit
- 1. Yes**
- 2. No**
51. The most appropriate way of keeping used menstrual cloth is:
- a. Washing and wearing
 - b. Washing and drying
 - c. Washing, drying and ironing
- 1. Yes**
- 2. No**

52. Can you demonstrate hands washing procedures? (Students should demonstrate hands washing procedures per OSHA mikonoyako poster)

a. Yes

b. No

APPENDIX: II

OBSERVATION CHECKLIST FOR REQUIREMENTS ADHERENCE

School Profile

Name of School

Reg. No.....

Owner.....

Name of head of School.....

Name of Village.....

Name of Ward.....

Number of staff: (Male.....Female.....)

Number of students: (Male.....Female.....)

Latrine numbers.....

Date.....

SN	Guideline requirements (Availability)	AVAILABILITY (mark $\sqrt{}$ at respective area as observed)	
		YES	NO
1	Girls toilets		
2	Space pads		
3	Emergency pads		
4	Pads trash bin		
5	10 Metres separate blocks		
6	Wall front		
7	soap & Water		
11	Nearby hands washing facility		
12	water, soap and ash		
13	Drum/fence off pit incinerator		
14	drum fenced off pit in near latrines		
15	Medications		
16	Guidance teacher		
17	MHHM training to teachers		
18	Clubs		
19	Booklet		
20	funds set aside		

APPENDIX III

FGD FOR SCHOOL BOYS

Hellow,

Thank you for joining me in this short discussion.

My name is **Syabo Mwantimwa Mwaisengela** student of MSc. Health Monitoring and evaluation from Mzumbe University. I am assessing on whether SWASH project has addressed MHHM challenges among school girls, therefore I want to know your opinions as a Male student who is a part and parcel of school community.

This discussion will take about 30 to 45 minutes

1. What do you understand about menstruation?
2. With your fellow boys what do you discuss about menstruation?
3. How do you perceive school girls while they are menstruation?
4. Do you think that it is important for you to be knowledgeable on menstruation? Why?
5. Are you willing to share information on menstruation with school girls? Why do you think so?
6. Do you think that, you are obliged to provide peer support to school girls at their menstruation? Which peer support do you think you have to provide to school girls?

APPENDIX: IV

IN-DEPTH INTERVIEW TOPICGUIDE FOR SCHOOL GIRLS

Participant: No. Gender Participant initials:

Researcher Initials Place of Interview: _____ Date

INTRODUCTION

My name _____ from _____

Describe general purpose and aims of the study as speculated in the information sheet

Confidentiality: No names will be used in transcription, analysis or report writing and all data will be only accessible to research provider and will be kept in secure locations.

Ask if participant has any questions? Happy to be tape recorded?

Area of study	Topic and Probes
Participant information	<ul style="list-style-type: none"> I would like to hear a bit about your study class, whether you are a students' leader or not, For how long have you been experiencing menses?
adherence to SWASH guidelines	<ul style="list-style-type: none"> What is your view on Availability of MHHM SWASH facilities? Are they adequately available? What is missing? Are you comfortably attending classes at your menses? Explain. Have you ever been trained at school on MHHM? Through which methods were the training conducted? What do you understand on SWASH club?, is it available? Have you ever gained MHHM knowledge from it? Are you well satisfied using toilets at your menses? Why? How does lack of MHHM SWASH facilities affect your education?

MHHM awareness	<ul style="list-style-type: none"> ✚ What a menstruation is all about? ✚ Which sanitary materials do you frequently use? Why? ✚ Have you ever been using menstrual cloth? How do you manage it after its use? ✚ What do you think are the reasons for low MHHM understanding among girls? What should be done to cover the gap? ✚ Are there prevailing myths in school on MHHM? Mention them.
School community and boys support on MHHM	<ul style="list-style-type: none"> ✚ Based on your experience or else, is there existence of teasing and embarrassment from boys when its revealed that girls are at menses? ✚ Are you in a position of sharing your MHHM situation to boys to get their support when a necessity arises? Explain ✚ Which support are you always receiving from boys and school community members as whole including teachers while at your menses? ✚ How do you manage menstrual cloths? Are you exposing them to direct sunlight or in a hidden place? Explain
Others	<ul style="list-style-type: none"> ✚ What are challenges that you face related to MHHM while at school? ✚ Can you share with us any interesting scenario or story associated to you or your friend that is related to MHHM?

