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**RESEARCH TOPIC: PARTICIPATORY ACTION RESEARCH TO IMPROVE
SANITARY CONDITIONS IN SELECTED SCHOOLS IN CHIKANKATA DISTRICT**

BY

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TABLE OF CONTENTS

	PAGE
Copyright	i
Table of contents	ii
List of tables and figures	vi
Declaration	vii
Certificate of Completion of Dissertation	viii
Certificate of Approval	ix
Dedication	xi
Acknowledgements	xii
Acronyms	xiii
Abstract	xiv
 CHAPTER ONE	
1.0 Introduction	1
1.1 Global situation and Sanitation	1
1.2 Sub Saharan Statistics	1
1.3 Zambia's Sanitation Situation	2
1.4 Statement of the Problem	2
1.5 Justification	3
1.6 Research Questions	3
1.7 Study Objectives	3
1.7.1 Broad Objective	3
1.7.2 Specific Objective	4
1.8 Operational Definition of Concepts	4
 CHAPTER TWO	
2.0 Literature Review	5
2.1 Introduction	5
2.2 Sanitation challenges and coverage in rural areas of Zambia	5
2.3 General Overview of participation research and its roles in identifying local needs ..	6
2.4 Knowledge levels	7

2.5 Benefits of using participatory methods.....	8
2.6 Conditions of structures and provision of sanitation facilities.....	9

CHAPTER THREE

3.0 Description of Methodology	10
3.1 Study Design	10
3.2 Study Setting	10
3.3 Study Population	11
3.4 Sampling and Sample Size	12
3.5 Data Collection	12
3.6.1 Transect Walk	12
3.6.2 Photovoice	13
3.6.3 Photovoice Process	13
3.6.4 Focus Group Discussion and Procedure	14
3.6.5 Key informant interviews	15
3.7 Data analysis	15
3.8 Data quality control	16
3.9 Ethical consideration	16
3.9.1 Approval	16
3.9.2 Permission	16
3.9.3 Informed consent	16
3.9.4 Respect for participants and confidentiality	17
3.9.5 Autonomy	17
3.9.6 Justice and fairness	17
3.9.7 Beneficence	17
3.9.8 Plan for disposal or research materials	17
3.9.9 Dissemination Plan	17

CHAPTER FOUR

4.0 Findings of the Study	18
4.1 Introduction	18
4.2 Socio-Demographic Characteristics	18
4.2.1 Profile of Participants	18
4.3 Perceived Sanitary Conditions	21
4.3.1 Poor Sanitation	21
4.3.2 Fewer Toilet and cracked	22
4.3.3 Offensive smells	23
4.4 Good Sanitation	24
4.4.1 Hand Washing Facilities and Water	24
4.4.2 Provision of Solid Waste Management	26
4.4.3 Strong and Stable Structures	27
4.4.4 Separate Latrines for Pupils	27
4.5 Perceived Sanitation Practices	28
4.5.1 Poor Hygiene Practices	28
4.5.2 Stains of Blood on the Floors and Disposal of Condoms	29
4.5.3 Indiscriminate Disposal of Human Waste	29
4.5.4 Walls Smearred With Fecal Matter	30
4.5.5 Good Sanitation Practices	31
4.5.6 Proper Disposal of Fecal Matter	31
4.5.7 Proper Disposal of Refuse	31
4.6 Gender Specific Needs	32
4.6.1 Absence of Showers	32
4.6.2 Absence of Urinals	32
4.6.3 Provisions of Other Needs	33
4.6.4 Absence of Buckets	33
4.7 To Jointly Identify Opportunities and Develop Actions for Locally Appropriate	34

CHAPTER FIVE

5.0 Discussion of the Findings	37
5.1 Introduction	37
5.2 Perceived Conditions of Sanitary Facilities	37
5.3 Perceived Sanitation Practices	39
5.4 Gender Specific Needs	40
5.5 Analysis of Perceived Quality of Sanitary Facilities	42
5.6 Identification of Opportunities and Develop Actions for Locally Appropriate	43
5.7 Strength of the Study	44
5.8 Limitation of the Study	44
5.9 Challenges Faced During Research Process.....	44

CHAPTER SIX

6.0 Conclusion	46
6.1 Implications to the Government	46
6.2 Implications to the Schools	46
6.3 Implication to the Community	47
6.4 Recommendations	47

REFERENCES	49
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APPENDICES

Appendix I: Informed Consent Document	54
Appendix II: Consent Form	57
Appendix III: Photo Release for use of Images	61
Appendix III: Guide for Interviews for the Key Informants – Teacher	62
Appendix IV: Guide for Interviews for the Key Informants –Stakeholders	66
Appendix IX: Approval letter from Ethics	
Appendix X: Permission to Conduct Research from DEBs	

LIST OF TABLES

TABLE 1: Study Participants	11
TABLE 2: Characteristics of participants by age and sex	18
TABLE 3: Description of key informants by gender	19
TABLE 4: Description of participants and stakeholders	19
TABLE 5: Themes and subthemes	20
TABLE 6: Proposed Action Plan for Nanduba Primary School, 2016	35
TABLE 7: Proposed Action Plan for Chilileka Primary School, 2016	36

LIST OF FIGURES

FIGURE 1: Latrine without a door	21
FIGURE 2: Cracks on the latrines walls and floors	23
FIGURE 3: Showing Hand pump & buckets for hand washing at Chilileka	24
FIGURE 4: Water supply for hand washing at Nanduba	25
FIGURE 5: Litter around a refuse pit. Nanduba	26
FIGURE 6: Latrine with a door	27
FIGURE 7: Latrine with clean floor and walls	27
FIGURE 8: Separate toilets according to gender and grade	28
FIGURE 9: Dirty latrine with blood stains	29
FIGURE 10: Open defecation – Chilileka	30
FIGURE 11: Defecation on the floor	30
FIGURE 12: Picture of a latrine with fecal matter on the walls	30
FIGURE 13: A girl writing on the board at Nanduba School	35

DECLARATION

I, **Margaret Chauma Phiri** declare that this dissertation hereby submitted for the award of the degree of Master of Public Health (Health Promotion) is my own work and has not been submitted either wholly or in part for another degree to this University or any other or to any institution of higher learning.

Signed.....

Date.....

Margaret C. Phiri

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CERTIFICATE OF COMPLETION OF DISSERTATION

The undersigned certify that they have read the dissertation and are satisfied that it is the original work of the author under whose name it is being presented.

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CERTIFICATE OF APPROVAL

This dissertation by **Margaret Chauma Phiri** is approved as a partial fulfillment of the requirements for the award of a Master of Public Health (MPH) by University of Zambia.

