

**SANITATION MANAGEMENT AT BASSAJABALABA SECONDARY SCHOOL IN
BUSHENYI DISTRICT ISHAKA MUNICIPALITY**

KATO HAKIIMU

DCM/0006/143/DU

**A RESEARCH REPORT SUBMITTED TO THE SCHOOL OF ALLIED HEALTH
SCIENCES IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR
THE AWARD OF DIPLOMA IN CLINICAL MEDICINE AND
COMMUNITY HEALTH OF KAMPALA
INTERNATIONAL UNIVERSITY**

AUGUST, 2017

DECLARATION

I Hakiim Kato, declare to the best of my knowledge that this is my original work entitled “Proper Sanitation Management at Bassajjabalaba Secondary School in Bushenyi district Ishaka municipality” and has never been presented to any higher institution of learning for any award.

Signed:.....

Date

APPROVAL

This is to certify that the research proposal entitled “Proper Sanitation Management at Bassajjabalaba Secondary Secondary School in Bushenyi district Ishaka municipality” has been submitted for the award of diploma in clinical medicine and community health with my approval as the university supervisor.

Signed:

Mr.Tashobya Daniel

Supervisor

Date.....

LIST OF ABBREVIATIONS

CHDP	Child Health Development Programme
DWD	Directorate of Water Development
IMR	Infant Motility Rate
LGDP	Local Government Development Programme
NGO	None Government Organisation
NWP	National Water Policy
PEAP	Poverty Eradication Action Plan
PHC	Primary Health Care
RWSS	Rural Water Supply and Sanitation
SFG	School Facilitation Grant
SSHE	School Sanitation and Health Education
STP	Strategic Investigate Plan
UPE	Universal Primary Education
USE	Universal Secondary Education
VIP	Ventilated Improved Pit latrines
WES	Water Sanitation and Environment

ABSTRACT

Inadequate sanitation has been found to be a major problem in primary schools and now as UPE begins to offload pupils into secondary school system, the same problem might begin to affect secondary schools. This study therefore sets out to investigate the sanitation management at Bassajjabalaba Secondary school Bushenyi District Ishaka Municipality. Two objectives were considered in this study namely,

To find out the different kinds of sanitation facilities available at Bassajjabalaba secondary school Bushenyi district Ishaka Municipality

To examine students awareness of the consequences of poor sanitation at Bassajjabalaba secondary school in Bushenyi district Ishaka municipality

The required information was gathered using four methods namely, in-depth interviews, survey, focus group discussions and observation. Two categories of respondents were used including head teachers and students. It was found that although the sampled secondary school own a variety of sanitation facilities, there is generally inadequate coverage of sanitation facilities at the school and the phenomenon is exacerbated by the ever increasing student population due to increase in enrolment for secondary education resulting from Universal Primary Education.

The cleanliness of the available sanitation facilities is not at its best and this forms part of reasons why some students ignore using facilities and instead opt for use of bushes around school.

It was recommended that there is a need to develop sanitation programs under which the challenge should be tackled right from the root rather than attempting to manage the resultant consequences. School administrations need to prioritize the aspect of sanitation and hygiene

TABLE OF CONTENTS

DECLARATION.....	i
APPROVAL	ii
LIST OF ABBREVIATIONS	iii
ABSTRACT.....	iv
CHAPTER ONE	1
INTRODUCTION AND BACKGROUND	1
1.0 INTRODUCTION	1
1.1 BACKGROUND	1
1.2 PROBLEM STATEMENT	5
1.3.0 OBJECTIVES	5
1.3.1 General purpose	5
1.3.2 Specific objectives.....	5
1.4 RESEARCH QUESTIONS.....	6
1.5 SCOPE OF THE STUDY	6
1.6 JUSTIFICATION OF THE STUDY.....	6
1.7 CONCEPTUAL FRAMEWORK	7
CHAPTER TWO	8
LITERATURE REVIEW	8
2.1 Introduction.....	8
2.2 Availability of sanitation facilities	8
2.4 Students' Awareness of the consequences of poor sanitation	10
CHAPTER THREE	14
RESEARCH METHODOLOGY	14

3.1 INTRODUCTION	14
3.2 RESEARCH DESIGN.....	14
3.3 AREA AND POPULATION OF STUDY	14
3.4 SAMPLE SIZE AND SELECTION	14
3.5 Data collection methods	15
3.6 Data analysis and management.....	16
CHAPTER 4.....	17
DATA PRESENTATION, INTERPRETATION AND ANALYSIS.....	17
4.1 Introduction.....	17
4.2 Sanitation Facilities and Materials Available at School.....	17
4.3 Students’ awareness of the consequences of poor sanitation	18
CHAPTER FIVE	19
DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS.....	19
5.1 Introduction.....	19
5.2 Discussion	19
5.2.1 Availability of sanitation facilities.....	19
5.2.2 Consequences of poor sanitation.....	19
5.3 Conclusions.....	20
5.4 Recommendations	21
REFERENCES	23
APPENDICES	25
Appendix I: Questionnaire for students	25

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.0 INTRODUCTION

Sanitation is a means of promoting hygiene through the prevention of human contact with hazards of wastes especially faces by proper treatment and disposal of waste, often mixed into waste water.

Adequate access to WASH is every students right, as stated in the convention on the rights of students (United Nations, 1989). Poor health of students affects their ability to learn and therefore influences their prospects in life. A study by Protos (2015), for example, shows that students with worm infections have higher absenteeism than non-infected students. Basically, this means that students with worm infections spend less time and are disadvantaged in the learning process. Effective school sanitation and hygiene education should help reduce these infections. In light of the above, this study undertook an investigation into the proper sanitation management at bassajjabalaba secondary school Bushenyi district Ishaka municipality as a case study for this inquiry.

