

**ASSESSMENT OF WATER SANITATION AND HYGIENE
PRACTICES AMONG SCHOOL CHILDREN IN Sengerema
District Council**

**ASSESSMENT OF WATER SANITATION AND HYGIENE
PRACTICES AMONG SCHOOL CHILDREN IN SENGEREMA
DISTRICT COUNCIL**

By

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**A dissertation Submitted in fulfillment of the Requirements for Award of the
Master of Science in Health Monitoring and Evaluation (MSc. HM&E) of
Mzumbe University**

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CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a thesis entitled **Assessment of Water Sanitation and Hygiene Practices among School Children In Sengerema District Council**, in partial/fulfillment of the requirements for award of the degree of Master of Science in Health Monitoring and Evaluation.

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I, **Consolata E Temu**, 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 would like to dedicate this thesis to my parents Mr. and Mrs. E. Temu, who always told me that education is the best inheritance a parent could give a child. They have always pushed me to study harder by referring to the words that *“Education is the great engine of personal development. It is through education that the daughter of a peasant can become a doctor, that a son of a mineworker can become the head of the mine, a child of farm workers can become the president of a nation”*. They have been the best role models and inspiration to me in my life.

ABBREVIATIONS AND ACCRONYMS

AMREF	African Medical Research Foundation
MoVET	Ministry of Education and Vocational Training
MoHSW	Ministry of Health and Social Wealfare
MoWI	Ministry of Water and Irrigation
NGOs	Nongovernmental Organizations
NSC	National Sanitation Campaign
PMO-RALG	Prime Minister's Office, Regional Administration and Local Government
School WASH	School Water Sanitation and Hygiene
SWASH	School Water Sanitation and Hygiene
SNV	Netherland Development Organization
UNICEF	United Nations Children's Fund
WASH	Water Sanitation and Hygiene
WHO	World Health Organization
WSH	Water Sanitation and Hygiene

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).

Improved Sanitation facilities: is defined as one that hygienically separates human excreta from human contact.

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

Desirable latrines refers to improved latrines

ABSTRACT

Background: Poor hygiene practices and conditions create a serious public health threat to school children. This evaluation aimed to assess School Water sanitation and Hygiene (SWASH) project established for providing better school environment to the school children and better hygiene conditions to all pupils. The specific objectives included assessing the alignment of the project to the national guidelines, hygiene practices behavior of the pupils as well as the perception of implementers of this program.

Methodology: The study was qualitative and a descriptive cross sectional study design where a formative evaluation approach was employed. A sample size of 8 primary schools with 80 people was used in the study. One on one interviews, Focus group discussion and observations checklist were used to extract data from the study participants. Data was analyzed through content analysis technique with the help of Atlas ti software, where codes, themes and quotes were created

Results: The overall results showed that none of the 8 schools had met the standards of school WASH. 2 district implementers and 16 school teachers were interviewed while 62 pupils (56%) females and (43%) males were in a focus group discussion. The majority of Pupils seem to have fair knowledge on hygiene related diseases but poor practice on hygiene practices. 85% of interviewed pupils never wash their hands after toilet use and 83.87% of them do not like their school toilets despite of them using it. The implementation process is a big challenge to the implementers of both sides (district and schools).

Conclusion: The evaluated primary schools have poor hygiene conditions mainly due to poor planning and implementation of the programme. The school children practices poor hygiene behavior due to lack of knowledge and means made available for them to practice safe hygiene practices. Lack of water and sanitation facilities is stated as the main obstacle for the pupils to practice safe hygiene behavior. The implementers find that the biggest challenge in the implementation of School WASH is poor or too little budget for the project and poor commitment of the government in running school WASH. Poor partnership and co- ordination between the department of education and health are also observed as the driving challenges to the implementation of school WASH. Efforts should be made by the government in improving these challenges.

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CHAPTER ONE: INTRODUCTION

1.1: Background

Water Sanitation and Hygiene (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. Its main aim is to improve child health and school performance through reducing chances to encounter incidences of water and sanitation related diseases. Schools are required to have appropriate WASH initiatives to ensure the environment is kept clean and free from bacteria (Zomerplaag, 2005). The Millennium Development Goal (MDG) number seven that aims to improve environmental sustainability has a sanitation target which is to reduce the percentage of the population with no access to improved sanitation from 51% in 1990 to 25% in 2015. Since 1990 access to improved sanitation improved from 49% to 64% in 2012 meaning that about 2 billion people increased access to upgraded sanitation (WHO, UNICEF report, 2014).

Despite that studies conducted in 2012 have shown that 36% of the world's population which is about 2.5 billion people, has no improved sanitation facilities while 76% of the people from the sub-Saharan Africa still uses water from unsafe sources. This situation sickens thousands of children as well as killing them each day, as a result opportunities for thousands children more is endangered (WHO/UNICEF report, 2013)

However progress in sanitation between southern Asia and Sub Saharan Africa has been quite different since 1990 to 2012. The use of improved sanitation increased from 19% to 42% in Southern Asia while in Sub Saharan Africa, it increased only by 5% of the population that uses improved sanitation in 2012 (WHO/UNICEF report, 2014).

Also half of the girls who drop out of school in sub Saharan Africa is due to lack of adequate water and poor sanitation facilities in their schools. Moreover 10% of

school-age girls who have reached puberty age do not attend school during menstruation. This is because of poor sanitation facilities that do not allow privacy for the student as well as inadequate availability of water that they use for cleaning themselves during those days (Mercer J, 2010).

The rate of access to School water sanitation and hygiene as well as facilities has been very slow in Tanzania. The number of children attending school in Tanzania as a result of some successful policy initiatives, more specifically the abolition of school fees in 2002, has become very high. The number of primary schools raised from 11,873 in 2001 to 14,700 in 2006. As a result of this massive increase of primary schools, there has been a great necessity of resources to keep pace with this vast increase, hence there has been a need of more than 240,000 extra drop holes in all the schools in Tanzania (UNICEF, 2010).

On the other hand a survey conducted by organizations such as African Medical and Research Foundation (AMREF), Netherlands Development Organization (SNV) and Water Aid, indicated that the immense increase of schools to ensure access did not go hand in hand with improving the sanitation facilities. Schools were increasing faster than how sanitation facilities were increasing and most schools did not meet the defined standards for the latrines which include the ratio of one drop hole per 20 girls and one drop hole per 25 boys that was later changed to 40 girls per drop hole and 50 boys per drop hole (SWASH Strategic guideline, 2012).

Also a study carried out by SNV and other partners in 2009, aimed to look at the situation on the ground on school WASH in Tanzania. 2,667 schools from 16 districts in Tanzania were included in the study to find out the hygiene practices in primary schools as well as the situation on the ground. The results showed that 11% of schools had met the least requirements of toilet ratio, whereas 6% had no toilets, 20% had over 100 pupils per toilet, 48% of latrines for girls had no doors, and only 43% of the schools reported that their WASH facilities had been inspected by local government authorities. Moreover only 4% of the schools had adequate water and soap on the side for washing hands and only 6% of the schools had facilities for the children with special needs (A. Sigareti, 2012). From the observation above,

Tanzania is still in a critical condition on the issues of school WASH, where different measures should be taken to find out why the program is stuck and what measures should be taken to speed up the progress of the program in the districts of Tanzania.

The Tanzanian National Sanitation Campaign (NSC), launched in June 2012, aims to stimulate demand for sanitation and improve supply. The NSC is coordinated by the Ministry of Health and Social Welfare and involves (Non-Governmental organizations (NGOs), the private sector and other government ministries. Four key ministries involved in NSC are Ministry of Health and Social welfare (MoHSW), Ministry of Education and Vocational Training (MoEVT), Ministry of Water and Irrigation (MoWI) and Prime Minister's Office, Regional Administration and Local government (PMO-RALG). The National Sanitation campaign has two components which are household sanitation and hygiene and promotion of School Water sanitation and hygiene (School WASH). This evaluation focused on the component of School WASH in which the memorandum of understanding that was signed between the four key ministries gave the mandate to the MoEVT to lead the project (National Guideline for SWASH in Tanzania, Oct, 2010).

1.1.1: Situation of WASH in Sengerema district council

However the situation of primary school attendance in Sengerema district is still very poor. It has been reported that 28% of males and 39% of females never attend primary schools, while 11% of males and 13% of females drops out of school before completing primary education. Only 30% of male and 25% of females completes primary education (URT, 2002).

A total of 84 pit latrines were built in ten primary schools in Sengerema District but still there was a shortage of 2,729 latrines (Sengerema education profile, 2013). The existing latrines have very poor hygiene conditions with no sanitation facilities like water and areas for washing hands, soaps and sanitary pads disposal. Most of the school latrines also lack doors which reduces privacy for the pupils. As a result, there was poor attendance and performance in the schools as well as many reported cases of water borne related diseases which were caused by poor sanitation

1.2: Program Description

1.2.1: Description of school wash program

Since 2002 up to 2009 the Government of Tanzania has been implementing Primary and Secondary Education Development Programme, 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).

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.

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.

1.2.2: Overall goal of school wash programme

The overall goal for the SWASH programme 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)

Specific objectives of the wash programme

- 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 the Regions in Tanzania under the National Sanitation Campaign and aims to achieve the same objectives. This evaluation was focusing mainly on the objective that aims to improve hygiene practices among school children and to improve water, sanitation and hygiene facilities in primary schools. The study has also assessed the perceptions of the implementers towards the implementation of this programme.

1.2.3: 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, 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.

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. The activities and resources of the program are indicated in table 1.1.