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DEDICATIONS

I, **Margaret Chauma Phiri**, dedicate this dissertation to Almighty God and my family for the support and encouragement I received throughout my study period. I say thank you so much.

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ACRONYMS

CBOs	:	Community Based Organizations
CSO	:	Central Statistics Office.
DEBs	:	District Education Board Secretary
EHT	:	Environmental Health Technologist
KAP	:	Knowledge, Attitudes, and Practices
MLGH	:	Ministry of Local Government and Housing
MOH	:	Ministry of Health
NGO	:	Non-Governmental Organization
NWASCO	:	National Water supply and Sanitation Council.
PTA	:	Parent Teacher Association.
SPLASH	:	Schools Promoting Learning Achievement through Sanitation and Hygiene.
UNDP	:	United Nations Development Program
UNICEF	:	United Nations Children’s Fund.
USAID	:	United States Agency for International Development
VIP	:	Ventilated Improved Pit Latrine
WASH	:	Water and Sanitation Hygiene.
WHO	:	World Health Organization
ZDHS	:	Zambia Demographic Health Survey

ABSTRACT

Water, Sanitation, and Hygiene (WASH) coverage in rural areas remain a big threat to the rural population of Zambia. Most rural communities including public places such as schools, churches do not have access to any form of toilet facility. This health problem is common in the sub Saharan region. In this study the researchers used participatory action research approach to explore the perceived sanitary challenges and actions in the selected schools of Chikankata district in the southern province of Zambia.

The objectives were to investigate the perceived conditions of sanitary facilities, to analyze perceived quality of sanitary facilities, to understand the gender specific sanitary needs for the pupils, as well as to jointly identify opportunities and develop actions for locally appropriate interventions.

A qualitative participatory action research approach was employed to collect data. Data was collected using transect walk around the school surrounding and through photovoice. The photovoice, which was the main data collection tool, used camera to capture photographs to explore participants' experiences and reactions from photographs in the focus group discussions. Focus group discussions were done with forty-seven (47) participants and six (6) key informant interviews from other organizations were conducted.

Four major themes emerged from the discussions namely poor sanitation, ideal or good sanitation, perceived hygiene practices, and provision of gender specific needs. The FDGs revealed that participants used photographs to identify the sanitary conditions and possible solutions to the prevailing conditions. The study not only aimed at adding to the body of knowledge but also to allow the pupils' voices to be heard as they were the only ones who truly understood the prevailing sanitary conditions of their schools.

The findings showed that using participatory research tools assisted participants to identify a lot of conditions effective approach which can influence behavioural and social change. Photovoice should be incorporated because of its positive results in health related research.

Key words: Perceptions; Experiences; Photovoice; sanitary facility. Excreta

CHAPTER ONE

1.0 BACKGROUND

Provision of safe water and sanitation contribute towards nation building and prosperity by promoting the health status of the people. Despite of the efforts applied in improving sanitation and hygiene to improve the health status of the people, sanitation service delivery in most developing countries has not been given the needed attention it deserves. As a result of this unpleasant situation, a greater population of the people globally suffers from sanitation related diseases caused by poor or absence of sanitation (Emory University Center for Global Safe Water, 2009). These diseases are causing many people to suffer from diarrheal diseases especially in developing countries. This situation has also been noted in public places such as schools which have recorded cases of gastrointestinal diseases.

Safe water and improved sanitary facilities in schools has been known to contribute to healthy learning environment that benefits learners. Good sanitation and water in schools has also being described as significant because it brings about sanity in the school environment and promotes good health to pupils and communities (René John Dierkx, 2004; Assefa, and Kumie, 2014).

1.1 Global situation on Sanitation

UNICEF estimated that about 1.2 billion people worldwide gained access to improved sanitation between 1990 and 2004, and an estimated population of 2.6 billion including children had no toilets at home. Some studies have revealed that inadequate water, sanitation and hygiene have been estimated to account for 2.2 million deaths annually globally (Fewtrell, B. et al, 2002; Gelaya; UNICEF, 2010).

1.2 Sub Saharan Statistics

Achieving proper hygiene and good sanitation has continued to be a challenge to a majority of people in sub-Saharan Africa. According to World Health Organization, sanitation coverage at 70%. (World Health Organization, 2008; 2010). Other studies have described decent and functional toilet facilities that provide comfort and convenience to remain inaccessible for most

people in region. This is as a result of various factors such as cost of latrine construction, lack of knowledge on designs and utilization (Water AID, 2011).

1.3 Zambian Sanitation Situation

Zambia has not been spared from the challenge of poor sanitation. Access to safe water and sanitation in the rural areas was estimated at 37% and 13%, respectively and about 65% of the total population estimated at 11.6 million in 2005, lived in rural area. The rural population was characterized by low access to basic services including safe water supply and sanitation as compared to urban (World Bank; Water and Sanitation Program, 2012).

Statistics revealed that about 25% of Zambian basic schools did not have access to safe water and sanitation. The ratio of pupils per latrine stood at 124 pupils per latrine this has led to poor maintenance and unsightly condition. Besides, poor maintenance has contributed to absenteeism among pupils especially girls. This has resulted in increased poor health and high dropouts among pupils (Mbilima 2008; Central Statistics Office, 2010).

1.4 Statement of the Problem

Sanitation is still low and poses a public health threat to most developing countries including Zambia. The estimated 13% of sanitation coverage recorded in 2005 is a clear indication that sanitation levels in the rural areas of Zambia pose a risk of disease outbreaks of waterborne diseases to the learners and their immediate families (ZDHS, 2014). The ratio of pupils per toilet is generally higher as much as 124 pupils per toilet. This high number of pupils per toilet often leads to poor maintenance and unsanitary conditions. The pupils prefer to practice open defecation than to use dirty latrines. Limited access to water and sanitation facilities accompanied by poor hygiene practices is associated with high number of skin and diarrheal diseases (UNICEF, 2006; MOH, 2012a).

Limited or lack of participation among stakeholders towards sanitation has partly contributed to the complications in effectively addressing the sanitation problems in most schools. Sanitation programs focus on construction targets leaving out aspects of behaviour change which can only be effectively considered in the projects if the stakeholders fully participate in all phases. Leaving out behaviour features in project design has resulted in poor and inconsistent use as well

as poor maintenance of the facilities. Therefore, this study understood the current perceived sanitary challenges and identified opportunities and actions for locally appropriate interventions that encouraged stakeholder engagement to improve sanitation in the selected schools.