1.1 BACKGROUND

Hygienic sanitation is crucial for public health. Diseases related to inadequate water, sanitation and hygiene are a huge burden in the developing countries. It is estimated that 88% diarrheal disease is caused by unsafe water supply and inadequate sanitation and hygiene (WHO, 2004c). In 2015, 68% of the world's population had access to improved sanitation facilities compared with 54% in 1990 (WHO). Nearly one third of the current global population has gained access to an improved sanitation facility since 1990, a total of 2.1 billion people. 2.4 billion people still don't have basic sanitation facilities. Among the pre-urban population of the developing countries only about 65% have house connections and additional 20% have access to public taps, about half of these are intermittent. Of the rural population only about 60% have access to safe water and few of these have house connections. Population growth particularly in urban areas means that capacity must be increased simply to prevent the percentage served from falling (Nyamwaya, 1994). Over the years, government will support from multilateral and bilateral agencies, NGOs and the private sector has supported programmes aimed at improving sanitation situation. However, emphasis has mainly been on the provision of safe and clean water, with less

emphasis on latrine construction and virtually no emphasis on other sanitation facilities. (Ministry of Health, 2007). While access to improved water sources has grown in urban areas, progress has stagnated at 85% (AMCOW 2012) as urban populations grow. Between 2000 and 2010, 84 million urban Africans gained access to improved water and supply and 42 million to improved sanitation, and an impressive 3.9% average increase in access over the decade. Uganda's population as of 2005 was estimated at 26.8 million, of which 88% or about 24 million lived in rural areas (ADF 2005). Access to safe water facilities was estimated at 57% for rural and 80% for urban areas and for sanitation it was estimated at 56% for both urban and rural areas which means almost half of Uganda's rural population does not have adequate water and sanitation facilities. Water borne diseases, including malaria followed by diarrhea have been identified as the main causes of infant mortality. In 2007, Uganda formulated the Poverty Eradication Action Plan (PEAP) as the core of the government's strategies towards its goals of poverty alleviation and poverty-focused growth, and improved water supply and sanitation services were identified among the key priority areas for poverty eradication. PEAP was revised in 2001 and 2004 using a consultative process that involved the private sector, development partners, NGOs, civil society, central and local governments.

Sanitation in Ishaka municipality is still not satisfactory. The district has a latrine coverage of 40% safe water coverage of 18.3% (Unicef, 2002). A five year Water and Sanitation Project (WES) has been operating in the district since 2006. It protects water sources, trains community members in the maintaining of the same, and offers demonstration units to some institutions like schools. The commonest out-patient department illnesses in Ishaka municipality are malaria, cardiovascular illnesses, diarrhea, malnutrition, skin diseases, eye infections, anemia, trauma & AIDS-related diseases. These greatly contribute to the poor health situation manifested by the high infant mortality of 94 out of 1000.

By "good sanitation" at school is meant that every student should have ready access to a convenient and well maintained facility for the safe disposal of human waste, suitable anal cleansing materials, most important the means to effectively wash hands with soap after defecation must be provided and used (Anthony Waterkay, 2000).

Utilisation involves proper human waste disposal, water handling from the source to the point of consumption and effective washing hands with soap after using the toilet. (Waterkayn, 2000). National sanitation guidelines (2000) defines adequacy of sanitation facilities as the state of cleanliness of the facilities, it involves presence of clean latrines and urinals, functioning hand washing facilities with soap and water.

Lack of sanitation facilities can cause distress. Women and girls in particular face problems of distance, lack of privacy and personal safety. Poor sanitation is also a serious threat to the cleanliness of the environment and the water resources used for the supply of drinking water. But beyond being just an issue of convenience, students have a right to basic facilities such as school toilets, safe drinking water, clean surroundings and basic information on hygiene. In addition if sanitary conditions are created students will be more enthusiastic to come to school, they will enjoy their school experiences and will learn better; and can bring concepts and practices on sanitation and hygiene back to their families (Protos 2005). Schools can play an important role in bringing about behavioural changes and promoting better health as students are potential agents of change in their homes through their knowledge and use of sanitation and hygiene practices learned at school. .

According to WHO (2008), pit latrines are the most commonly used facilities for disposing human waste in developing countries. Studies indicate that the percentage of people using latrines as a means of sanitation in some part of East Africa is as follows: Kenya 30%, Uganda 60%, Tanzania 77%, and Ethiopia 7%. Sanitation service is much lower when compared with corresponding coverage on other African countries which ranges between 30-50%.

It has been observed that in situations where sanitation is inadequate or absent, hand washing is very crucial in terms of interrupting faecal oral disease transmission routes (UNICEF/NETWAS 2005). Diarrhoea, worm infections and eye and skin infections are diseases related to water and sanitation. About three million children die from diarrhoea each year (IRC 2004). Each of the three common worms (roundworms, whipworms and hookworms) is estimated to infect more than 500 million people. Roughly 6 million people have become blind from trachoma, an eye disease.

In view of the above the IRC (2004) counsels that good hygiene can help prevent much of this, saving lives and preventing illness. For example, it is estimated that washing hands with soap can reduce the risk of diarrhea by more than 40%. Simple hygiene behaviors – that is what people do, their practices for cleanliness – are key to improving health.

It has been noted that the high expectations of school health and hygiene education programmes have not always been fulfilled (WELL, 2003). In many countries, schools are not safe for students due to neglect of the operation and maintenance of sanitation. In addition hygiene education given to students has not always been relevant or effective. Schools too often suffer from:

- Non-existent or insufficient water supply, sanitation and hand-washing facilities;
- Toilets or latrines that are not adapted to the needs of students, in particular, girls;
- Broken, dirty and unsafe water supply, sanitation and hand washing facilities;
- Unhealthy and dirty classrooms and school compounds;
- Children with poor hand washing habits and practices

In Uganda, Schools suffered a great deal of neglect during the 1970s and 80s – because of wars and political and economic mismanagement at every level, from central government down to the community (Rugumayo 2002). National latrine coverage was 90% in the 1960s, but dropped to 30% in the 1980s and only rose to 47% in the 1990s. Uganda has a sanitation history that many people are rightly proud of. In the 1960s, the country was well covered with good deep pit latrines, and the prevailing culture and law dictated that a pit latrine was a necessity for all households (DANIDA, 2000).