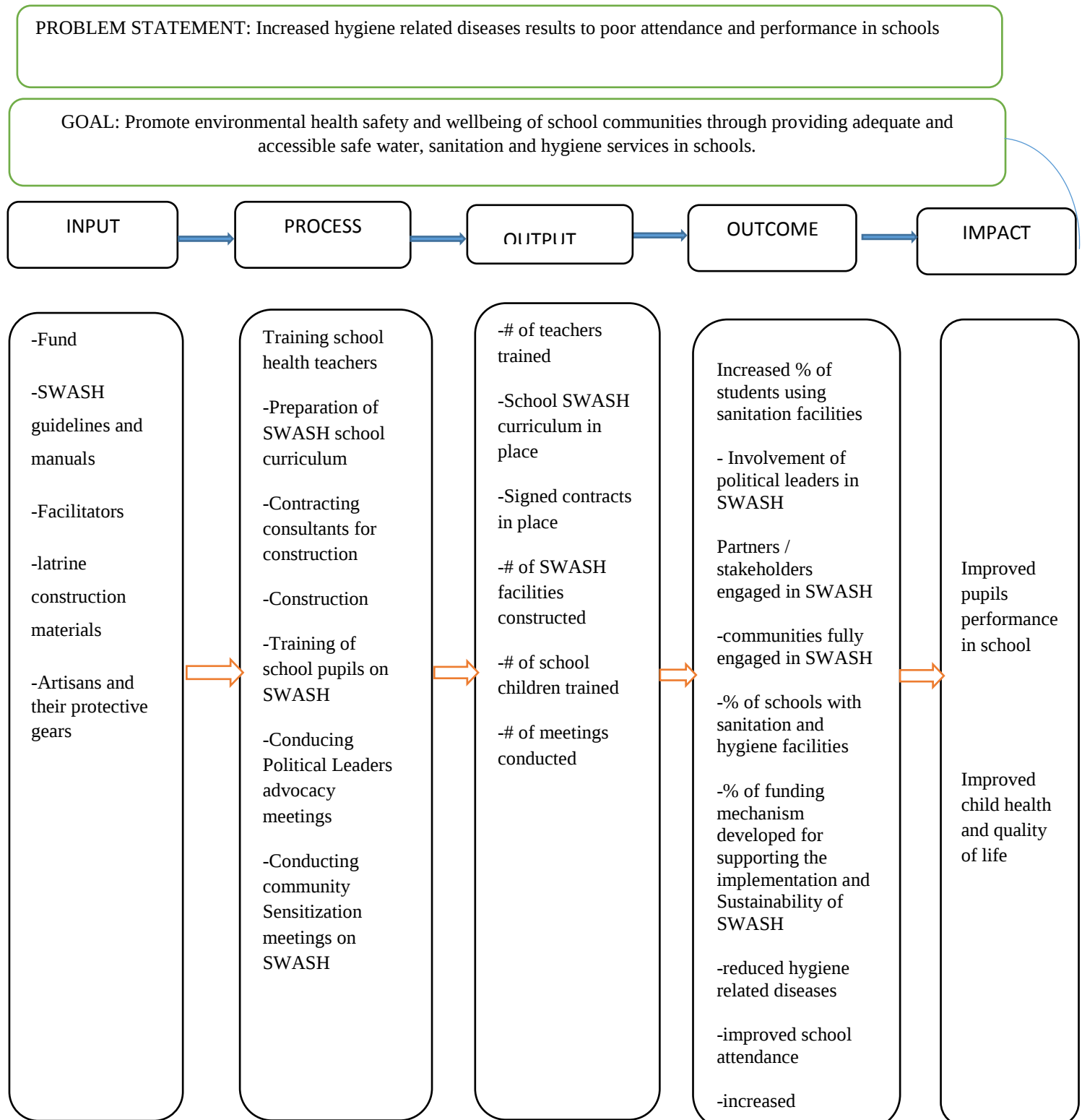
Table 1.1: The program activities and resources necessary for SWASH in the year 2012-2017

S/N	PROGRAM ACTIVITIES	PROGRAM RESOURCES
1.	Training teachers on school WASH	Human resource, training manuals, time and fund
2.	Training students on School WASH	
3.	Construction of new latrines	Fund, human resources, artisans, building materials
4.	Rehabilitation of school latrines	
5.	Formation of school WASH clubs	Training manuals
6.	Hygiene practices training	Soap, water, human resources.

1.2.4: SWASH Logic Model

The logic model shows the inputs/resources in the project, what they are used for the expected output of the project, outcomes and impacts.

Figure 0.1 logic model for the school WASH program



1.2.5: Stakeholder analysis

The ongoing School WASH project in Sengerema has a number of different stakeholders who work together to ensure proper implementation and sustainability of the programme. These stakeholders include the MoEVT, MoHSW, MoWI, Local authorities, Students, Teachers, Communities and other development organization partners. The same stakeholders were involved in the evaluation process where the District health department, District education department, teachers and pupils were the key participants in this evaluation. The officials in the department of education and department of health together with the teachers were the implementers and the pupils were the beneficiaries.

Table 1.1: Stakeholder assessment and engagement matrix for school water, sanitation and hygiene (swash) program for the year 2012-2015.

STAKEHOLDER	ROLE IN THE PROGRAM	INTEREST/PERSPECTIVE ON EVALUATION	ROLE IN THE EVALUATION	MEANS OF COMMUNICATION	LEVEL OF IMPORTANCE
DONOR.	Implement MDG (No. 4&7) Donat e fund	Goal achievement on improved hygiene in schools and community	Conduct oversight of the whole program.	Reports, emails, telephones and fax.	High
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 asses 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 community	-Asses success/failure of SWAH program -Practice sanitation	-Word of mouth	Low
COMMUNITIES	-practice sanitation at the house hold level	Improved health at the community	Provide/source of information	Telephones, word of mouth.	Low

Source: evaluator, 2014

During this evaluation, not all the stakeholders were involved due to constraints of funds and time. Only stakeholders from the district level and teachers (implementers) and pupils (beneficiaries) were involved and these stakeholders have been able to yield proper results about the implementation of the school WASH program in Sengerema district as presented in this evaluation report.

1.3: Statement of the Problem

It is estimated that 7% of the population in Rural Tanzania uses improved sanitation whereas it is completely off the track to achieve the MDG number seven. Due to this report, the government of Tanzania was prompted to make changes to this situation hence the National sanitation campaign was established so as to assist the MDG. In 2012, 42 districts were introduced with school WASH due to poor sanitation facilities in Tanzania (Jimenez A. et al, undated).

Sengerema is also not an exception, as Poor sanitation, water and hygiene in primary schools have many serious repercussions. Pupils and particularly girls are denied their right to education because their schools lack private and decent sanitation facilities. Without WASH, sustainable development is difficult (Sengerema district profile, 2013).

Despite of the efforts carried out by Sengerema District and other development partners, pupils still lack good sanitation facilities, like clean latrines, privacy in terms of doors, Sanitary pads disposal, water and hands washing facilities. The implementation of the project has been very slow in Sengerema and most of the schools have not been introduced to the School WASH programme. The indicators that were expected by the district have not been met and this justifies that apart from the big challenge of lack or delay of fund, there was still a delay somewhere or responsible people were not doing what they were supposed to do.

Due to time and financial factors, this evaluation mainly focused on only one objective of the school WASH programme which aims at improving hygiene practices among school children and their families. To achieve that objective the evaluator assessed the perception (knowledge and attitude) and practices of the

pupils and perceptions of implementers towards the programme mainly on hygiene practices among school children and the progress of the SWASH program in Sengerema district.

1.4: Evaluation Questions and Objectives

1.4.1: Evaluation questions

- i. Is school WASH being implemented according to the national standards?
- ii. What were the perception of the pupils on their school sanitation and hygiene facilities and practices?
- iii. What were the perception of implementers towards the implementation of the school WASH program?

1.4.2: Evaluation objectives

Overall objective

To evaluate the progress on the implementation of the School WASH in Sengerema District Council through assessing the perception of pupils, condition of sanitation facilities and hygiene practices in primary school.

Specific objectives

- i. To determine whether school WASH implementation in Sengerema was aligned to the national standards
- ii. To examine hygiene practices behavior among pupils in Sengerema.
- iii. To assess the perception of implementers towards implementation of SWASH.

1.4.3: Significance of the evaluation

This evaluation mainly intended to enable Sengerema district to assess the quality and impact of the School WASH project. The evaluation also intended to help foster learning and knowledge generation about School WASH in the district. The stakeholder engagement in the evaluation supported public accountability, provide

consolidated information showcasing School WASH progress as well as reveal mistakes and offer paths for learning and improvements.

It was also expected that the results gathered after this study would assist in policy formulation especially on SWASH issues as well as assist on what measures to be taken by the government to achieve the millennium goal in 2025.

The report has also been part of fulfilment of my Master's degree requirement and it is submitted to Mzumbe University for academic purpose.

Moreover it has shed light to the District to develop an M&E unit that would assist in monitoring and assessing the progress of the school WASH programme and other programs in the District.

CHAPTER TWO: LITERATURE REVIEW

2.1 Overview

This chapter reviews different publications that reflect on impacts of water borne related diseases as a result of inadequate WASH and show its implication to SWASH firstly, on poor hygiene then digs deeply to literatures about poor scaling up of sanitation facilities and how it affects child health. Finally it shows the literature gap that was researched on and explained by this paper.

2.2 Water borne related diseases and its implication to School WASH

Water borne related diseases are often caused by inadequate water sanitation and hygiene. Different studies that have been carried out worldwide have shown that inadequate WASH in schools have a big chance of affecting the performance and attendance of school children by affecting their health (UNICEF, 2011)

The global burden of disease study estimated the disease burden from water, sanitation, and hygiene at the global level taking into account various disease outcomes, principally diarrheal diseases. It was estimated that disease burden from water, sanitation, and hygiene is 4.0% of all deaths and 5.7% of the total disease burden occurring worldwide, taking into account diarrheal diseases, schistosomiasis, trachoma, ascariasis, trichuriasis, and hookworm disease (Prüss et al, 2002).