1.5 Justification

Poor sanitation was cited as one of the major problems that contributed to ill health, absenteeism and school dropout among pupils especially girls. This study used of participatory research methods root causes of poor sanitation was identified and through these methods, possible solutions were noted. This study not only will it shall improve school sanitation but also communities too because the pupils usually act as change agents. Furthermore this study is meant to facilitate social and behavioral change among pupils. In this way sustainability is guaranteed and good health among the pupils' this is likely to increase academic performance in schools. The results will help to make sure that health support programs specifically designed to promote good sanitation are integrated into the school curriculum. The knowledge levels will increase hence reduction in disease burden among pupils. The study is significant to the schools because sanitation programs are incorporated school program thereby reducing absenteeism and dropouts among pupils.

1.6 Research Questions

1. What are the perceived challenges that hinder improvement of school sanitation?
2. Who is involved in the maintenance of the sanitary facilities?

1.7 Study Objectives

1.7.1 Broad Objective

- To understand the perceived sanitary challenges and actions in the two selected Primary Schools in Chikankata District.

1.7.2 Specific Objectives

- To investigate the perceived conditions of sanitary facilities.
- To analyze perceived quality of sanitary facilities.
- To assess perceived sanitation practices.
- To understand the gender specific sanitary needs for the pupils.
- To jointly identify opportunities and develop actions for locally appropriate interventions

1.8 Operational Definition of Concepts

- **Sanitation:** broad name that is used to describe immediate surroundings, latrines/toilets waste management and water supply in a particular environment.
- **Hygiene:** simply means cleanliness.
- **Photovoice:** is defined as a participatory research method in which participants record and reflect on their community through a specific photographic technique.
- **School:** means a learning environment for pupils.
- **Participatory action research:** qualitative research that focuses on a process of sequential reflection and action, earned out with and by local people rather than on them. Local knowledge and perspectives form the basis for research and planning (Andrea Cornwall' and Rachel Jewkes, 1995).
- **Wash Hand Basin:** concrete structure built in a rectangular or square shape to provide water for hand washing after using the toilet. It has a tap at the bottom and has to be refilled every day.
- **Ventilated Improved Latrine:** according to Aime Tsinda et al, 2013 was defined (VIP), as a composting toilet, a pit latrine with a cover, slab and vent pipe.

CHAPTER TWO

2.0 LITERATURE REVIEW

This chapter presents information gathered from different authors and studies on the subject of improving sanitation in schools using participatory methods. The information reviewed is presented under the following headings; introduction, general overview of participatory research and role of participatory research in identifying and solving local problems, knowledge levels, conditions of structures, provision of sanitation facilities and benefits of using participatory methods.

2.1 Introduction

It is estimated that more than 65% of Zambia's population (estimated at 11.6 million in 2005) lived in rural areas. Zambia's rural population is characterized by low access to basic services such as safe water supply and sanitation. Despite achievements from the implementation of the water and sanitation sector reforms over the past years, progress has been slow in the rural water supply and sanitation. Studies conducted by Central Statistical Office revealed that access to clean water and sanitation has been equally slow (Central Statistical Office, Census, 2000)

2.2 Sanitation challenges and coverage in rural areas of Zambia

According to a final report of sixth development plan, it was revealed that the state of school water supply and sanitation coverage is unsatisfactory. Coverage ratio for girls is still as low as 28% while for boys is 40%. In general, the average sanitation coverage for both boys and girls is 33%. This is as a result of most sanitary facilities being temporal structures. These facilities are not convenient to the physically challenged pupils (Sixth National Development Plan 2011-2015, page 107, Zambia).

According to Millennium Development Goal progress Report, Zambia (2013) revealed that the most widely used dry excreta disposal method was pit latrine. An estimation of 73.1 % of households used pit latrines in 2010, but only 19.5 percent of the national population had access to pit latrines with slabs. The report further revealed that about two million Zambians had no access to sanitation facilities and they defecated in the open (MDG Report, Zambia 2013).

Other studies reported that factors attached to low sanitation coverage included the construction cost, low sanitation promotion programs. Temporal materials being used, with short life span, low support for sanitation among donor supported programs, resistance to the use of the latrines, lack of partnerships for sanitation programs (GRZ/UNDP, 2008).

2.3 General overview of participatory action research and its roles in identifying local needs.

In most countries, participatory action research approaches has being found to yield positive results as a research strategy within qualitative research especially in water and sanitation related programs. Several systematic references are made to participatory research because of the benefits that attached to it. Participatory research is known to help in identifying untapped knowledge to create potential qualitative methodologies. Literature further revealed that participatory methods could facilitate behaviour change through creating awareness and triggering immediate reactions and planned actions (Bergold, 2007; Bergold & Thomas, 2010).

Participatory action research strategies have many advantages such as emphasis on participation and collaboration where researchers and participants are co-learners in the research process. Community members are actively involved in all aspects of the research process and action. Webster, 2006 added that one major role of participatory methods is aimed at reducing the power distance between stakeholders.

A study done in Nepal on school led total sanitation reported that the project yielded positive results because of community involvement at all stages of the project. Community became partners in order to achieve no open defecation in school environment. Other studies revealed that safe, adequate water and sanitation facilities in schools, coupled with hygiene education, and community participation reduced the incidence of diarrheal diseases (UNICEF, 2009; Ministry of Health and Population, Nepal, 2006).

In 2007, the Government of Zambia and cooperating partners applied new strategies to meet the Millennium Development Goal for sanitation target of 66%. A Community Led Total Sanitation approach was introduced in Choma district of southern province. This approach yielded great successes and increased sanitation coverage to 67%. This led the Government to scale up the approach throughout Zambia. The report further revealed an increase in sanitation coverage from

23 % to 88 % for rural population. However other studies show that long term sustainability is absent (UNICEF, 2007). Another study conducted by Plan Kenya, 2010 conducted a study using Community-Led Total Sanitation (CLTS) and the results are CLTS seems key to transforming community's attitude and behaviour towards good hygiene and sanitation (PLAN Kenya, 2010)

A study done in Kenya used participatory approach known as photovoice in Water and sanitation project. The approach provided an opportunity for researchers to fully understand the complexities of water related behaviours in the community that other research methods may not fully capture (Bisung, 2014)

A review of 144 water and sanitation interventions conducted in some developing countries and the United States reported that using participatory approaches improved water and sanitation led to reduction in morbidity of diarrheal diseases (UNICEF, 2010)

However other studies conducted in Nepal indicated that some water and sanitation projects implemented in the past have failed to continue functioning because most of them used the top-down approach which was non-participatory (Yakami, 2011).