Show appreciation to a participant for her time and make sure they have a contact telephone number for you or another member of the research team should they have any more questions or concerns about the research process.

APPENDIX: V

IN-DEPTH INTERVIEW TOPICGUIDE FOR SCHOOL MGT OR SWASH TEACHERS

Participant: No. |_|_| Gender Participant initials: |_|_|_|

Researcher Initials |_|_|_| Place of Interview: _____ Date
|_|_|/|_|_|/|_|_|

INTRODUCTION

My name _____ from _____

Describe general purpose and aims of the study as speculated in the information sheet

Confidentiality: No names will be used in transcription, analysis or report writing and all data will be only accessible to research provider and will be kept in secure locations.

Ask if participant has any questions? Happy to be tape recorded?

Question	Probes
Participant information	✚ I would like to hear a bit about you, which position do you serve in school?, Your day to day SWASH related responsibilities etc.
Do you have SWASH guidelines, if YES how do you use it? if NO, why?	✚ Guidelines here entails Growth and Changes booklet, Osha Mikono yako posters, SWASH strategic guideline (2016's) etc
Dou you have Vipindi vya Maisha guide for MHHM knowledge impartation? If NO which guide do you use and how do you make use of it?	✚ Vipindi vya Maisha (Growth and Changes) Booklet is the approved one when it comes to MHHM knowledge impartation, a teacher should at least explain on what it is all about and show at least one copy of a book.
What serve as a source of fund in your school and how do you manage it?	✚ Funds sources should be enlisted and how are they disaggregated into priorities.
Do you incorporate MHHM SWASH activities in your general school plan? If YES, how? If NO, why?	✚ The aim is to observe whether MHHM related SWASH activities are incorporated in school plan. Aresearcher should ask for a plan and observe adhere to this requirement. If NO, respondent should justify reasons for so case.

Do you have SWASH clubs? How are they organized?	🎯 The aim is to ascertain whether clubs are actively available and hence obtain insights on challenges that the clubs might be facing.
What are the means that you use in raising students' awareness on MHHM?	🎯 Respondents should show means through which MHHM knowledge is being imparted to students, they should show the one which is mostly applicable in their context.
What are the challenges impeding smooth implementation of SWASH project in the area of MHHM?	🎯 Interviewee should just mention and explain factors impeding smooth implementation of SWASH project in the area of MHHM.

Show appreciation to a participant for her time and make sure they have a contact telephone number for you or another member of the research team should they have any more questions or concerns about the research process.

APPENDIX VI

IN-DEPTH INTERVIEW TOPICGUIDE FOR DSHCO, DSEO AND DWE

Participant: No. Gender Participant initials:

Researcher Initials Place of Interview: _____ Date

INTRODUCTION

My name _____ from _____

Describe general purpose and aims of the study as speculated in the information sheet

Confidentiality: No names will be used in transcription, analysis or report writing and all data will be only accessible to research provider and will be kept in secure locations.

Ask if participant has any questions? Happy to be tape recorded?

Question	Probes
Participant information	✚ I would like to hear a bit about you, which position do you serve?, Your day to day SWASH related responsibilities etc.
Do you have accessibility of guiding documents for SWASH?	✚ Guidelines here entails Growth and Changes booklet, OshaMikonoyako posters, SWASH strategic guideline (2016's) etc
How consistent and sustainable is the flow of funds for SWASH?	✚ Respondent should explain on fund flow pattern of SWASH project from MoWI
Dou you have permanently available partners for SWASH? What have they done so far?	✚ A list of partners and their roles towards SWASH in the area of MHHM should be indicated by respondent.
Do you conduct supervision to schools as guidelines envisages for? How is it organized? How often do you conduct it?	✚ Should indicate on how organized Supervision in schools is? How often are data collected through monitoring toolkit?
Do you know how to manage SWASH data by using National Sanitation Management Information System?	✚ The aim is to ascertain whether clubs SWASH data are being fed into NSMIS which is prime in as far as sanitation data management is concerned.