These water borne related diseases which are strongly associated with poor sanitation and hygiene in schools, result in morbidity and mortality of school children and affect the quality of their attendance and performance in school.

A study from UNICEF, (2010) on water, sanitation and hygiene programs in South Asia have identified WASH in Schools as a priority area. The availability of improved hygiene practices and improved school sanitation that is the surrounding environment of the schools are very important factors that triggers the children's enjoyment of accepted standards of health. Therefore there was a big need for the improvement of the hygiene practices and improved school environments so as to

reduce the deprivation in primary schools which lack safe drinking water, clean latrines, and soap for washing hands and enough supply of flushing water in the toilets on their school premises (Mooijman.A, et al, 2010).

Other studies also show that most of the developing countries have had a great burden of diseases that are related to poor water sanitation and hygiene. It has been estimated that 88% of diarrhea diseases are a result of unsafe drinking water supply as well as poor sanitation. This justifies that even the school children who are surrounded by unsafe environment and inadequate supply of clean and safe water are highly affected by the poor sanitation and water related diseases (WHO, 2004). Many schools in developing countries serve communities that have a high prevalence of diseases related to inadequate water supply, sanitation and hygiene, and where child malnutrition and other underlying health problems are common. Therefore washing hands with soap is very important to eliminate waterborne related diseases (Curtis V, 2003).

Moreover a study conducted in Kenya aimed to assess the impact of a school-based WASH intervention on diarrhea disease in primary school children. They used two different groups of school children where one school had an available water source and the other group did not have one. The results of the study proved that schools with an available water source had a lower prevalence of diarrhea diseases compared to the schools that had no available water source nearby. Schools with a nearby water source were also given an intervention of hygiene practices promotion and after sometime there was reduction of diarrhea incidences and days of illness (Chatterley C et al, 2013). Based on the study, we could say that inadequate WASH in schools imposes a great effect to the school children's health and performance as it leads to diseases like diarrhea which prohibits students from attending in school (Gelaye, 2014)

Tanzania is not an exception. Poor sanitation costs Tanzania 301 billion Tanzanian Shillings each year, equivalent to US\$206 million (WSP, March 2012). Most of schools still lack adequate WASH and as a result affects the students' health, attendance and performance. The impact of poor sanitation, poor water quality and

supply and the inappropriate hygienic behavior has proved to be a disaster to most of the school children and it has a big impact to their health and school attendance and performance (UNICEF, 2010).

The above literature indicates that above other factors, the students' health, attendance and performance was highly hindered by water borne diseases and thus more efforts should be put on this issue.

2.3 Sanitation facilities and poor hygiene practices

Some other literature has also been written about the poor sanitation facilities and facilities that lack privacy and how it hinders the health, performance and attendance of both teachers and students. Different researchers wrote about how poor sanitation facilities like undesirable latrines, lack of hand washing areas with soap as well as lack sanitary pads' disposable bins in schools was a contributing factor to poor health, attendance and performance of school children.

Most schools that lack proper sanitation facilities, especially for girls have been creating a burden to both the school children and their teachers. The lack of sanitary facilities in primary schools has led to poor attendance of female teachers and girls students into the schools especially during their menstrual periods. This also creates a gap of attendance and performance between boys and girls since the girls seems to be the ones affected more than the boys (Adams et al, 2009)

Studies carried out in South Asia, have pointed out a very small percentage of schools with separate facilities for girls. The facilities are very few and in a very poor conditions which was not healthy for the school children. As a result the students do not use these facilities and choose to use other places which seem to be more comfortable to them such as the school compounds or hidden bushes. The situation was worse for girls who are maturing to the teenage age, as they are forced to use the poorly constructed facilities which was not healthy for them and other girls chooses to skip schools so as not to endure the hardships. This then affects the health and the performance of the school children. In this case the poor conditions of the sanitation

facilities may transmit poor hygiene related diseases to the children which would also affect their health (Mooijman A et al, 2010).

Other studies show that poor sanitation which has always been associated with Africa, has significant negative effects on the national economy and that 49% of all reported sickness and injuries in Sierra Leone is related to poor sanitation. Many schools, particularly rural schools have no latrines at all and of those with latrines most did not have separate latrine facilities for girls and boys. Lack of latrines especially separate latrines for girls is identified as the worst school experience for girls. This illustrates that the issue of poor sanitation is one of the special conditions which prevent girls from fuller participation and achievement in schools and to an extent force them out of school. It is also estimated that 59% of all outpatient visit are accounted for by poor sanitation (Mustapha S., 2012).

Moreover in Malawi and Uganda a study on policy provision for WASH in school with children with disabilities was conducted. The findings could prove a relationship between improved access to water sanitation and hygiene in schools and improved students health and performance in schools with regard to school children with disabilities on the impact of school WASH facilities on health, enrolment and absence for children with disabilities is not available. The limited data have revealed that children with disabilities are burdened by poor WASH in school access, and are even prevented from attending school due to inaccessible WASH facilities. The study found a robust policy environment in Uganda and Malawi with policies and guidelines in place for WASH in schools for children with disabilities. However, provision of services and facilities are low and focused primarily on sanitation. This shows despite of policies and guidelines being in place, still there is lack of sanitation facilities for students with disabilities hence their attendance in school is affected (Erhard, 2013).

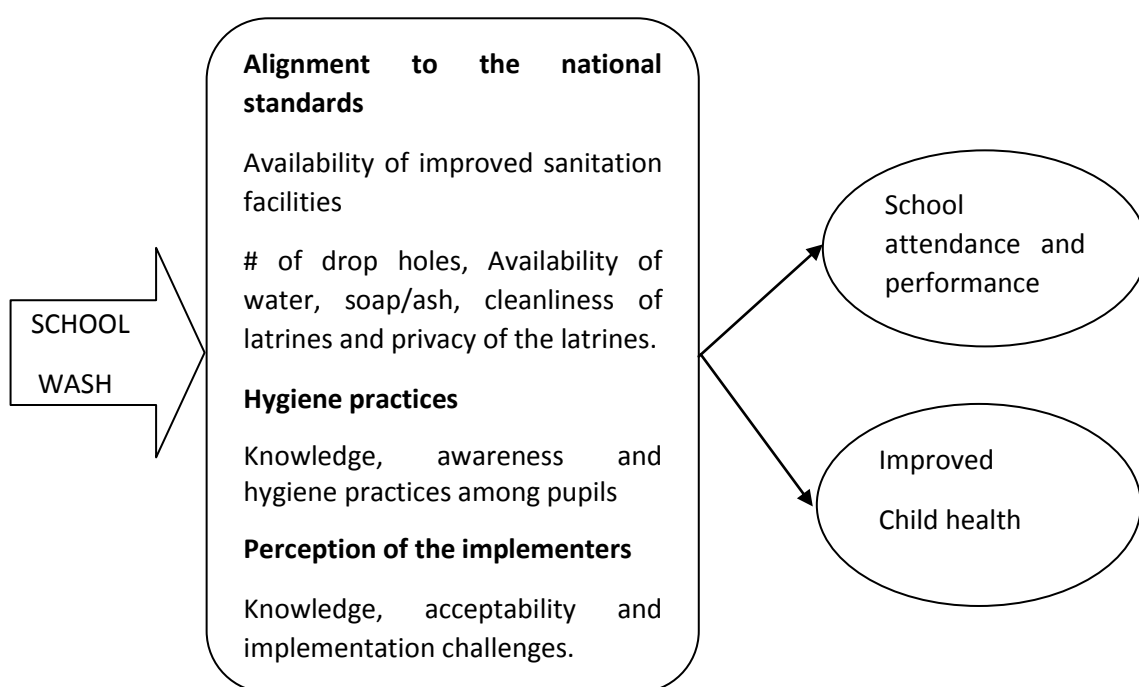
In Tanzania, 38% of schools have no water supply on school premises, 84 % have no functioning hand washing facilities, 96% lack sanitary facilities for disabled children and 52% do not have doors on toilets to ensure privacy for girls (UNICEF, 2009). This increased the need for the MoEVT to participate in the scaling up of WASH

facilities as a way of reducing the problem and improving school attendance and performance.

2.4 Conceptual Framework

This is a network of concepts that link together to provide the same understanding of a phenomena. This is a collection of concepts, expectations, beliefs and theories that assists us in informing our research (Miles and Huberman, 1994; Jabareen, 2009). This conceptual framework shows the dependent variable as well as the independent variables that were expected to be researched so as to provide the desired results. They have been able to inform this evaluation with regard to the phenomena under study. Figure 2.1 indicates the link between the concepts and the expectations of the study.

Figure 2.1: Conceptual Framework



Description of Variables

Variables that are indicated in the conceptual framework are described in the table below and how each variable was measured to achieve the presented results.

Table 2.1: Description of variables used in the study

SN	Type or Name of Variable	Definition of Variable	Measurement of Variable
1	Alignment of school Wash to National Standards	These are the minimum set standard of School WASH in Tanzania that were indicated in the National Strategic guideline of 2012 to guide the program.	Number of students per drop hole, availability of water (flush and washing hands), Availability of urinals for boys, Availability of soap/ash, cleanliness of the latrines.
2	Hygiene Practice Behaviours	These are conditions and practices that help people to maintain health and avoid spread of diseases (WHO, 2010). It involves the pupils knowledge and awareness towards practicing personal and environmental cleanliness	Knowledge of pupils on hygiene related issues, awareness of pupils and the practices of pupils towards hygiene behaviours
3	Perception of implementers	These are the knowledge, attitudes and acceptability of implementers towards the implementation of school WASH program.	Knowledge and attitude towards the program, acceptability and implementation challenge.