2.4 Knowledge Levels

The report on school water, sanitation and hygiene intervention programs using participatory approach in both developed and developing countries have been found to increase knowledge and improve behavioral practices not only in schools but also in communities. An impact evaluation study conducted in Bangladesh after a five-year intervention revealed that lack of awareness, knowledge, and hygiene practices were barriers to safe water use and improved sanitation due to a gap in knowledge and practice as a result of attitude (Job Wasonga, Charles Omondi Olang'o, and Felix Kioli, 2014).

Poor hygiene practices and inadequate sanitary conditions play major roles in the increased burden of communicable diseases within developing countries. This study evaluated the knowledge, attitudes, and practices (KAP) of hygiene among rural school children in Ethiopia and assessed the extent to which proper knowledge of hygiene was associated with personal hygiene characteristics. The study also revealed that about 52% of students were classified as

having adequate knowledge of proper hygiene. The study findings showed the need for more hand washing and hygiene education in schools (Bizu Gelaye, et al, 2011).

According to a study done by (Nthalivi Silo, 2013) in Botswana, poor sanitation was associated with non-attention from the school management. Despite low attention received, the knowledge levels among pupils concerning sanitation were high. Another study conducted in South Africa indicated that rural areas face challenge in the provision of adequate sanitation as compared to urban areas. This study revealed that some schools did not consider gender issues such as sanitary bins for girls. A determination of the level of knowledge, attitude and practices on hygiene led to the conclusion that learners in the study area had sufficient knowledge about safe hygienic practices (Sibiya J. and Gumbo J., 2013).

Another study done in Nepal revealed that open defecation was common among the rural population including schools despite several hygiene messages being delivered in schools but there are not practiced and there is resistance to behavior change (Yakami, 2011).

2.5 Benefits of using Participatory Methods

Jewitt, in his study reported that most past projects failed due to their inability to involve and commit local people to the projects and their results. The community had no role or contribution towards construction and utilization of sanitary facilities. He further suggests participatory approach in developing projects had made the tremendous change to the local people. The project which involves the community from the beginning to the end brings about sense of ownership and sustainability. He added that participation increased effectiveness and enables the community to determine their own lives and also learn from each other (Jewitt, 2011).

According to baseline Survey on School WASH Facility Assessment 2014, conducted in the Eastern Province of Zambia on sanitation and water supply indicated that about (92 percent) of the schools surveyed showed that they provided separate latrines for boys and girls. This was as a result of stakeholder involvement.

A study done by Musabayane in 2000 outlined the benefits of using participatory method how the methodology has been useful in improving sanitation. The study done by Musabayane in Zimbabwe highlighted some of the benefits in the application of PHAST. Reviews of the effects

of the process have indicated positive behaviour change in such areas in the management of water, construction and use of latrines. The process has also led to a change of institutional approaches from supply driven projects to demand responsive approaches (Musabayane N., 2000).

2.6 Conditions of structures and provision of sanitation facilities

In about 90 countries around the world including Sudan, Colombia, Vietnam, and Uzbekistan, some school children are faced with the some challenges such as lack of clean water for drinking, hand washing facilities and the absence of privacy and inadequate toilets. This has resulted in compromising children's ability to learn and often causes them to stop going to school. Girls are more vulnerable as a result many drop out due to lack of privacy and safe sanitation facilities (UNICEF, 2008).

From the various studies done, it is clear that participatory approaches stand out to be one of the best options to improving sanitation. It is for this reason that this study opted to use this approach because of the influence and critical role they have in the reduction of disease burden related to poor sanitation.

In conclusion, studies that used participatory approaches have confirmed that the approach lead to improved hygiene behaviour with communities being able to link causes and effects. The use of participatory methods also necessitates a change in approaches from supply driven strategies to demand driven.

CHAPTER THREE

3.0 DESCRIPTION OF METHODOLOGIES

This research used a participatory approach to explore sanitary challenges in the selected schools. Within the participatory research approaches, data were collected using transect walk and the use of participatory documentary photography called Photovoice, Focus group discussion and in depth interviews with key informants.

3.1 Study Design

Participatory action research was used as a study design because it is suitable to understand the depth of sanitary challenges. The method was useful in finding out root causes and possible solutions which other methods would not find. This approach was necessary for the study because it removed power imbalances and facilitated learning, action, and capacity building through collaboration with those affected by the issue being studied. (Green et al, 2009). In this study the researchers deliberately applied this approach to help participants develop confidence to share their experiences and realities as regards to school sanitation. One of the most important features of this approach lied in the relationship between those conducting the research and the researched. This was considered to facilitate partnership and to share responsibilities thereby promoting sense of ownership and sustainability. This was a school based qualitative study. The study comprised of participants who were asked to take photos around the school environment on what they perceived as sanitary challenges in their respective schools.

3.2 Study Setting

The study was conducted in Chikankata District, in the Southern province of Zambia. The District was established in 2013 and has a number of primary and secondary schools. Nanduba and Chilileka primary schools were purposely sampled for the study because they had inadequate and poorest sanitary facilities and conditions as compared to the rest of the schools in the District. On average one latrine accommodated 42 pupils and the state of repair for most of the latrines were absent.

3.3 Study Population

The study population included pupils in grades three to nine. The pupils were selected because they were available at the time of the data collection. The study population included guidance teachers because of the direct interaction with pupils, because of their guidance and support they render to pupils. The Environmental Health technologist and Sanitation Officer were selected as key informants because of their direct involvement in water and sanitation matters in their respective organizations in the district.

An additional of two (2) Parent Teacher Association members from the two schools was included. These were involved in the study because of their direct link in schools. In this study they acted as representative for the community concerning school programs. They have influence as regard to resource mobilization on sanitation issues in communities that can improve school sanitation.

Table 1 below shows the methods of data collection that were used and also the total number of participants that participated in the particular method.

TABLE 1: Study Participants

Source	Data Collection Methods	Number Of Participants
Chilileka School	Transect walk.	24
	KII	01
	FDGs	24
Nanduba School.	Transect walk.	23
	KII	01
	FDGs	23
Chilileka Community	KII	01
Nanduba Community	KII	01
Local Authority	KII	01
Chikankata Medical Office	KII	01

3.4 Sampling And Sample Size

Purposive sampling was used to select the two schools because they had extreme cases of sanitary challenges which needed to be highlighted and to find ways of minimizing them. These schools too had similar characteristics which were relevant to the study objectives. The pupils were selected using convenience sampling because of their availability during the research period and their willingness to participate in the study. These were selected with the help of teachers. The study had four focus group discussions for pupils where homogenous groups were created so as to promote freedom of expression.

Six key informants were i.e. two guidance teacher one from each school, two stakeholders from ministry of Health and Local Government. The guidance teachers were chosen because of their direct link with pupils as they were involved in guiding and provide moral support to learners. The Government workers were engaged because of the direct involvement in sanitation programs in the district and provision of relevant data on policy requirement and for advocacy. While parent teacher association members had a role of community and resource mobilization meant for school programs including sanitation and sourcing for other resources.