In 1995, national enrolment in Primary School was 2.5 million but the introduction of Universal Primary Education (UPE) resulted in a rapid increase in the number of children in the primary schools to 5.3 million in 1997 and 7.3 million in 2002 (CHDC 2006, Rugumayo 2002). This trend has continued in subsequent years and this number is set to double to 13 million school children by 2015. For most schools (especially rural) schools this means that within the last decade there has been a doubling or tripling of pupils at school despite the fact that the

infrastructure of classrooms, latrines etc. simply has not been adequate to cope with the sudden surge in numbers (Protos, 2005).

As a result the inadequate sanitation situation in schools had been exacerbated by the implementation of this education policy which entitles all school age children to free primary education, causing the number of students per latrine stance to exceed 700:1 when in 1995 it was 328:1 (Rugumayo, 2002). The Ministry of Education recommendation on sanitation requires a ration of 40:1. A UNICEF study found that over 1,200 school children died because of poor sanitation conditions at school during the 1997 cholera outbreak (UNICEF, 2002). Consequently, 560 primary schools around the country were closed because they lacked acceptable latrine facilities. A good percentage of the UPE pupils are now entering the secondary schools in Bushenyi district and the increased numbers of students in secondary schools could have the same impact on proper sanitation in this section as well.

1.2 PROBLEM STATEMENT

Inadequate sanitation has been found to be a major problem in secondary schools especially since the introduction of UPE in the mid 1990s in primary schools. Now as the UPE programme begins to offload these pupils into the secondary school system and the Universal Secondary Education programme also rolls out, which in turn affects the secondary schools.

Despite the efforts that have been directed towards addressing the issue of poor sanitation in schools in Bushenyi District for example the UNICEF Water, Environment and Sanitation (WES) programme 1995-2000 and The UNICEF School and Community Hygiene and Water Programme (2001-2005); and the fact that the Ministry of Education encourages and provides guidelines for sanitation in schools, little is known about the proper sanitation management at bassajjabalaba secondary school Bushenyi district Ishaka municipality.

1.3.0 OBJECTIVES

1.3.1 General purpose

The overall purpose of this study was to find out the sanitation management at bassajjabalaba secondary school in Bushenyi district Ishaka municipality.

1.3.2 Specific objectives

1. To find out the different kinds of sanitation facilities available at Bassajjabalaba secondary school in Bushenyi district Ishaka municipality.

2. To determine students awareness of the consequences of poor sanitation at Bassajjabalaba secondary school in Bushenyi Ishaka municipality.

1.4 RESEARCH QUESTIONS

1. What kind of sanitation facilities are present at Basajjabalaba secondary school in Bushenyi district Ishaka municipality?
2. How aware are students of the consequences of poor sanitation at bassajjabalaba secondary school in Bushenyi district Ishaka municipality?

1.5 SCOPE OF THE STUDY

The research was conducted at Bassajjabalaba secondary school in Bushenyi district ishaka municipality and looked at sanitation management at the school and also looked at the availability of sanitation facilities, and student's awareness of consequences of poor sanitation.

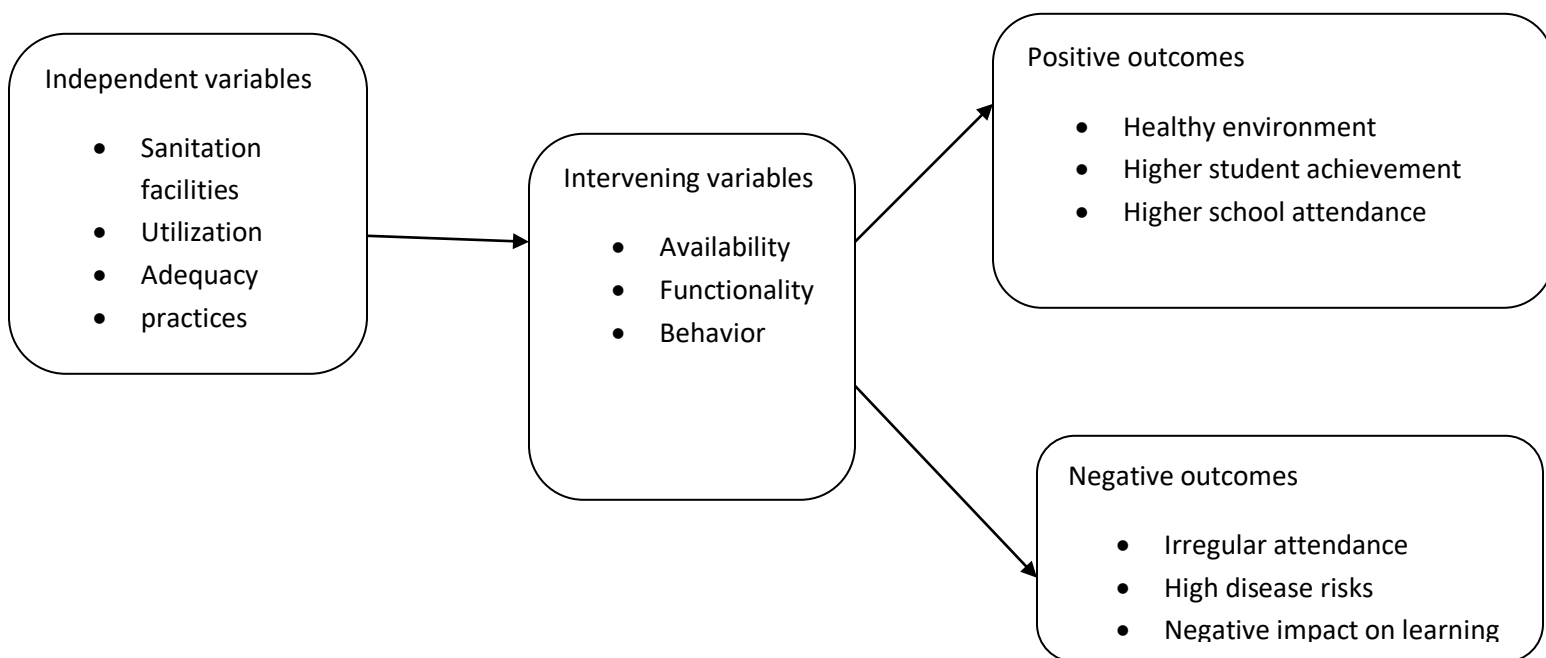
1.6 JUSTIFACTION OF THE STUDY

The information and recommendations which was aggregated are expected to assist the school, University administrators and the general public to learn about sanitation facts and its related problems. The study also provide baseline information that can be used by other researchers in future.