CHAPTER THREE: EVALUATION METHODOLOGY

3.1 Study area

Sengerema district council is one of the seven districts of Mwanza region and it is located at the southern shore of lake Victoria in Mwanza Region. In 2002 it was estimated to have a population of 501,915 people. Two rainfall seasons are experienced in Sengerema District which allows the people to practice agriculture and fishing as their main activities. The district has a total number of 160 primary schools of which 2 are privately owned. Like most of the districts in Tanzania Sengerema has a shortage of latrines in primary schools. It was estimated that Sengerema has a shortage of 2,729 pit latrines for primary schools (Sengerema profile, 2013)

The shortage of latrines and sanitation facilities in Sengerema district, prompted the Ministry of Education and Vocational Training together with Ministry of Health and Social Welfare to implement the School WASH program in Sengerema. This is one among other districts that have been Implementing School WASH program by improving sanitation facilities in primary schools. All the primary schools in this district do not reach the national standard which was one hole per 40 girls and one hole per 50 boys. Therefore the scaling up of School WASH in this district was very important to ensure that the standards are met in this district. The intended impact of improved health to school children and education was dependent upon a combination of reduced exposures to pathogens and improved quality of basic services (e.g. more desirable latrines with enough water and soaps). The SWASH project is an ongoing process in Sengerema District and it is coordinated by the district's sanitation Co-ordinator and regional sanitation co-ordinator.

3.2 Evaluation period

In consideration of academic factors, this evaluation process began with an evaluation plan in October 2013, where an evaluability assessment was conducted by studying the area where the evaluation was expected to be conducted. An evaluation

proposal was prepared in October 2014 and all the stakeholders were identified during this period.

Data collection for the evaluation was conducted for the period of four months, where data was collected from February 2015 to early June 2015. This is elaborated in appendix 1.

3.3 Evaluation approach

The study employed a formative evaluation approach, where it specifically assessed the implementation of the School WASH program in Sengerema district council. A qualitative method approach was employed in this evaluation

In this evaluation an observation checklist was used to determine if school WASH was aligned to the national standards by observing the situation of latrines in the schools, and the availability of sanitation facilities, where it was able to point out to what extent the program was a success or failure in Sengerema district. A qualitative approach was also employed to explore the perception of pupils towards the hygiene practices in their schools as well as the perceptions of the implementers towards the implementation process of the program and hygiene practices of the pupils in Sengerema district.

This evaluation was therefore a benefit to Sengerema district in analyzing the progress of the school WASH program as well as an assessment of behavior change of pupils on hygiene practices in Sengerema district since the district officials were involved in all steps of the evaluation.

3.4 Evaluation design

A descriptive cross sectional evaluation was employed where data was collected at a single point in time. Students were gathered in focus group discussions and offered information and the same case with teachers in one on one interviews. A descriptive evaluation method was employed where an observation checklist was used based on the national guideline, in depth interview and focus group discussions were also used to assess the perceptions of users and implementers.

3.5 Focus of evaluation and dimensions

The focus of this evaluation was mainly on the perception of the pupils and the implementers on the implementation of School WASH program in Sengerema district council. In this evaluation the perception of pupils included knowledge of pupils on hygiene practices as well as quality of the school WASH facilities. On the perception of implementers the dimensions considered were knowledge on the implementation of the school WASH program as well as acceptability of the Program in the district and the schools in Sengerema.

3.6 Indicators

Generally the **dependent** variable is **School WASH**. All the independent variables are categorized in the table 3.1.

Table 3.1: The independent variables that have been used in the project and their categories

INDEPENDENT VARIABLE	OPERATIONALIZED INDEPENDENT VARIABLE	TYPE
DEMOGRAPHIC FACTORS	Age	Continuous
	Sex	Categorical
	Level of education	Categorical
NATIONAL STANDARDS		
	Availability of hand washing sinks	Categorical
	Number of drop holes	Discrete
	Availability of water sources near the school	Categorical
	Number of students per drop hole	Discrete
SANITATION FACILITIES	Cleanliness of the toilets	Categorical
	Availability of water	Categorical
	Availability of soaps/ash	Categorical
	Availability of Privacy of the latrines	Categorical
	Pads disposable bins	Discrete
HYGIENE PRACTICES	Attitude of students in hand washing	Categorical
	Knowledge of students in hand washing	Categorical
	Hand washing with soaps	Categorical
	Girls students practices during menstruation	Categorical

Source: Evaluator, 2014

3.7 Population and Sampling

The general population for this study is the schools in Tanzania. During this evaluation data was collected from the primary schools in Sengerema district council.

3.7.1 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 primary schools in Tanzania

3.7.2 Source population

The source population included the selected public primary schools in Sengerema district that were involved in the implementation of this school WASH program at any point. All the pupils and teachers interviewed were members of these selected schools. The implementers were from Sengerema district council and specifically from the department of education and health.

3.7.3 Study population

Data was collected from Sengerema district council municipal, pupils and teachers from the suggested public primary schools.

3.7.4 Study units and sampling units

Data was collected from pupils that ranged from standard six to seven. This was because between this age pupils are more aware and are assumed to be able to read, write and speak hence could offer more reliable results.

The schools were selected purposively that is, those schools that had been introduced to the school WASH program were identified by the district officials then they were randomly identified by the evaluator.

The sampling units were therefore people and schools.

3.7.5 Sample size

Since this study was a qualitative method, the sample size was 8 schools that were identified from the district implementer involving the schools that were familiar to the program and from these schools 80 participants were involved in focus and in-depth interviews.

3.7.6 Sampling procedure/technique

In qualitative research purposive selection of study participants helps the evaluator to best understand the problem and the evaluation questions (Cresswell, 2003). The sampling technique was purposive sampling for the qualitative. To conduct a purposive sampling for qualitative data, I was able to talk to the direct implementers who were able to point out the schools that have been introduced to the program and also are aware of the program. From the schools identified, 8 schools were identified based on the geographical location of these schools.

3.7.7 Inclusion and exclusion criteria

The study included all pupils in the selected primary schools who were in standard six to seven, school health teachers and all workers who were in school WASH team in the district. Only schools that have been introduced with the school WASH project in Sengerema DC were included in the study.

All pupils with special needs were excluded from the study as well as students from standard one to five.

3.8 Data Collection

Data was collected through focus group discussions, interview guide and an observation check list. All pupils that were involved in the study were in focus group discussions while teachers and district implementers were in one on one interviews. Other data was collected through observation, where a checklist was prepared.

3.8.1 Development of data collection tools

This evaluation employed a number of data collection tools which are an interview guide and an observation checklist. The interview guide was prepared in Swahili language so as to ensure full participation of the participants where after data collection they were translated in English for data and report presentation. The observation checklist was prepared in English language and it was used to identify the guidelines of school WASH hence it was used to show the extent to which the program has succeeded in meeting its goals in Sengerema district. A pretest of all the tools was conducted before the actual evaluation was carried out.

3.8.2 Data collection field work

During data collection in the field, all participants/study subjects were identified from the district council based on the progress of the program.

3.9 Data Management and Analysis

3.9.1 Data entry

All qualitative data was translated and transcribed, then a Microsoft Word program was used to write a report then entered in Atlas ti. Coding and memoing was carried out to ensure that all important information is captured. Atlas ti was also used to capture all quotation and make sense of the data as well as to create themes. Excel was also used for data cleaning and simple description of the data.

However the process of data cleaning was carried out through the whole process of data collection and data entry. Data was cleaned as the transcription was done in the Atlas ti.

3.9.2 Data analysis

Data analysis was carried out with the help of Atlas ti. Whereas tables, graphs, and quotations were used for data presentation. The analysis technique used for this study was content analysis. This is a systematic way of comprising many words into fewer

content through coding (Weber, 1990). So the key aspects were counted from the content with the help of Atlas ti software codes, themes and memos were created and analysed.

3.10 Ethical issues

In any evaluation ethical consideration are very important. An essential issue in any evaluation or research is to ensure that all the information gathered by the evaluator is treated with full confidentiality. Any participant has to be willing to participate and should not be forced into giving information and his/her anonymity should be ensured (Maree, 2007). In this evaluation ethics were considered.

Permission from Authority

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

Informed consent

All the participants of this study were well informed about the data collection process. They were also informed about risks/harm that might be involved with this study.

Confidentiality and anonymity

An evaluator or researcher was 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 was treated with high confidentiality. The report would only be used when authorized by the University of Mzumbe. All participants are anonymous and are not to be revealed to anyone or any institution and any information offered by participants, the identity remained between them and the evaluator.

CHAPTER FOUR: PRESENTATION OF FINDINGS

4.1 Introduction

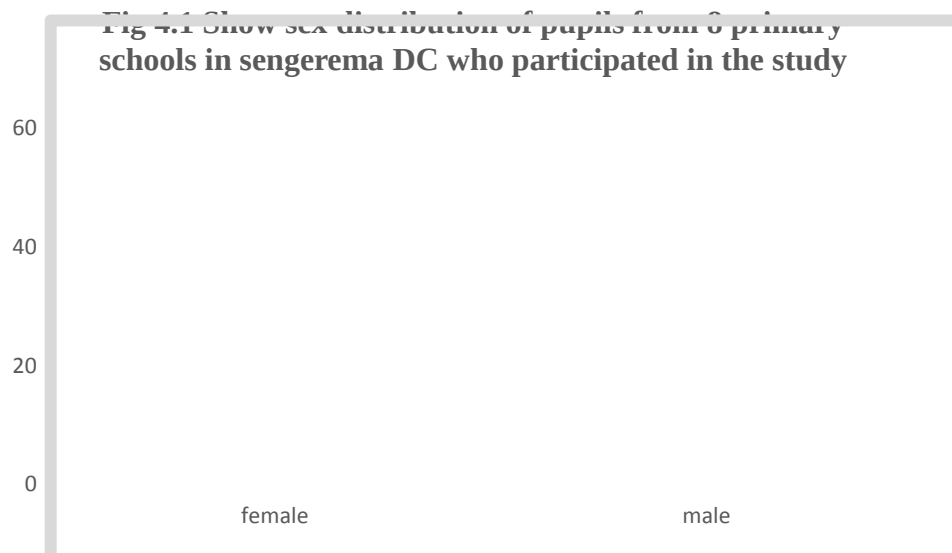
Presented are the findings relating to each evaluation question posed in this thesis. First the vignette of the findings from evaluation question one are presented and they describe the actual situation of school WASH in Sengerema district, explaining whether the program in Sengerema is aligned to the national guidelines. The findings were derived from observation of school sanitation facilities in Sengerema and interviews from implementers including teachers and implementers from the district council in two different departments (department of health and department of education).