3.5 Data Collection

The data was collected using transect walk, focus group discussions and key informants interviews.

3.5.1 Transect walk

The study began data collection with a transect walk. This is an observation walk which was selected by the researchers to familiarize themselves with the study site and also to understand prevailing behaviours and practices in the selected schools. This walk was chosen to assist participants and researchers identify most needy areas within the study sites. The team walked through study sites and focused on the sanitary facilities and conditions such as water points, sanitary facilities. The main reason to employ this method was to compare the accuracy of data that would emerge from other methods. Among participants, a leader was chosen to lead the researchers and other participants while other participants observed and explained what they saw

to researchers. The transect walk comprised pupils and researchers from the two schools and this was done in their respective schools.

During a ‘transect walk’ the focus was to identify ideal and worst situations for school sanitation. Ideal sanitation in the study was defined as a sanitary facility that provided privacy, comfort, water and hand wash facilities. Worst sanitary was defined as a latrine lacking hand washing facilities, poor structure without door, without water and dirty. As the walk progressed, a number of areas within the school vicinity were visited such as water points, areas of open defecation, super structures for latrines so as to establish the prevailing conditions and quality. This walk led to a moment of realization of bad behaviours and practices among pupils. And it triggered their participation in finding possible solutions.

3.5.2 Photovoice

Photovoice was selected as a core method because of its participatory properties as well as its ability to capture a more detailed understanding of an issue through photographs.

3.5.3 Photovoice process

Before the commencement of photovoice process, written consent was given to the Head teachers to permit participants capture photographs in their respective schools. The process of photovoice included participant practically learns how to use a camera, capturing photographs, and discussion of photographs. The reason for using this method was elaborated to them that photographs could be used to bring a lot of data as the picture remained. It was also vital to use it as a channel of communication. During training, the definitions and the whole process of photovoice as a data collection tool were highlighted.

Participants were taught on ethical issues in the research process and taking of photographs as well as technical use of digital camera. In this study, participants were asked to photograph structures in surrounding of the selected schools and not people or animals because it was an ethical to do so. Training was conducted where all the participants practically held a camera and photographed various points. Researchers and participants agreed on the next meeting to take photographs. On the set date, participants were divided in two groups where one group was with principal researcher while another group was with assistant researcher. Participants were asked

to take as many photographs as possible around the school environment on what they perceived ideal and worst sanitary facilities and conditions. Thereafter, photographs were transferred from the digital camera to the laptop. Then researchers and participants had time to observe the photographs and choose the photographs they wished to discuss. Participants chose and these were developed into hard copies for focus group discussion later.

3.5.4 Focus Group Discussion and procedure

Prior to the discussion, the purpose of the discussion was explained to the participants and why they were separated. These discussions were held in their respective schools and researchers assured participants confidentiality concerning the discussions and discussions were done in local language Tonga.

Sitting arrangement

Participants sat in a circular manner to allow interaction among participants and to ensure that all the participants had a chance of looking at photographs and contributing freely to the discussions.

Time

The group discussion did not last for more than one hour to avoid participants shunning future meetings.

Actual meetings

Participants were asked to introduce themselves and asked to say something about themselves before the actual discussion could commence. During discussions, participants selected at least six photographs to discuss. Using the photographs taken by each participant, researchers asked participants to explain what was on the photographs they had chosen, how the things they mentioned affected the pupils, what should be done on the problems and who should do it. Some were probing questions to encourage the participants expand on responses. These methods helped in the collection of individual explanations of photographs as well as discussion of the photographs as a group. The data was collected using the discussion of photographs. When there

was no new data from the participants' discussion, the discussion stopped because the participants mentioned almost all relevant data which is called saturation in qualitative research.

3.5.5 Key informant interviews

The Environmental Health Technologist (EHT) from health sector and sanitation officer from local Authority, two Parent Teachers Association members (PTA) and the guidance teachers from the selected schools were interviewed using the interview guide as key informants. Key informant interviews helped in determining not only what pupils do but also why they do it. The interviews revealed local attitudes towards sanitation; information that was necessary to draw plans for interventions. The interviews also provided adequate information and insights for making critical decisions. Data analysis in qualitative research consists of preparing and organizing the data (i.e., text data as in transcripts, or image data as in photographs) for analysis, then reducing the data into themes through a process of coding and condensing the codes, and finally representing the data in figures, tables, or a discussion. According to books on qualitative research, this was the general process that researchers used

3.6 Data Analysis.

Data management consisted of preparing and organizing the data for analysis which is important in qualitative research (Cresswell, 2007). Data was recorded with the permission from the participants and was then checked immediately after collection for completeness and accuracy. It was then transcribed as verbatim and transcripts were imported into NVivo 10, software to assist in data coding. Themes and subthemes were formed and photographs were matched to support the data in those themes. Photographs that appeared more than once were coded in more than one category. Thematic codes were developed and improved upon. The researchers checked for any missing data and then removed the data that did not add value to the study. Thereafter a detailed analysis was carried out to understand the study in detail. Thereafter, data was interpreted.

3.7 Data Quality Control

To improve the quality of data collected, the researchers used tape recorder and listened to recordings several times and the field notes to compare the accuracy of data gathered from various methods employed.

3.8 Ethical Considerations

The study involved human participants and images of sanitary facilities in selected schools and their human rights needed to be protected.

3.8.1 Approval

Approval and clearance was sought from the Ethics committee UNZABREC to allow the researcher carry out the study.

3.8.2 Permission

Thereafter permission was sought from the Chikankata District Education Board Secretary. School authorities allowed researchers to carry out the study. A detailed explanation on the photovoice approach and its significance for the study was availed to schools masters before taking photographs. A form called photo release was signed by headmasters as a way of giving consent to researchers for take photographs in their schools. In this study, only photographs of sanitary related issues were allowed to be taken and no images of the persons. This photo release form was adopted from the study done by (Farzana Tabassum, 2014).

3.8.3 Informed consent

The study involved pupils some of whom were under the age of 18 years and therefore could not give consent because they were considered as under age. In this case informed consents were sought from their parents/guardians and the school management before they could participate in the study to ensure pupil protection. Written consents were obtained from participants after explaining the purpose, nature of benefits and risks and how information would be utilized while assuring them that information would be kept in confidence. Pupils were also asked to sign the assent forms themselves because they still had the right to refuse despite their parent/guardian having permitted them to participate in the study.