1.7 CONCEPTUAL FRAMEWORK

The conceptual frame work in figure 1, suggests that independent variables were conceptualized into sanitation facilities, adequacy and practices and in addition, the intervening variables that affects the dependent variables illustrated into positive and negative outcomes

The positive outcomes include health environment; higher student achievement in class and higher school attendance while the negative outcomes were conceptualized into irregular attendance, high disease risk and negative impact on learning.



The conceptual frame work in figure 1

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literal materials that have been written on the subject area of job rotation with a view to examining what has been researched/written before delineating what the current study is going to accomplish.

2.2 Availability of sanitation facilities

Hand washing facilities in rural schools has not been considered important. Yet from a preventive health perspective hand washing is absolutely crucial. Without hand washing, all investment in fancy latrine construction is a complete waste of time and resources as fecal contamination from hand to mouth, food, friends etc is virtually guaranteed (Waterkayn, 2000).

Three types of latrines are encountered in Uganda. The traditional pit latrine is one whose floor is made of rammed earth. The walls are usually composed of mud and wattle and roofing may be accomplished by temporary thatch materials like grass. These are temporary structures which are abandoned on filling. They have a disadvantage of being difficult to keep clean and free from flies although they are cheap to construct. The wittiness of the area near the squat hole renders them clammy and lucrative places of hook worm transmission and houseflies breeding. Improved traditional pit latrines have concrete platform (the sun plat) surrounding the squat hole. This renders them easier to keep clean than the traditional ones but for a higher cost. The ventilated improved pit latrines (VIP) have a concrete slab covering the whole floor, and a vent communicating from just under the slab to the atmosphere. At the atmospheric end the vent is covered with a fly screen. Bad smells are led away from the pit into the atmosphere. Flies which are attracted from the pit into the atmosphere by light are attracted by the screen and die of heat and gases in the vent. VIPs therefore have least smells and the slab could be re-used or the pit emptied by a cesspool emptier. They are however more expensive to construct.

Safe water and sanitation and knowledge of hygienic behavior are the greatest of all public health breaks through. And the priority of human health and development in the early years of the 21st century must be to make sure that their benefits are finally made available to all (Water Sanitation and Hygiene, 2009). Studies on water handling during collection, storage and use have shown that there is progressive contamination from source to the point of consumption due to

poor sanitation and inadequate/inappropriate hygiene. A rural water and sanitation study showed that only 9% of 57 household surveyed were consuming acceptable quality of water (WHO, 2013).

There is lack of up-to-date statistics on the level of coverage of water supply in Uganda and what is available is somewhat differing. The State of Environmental Report for Uganda (2012) reports that there is low level of domestic water supply in the country with only 40% and 75% coverage for rural and urban areas respectively. In the urban areas of Kampala, Entebbe, Bushenyi and Jinja the current water demand is 27.5 million cubic meters per year. And according to the WHO (2008), in the last decade access to water supply rose from 61% to 71% in Uganda, but during the same period, the proportion of people with access to sanitation means of excreta disposal declined from 36% to 34% as funding for sanitation decreased and population increased. But even the water supply to which access has increased, its quality of water has been degraded. According Lake Victoria Environmental Programme report (2011), there has been drastic deterioration of water quality ecology of the lake during the last two decades which in turn has affected the quality of water, further leading to disease to the urban population. Despite continued effort to promote sanitation, 40% of the world's population is still without basic sanitation. This number does not tell the whole story. Sanitation coverage is often much lower in rural areas than in urban areas for example in Africa 84% of urban, 45% of rural residents have access to basic sanitation. The number is similar in Asia where 78% of urban and 31% of rural residents has access to basic sanitation (WHO, 2008).

It is stated that 2.6 billion people lack access to basic sanitation. According to world health organization (WHO, 2002) assessment, it concluded that if the 1990/2002 trends hold, the world will miss the sanitation target by half a billion-nearly 2 billion people should gain access to basic sanitation by 2015.

Africa is one of the worst performing continents in sanitation and is sure to miss target by wide margins unless urgent radical action is taken to turn things around rapidly (U.N) Global sanitation coverage. It further states that, sanitation coverage in Sub-Sahara Africa is only 35% and that sanitation coverage in Sub-Sahara challenge worldwide.

2.4 Students' Awareness of the consequences of poor sanitation

Richford (2014), argues that in Uganda today, diarrhea diseases rank second among the five killer diseases being transmitted mainly through swallowing fecal germs. This has been mainly because of the poor disposal of fecal and unprotected water source. He further reveals that the provision of safe water resource and sanitation is very important, but constructing latrines and digging wells would have little effect on health unless people use these facilities.

One gram of feces can contain ten million virus, one million bacteria, one thousand parasite cysts and a hundred worm eggs that is what makes the safe disposal of feces the most important of all public health priorities. Still today, the majority of illnesses in the world is caused by the fact that fecal matter enters the human body because of lack of safe sanitation and lack of hygiene. To prevent this huge burden of illness, safe water and sanitation are only half of the answer. The other half is getting people to use them wisely and well. Millions of people have still not been adequately informed about the link between feces and diseases (Water, Sanitation and Hygiene, 2016).