Next, findings from evaluation question two are presented here and focus more on describing the perception of pupils towards hygiene practices behaviour in their schools. The findings were gathered from focus group discussion of between 7-8 pupils who are in class 6&7 in 8 different primary schools in Sengerema district council.

The reminder of Evaluation question three was mostly based on the perception of implementers in Sengerema district council towards the implementation of school WASH program. Findings were gathered from one on one interview with the implementers from the department of health and education as well as school health teachers in 8 primary schools in Sengerema District council.

4.2 Demographic information of participants

Figure 4.1: The Percentage of sex distribution of school children (N=62)



The study comprised of 62 pupils from 8 different primary schools where 35(56.45%) of the participants were female and 27(43.55%) of the participants were male pupils as indicated in figure 4.1.

However on the side of implementers that is district officials and school health teachers there was equal gender distribution which is 50% male participants and 50% female participants in the study.

Figure 4.2: Age distribution of school children in Sengerema DC

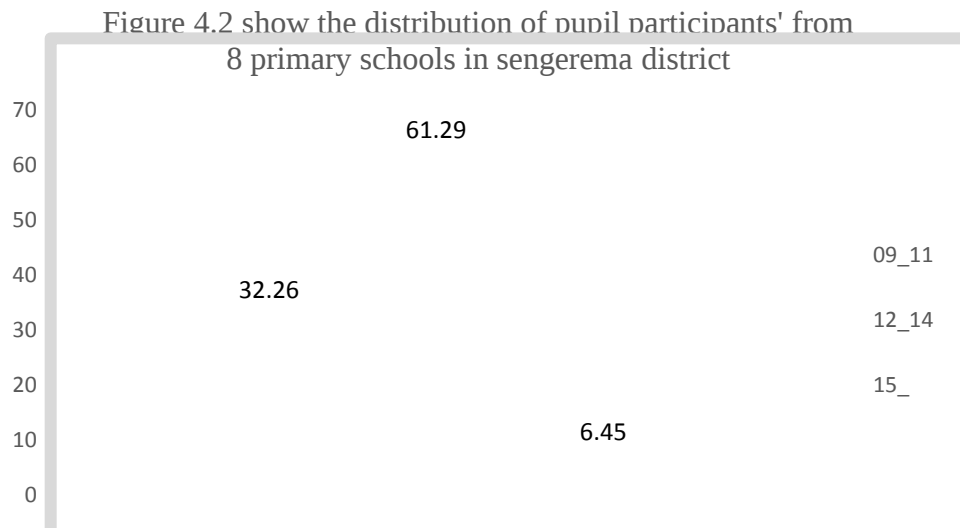


Figure 0.1 Age distribution of school Children

Furthermore the study participants were of different age groups since they were from standard six and seven. Three different age groups were identified from the study participants as reflected in figure 4.2. Pupils at the age between 09 – 11 years old were found to be 20(32.26%), 12 – 14 were found to be 38(61.29%) and 15 years old pupils were 4(6.45%).

Education level of the participants

School children

Table 4.1: The level of education of pupils who participated in the study.

Class	Frequency	Percentage (%)
6	30	48.39
7	37	51.69
Total	62	100.00

Source; evaluator, 2015

All the study participants were at the primary level of education and as table 4.1 reflects 30(48.39%) of the pupils were in standard six and 37(51.69%) of the pupils belonged in standard seven hence they could all speak and write as well as produce more reliable results.

Project implementers

Table 4.2: The level of education of the implementers of the school WASH program in Sengerema DC

EDUCATION LEVEL	FREQUENCY	PERCENTAGE (%)
CERTIFICATE	6	33.3
DIPLOMA	10	55.5
BACHELOR DEGREE	2	11.1

Source; evaluator, 2015

Table 4.2 shows that the implementers of this program are all educated with certificate level (33.3%), diploma education (55.5%) and bachelor degree (11.1) whereas the results show that most of the implementers have diploma level of education hence can be trained to teach children hygiene practices.

4.3 Evaluation Findings

4.3.1 Alignment of school WASH implementation to the national standards

The first evaluation Objective was to assess the alignment of School WASH implementation according to the national standards. This data was collected through the use of an observation checklist that was adopted from the School WASH National strategic plan of 2012-2017. The evaluator could tick what was observed and some of the information was gathered from the focus group discussions. To gather these results the evaluator focus mostly on the set minimum standards of School WASH like the condition of the latrines, number of drop holes, availability of water and privacy of the latrines. The results are indicated in table 4.3

Table 4.3: List of schools involved in the study in Sengerema DC and their observed situation in SWASH.

<i>School</i>	No of pupils	No of drop holes	No pupil per drop hole	Doors/ privacy	Latrines with urinals for boys	Hand washing points	Feces around the toilet and compound
<i>Nyampande Primary</i>	1200	10	120	Yes	No	yes	No
<i>Nyasenga Primary</i>	1087	7	155	Yes	No	No	Yes
<i>Tabaruka Primary</i>	1045	8	131	Yes	No	No	No
<i>Mtakuja Primary</i>	990	7	141	No	Yes	No	Yes
<i>Kamanga Primary</i>	1030	7	147	No	Yes	No	Yes
<i>Buyagu Primary</i>	1109	10	110	Yes	No	No	Yes
<i>Nyakaliro Primary</i>	800	7	114	Yes	No	No	Yes
<i>Sengerema Primary</i>	1284	7	183	Yes	No	No	Yes

Source: evaluator, 2015

Results from table 4.3 indicates that only 2 out of 8 schools have urinals for boys and that the number of drop holes was too low compared to the number of the pupils hence no school has been able to meet that target. Only 1 out of 8 schools have hand washing points while most of the schools' compounds are surrounded by faeces inside and outside of the school latrines. However 6 out of 8 schools had doors on the latrines which could offer privacy for the pupils.

4.3.2 Hygiene practices behaviour among school pupils

This information supports the second objective focused on examining the hygiene practices behaviour of the pupils. To collect this kind of data the evaluator used focus

group discussion to understand the knowledge, awareness and practices of pupils towards hygiene related issues.

4.3.2.1 a) Introduction

These were the main Participants of the study. Each one was given an opportunity to explain their attitudes pertaining to hygiene knowledge and practice beyond what was elicited through the questions. All of them were encouraged to answer the questions from their own personal perspective. A number of themes and sub themes emerged during the focus group discussion and data analysis process. The main themes in the discussion were knowledge on hygiene related diseases and hygiene practices. Subthemes that emerged from these themes were; knowledge of causes and education by school health teachers while the second theme was accompanied by sub themes of washing hands with soap, boiling drinking water, use of toilets and school health clubs. The summary of the themes and the sub themes as reflected in table 4.4.

Table 4.4: Themes and sub themes discussed by school children from 8 primary schools of Sengerema DC

THEME	SUB THEME
Knowledge on hygiene related diseases	Knowledge on causes
	Education by school health teachers
Knowledge and awareness on hygiene practices	Hand washing
	Use of toilets
	Boiling drinking water
	Health Clubs

Source; evaluator, 2015

4.3.2.2 b) Knowledge on Hygiene related diseases.

i. Knowledge on causes

Most of the participants of this study had poor Knowledge on causes of Hygiene related diseases. Pupils were asked to mention diseases that are common around their schools, and they mentioned diseases like diarrhoea, cholera, malaria and skin diseases. When the evaluator asked as to what are the causes of these diseases, it was confusing to some of the students.

“..... was sick with malaria so it made me diarrhoea a lot,” this pupil believed that malaria was the cause of diarrhoea. More over participants could not link the relationship between drinking un-boiled water and Diarrhoea. While some believed that cholera is due to using dirty toilets.

“I am afraid to use the toilets because I will get diseases like diarrhoea, round worms, and cholera.....aiiiiii they are so dirty, pupils urinate on top of the toilets and some even leave their faeces on top” said a pupil from Nyakaliro Primary school.

ii. Education offered by health teachers

Pupils have been offered health education at their schools by the health teachers mainly through the health club which is a union established by the pupils. This was also brought forward by the students that they do not get health education from their teachers unless when they are at standard six and seven. *“only students at standard six and seven are allowed to join the health club.....”* said a pupil from Nyasenga Primary school.

The same case was also brought forward by the district official from the department of education who insisted that the removal of health subject from school has affected the awareness of pupils on hygiene issues.

“I am not really happy with the government for taking out the ‘sayansi kimu’(health skills subject), because it was very helpful..... in our days we were taught how to saw our clothes, take a bath, make ourselves clean etc, but today students do not even know how to saw their clothes. They attend to school with their clothes torn and teachers cannot offer that education” she said.

So the change of the syllabus was perceived as one of the major challenge in providing proper health education to the pupils.

c) Knowledge and awareness on Hygiene practices.

i. Hand washing

Table 4.5: Percentage of pupils who wash hands after using the toilet at Sengerema DC

(N=62)		
WASH HANDS AFTER TOILET	FREQUENCY	PERCENTAGE (%)
NO	53	85.48
YES	9	14.52

Source; evaluator 2015

As indicated in table 4.5 most of the students do not wash their hands after using the toilet and this was due to lack of water at their premises, education on hand washing, and some just do not have that behaviour of washing hands after toilet. Nyampande primary school was the only school with a hand washing tank that had water and as a result most of the students in this schools washed their hands after the toilet.