3.8.4 Respect for participants and confidentiality.

The issues of anonymity and confidentiality were assured to all the participants as no real names were used in the report and that the results were not used for any other purposes other than that of academic purposes. The ethical issues considered in this study therefore, were informed consent, anonymity, confidentiality, and personal harm. Signed consent forms were obtained from all pupils who volunteered to participate in the study. The information sheet accompanied the consent forms to explain to respondents the nature of the study and their expectations in this study.

3.8.5 Autonomy

The information sheet also informed participants that their participation was voluntary and that they were free to withdraw at any time. Participants were informed that their responses would be kept confidential and that their anonymity would be maintained.

3.8.6 Justice and Fairness

Everyone who was eligible for the study was given an equal opportunity to participate or to decline.

3.8.7 Beneficence

Participants were assured that the study did not have any known harm and risks. There were no direct benefits for the participants but that their participation would add to scientific knowledge.

3.8.8 Plan for disposal of research materials

All the photographs would be surrendered to the respective schools after the study is completed.

3.8.9 Dissemination Plan

Copies of research findings would be disseminated to Ministry of Education (MOE) Chikankata and the selected schools. A copy of the findings will be subject to discussion with other key stakeholders. Copies of the report will be submitted to UNZA Library.

CHAPTER FOUR

4.0 FINDINGS OF THE STUDY

4.1 Introduction

This chapter presented results from the participatory research approach which explored the sanitary challenges and actions in the two selected schools in Chikankata District of Southern Province. The chapter outlined the socio demographic characteristics of participants and on the description of the participants and stakeholders that participated in the study.

4.2 Socio-Demographic Characteristics

4.2.1 Profile of Participants

The study comprised participants in age range of 10-17 years and was from grade 3-9 from two selected Government schools.

TABLE 2: Characteristics of participants by age and sex

Table 2 below showed the sex and the age of participants by school and total participants in the study. The study reported 21 males (46.7%) and 24 females (53.3%) from the two schools who participated in the study. The record revealed that more girls participated in Nanduba School than in Chilileka School. Meanwhile there were more males at Chilileka (53.2%) as compared to (42.8%) at Nanduba. The overview picture shows that more girls (53.3%) were involved in the study as compared to boys (46.7%).

Name of School	Age	Sex		Total
		Males	Females	
Nanduba	10-17	11	13	24
Chilileka	10-17	12	11	23
Total		23	24	47

Table 3 below shows the description of key informants by gender and total number of females and males in the study.

TABLE 3: Description of key informants by Gender

Description of Key informants by gender.	Sex		Total
	Females	Males	
Education	01	01	02
Health	0	01	01
Local authority	0	01	01
Community	01	01	02
TOTAL	02	04	06

Table five (4) below illustrated details of the total participants, key informants and stakeholders involved in the study.

TABLE 4: Description of the Participants and Stakeholders

Description of the participants and Stakeholders	Frequency
Pupils	47
Teachers	02
PTA member	02
Stakeholders (MOH & MLGH)	02
TOTAL	53

Table 5 below showed gave details of themes and subthemes identified in chapter four. The themes were identified in line with the specific objectives. These were as follows: Perceived sanitary conditions and quality, perceived sanitation practices and gender specific needs. The subthemes outline the subthemes that emerged both for poor and good sanitation. Further the table showed the sanitary practices and the provision of gender specific needs in the schools.

TABLE 5: Theme and Subthemes

Objectives	Major Theme	Subthemes
Perceived sanitary conditions and quality.	Poor sanitation	<ul style="list-style-type: none"> ▪ Toilet facility ▪ Missing door on some latrines ▪ Fewer toilets ▪ Cracks on the latrines walls. ▪ Odours
	Good sanitation	<ul style="list-style-type: none"> ▪ Provision of water and hand washing facilities ▪ Provision of refuse pits. ▪ Strong walls. ▪ Separate toilets for boys and girls.
Perceived sanitation practices	Poor hygiene practices	<ul style="list-style-type: none"> ▪ Open defecation ▪ Indiscriminate disposal of fecal matter in the latrines. ▪ Hand washing practices ▪ Smearred wall with fecal matter
	Good hygiene practices	<ul style="list-style-type: none"> ▪ Proper use of latrines ▪ Hand washing habits. ▪ Proper disposal of refuse
Gender specific needs	Girls	<ul style="list-style-type: none"> ▪ Absence of showers for girls ▪ Absence of buckets in the girls latrines ▪ Provision of menstrual materials.
	Boys	<ul style="list-style-type: none"> ▪ Absence of urinal

4.3 Perceived Sanitary Conditions

Overall the study showed that schools visited experienced both poor and good sanitation facilities. Below are the sanitary challenges discussed in details. The section begins by outlining the poor conditions then good conditions.

4.3.1 Poor sanitation

Poor sanitation in both schools included lack of toilet facility door on some latrines, fewer number of latrines, cracks on the latrines, presence of flies in some latrines, and offensive smells as shown in table 6 above.

The picture below illustrated a structure of latrine without a door. One of the worst scenarios of the latrines that do not provide privacy to the user. Refer to the definition of ideal latrine on page 13.

FIGURE 1: Latrine without a door



The above picture describes a latrine without a door. This is a latrine pupils complained about which didn't provide privacy. The picture in figure 1 was captured during photograph taking. It looked dirty and not properly used. Furthermore the latrine described the poor quality and condition of sanitation. The study revealed that both schools had this type of latrines that existed since inception. All the pupils especially girls found it difficult to use such latrines because they didn't provide privacy. Due to lack doors, the toilets were accessible by passerby from the surrounding villages. One female aged 15 explained the situation,

“We face challenges in using the latrines without doors because as for me a girl, I need to take off my skirt when using the toilet. Sometime as you are using the toilet, someone comes in and this is disturbing”.

Another girl aged 17 from Chilileka School explained how the lack of doors makes her insecure to use the toilet,

“I don’t have freedom to use the toilets especially when on my menses I feel someone is likely to enter. The toilet is supposed to have a door and lock to provide security and privacy to me the user”.

Some boys from both schools felt that they were old enough to use latrines without door. As doing so would also undermine their privacy. This prompted them to use the behind of the latrines as it was much better secured than the latrine itself.

“I don’t like using these latrines because there have no doors. Sometimes you find there is someone in the toilet. The toilets are too open and other people in the compound use them”.

4.3.2 Fewer Toilets and cracked.

The study reported that the total number of latrines in both schools were fewer as compared to the number of pupils enrolled. This situation has resulted in latrines getting full quickly because of the small volume. Some girls revealed that due to fewer number of toilets, the big girls used latrines for junior grades, (from grade one to four).

“You can’t have freedom to use the latrine because you fear someone will enter. The latrines are busy because they are few for the number of boys in the school. I feel there is need to build more toilets”.