The majority of the people living in developing countries are suffering from diseases, hunger and ignorance. In most cases problems are interlinked. Due to lack of knowledge the people are exposed to hunger while having enormous resources around them. Over half of the population suffers from diseases caused by poor sanitation when simple sanitary measure can make a big difference. Poor sanitation, hygiene and inadequate water supply are also related to the spread of other diseases, including tropical diseases such as schistosomiasis (sometime called Bilharzias) rank second in terms of socio-economic and public health importance in tropical and subtropical areas (Esrey 2013). The diseases are endemic in 74 developing countries Uganda inclusive, infecting more than 200 million people of these, 20 million suffer severe consequences from the disease. 40% of the world population still have no basic sanitation; many people do not realize the health benefit to individuals, community and to the society from improving sanitation. The high cost of improving sanitation is often cited as a barrier to implementing sanitation projects.

According to the International Water and Sanitation Center (IRC 2004), the challenge for Uganda is enormous. With a deficit of over 50% in excreta disposal and around 70% for social waste management coupled with inadequate provision and broken down infrastructure for drainage and water management in general, the task of addressing the grave sanitation in the

country requires a major effort. The following impact of poor sanitation in Uganda makes the challenge even bigger:

1) Health:

- Almost 50% of all the diseases are related to poor sanitation
- Hundreds of thousands of citizens suffer from intestinal worms as a result of poor sanitation.

2) Economic

- Expenditure on the cure of sanitation related diseases far outweighs that spent on prevention
- Many thousands of school days are lost from sanitation related illnesses each term.

The non-availability of toilet facilities is one of the major causes of such drop out among adolescent girls in Uganda.

- Many thousands of work days are lost from sanitation related sickness every month

3) Environmental:

- Degradation of the urban environment indiscriminate disposal of solids and liquid wastes
- Eutrophication of fresh water lakes and rivers is significant by untreated human waste demonstrated by the human rise in water hyacinth. Impacts on the fishing industry and livelihood in the lake region are phenomenal

4) Social cultural factors

- Taboos, myths and beliefs
- In-laws should not share a pit latrine
- A person with diarrhea is to defecate in the open and must not use pit latrine. If done, it will spread it to others

- One should only wash hands with soap after eating.
- Hand washing is simply soaking hand in water at meal times
- After eating fatty meat, one should not wash his or her hands because of fear of indigestion.

6) Geographic and technical constraints

- Difficult areas in terms of provision or excreta disposal facilities
- The peculiarities that can be encountered with excreta disposal can arise due to complications related to:
 - Rocky grounds
 - High water table

Birley (2006) noted that, education level is a paramount factor in as far as sanitation is concerned. Education which he defines as an instrument in human capital as it involves passing on preserved values, knowledge and skills from one generation to another whether formal or informal; is important to community members and stimulates change among the beneficiaries.

The global sanitation status coverage (UN) further states that families pay highly to care for students who suffer from severe diarrheal enter school later than their age mates and perform worse in non-verbal intelligence tests, poor sanitation in schools affects attendance rates. Sanitation and hygiene is one of the factors contributing to the mortality rates in Uganda (UN). Global sanitation status.

Suitable methods of population control, developed by community effort should be emphasized.

Sanitation in Ishaka municipality is still not satisfactory. The town has coverage of 40% safe water coverage of 18.3% (Unicef, 2002). A five year Water and Sanitation Project (WES) has been operating in the district since 1994. It protects water sources, trains community members in the maintaining of the same, and offers demonstration units to some institutions like schools.

The commonest out-patient department illnesses in Ishaka municipality are malaria, acute respiratory illnesses, diarrhea, malnutrition, cardiovascular diseases, skin diseases, eye infections, anaemia, trauma & AIDS-related diseases. These greatly contribute to the poor health situation manifested by the high infant mortality of 94 out of 1000.

Environmental sanitation is the control of factors in the physical environment that may cause disease. It is a Cornerstone in primary prevention of disease. Physical environment comprises water, air, soil and other non-living surroundings to man. Control of environment involves supply of adequate quantities of safe water, proper excreta and refuse disposal and proper personal hygiene and housing (Wood et al, 2014).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The chapter presents the research design which was used in the study, sample size and selection method, study population, data collection and data analysis methods to be used.

3.2 RESEARCH DESIGN

The research was cross-sectional. It utilized both qualitative and quantitative methods of inquiry. The quantitative aspects were used to capture quantifiable patterns and the qualitative aspects were used to explore in-depth the issues at hand.

3.3 AREA AND POPULATION OF STUDY

The study was conducted at Bassajjabalaba secondary school. The study population included students and teachers

3.4 SAMPLE SIZE AND SELECTION

A total of 17 respondents participated in the study. The breakdown of this is: 1 respondent (Head teacher) and 1 respondent (one class teacher) as a key informant for in-depth interview; 5 students for Focus group Discussion (FGD) and 10 students as respondents for the survey.

The Head teacher was purposively selected due to the key position he holds. For the students simple multi-stage sampling technique was used. In total, 10 students were chosen by lottery: 4 students from Senior 2 and 3 and 6 students from Senior 4 and 6). For FGDs 5 students were used from senior 1 and 5. This is because students from Senior 2, 3, 4 and 6 have been in school for at least two years and therefore they have knowledge on the state of sanitation of the school. Thus they were competent to make independent judgment. One Head teacher and one Class teacher for the in-depth interview were got from the target school. Head teachers are chosen because of the positions they hold in schools.

Table 1. Summary of sample selection

Head teacher	In depth interviews	1
Students	FGDs	5
Students	Survey interviews	10
Class teacher	In-depth interviews	1
Total		17

3.5 Data collection methods

As already stated the employed both qualitative and quantitative data collection instruments. And these include:

Survey questionnaires

The sample survey questionnaires constituted the main research instruments because it is easy to use on a large number of subject, ten students. It has an advantage of facilitating collection of a lot of information in relatively short time and can be answered by respondents without explanation.