“.....our school do not have a ‘kibuyu chirizi’ since it broke down it has never been repaired so there is no water to wash hands after toilet” Said a pupil from Mtakuja Primary School.

Another pupil from buyagu primary school could not see the importance of looking for water at a distance just to clean his hands.

“ha ha ha! I have never seen a water tank for washing hands here at our school, and I cant go to look for water out of the school just to wash my hands” he said

Table 4.6: Percentage of pupils who wash their hands before eating at Sengerema DC

N=62		
WASH HANDS BEFORE EAT	FREQUENCY	PERCENTAGE (%)
NO	9	14.52
YES	53	85.48

Source, evaluator, 2015

From table 4.6, 85.48% pupils washed their hands before eating food, and 14.52% students do not wash their hands before eating food. This was mostly due to behaviour that the pupils have developed from their parents and fellow pupils. From the focus group discussion all pupils never wash hands with soap, unless when taking a bath. Moreover the hand washing was only found to be during eating food and not anything else, and since they eat food at home and not at school so hand washing is hardly practiced at school.

“When I eat mangoes I never wash my hands because sometimes I maybe find them under the trees and there is no water.” Said a pupil from Tabaruka Primary school.

Another pupil also mentioned that at home parents only asks them to wash hands before eating, so that is the only behaviour the pupils practices.

Evaluator: when do you wash yur hands?

Participant: when I want to eat

Evaluator: only then?

Participant: yes, since I was young my mother always told me to wash hands before I eat food

Evaluator: do you use soap?

Participant: (laughing) No. I use soap when I want to take a bath.

ii. Use of toilets at school

Table 4.7: Percentage of pupils who uses the toilets at school at Sengerema DC

N=62		
TOILET USE	FREQUENCY	PERCENTAGE (%)
NO	24	38.71
YES	38	61.29

Source: evaluator, 2015

Table 4.7 indicates that 61.29% of the pupils from the 8 primary schools uses their school toilets while 38.71% of the pupils never uses their school toilets. From the study most pupils use the toilet only because it was the closest option they have for a toilet.

“...so what will you do when you want to use the toilet? ...it is very dirty but it is the one we must use....we are not allowed to go home before school breaks for the day” said Frank from Mtakuja primary school.

However some of the students claimed to never use the toilet, and this is due to the conditions to the toilets.

“If I have to use the toilet it must be in the morning but never in the afternoon..... they are too dirty and they smell bad.....” “..... I don’t drink water so that I am sure not to want to go to the toilet” said a pupil from Tabaruka primary school.

iii. Like the school Toilet

Table 4.8: Percentage of students who likes their school toilets at Sengerema DC.

LIKE	FREQUENCY	PERCENTAGE
NO	52	83.87
YES	10	16.13

Source: evaluator, 2015

The table 4.8 shows that most of the pupils (83.87%) do not like their school toilets while only 16.13 % of the pupils likes their school toilets. This data suggests that

despite of many students using their school toilets but most of these children do not like their toilets and they use them just because they have no way out.

“..... I hate the toilets, it is very dirty and smells very bad. Aaah... the toilet also has bees on the roof and I am scared one day they might come down and sting me” said a pupil from Buyagu Primary school

“I do not like this toilet it has no water and it is very dirty. Since they took the ‘kibuyu chirizi’ for repair it has never been brought back” a pupil from Tabaruka primary school complained.

iv. Boil Drinking water

Table 4.9: Percentage of school pupils who uses boiled drinking water at Sengerema DC

BOILING DRINKING WATER	FREQUENCY	PERCENTAGE (%)
NO	58	93.55
YES	4	6.45

Source: evaluator, 2015

The data from table 4.9 suggests that 93.55% of pupils do not drink boiled water neither at home or at school and only 6.45% of pupils’ drinks boiled water at home. This is due to poor knowledge on causes of hygiene related diseases and also because boiled water is not always available to them.

v. Member of school Health club

Table 4.10: Percentage of school pupils who are members of the school Health club at Sengerema DC

MEMBER	FREQUENCY	PERCENTAGE (%)
NO	32	52
YES	30	48

Source: Evaluator, 2015

The data from Table 4.10 suggests that 51% of the pupils involved in the study are members of a school health club while 48% of the pupils were not members of a school health club respectively.

4.3.3 Perception of implementers towards the implementation of the school WASH program

The last objective was mainly to assess the perception of implementers towards the implementation of the program. To be able to understand the perception of these implementers the evaluator used in depth interviews to gather this information.

a) Introduction

The other group that the evaluation involved in the study were the implementers of the program. 2 health teachers from every primary schools among the 8 selected schools were interviewed as well as 2 district implementers one being from the district health department and one from the district education department. This occasioned to a total number of 18 implementers involved.

b) District officials

The two participants were given an opportunity to express themselves on how they perceived the program of School WASH in their district. The main themes for the discussion were knowledge on hygiene related disease, implementation challenges, and acceptability of the program by both the implementers and pupils. Both participants were able to discuss these themes with regard to their position of program implementation. One theme of implementation challenge raised sub-themes as indicated in table 4.11.

Table 4.11: Themes and subthemes discussed by the district officials at Sengerema DC

Theme	Sub Theme
Knowledge on Hygiene related disease	-
Acceptability	-
implementation challenges	Budget
	Planning
	Two departments on one project

Source: evaluator, 2015

i. Knowledge on hygiene related diseases for the district officials

All the two district officials from different department were well aware of hygiene related diseases and could give good details of hygiene related diseases that are very common in the primary schools in Sengerema DC.

ii. Acceptability

The district officials have positive perceptions towards the introduction of this project. They believe it will improve the health of the pupils and as well as the performance of these pupils.

“You know the introduction of school WASH was like a blessing to our education system. If the government was committed to this project it could have improved the health of the pupils hence improve the performance in school..... you know, better health better performance (breath)... because hygiene related diseases are very common in our schools” said the official who seemed very positive about the program.

iii. Implementation challenges

Despite of the district officials being positive about the project, their perception was mainly on the implementation challenges. These implementers believe that the implementation was faced by challenges especially on budget, planning and partnership.

“mmh, yes, this project always receives a very small budget. Like this year the budget for the sanitation campaign was 11million where only 3 million is for school WASH and the rest is for household sanitation. You can’t do much with 3 million” he said

Another official said that some of the years no money was budgeted for school WASH. *“The budget is too tight, example last year there was not a cent for school WASH, so we cannot work like that”.*

Poor planning was also another issue that emerged in this discussion with the district officials. They complained about the changes that have often been made in school WASH. The program was also designed in a way that two departments must be involved in running it. The department of health and the department of education were all forced to work together so that this program can be a success. The problem was that the departments often wait for one another to carry out the activities. No clear activities have been defined for each department. The department of education complained about the budget been taken to the health department while they are the ones to implement, while the department of health felt that it should be an activity for the department of education since they are the ones dealing with schools.

“.... We cannot always go the health department and start begging for money to implement the project. They told us that they well call us for the second meeting but we have not heard from them since”

“you know school WASH is based in the department of education. The department of health is only to train the school health teachers..... We have not trained them because we don’t have enough budget” An implementer noted.

c) School Health Teachers

The schools health teachers were also in the group of implementers but their position was quite different from the district officials. These are more of direct implementers and they were also given an opportunity to express their perception towards this program and three main themes emerged being knowledge on Hygiene related diseases, education offered and hygiene practices of both teachers and pupils.

Every teacher was in a position to discuss this and from every theme there were sub themes that emerged. The theme of knowledge on hygiene related diseases rose sub

themes like health education to teachers, while the theme of education offered raised the theme of teaching materials and syllabus and the last theme emerged with subthemes of lack of water, lack of toilets for both teachers and pupils as well as poor participation from pupils' parents.

Table 4.12: Themes and sub themes discussed by school teachers from Sengerema DC

Theme	Sub Theme
Knowledge on Hygiene related disease	Health education to teachers
Education offered	Education materials
	Syllabus
Hygiene practices	Lack of water
	Training
	Lack of toilets
	poor participation from pupils parents'

Source: evaluator, 2015

i. Knowledge on hygiene related disease

Like the district officials the teachers had clear and enough knowledge on hygiene related disease. They could clearly tell what diseases are common around their schools and they identified the most common hygiene related diseases that affect the pupils. They were also aware that the causes are mainly from poor sanitation facilities and poor hygiene practices.

“diarrhoea is the most common disease in our school, we tried to improve the sanitation facilities to improve their hygiene practices but the villagers steals the soap” a teacher from Tabaruka said.

ii. Education offered

The teachers also declared that the education that they offer was not suitable to the pupils especially of hygiene practices. They lack teaching materials that could really help them educate the pupils like health books and other practical materials. The

national syllabus does not give a very wide range for the health teachers to be able to teach the student on hygiene related issues.

“health is very wide, we have a lot of things to teach the pupils so we just teach very little of everything. The class periods are very few for health and we do not have special teachers for health hence we have to teach more than one subject” said a teacher from Sengerema primary school.

iii. Hygiene Practices

Teachers from the 8 primary schools explained that lack of water, poor training of both teachers and pupils, lack of latrines and poor participation were the main challenges towards hygiene practices in the schools. The villages as well as the schools had no water and this resulted in dirty toilets and poor hygiene practices.

“we can teach the pupils to wash their hands after using the latrine, but what will they use? There is no water..... if we ask them to bring water it will be contaminated water, very dirty, its better they don't wash their hands than using that kind of water” a teacher stated

Moreover the teachers insisted that they have had a lot of trainings on dental issues, but only one on school WASH. This then demises their morale to teach about school WASH but rather teach on Dental issues.