How do you capture, analyze and use SWASH and MHHM related data?	🚦 Respondents should explain on data collection, analysis and use. This should be proved through displayed visualizations and in reports.
In the absence of SWASH funds, which initiatives do you always take to address MHHM infrastructural challenges?	🚦 Respondent should just mention and explain on initiated alternative means through which SWASH is to implemented in the absence of SWASH funds.
What do you think are the challenges underlying smooth implementation of SWASH project in the area of MHHM awareness and infrastructural adherence?	🚦 Interviewee should just mention and explain factors impinging smooth implementation of SWASH project in the area of MHHM.

Show appreciation to a participant for her time and make sure they have a contact telephone number for you or another member of the research team should they have any more questions or concerns about the research process.

APPENDIX: VII

RESPONSES ON INSPECTED ELEMENTS IN OBSERVATION CHECKLIST

SN	Name of School/Inspected elements	Chief Mang'anya	Shebomeza	Ngomeni	Kwafungo	Kerenge	Kwemkabala	Alhuda	Hegongo	Score
1	Girls toilets	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
2	Space pads	No	No	No	No	No	No	No	No	0%
3	Emergency pads	Yes	No	Yes	No	No	No	Yes	Yes	50%
4	Pads trash bin	No	No	No	No	No	No	No	Yes	13%
5	10 Metres separate blocks	Yes	Yes	Yes	No	Yes	No	Yes	Yes	75%
6	Wall front	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
7	soap & Water	No	No	No	No	No	No	No	Yes	13%
8	Nearby hands washing facility	No	Yes	No	No	No	No	No	Yes	25%
9	water, soap and ash	No	Yes	No	No	No	No	No	Yes	25%
10	Drum/fence off pit incinerator	No	No	No	No	No	No	No	No	0%
11	drum fenced off pit in near latrines	No	No	No	No	No	No	No	No	0%
12	Medications	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	88%
13	Guidance teacher	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	100%
14	MHHM training to teachers	No	Yes	No	No	No	No	No	No	13%
15	Clubs	Yes	Yes	Yes	Yes	Yes	Yes	No	No	75%
16	Growth and changes Booklet	No	No	No	No	No	No	No	No	0%
17	funds set aside	Yes	Yes	Yes	No	Yes	Yes	No	Yes	75%
SCORE		47%	59%	47%	24%	41%	35%	35%	65%	

APPENDIX: VIII

LOGISTIC REGRESSION OF DETERMINANT FACTORS FOR MHHM UNDERSTANDING AND ITS GOODNESS OF FIT TESTS.

```
. logit Perfc i.mothersedu i.class ,or
```

Iteration 0: log likelihood = -288.18126
Iteration 1: log likelihood = -284.69135
Iteration 2: log likelihood = -284.67191
Iteration 3: log likelihood = -284.6719

Logistic regression

Number of obs	=	458
LR chi2(6)	=	7.02
Prob > chi2	=	0.3191
Pseudo R2	=	0.0122

Log likelihood = -284.6719

Perfc	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]
mothersedu					
Primary	.9090284	.2527864	-0.34	0.732	.5270742 1.567773
Secondary	.9434083	.4935591	-0.11	0.911	.3383608 2.630385
None	.2017813	.1512677	-2.14	0.033	.0464267 .8769887
class					
Form II	1.037312	.2891566	0.13	0.895	.6006651 1.791376
Form III	1.360822	.3739136	1.12	0.262	.7941756 2.331774
Form IV	1.399092	.479969	0.98	0.328	.714225 2.740674
_cons	1.987766	.6540199	2.09	0.037	1.043039 3.788173

```
. estat gof, all group(5)
```

Logistic model for Perfc, goodness-of-fit test

(Table collapsed on quantiles of estimated probabilities)

number of observations =	458
number of groups =	5
Hosmer-Lemeshow chi2(3) =	0.67
Prob > chi2 =	0.8804

```
. estat gof, all
```

Logistic model for Perfc, goodness-of-fit test

number of observations =	458
number of covariate patterns =	14
Pearson chi2(7) =	8.97
Prob > chi2 =	0.2547