FIGURE 2: Cracks on the latrines walls and floors



Figure 2 has a picture showing a cracked latrine at Chilileka School a situation that caused instability on latrines. The participants expressed worry over such cracks because they put the life of users at risk. This latrine was for junior classes and the senior boys felt this was not right because the latrines were likely to collapse. However Nanduba School did not have any latrines which were cracked or unstable.

“One female grade six participant from Chilileka said, I have a photo and it has a toilet with a big crack. Even the other photo has a toilet with holes and cracks. There is need to repair these latrines”

The issue of cracks was widely discussed among boys. During their discussion, they noted that the cracked latrines were used by younger pupils who were fond of going to the latrine in a group and playing inside. They felt the need to demolish such latrines.

“When I look at this photograph well, it has a latrine and is cracked and is dilapidated. There is need to demolish these old latrines and build new ones. (Grade 9 pupil).

4.3.3 Offensive smells.

Nanduba and Chilileka Schools experienced offensive smells because of the poor state of most latrines. The smells were a source of worry to participants because they felt pupils would resort to use the immediate surrounding shunning latrines. This was observed during transect walk, when participants smelt bad smells as they approached the toilets. It was worse when they entered the latrines as they could not hold themselves. One female participant at Nanduba had this say,

“Some latrines at this school are almost full. They are producing bad smells and you cannot even go near them because of smells. These smells make some pupils to avoid the latrines”.

Another male participant from Chilileka during transect walk feared that smell may deter people from using the toilets.

“These latrines are stinking. I wonder whether there is any pupil entering in these latrines. The smell is bad and I can’t stand it.”

4.4 Good Sanitation

In this section are details of the outcomes of good sanitation in both schools such as provision of water, provision of refuse pits, strong structures and separate latrines for pupils.

Despite the reports on the perceived sanitary challenges of the two schools, it is worthwhile to mention some ideal sanitary facilities that were noted during transect walk and focus group discussions.

4.4.1 Hand washing facilities and water

The study reported that both schools provided water for the pupils and the sources of the water were underground. Nanduba School provided taps for hand washing while Chilileka provided buckets with water.

FIGURE 3: Showing hand pump & buckets for hand washing at Chilileka



During transect walk, wash hand basins were displayed at Chilileka and later a photo was captured as shown in figure (3) above. The photo was discussed in the focus group discussions where all participants appreciated the provision of hand wash basins however their concerns were the long distance to where water was fetched. It was also noted that that the pump was busy. One female participant from Chilileka had this to say,

“I feel the idea is good to providing buckets with water, but pupils are not committed to refill the water because in the buckets and teachers do not monitor this activity. Even if there is a duty rota it is not followed”.

During transect walk and focus group discussions, it was observed and revealed that Nanduba has running water but the taps were usually locked. This problem was making pupils not to wash their hands after using the latrines. One female outlined the challenges.

“Our school provides the water for use after using the toilet. The problem is that the water taps are usually locked in the afternoon”

This was further justified by the photograph that was discussed in the focus group discussion as shown in figure 4 below.

FIGURE 4: Water supply for hand washing at Nanduba School



The water source for Nanduba School was about 50m away from the latrines. The photograph of water source above was discussed in the focus group discussion and the findings reported that the supply of water was intermittent because the taps were opened for a few hours in a day and soap was not provided for hand washing. During group discussion, a participant narrated the situation as follows:

“Our water is only supplied to us in the morning only, the afternoon classes are deprived of this basic need. It is difficult for us to wash hands after using the latrines”.

4.4.2 Provision of solid waste management

Figure 5 below has a picture describing the prevailing situation on waste management. The study revealed that both schools used open rubbish pits for final refuse disposal. Solid waste comprised of papers, food waste, water nylons and plastic bottles. This waste was incinerated weekly. Though the schools had the refuse pits, they were inadequate as compared to the refuse generated and disposed-off.

FIGURE 5: Litter around a refuse pit - Nanduba



In all the focus group discussions it was reported that both schools had clean and untidy surroundings. The pictures in figure (5) are an example of indiscriminate disposal of refuse in some parts of the school surrounding. The litter on figure (5) was noted around the refuse pit behind the classrooms. Both school experienced indiscriminate disposal of refuse. A pupil in grade five at Nanduba said,

“The refuse pit is full and the papers are scattered around the school yard. These refuse pits should be buried and we need to dig a new one.”

In general, the problem of refuse disposal was as a result of inadequate number of pits dug by the schools. Pupils complained that the waste was accumulating quickly in the bins as the population of pupils kept on increasing.

“The refuse pits are only two and the school population is big and as such the refuse pits get full quickly. We need to have more pits so that the surrounding remain clean.”

4.4.3 Strong and stable structures

Although Chilileka faced challenges of some cracked and unstable latrines, the finding also revealed that both schools had also strong structures. The pictures below (figures 6 and 7) illustrated the perceived good state of sanitary facilities.

FIGURE 6: Latrine with a door



FIGURE 7: Latrine with clean floor and walls



Some of these structures were still in good conditions and appeared strong and stable. The two pictures in figures 6 and 7 taken during photovoice process represented what was described as ideal latrines. Refer to page 13 for the definition of ideal latrine.

4.4.4 Separate latrines for pupils

The study also reported that both schools considered sex in the allocation of latrines. Separate latrines were given to boys and girls. In the case of girls, latrines were identified through the labels written girls. Further these were subdivided among girls; the older girls were given their own latrine while the junior grades also had theirs. This was also the case with boys. The study reported that this division was arrived at to create privacy among pupils and also respect for one another. To further support this statement, the picture in figure (8) showed the distinction. The picture in figure (8) below showed the latrine for boys from grades 5, 6, & 7.

FIGURE 8: Separate toilets according to gender and grade



The study revealed that the separation of latrines among pupils brought about the sense of ownership. It made them realized that it is theirs and from the discussions it was observed that participants planned on how best they wanted to improve their latrines. The point was supported by a comment from one participant from Nanduba:

“As we went round to observe sanitary facilities, I saw dirty in the toilets for ladies in grades 8 and 9 on the floor. They should clean that mess. We need to keep them clean.”

4.5 Perceived sanitation practices

The discussion below provides a detailed discussion on the perceived hygiene practices.

4.5.1 Poor hygiene practices.

In this section, I present outcome of poor hygiene practices in both schools such as: Stains of blood on the latrine floors, open defecation, indiscriminate disposal of fecal matter in the latrines, low hand washing practices, smeared wall with fecal matter and urinating on the floor.

Overview: the hygiene practices of both schools visited were both poor and good practices. The details are discussed below.