In-depth interviews

The researcher conducted interviews with key informants like; Head teachers and the Class Teacher. This enabled him to come across new ideas. This interview method was appropriate as it brought the interviewer and interviewee to close to each other. It enabled probing and cleared ambiguities, generated firsthand information, had a high response rate and enabled acquisition of data there and then.

Focus Group Discussions (FGDs)

These are group discussions with students. They were adopted so as to compliment the quantitative method by soliciting for explanations that cannot be quantified through sampling view.

3.6 Data analysis and management

Quantitative data: After collection, survey data was edited and coded. This is where data is examined for errors and omissions and corrected where necessary and possible. In the coding process, data is organized into categories after which, numerals were assigned to each item before entering them into the computer. After entering using SPSS programme, the computer was used to generate quantitative results including the percentages.

Qualitative data: After collection, is coded and analyzed. Editing involved examining data for errors and omissions after which, corrections were done accordingly where possible. Coding involved organizing data into classes/categories in relation to the themes of the study. After this, interpretations were made before making conclusions.

CHAPTER 4

DATA PRESENTATION, INTERPRETATION AND ANALYSIS

4.1 Introduction

The major findings of the study are presented in this chapter in relation to the objectives of the study. The presentation follows the order by which the specific objectives of the study are stated. Methods that involve frequency tables have been used in the presentation to reflect statistics that accompany explanations for better understanding.

4.2 Sanitation Facilities and Materials Available at School

This was the first objective of the study. Through observations and inquiries with administrative authorities, the table below presents data regarding the actual sanitation facilities and materials available in the sampled school:

The table 2 below indicates that three pit latrines were found, two for students and one for teachers

TABLE 2

SANITATION FACILITIES AND MATERIALS

Pit latrines	Flush toilets	Urinals	Sources of water facilities	Hand washing facilities	Toilet papers
3	0	3	2	2	For teachers

Majority of the students at school indicated that their school has pit latrines as their toilet facilities. Besides the pit latrines and urinals, information from the key informant interviews revealed availability of bathrooms, open rubbish dumping pits and composite pits for solid waste but these were not mentioned by students.

4.3 Students' awareness of the consequences of poor sanitation

Reflecting on the fourth objective, the study endeavored to establish whether students have knowledge of the consequences that would arise out of poor sanitation and hygiene practices. The responses are tabulated as follows:

Table 3: Types of diseases from poor Sanitation and Hygiene

Percentages

Response	Senior 1and 2	Senior 3 and 4	Senior 5 and 6
Stomach worms	15	21	23
Diarrhea	26	18	17
Others	9	11	10
Total	50	50	50

Majority of the students from senior one and two mentioned that poor sanitation and hygiene practices may lead to contracting of stomach worms while majority of students from senior five and six indicated that poor sanitation and hygiene may lead to diarrhoea. Others from senior three and four mentioned that adoption of poor sanitation and hygiene practices like drinking of unsafe water would lead to contracting typhoid fever. Students are therefore knowledgeable of the dangers of poor sanitation and hygiene practices. However, students added that such diseases have not been common at their school of study indicating fair standards of sanitation and hygiene. Efforts were also made to establish whether students have knowledge of the diseases that would arise out of using unsafe water. The findings are tabulated as follows:

Table 4: Knowledge of Diseases acquired through use of unsafe water

	Senior 1 and two	Senior 3 and 4	Senior 5 and 6
Diseases	Eye diseases	Diarrhea	scabies
Percentage	8	25	17
Total			50

Most of the students (25% senior 3 and 4) mentioned diarrhea followed by 17% (senior 5 and 6) who indicated scabies and eye infection followed by 8% of senior 1 and 2. This reveals that students are

Fairly knowledgeable about the dangers of using unsafe water. Students are therefore less likely to use unsafe water in effort to avoid catching related diseases as mentioned.

In conclusion therefore, as stated in the studies reviewed in chapter two, improving water and sanitation facilities doesnot necessary lead to a decrease in water and sanitation related diseases. To bring about real improvement in health, the installation of facilities has to go hand in hand with their proper use and maintenance, hygiene promotion aims to ensure the proper use and maintenance of facilities by motivating people to change their behavior (IRC 2004).

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion and conclusion on the major findings of the study and gives tailor-made / suiting recommendations basing on what was found out as regards the sanitation management at Bassajjabalaba secondary school Ishaka municipality Bushenyi district.

5.2 Discussion

5.2.1 Availability of sanitation facilities

Generally speaking, there is fair availability of sanitation facilities at the sampled school (*see Table 2*). However, there is inadequate availability of the related materials such as anal cleansing tissues as indicated in the table. The number of the different sanitation facilities and materials as given in the table reveal fair availability of pit latrines (3) and water sources (2) at the sampled school while the availability of flush toilets is very low (0). Hand washing facilities (2) are also relatively inadequate and therefore inadequate to effectively serve the population in the sampled school while the urinals (3) also need to be increased in number.

In agreement with these findings, the reviewed literature shows that a study conducted by Child Health and Development Centre, Makerere University (CHDC, 2006), found that almost all schools surveyed did not meet the minimum sanitation and hygiene school.

5.2.2 Consequences of poor sanitation

Regarding illnesses related to poor sanitation and hygiene practices, literature reveals that diarrhea diseases in Uganda rank second among the five killer diseases being transmitted mainly through swallowing faecal germs (Richford, 1995). This has been mainly because of the poor disposal of faecal and unprotected water source. As Richford suggested, this study agrees that the provision of safe water resource and sanitation is very important, but constructing latrines and digging wells will have little effect on health unless people use these facilities.

Drawing from the reviewed literature, one gram of faeces can contain ten million virus, one million bacteria, one thousand parasite cysts and a hundred worm eggs, that is what makes the safe disposal of faeces the most important of all public health priorities. Still today, the majority of illnesses in the world is caused by the fact that faecal matter enters the human body because of lack of safe sanitation and lack of hygiene. To prevent this huge burden of illness, safe water and sanitation are only half of the answer. The other half is getting people to use them wisely and

well. Millions of people have still not been adequately informed about the link between faeces and diseases (Water, Sanitation and Hygiene, 2015).