APPENDIX: IX

OUTPUTS FOR ONE-WAY ANOVA TESTS CONDUCTED

```
. oneway perf school ,tab
```

school	Summary of Perf		Freq.
	Mean	Std. Dev.	
Mang'enya	53.683036	11.870166	64
K/mkabara	53.113553	12.849397	78
Kerenge	53.896104	12.287874	66
Ngomeni	53.769841	11.866134	72
Kwafungo	54.807692	15.923056	52
Shebomeza	55.486543	13.144828	69
Alhuda	49.553572	13.696532	48
Hegongo	44.867725	5.9608401	9
Total	53.423789	12.979467	458

Source	Analysis of Variance			F	Prob > F
	SS	df	MS		
Between groups	1806.16362	7	258.023374	1.54	0.1503
Within groups	75183.057	450	167.07346		
Total	76989.2206	457	168.466566		

Bartlett's test for equal variances: chi2(7) = 13.5962 Prob>chi2 = 0.059

```
. oneway perf schoolcat,tab
```

Schoolcat	Summary of Perf		Freq.
	Mean	Std. Dev.	
URBAN	53.554175	12.349237	207
RURAL	54.639175	13.428825	194
PRIVATE	48.813701	12.864423	57
Total	53.423789	12.979467	458

Source	Analysis of Variance			F	Prob > F
	SS	df	MS		
Between groups	1501.50483	2	750.752415	4.53	0.0113
Within groups	75487.7157	455	165.907068		
Total	76989.2206	457	168.466566		

Bartlett's test for equal variances: chi2(2) = 1.3949 Prob>chi2 = 0.498

APPENDIX: X

RESEARCH PROPOSAL APPROVAL FORM

MU

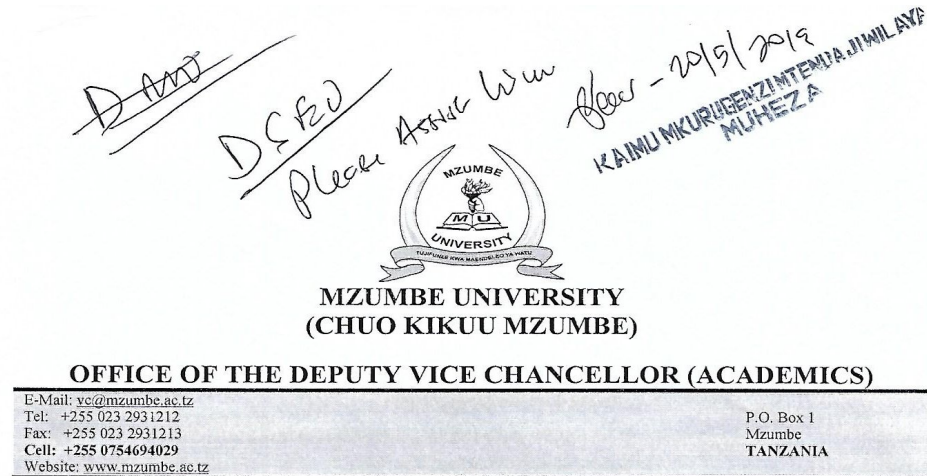
SCHOOL OF PUBLIC ADMINISTRATION AND MANAGEMENT

RESEARCH PROPOSAL APPROVAL FORM

1. Name of the Candidate (Surname): Mwankimwa (Initial) S
2. Programme Of Study: Masters Academic year: 2017/2019
3. Programme Specialization: Msc In Health Monitoring and Evaluation
4. Title of Thesis Proposal: Evaluation of SWASH; Has it addressed Menstrual Health, Hygiene and Management related challenges facing school girls in Muheza District?
5. Comments by Major Supervision:
Allowed to proceed for Data Collection
Signature: [Signature]
Date: 12/05/2019
6. Head of Department: [Signature]
Decision: Approved/Not Approved: Approved
Signature: [Signature]
Date: 12/05/2019
7. Chairman Board of School of Public Administration
Decision: Approved/Not Approved: _____
Signature: [Signature]
Date: 17th May, 2019

APPENDIX: XI

AN INTRODUCTION LETTER OF EVALUATOR TO RESEARCH AREA



Ref. No. MU/DPGS/INT/38/Vol. IV

Date: 17th May, 2019

TO WHOM IT MAY CONCERN

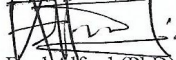
RE: INTRODUCTION OF MR. SYABO MWANTIMWA

The bearer of this letter Mr. Syabo Mwantimwa whose registration number is 14412036/T.17 is a postgraduate student at our University (Mzumbe University) pursuing **Master of Science in Health Monitoring and Evaluation (MSc. HME)**. As part of requirements for completion of his studies, he is collecting information on: **EVALUATION OF SWASH PROJECT: HAS IT ADDRESSED MENSTRUAL HEALTH, HYGIENE AND MANAGEMENT RELATED CHALLENGES FACING SCHOOL GIRLS IN MUHEZA DISTRICT.**