“after coming back from the dental seminars we teach more of what we had from the seminars so the pupils have more training on dental issues because we were insisted to teach them what we have been taught”. A teacher said

Lack of training as well as poor participation from pupils parents has also been posed as a threat towards hygiene practices among the pupils. The schools do not have enough, improved latrines and the parents are never ready to contribute for the improvement.

“some of the parents do not have even the latrines at their houses, if you ask them to contribute for one at school they think its a joke. They do not have any knowledge on hygiene practices. That is why if we buy soap for washing hands after toilet use, they come at night and steal them”

A teacher complained. This information shows that parents needs more knowledge and awareness creation with regard to hygiene related issues too.

4.4 Discussion of Evaluation Findings

This chapter discusses the data presented in chapter six based on the evaluation questions or objectives.

4.5 Alignment of school WASH implementation to the national standards

The results suggest that the School WASH project is not run according to the established guidelines. The guideline suggests that schools should have 1 drop hole for 40 girls and 1 drop hole per 50 boys, but the case has been very different in the schools at Sengerema DC. This is mainly due to lack of money budgeted for the project of School WASH, where the budget is very low and it is impossible to renovate the school latrines to be able to achieve that goal. The district officials have been complaining that in most years the government do not provide any money for the School WASH project and when budgeted, the district receives a very small amount of money and as a result no schools have been rehabilitated nor constructed.

Another indicator that strongly suggests that it is not aligned with the national standards is the Hygiene practices behaviour of the pupils, where the observed schools did not have water tanks nor soap or ash outside of the school latrines for students to wash their hands after toilet use. This is mainly due to lack of water in the district as well as poor knowledge on the importance of hygiene practices. Poor hygiene practices are also observed through the faeces around the school latrines. This is an indicator that proper sanitation facilities are not observed in most of the primary schools in Sengerema as a result the pupils never practice hygiene. This data corresponds with a study conducted in Machacos that showed that the type of sanitation facility used by pupils has a great contribution to hygiene practices (Mbula et al, 2014). This then proves that sanitation facilities should be in place at Sengerema to boost hygiene practices.

4.6 Perception of school pupils towards School WASH

a) Knowledge on Hygiene Related diseases

Most of the study participants had knowledge about hygiene related diseases. During the discussion the participants were able to point out most of the hygiene related diseases. The main challenge was the causes of these hygiene related diseases as most students could not point out clearly on the causes of these diseases. For example a pupil who had good knowledge on hygiene related diseases was asked to mention the disease that occurs the most in their school which are hygiene related and she said “*I know Diarrhoea, cholera, and...*” but on the other side another student from the same school was asked to mention the hygiene related diseases in his school and he said “*malaria and fever*”. This shows that some of the pupils are not aware of hygiene related diseases due to poor health education provided to the schools and at home.

Most of the students knew the causes of hygiene related diseases but were not aware of the reasons that caused these diseases. Students could not establish a link between unclean toilets, lack of washing hands with soap and the hygiene related diseases like diarrhoea. A study carried out in in south Arica to measure the knowledge attitude and practice on water sanitation and hygiene in schools also showed that students had a good knowledge on hygiene related diseases but the transmission knowledge was inadequate (Sibiya et al, 2013).

b) Knowledge and awareness on Hygiene practices

The study has reflected that most of the pupils do not have knowledge on hygiene practices, since they hardly practice hygiene at their schools. Most of the pupils do not wash hands after toilet but rather wash hands before eating food. This behaviour was common to most of the pupils in Sengerema district, and pupils are not aware that it was necessary to clean hands after toilet. Most of the students declared that they never wash their hands before eating fruit nor any snack that they buy at school. They only wash their hands before having a meal (main dish) at home and they never use soap. This data was supported by a study conducted in India which was meant to

assess the hygiene practices after health education intervention and the study found that before the intervention there was poor hygiene practices but after health intervention knowledge was improved among the students and hygiene practices like washing hands after toilet and before eating improved (Shrestha et al, April 2014).

The study has also found out that many pupils' use the toilet despite the fact that they do not like them. A high percentage of pupils do not like these toilets because they are dirty, smelly, and lack privacy in most cases. This has also affected girls' pupils, especially during their menstruation, where due to lack of privacy, pupils do not attend school. This information also matches with the study carried out in Zambia, where the study found out that most of the girls students do not attend school during menstruation and this was mainly due to poor sanitary facilities, and well as lack of improved latrines that provide privacy for the pupils (Matunda, 2013). More over Some of the pupils would rather hold in the urine than use the toilets in the afternoon. This affects their concentration and performance in class as well as their health.

More over the study has found that a very high percentage of the pupils do not use boiled water for drinking. This was mainly due to lack of knowledge and awareness among families in Sengerema DC on hygiene practices. The implementers had suggested that knowledge and awareness on health and hygiene related issues was very important for improving hygiene practices. This matches the data for a study conducted in Nigeria that found out that education for the parents was one of the issues in improving the hygiene knowledge of the pupils in Nigeria (Ahmadu et al, 2013).

4.7 Perception of implementers towards the implementation of school WASH.

a) Knowledge on hygiene related diseases

The study was able to capture the perception of implementers towards the implemented program. All the implementers had enough knowledge on hygiene related diseases and could clearly tell the importance of this program to the school children.

b) Implementation challenges

The study found that implementation was faced by a number of challenges that affect the sustainability of the project. The main challenge was the fund where by the budget allocated to the district by the government is not enough to run school WASH. School WASH was considered not to be a priority program in the district hence the budget was always too little.

However it was found that the program was being implemented by two departments in the district and this affects the implementation process. Since the money was being received by the department of health while school WASH was being implemented by the education department to a high degree. This results to poor implementation of the program since the education department felt left out and harassed to request money from the department of health thus this affected the process.

c) Acceptability

The study found out that the implementers accept the program but the biggest challenge was the implementation. The teachers that were introduced to this program have also accepted the program and consider it as a way to save the pupils from hygiene related diseases.

Teachers

a) Knowledge on hygiene related diseases

Teachers were found to have basic knowledge on health issues but they still need to be trained so that they could act as the role models to their pupils. A study conducted in India showed that after health education intervention there was a significant increase of knowledge and attitude on hygiene practices to the pupils (Shrestha, 2014). This shows that teachers should be well trained to ensure that they offer quality health education to the pupils.

b) Education offered

The results also suggested that the education materials and syllabus for the pupils were not user friendly. The health teachers did not have a schedule to teach hygiene related diseases hence they could give the pupils a good education on health.

c) Hygiene practices

Most of the school teachers did not have improved latrines for themselves as a result they did not find it important for pupils to have enough improved latrines either. They have also not been trained and this affects their training skills on hygiene practices to the school pupils. Water being a big challenge in Sengerema district, most of the teachers did not practice hygiene and hence could not educate children to practice hygiene.

CHAPTER FIVE: SUMMARY, CONCLUSION AND POLICY IMPLICATION

5.1 Introduction

This Chapter aims to cover summary and conclusion of the study, policy implication, recommendations, limitations of the study, and suggest areas that will need further research in terms of the data which have been collected, analysed and discussed.

5.2 Summary

The summary of this study have been discussed based on the three objectives of the study. The first objective aimed to determine whether school WASH was aligned with the national guidelines while the second was to examine the hygiene practice behaviour among school pupils and the third objective aimed to assess the perception of implementers towards the implementation of School WASH in Sengerema DC.

The results of the study suggested that the level of alignment of SWASH to the national guidelines in Sengerema DC was not very satisfactory. None of the schools involved in the study had met the criteria's indicated in the national guideline. Schools did not have enough latrines, teachers have not been trained on hygiene practices nor the pupils. Among the schools involved in the study, only one school had their toilets renovated and only two schools had urinals for boys.

The hygiene practices behaviour of pupils in Sengerema district was also not satisfactory. Most of the pupils did not wash their hands after toilet, some of the pupils still prefer to use the forests than using the school latrines and they never drink water that was boiled because it was not available at their school premises. Pupils were found to have poor knowledge on hygiene related disease and as a result made it impossible to practice hygiene behaviour. It was obvious that pupils failed to understand the causes of hygiene related diseases as well as their connection to the hygiene practices. The government has to take the issue of hygiene practices among pupils and their societies as a major concern as it has a very big impact into people's lives.

However the perception of implementers towards the implementation of school WASH in Sengerema DC was very convincing. The district officials believe that the project was a very important key in improving the education status as well as the health of the school children. However the implementation was faced by various challenges that are mostly due to poor planning of the project, poor co-ordination and financial challenges. The program seems to be accepted very well by implementers from both sides (district officials & teachers) but the main challenge was the implementation.

5.3 Conclusion

Poor knowledge and sanitation facilities is found to increase the level of poor hygiene practices among pupils in the primary schools. Both pupils and teachers understands hygiene practices but due to unavailability of sanitation facilities none of them practices proper hygiene as a result hygiene related diseases are the most common diseases in all the schools involved in the study. This affects the attendance, performance and health of the school children in Sengerema DC.

Generally School WASH in Sengerema has not been able to meet its expected goal to the targeted people. The progress was very slow and pupils did not practice proper hygiene and implementers did not implement as per the established guideline. This justifies that major efforts should be taken by the government, especially on policy implementation and budgeting, to be able to revive this project and meet the expected goal.

5.4 Recommendation

Based on the findings from the study, the following recommendations could be made;

- i. The government should update the school WASH guideline to ensure that it is possible to be implemented. Since the program started most of the schools in Sengerema have not heard of school WASH hence hygiene practices become impossible.

- ii. The district should also start to treat school WASH as of the priority program and inject a budget to this project.
- iii. However the department of education and health in the district of Sengerema district should sit together and plan on how to work together on the implementation of school WASH project.