The majority of the people living in developing countries are suffering from diseases, hunger and ignorance. In most cases problems are interlinked. Due to lack of knowledge the people are exposed to hungers while having enormous resources around them. Over half of the population suffers from diseases caused by poor sanitation when simply sanitary measure can make a difference

5.3 Conclusions

Although the secondary schools in Bushenyi District own variety of sanitation facilities, there is generally inadequate coverage of sanitation facilities in the schools in the District and this is particularly worse-off in rural based schools. The phenomenon is exacerbated by the ever increasing student population due to increase in enrolment for secondary education resulting from output from Universal Primary Education. School administrations seem to find a big challenge with increasing the quantity of the facilities saying that it required relatively large budgets to set-up the facilities.

There is considerable congestion for students trying to access school latrine in most of the secondary schools in Bushenyi district. This leads to unhygienic conditions and greatly increases the risk of cross contamination and infection. The useful life of a latrine is reduced to a fraction of what it should be; a ratio of 180 : 1 rather than 40 : 1 which means a feeling rate or five times faster, thus a pit which should have a designed life of five years is reduced to one year. Land availability becomes a problem if latrines need to be replaced so frequently (after every 1 to 5 years).

In addition, the few sanitation facilities are poorly utilized which is a result of many factors including students' background and upbringing, discipline regarding personal hygiene and school and weakness in implementation of sanitation and hygiene policies. For instance, key informant interviews and physical observations revealed poor disposal of solid waste especially where dustbins were ignored but disposed solid materials /waste just outside the bins yet the bins were not necessarily full.

5.4 Recommendations

There is need to develop sanitation programs under which the challenges should be tackled right from the root rather than attempting to manage the resultant unpleasant consequences.

School administrations need to prioritize the aspect of sanitation and hygiene. The excuse of inadequate financial resources is not genuine enough to explain the inadequacy of the sanitation facilities in the schools. It is expected that the increase in enrolment comes with increase in income to the schools. It is therefore strongly recommended that a separate budget is put aside and strictly observed by the schools to cater for this indispensable service in the schools.

Proper planning for the schools' carrying capacity needs to be considered. This should guide the recruitment of students into the schools where school administrations should not only focus on the income benefits but the wellbeing of the students who enroll. The Ministry of Education itself should conduct regular monitoring and evaluation of school sanitation and hygiene standards as part of its regulatory roles. Schools which do not meet the standards should be closed until they upgrade to desirable and acceptable sanitation standards.

Fundraising drives can be ensured by school administrations especially through school parents, networks of old students associations, sanitation and hygiene program funding agencies, the Ministry of education and several external links that may include friends of the schools and corporate institutions. Fundraising dinners and auctioning can be some of the strategies to be used in this endeavor.

Despite the different backgrounds of the students in the Schools, school administration should design sanitation and hygiene policies and programs to groom students and general school population into practically responsible citizens with good knowledge and practices as far as sanitation and hygiene are concerned. School administration should conduct their and evaluation of students wing of toilets and urinals instead of leaving the task to the sanitation prefects.

Regular cleaning of the latrines and urinals should be ensured. The school should be encouraged and facilitated to put wall painting, word curving and clay portraits that depict hygiene and sanitation messages. This can be installed in such a manner that they are not easily removed.

There is a need to train teachers with suitable sanitation and hygiene practices while they are still at University or Teachers Training college. This will ensure that by the time they come out, they are already acquainted with sanitation and hygiene issues, strategies for their promotion and the roles they have to play.

As far as sanitation and hygiene are concerned. School administration should conduct regular monitoring and evaluation of the students' wing of toilets and urinals instead of leaving the task to the sanitation prefects and support staff members.

Regular cleaning of the latrines and urinal sanitation facilities should be ensured especially in the morning and evening hours of the day. Regular maintenance should also be ensured by the school administrations to avoid possible break-down of the facilities which would comparatively make repairs more costly than maintenance.

Schools should be encouraged and facilitated to put wall painting, word curving and clay portraits that depict hygiene and sanitation messages. This can be installed in such a manner that there are not easily removed.

There is need to train teachers with suitable sanitation and hygiene strategies while they are still at University or Teachers Training College. This will ensure that by the time they come out, they are already acquainted with sanitation and hygiene issues, strategies for their promotion and the roles they have to play.

REFERENCES

- Abwoke, W. (2015). *Sanitation in primary schools in Bushenyi district district*. Unpublished Thesis MPH, Makerere University, Kampala.
- African Development Fund (2010) *Appraisal report rural water supply and Sanitation Program* Uganda.
- Amin, M. E. (2005). *Foundation of statistical inference for social science research*.
- African Development Fund () *Appraisal report rural water supply and Sanitation Program* Uganda.
- Amin, M. E. (2005). *Foundation of statistical inference for social science research*. Kampala. Makerere University Printery.
- Annet, P., Bos, R., Gore, F., Bartram, J (2008). *Safer water better health*. A report by World Health Organisation, Geneva, Switzerland.
- Bbaale, T. (1982). *Assessment of school health services in Kampala*. Unpublished Thesis for DPH, Makerere University, Kampala.
- Bhore, P. D., Bhore, C. P., Powa, S. & Nade, A. L. (2010). Child to child education. *A pilot study India Journal of Leprosy*, pp. 51-57.
- Bryant, J. M. D. (2013). *Health and the developing world*. Connell University Press.
- Carr, A & Strauss, M (2015). *Excreta-related infection and the Role of Sanitation in the control of Transmission*. Longman publishers Kampala Uganda
- Esrey S (2014). *Multi-Country study to examine the relationships between the health of children and the level of water and sanitation service, distance to water and type of water used*. McGill University, Montreal.
- Feachem, R. & Bradley, D. (2005). *Health aspects of excretal and waste water management*. Published for the World Bank, Wiley, J. & Sons, Chi Chester, New York: Brisbane Toronto Singapore.
- Goudie, T. & Brum, D. (1986). *Water treatment and sanitation: Simple methods for rural areas in development countries*.