This letter serves to achieve three purposes. Firstly, to introduce him to you, secondly, to request you to grant him permission to undertake the mentioned research at your organization, and thirdly to request you to facilitate any form of assistance he might need in order to successfully pursue this noble exercise at your organization. We can assure you that this activity is entirely for academic and will never be used for any other purposes.

We trust that you will accord our student with necessary assistance.

Sincerely yours,


Dr. Fred Alfred (PhD)

For: **DEPUTY VICE CHANCELLOR (ACADEMICS)**

QUOTATION OF REF. NO IS ESSENTIAL

APPENDIX: XII

APPROVAL FOR DATA COLLECTION FROM STUDY AREA AUTHORITY

MUHEZA DISTRICT COUNCIL

(All correspondence should be addressed to the District Executive Director)

Tel No.: 027 2641105, 027 2641105
Fax: 027 2641271, 027 2641414
Email: ded@muhezadc.go.tz
Website: www.muhezadc.go.tz



P. O. Box 20,
MUHEZA.
23rd May, 2019

Ref.No. HW/MUH/S.80/26/170

H heads of Schools,
CHIFU MANG'ENYA, KWEMKABARA,
KERENGE, NGOMENI, BWEMBWERERA,
MISOZWE, SHEBOMEZA, AL-HUDA,
SWAFAA, KWAFUNGO AND HEGONGO,
MUHEZA.

Dear Sir/Madam.

REF: INTRODUCTION OF MR.SYABO MWANTIMWA

Concerning to the title above.

The bearer of this letter is to introduce you mr Syabo Mwantimwa who is a student at Mzumbe University pursuing Masters of science in Health Monitoring and evaluation (MSC.HME).

Kindly be informed that the above mentioned student has been granted a permit to collect information on "EVALUATION OF SWASH PROJECT HAS IT ADRESSED MENSTRUAL HEATH, HYGIENE AND MANAGEMENT RELATED CHALLENGES FASING SCHOOL GIRLS IN MUHEZA DISTRICT". The validity of this permission lies in between 20th May to 20 June, 2019

You are here requested to accord him with all necessary assistance so as to make his/her research project success.

Thank you.

Richard J. Msagati

FOR: DISTRICT EXECUTIVE DIRECTOR

Copy:

District Executive Director
MUHEZA - To see in the file

" Syabo Mwantima"
Mzumbe Unoversity,
P.O BOX 1
MOROGORO

APPENDIX: XIII

STUDY AREA ARRIVAL SHEET

STUDY AREA ARRIVAL SHEET

Researcher: Mr. Syabo Mwantimwa

Research Assistants: Mr. Rasmo Msabaha and Mr. Francis Riwa

SN	Name of school	Name of Head Master/Mistress	Signature	No of Surveyed respondents	Number of IDI respondents	Date of Data Collection	Time in	Time out
1	CHIEF, MARIKEMBA	RAMADHAN KABELWA		64	7	27/5	0908 HRS	1512 HRS
2	SHEBOMEZA	SUMA HANGA		69	4	28/5	0812 HRS	1416 HRS
3	NGOMENI	RAJABU MZIRAY		72	6	29/5	0856 HRS	1327 HRS
4	KWAFUNDO SS	MFUKO RICHARD D.		52	4	30/5	0803 HRS	1154 HRS
5	KERENGE SS	MFILINGE A.		66	5	30/5	1213 HRS	1556 HRS
6	KWEMKUBANA	JANJA H.F		78	5	31/5	0831 HRS	1209 HRS
7	AL-HUDA ISLAMIC SCHO.	ZUBERI KIVULO		48	7	31/5	1215 HRS	1607 HRS
8	HEGONGO SEC SCHOOL	FR. CLODWIG KOMBA		9	4	3/6	0932 HRS	1156 HRS
9	TOTAL	(Students)		458	42			