5.5 Policy implication

School WASH in Sengerema has not been implemented as designed. Most of the schools in Sengerema did not have enough latrines as compared to the number of pupils and hygiene was not practiced as planned in the schools. There was a number of challenges that have also been noticed in the implementation process. The ministry of education and health should review the project planning of SWASH to ensure that the leading ministry of this project is well defined as well as the roles and responsibility of each Ministry are clear.

5.6 Limitations

The study was conducted in the rural schools of Sengerema district where water is still a challenge to most schools. This being a big among the factors of hygiene practices the results might not be transferred to schools with availability of water or primary schools in the city locations. However since the study was conducted in the rural schools some of the schools were very hard to be reached by the evaluators.

5.7 Areas for further research

Research should be carried out to determine to what extent poor hygiene conditions and practices in Primary schools affects the attendance, performance and health of the school children in Sengerema DC.

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APPENDICES

Appendix 1; Expected activities

Table shows activities that were carried out and the time frame for M&E field project

SN	ACTIVITY	TIMEFRAME
1.	M&E field work proposal write up	Oct 2014 – Jan 2015
2.	Final day to submit M&E Field Project Proposal to MU for academic supervisor for approval	30 th Jan 2015
3.	Data collection	Feb – June 2015
4.	M&E Field Project writing report	June – July 2015
5.	Submission of evaluation report	July 2015
6.	M&E field project presentation	September 2015

Appendix 2; Focus group discussion guide for pupils

Good morning / afternoon,

My name is From Mzumbe University.

The fellow with me is an evaluation assistant named

We are assessing the perception of pupils towards the practice of sanitation and hygiene in this primary school so we want to find out your opinions about water sanitation and hygiene issues. The information offered here will enable us to understand the perception of students towards hygiene practices and how it promotes your health and performance at school. We will also be able to understand the current situation in your school with regard to the sanitation and hygiene practices hence improvements can be made in the schools and policies of the country.

Any information offered here will be confidential and no names will be mentioned. This discussion will take about 45minutes to 1 hour. You are free to accept or repudiate to participate in the discussion, and remember there are no wrong or right answers. This discussion will also be audio recorded for easy analysis but no one will be quoted in the final report individually. So may we begin with our discussion?

	Interviewer Instructions
I want to play a game to start. Please tell us your name and something you like about your school. I'll start. My name is X and I think XX,	Using a stick the pupils will introduce themselves by handling the stick over to others randomly. (make sure that they don't throw to the people sitting beside them)
1. Where do you get drinking water at school? 2. (If answer is "from a water tank"): Is there always water? 3. Do you like the water? Why?	Key question –accessibility PROBE: (only to be asked <i>after</i> the participants have given their own answers and <i>only</i> if they didn't mention these) Clean Convenient
4. How do you get water from the tank?	PROBE: Do they have their own cup? Do they bring a cup? Do they use their hands?
5. Do you have a hand washing stand at school?	PROBE: (key issue perception)

6. Why? 7. Why not?	(if the answer is No, then would you like to have one? Why? Why not? Is there always soap/ash/mud? Is it sometimes too crowded?
8. What do you do to be clean?	Key Question – practices PROBE: How do you keep your hands/body/teeth/hair/clothes clean? What do you do after you use the toilet? Do you use soap/ash/mud?
9. Why is it good to be clean?	PROBE: Health Smell Status in family/community
10 When do you wash your hands? 11. Why?	Key Question –practice/knowledge PROBE: After going to the toilet Before eating After field work After playing in the yard
12. When do you use soap? 13. Why?	Follow up Question PROBE: Wash hands Wash complete body Washing clothes Cleaning house
14. Do you like hand washing with soap? 15. Why/ why not?	Motivation
16. What do you think of the toilet at the school? 17. (If they like it): why?	Key Question- acceptability PROBE: (If yes) Clean

	Convenient (privacy, distance, crowded)
18. (If they don't like it): why not?	PROBE: Dirty Smells No privacy Too far
19. Do you ever wait to go to the toilet until you are home? 20. Why?	PROBE: Dirty Smells No privacy
21. Do you ever urinate/defecate outside the toilet? 22. Where? 23. Why?	Follow-up Question
24. Where do you learn about hygiene?	PROBE: Home School Medical facility Your friends Anybody else
25. What do your teachers tell you about hygiene?	Key Question—school education PROBE: In which classes? Do you visit the hygiene corner?
26. What activities related to hygiene do you do in school?	
Thank you for your participation. Please let us know if you have any questions.	

Appendix 3; Interview guide for implementers (school teachers)

Hello,

Thank you for joining me in this short discussion.

My name is..... I am a student of Msc. Health Monitoring and evaluation from Mzumbe University. The fellow with me is an evaluation assistant named We are assessing the perception of pupils towards the practice of sanitation and hygiene in this primary school and as a teacher we want to know how you feel towards this program.

I want to find out your opinions about hygiene, water, and sanitation issues and the project of school WASH in your school. There are no wrong or right answers; we just want to know your opinion. Please speak freely; this discussion will be audio taped for easy analysis but what you say will not be quoted in our final report.

This discussion will take about 20 to 30 minutes.

	Interviewer Instructions
Please tell us your name and something you like about teaching in this school. (OR living in this community) I'll start. My name is X and I think XX,	Introduction from the teacher
What illnesses are common among the students in the school? Is there a difference among illnesses for boys and girls?	Introductory question PROBE (only to be asked <i>after</i> the participants have given their own answers and <i>only</i> if they didn't mention these) Diarrhea Colds Malaria Typhoid Fever
3. How frequent are these diseases? 4. In what seasons do they occur?	Follow-up Question
5. How do you think these diseases are transmitted?	Transitional Question—knowledge PROBE: Dirty water

	Dirty hands Other people coughing Flies/Mosquitoes Dirty fruit Dirty dishes or table
6. How do you try to educate children to prevent these diseases?	Key Question – practice PROBE: Special subject Integrated into other subjects Essay writing Hygiene corner Other activities
7. What methods are most effective?	
8. Do you have any recommendations to improve the teaching of hygiene?	PROBE: Textbook Integrate into other lessons Games/interactive methods
9. Describe the improvements in the school toilet:	
10. Are there any problems with the toilet?	PROBE: Cleanliness Smells Distance Not big enough Poor construction Flies have access
11. Who is responsible for maintenance? 12. Are there any problems?	
13. What recommendations would you make to improve the toilet? (both structure and maintenance)	PROBE: Dirty Smells No privacy

	Too far away
16. Do children ever urinate/defecate outside the toilet? 17. Where? 18. Why?	Follow up Question
19. What do girls/female teachers do when they have their menstrual periods?	Ask to a female respondent
20. Are there any facilities that would make things easier for them?	
21. Please tell us what the children do about hand washing.	
22. Do they always wash their hands after using the toilet? 23. Why/ why not?	Key Question--practice PROBE: Is the facility near enough? Is there always enough water? Is there always soap? Is it sometimes too crowded?
24. Who is responsible for maintaining the hand washing stand?	Follow up Question
25. What recommendations would you make to improve the hand washing stand? (both structure and maintenance)	<i>Summary</i>
26. Where do you get drinking water at school?	Key question –accessibility
33. What is your opinion about the content of the educational material provided under the project?	PROBE: Too easy Okay Too complicated
34. Did the educational materials fulfill the needs in your school? 35. Do you have any recommendations to improve the materials?	Yes/no
36. What other recommendations do you have to improve the water, sanitation, and hygiene situation in your school?	Wrap Up
Thank you for your participation. Please let us know if you have any questions.	

Appendix 4; Interview guide for implementers (local authorities)

Name of interviewer: Date: Name, Position:
Introduction: We are here to review the water, sanitation, and hygiene project implemented in the school by Sengerema District. We want to use the information to improve the project and get your perceptions as implementers, so your comments and opinions are very important to us. Please feel free to talk freely. Your comments will be recorded, but we will not quote you in our report. We will share a summary of our final report with you later.
1. General information 1.1. What are the most common health problems in the area? 1.2. Are there any sanitary problems?
2. General information 2.1. Please tell us about the project interventions. What was your role? 2.2. Have any other interventions concerning sanitation, hygiene, or drinking water been implemented in the area/ district? 2.3. What results do you think the project intervention has brought to your area? 2.4. Do you have any recommendations to improve this package?
3. Hygiene promotion 3.1. How do children learn about hygiene? (family, peers, school, health workers, other) 3.2. How are children educated about hygiene in schools? (In what classes, how often,) 3.3. What role does your office play in hygiene promotion? 3.4. Do you have any recommendations to make hygiene promotion more effective?
4. Support from Project Implementation Unit 4.1. How often do you have contact with the Project Implementation Unit? When was their last visit?
5. Wrap up 5.1. What other recommendations do you have for improving the water, sanitation, and hygiene situation in your area/municipality? 5.2. What are your general perception towards this project? Probe: is it realistic? Why? Why not? 5.3. Any questions? Thank you for your time

Appendix 5; Observation checklist

OBSERVATION CHECKLIST FOR SCHOOL WASH.

School Profile

Name of School Reg. No..... Owner.....

Name of head of School.....Name of Supervisor.....Name of Village.....

Name of Ward.....Name of District.....Number of Students(Girls.....Boys.....)

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

Rehabilitation of facilities							Latrine											Hand washing Point		Open defecation						
Total no. of facilities rehabilitated	Part of facility rehabilitated						Availability of urinals		Changing room for girls	No of Drop holes						Latrine type							Hygiene & Privacy			
	Latrine sub-	Latrine Walls	Latrine Roof	Door/shutter	Hand-washing	Urinals	School boys	Male teachers		Pupils Girls	Pupils Boys	Female	Male Teachers	Pupils with disability (girls)	Pupils with disability (boys)	A=VIP	B=FLUSH	C=Eco-San	Slab/floor Clean	Walls clean	Superstructure Privacy	Outside	Running Water	Soap	No feces visible on the slab/walls	No feces around the compound
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Comments																										