Grove, H. (2015). *The poor die young: Housing and health*. Earth scan publications, London.

Hobson, J. (2006). *The theory and practice of public health*. Oxford Medical Publications, London: Oxford Up.

Hunter, P. (1997). *Water borne diseases, epidemiology and ecology*. Sponsored by DANIDA, Kampala: Uganda.

IRC - International Water and Sanitation Centre (2004). *Sustainability of Hygiene Behaviour and the Effectiveness of change interventions: Lessons learned on research methodologies and research implementation from a multi-country research study*.

APPENDICES

Appendix I: Questionnaire for students

Dear respondent,

My name is Kato Hakimu. I am a student of Kampala international University pursuing Diploma in clinical medicine and community health. I am currently conducting research on the sanitation management at bassajjabalaba secondary school. You have been chosen to be part of this study as a respondent. I therefore request you to kindly give me your honest views on the few questions below. The questionnaire is anonymous because we do not need your name so your views will remain confidential. Where you feel you cannot answer feel free to skip? I thank you in advance.

Location: _____ urban _____ Rural

1. What type of sanitation facilities do you have in your school?

Toilets

- a. Pit latrines
- b. Flush toilets (with running water)
- c. None at all

Urinals

- a. Cemented urinals
- b. Soak-pit (a dug hole with stones in it)
- c. We just go to the nearby bush
- d. None, we have only toilets

2. Which of the following is true about the sanitation facilities? You may tick more than one answer.

- a. Students just *pupu* on top and urinate anyhow

- b. The place is never cleaned
 - c. Even if they clean, the place will be dirty in a short time
 - d. The place is kept clean as much as possible 84
3. Tell us about the adequacy of the sanitation facilities

Toilets:

- a. Enough, there is no overcrowding
- b. Not enough but somehow we manage
- c. Not enough, there is overcrowding

Urinals:

- a. Enough, there is no overcrowding
 - b. Not enough but somehow we manage
 - c. Not enough, there is overcrowding
4. Tell us whether the following are available

Anal cleansing materials (toilet paper etc)

- a. Available
- b. Not available

Facilities for washing hands after:

- a. Available
- b. Not available

Separate toilets for girls and boys:

- a. Available

b. Not available

4. Are the hand-washing facilities functional?

a. Most of the time there is no water when we need it

b. There is not water or soap at all, we never use them

c. There is water and soap most of the time

5. Are the facilities enclosed to ensure privacy?

a. Yes, the user is completely not seen from outside while using

b. The user is somehow seen from outside while easing themselves

6. Which of the following is true about the use of hand-washing facilities?

a. Nobody bothers to wash even if there is water

b. Sometimes I wash, sometimes I just go

c. Most student's don't bother to wash their hands

7. Have you attended all classes since the term begun?

a. Yes

b. No

8. If yes, what are these diseases?

a. Diarrhea

b. Intestinal worms

c. Others (specify)

9. Where do obtain water for drinking and other uses at school?

a. Rain water tank

b. Borehole

c. Protected water spring

d. Un protected water spring

c. Others (specify)

Appendix II: Interview guide for key informants

1. What types of sanitation facilities do you have in your school?

2. Are these facilities appropriate in the school circumstances or you could do otherwise if you were given more resources?

3. (In case of an affirmative answer to the latter part of the above question) Do you think this inappropriateness of could be affecting how the students use the facilities?

4. Are the facilities you have enough or you could do more if given more resources?

5. Do you provide complementary facilities like hand-washing, anal cleaning?

Appendix I11: Interview guide for FGS

1. What type of sanitation facilities do you have in your school?

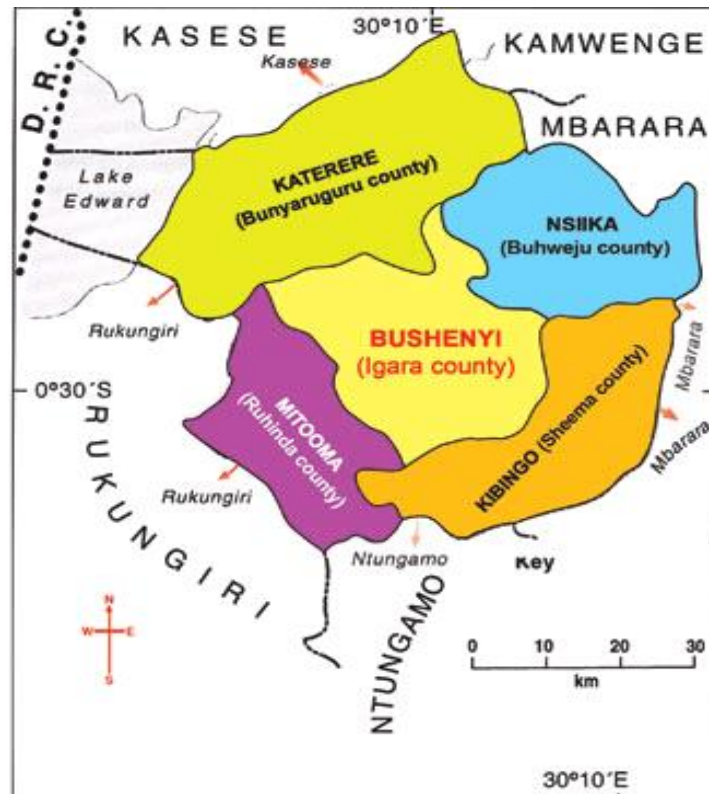
2. Comment on the general cleanness of the sanitation facilities in your school

3. What is your attitude towards using the sanitation facilities; is it a place you are happy to go to or you go begrudgingly?

4. What do you have to say about how students use these facilities?

5. Tell me about the adequacy of the sanitation facilities; are they enough?

The map below shows the location of Bassajjabalaba Secondary school in Ishaka Municipality Bushenyi District



Location of Ishaka municipality