FIGURE 9: Dirty latrine with blood stains



4.5.2 Stains of blood on the floors and disposal of condoms.

The picture in figure 9 above showed some condoms and papers on the floor. The study revealed that both schools experienced bad habits practiced by pupils. The focus group for girls at Nanduba revealed that sometimes used condoms and stains of blood were found on the floor. During transect walk. One girl aged 14 had this to say,

“I sometimes see traces of blood on the floors of the girls’ latrines. This blood is not safe to other people around.”

The issue of poor disposal of used condoms was not only observed in the girls’ toilets but also in the boy’s toilets. A boy aged 16 had this to say,

“I sometimes come across used condoms in our toilets. These are used by pupils here, we don’t know who is doing this. This is because our latrines do not have doors and any one is free to enter”.

4.5.3 Indiscriminate disposal of human waste

The study further revealed that both schools experienced open defecation. These bad habits were confirmed during transect walk and group discussions using the photos. The study reported that apart from open defecation, some of the latrines in both schools had stones and leaves used as toilet papers as shown in figures 10 & 11 below.

FIGURE 10: Open defecation Chilileka



FIGURE 11: Defecation on the floor



The two photographs shown above confirmed the indiscriminate disposal of fecal matter and open defecation which were seen during transect walk. A grade 7 pupils had this to say,

“I fear to enter the latrine most of the times because when you enter the toilet, you find fecal matter because some pupils use stones and leaves to clean themselves as toilet paper and leaving the stones on the floors.... this forces young boys to use the nearby busy when answering the call of nature.”

4.5.4 Walls smeared with fecal matter.

The study further revealed that at Nanduba some pupils who could not either use leaves or stones went as far as using their hands and smeared the walls. This was seen during transect walk and was discussed during focus group discussions. Participants added that this bad habit was shameful to the schools. Figure (12) has a picture with traces of fecal matter on the wall.

FIGURE 12: Picture of a latrine with fecal matter on the walls



This came to light during focus group discussion where boys reported that most of the latrines had fresh fecal matter.

One boy had this to say,

“The school does not provide paper in the latrines; most of us use what is locally available like leaves, stones and others.”

4.5.5 Good sanitation practices

In this section of the study, I present the results of good sanitation practices in both schools such as proper disposal of fecal matter, good hand washing habits, proper disposal of refuse.

4.5.6 Proper disposal of fecal matter

The study revealed that despite the bad status of the latrines at Nanduba, the situation at Chilileka was better. Some latrines for senior pupils were not as bad as those for the junior classes. This was because the older ones used latrines responsibly. Some participants at Chilileka reported that the latrines were untidy as a result of splashes of urine on the floors. Refer to figure 6 which represent clean latrine and a door. To further support the statement above, a grade 9 pupil aged 17 had this to say,

“I appreciate the status of our latrines. Even if sometimes we see dirty, it is usually some splashes of urine which some pupils encounter”

Though the findings revealed that hand washing among pupils were low in both schools, Chilileka provided buckets as shown in figures (3).

4.5.7 Proper disposal of refuse

The finding is revealed that refuse was well managed in some parts of the school surroundings in both schools. During the transect walk, it was observed that both schools presented that the front surrounding was clean whereas the behind was littered with papers. This was justified during the focus group discussion where the participants reported that they usually clean the front part of the surrounding leaving out the behind. A grade 9 male had this to say,

“Every morning before we get to class, the later comers are told to clean the school environment in the process, these pupils will only concentrate in front leaving out the behind.....especially the young ones when they are told to pick paper, they throw behind instead of using refuse pits”.

4.6 Gender Specific Needs

During group discussions, girls were separated from boys so as to allow them to express themselves freely on their gender specific needs. The findings of the study revealed that the needs for girls were partially met while those for boys did not exist in both schools. The study revealed that both schools had similar challenges such as absence of showers, absence of urinals and buckets of water for bathing during menses for girls, while boys from both schools did not demand for their needs like girls. The study further reported that boys seemed as though they lacked knowledge about their needs.

4.6.1 Absence of showers

The study revealed that both schools did not have the showers ever since the schools were built. This made it difficult for girls to stay in school during their menses. They preferred to be home where it is more conducive. One female participant from Chilileka had this to say,

“We lack showers at this school and it is difficult for a girl to remain in school while on your menses. At home one can easily wash and be comfortable unlike here. Me, I make sure I stay home to avoid discomfort that I go through.”

Another study participant from Nanduba added that,

“Us as girls have big problems when it comes to menses because the school does not provide these materials to us. We even don't have bathing shelter during menses.”

Despite the provision of these needs to girls, it seemed that girls did not have adequate knowledge about the menstrual hygiene in both schools. At Nanduba one girl noted some stains of blood in the girl's latrine during transect walk. This is what she said,

“I sometime come across blood on the floor of our latrines. I feel we need to educate one another menstrual hygiene.”

4.6.2 Absence of urinals

The study revealed that boys did not request for any specific needs from the school as done by girls in both schools. This was assumed that they did not have adequate knowledge about their

specific needs. Absence of urinals was experienced in both schools and there has never been a provision from the time the latrines were built. This is seen in figures (1).

4.6.3 Provisions of other needs

The provisions of other gender needs were partially met in both schools. The needs consisted of soap and sanitary pads for girls. In Nandaba these needs were distributed to only vulnerable girls and at the time when the school received funding from the Government. These needs are not adequate and it was somehow unfair to the other girls who were not eligible to collect these needs. This statement was supported by the key informant, who had this to say,

“Nandaba School provides sanitary pads and soap only when the school receives grants and are given to the vulnerable girls only. We cannot afford to buy for all the girls in school.”

The situation at Chilileka was encouraging because everyone benefitted from the little resources the school was able to provide. During interviews with guidance teacher at Chilileka School, she had this to say,

“Most girls missed classes when they have their menses. That is why as a school, from the little financial resources we receive from the office, we have managed to provide sanitary towels and soap for all girls.”

4.6.4 Absence of buckets

During focus group discussion for the girls, some girls revealed that the schools didn't provide buckets for the girls to use during their menses. This made it difficult for the girls to be coming to school during menses. Most of them preferred to be home where it was much safer for them.

“I have some challenges in coming to school during my menses because the schools do not have buckets to use. Most of the girls miss lessons. It is worse for those who are starting because they may not have an idea on what to do”.

4.7 To jointly identify opportunities and develop actions for locally appropriate interventions

During transect walk, participants noted a number of sanitary conditions which could lead to negative effects such as ill health among pupils. For example latrines without door forced some pupils to practice open defecation which will eventually contribute to fecal oral transmission of diseases. In the focus group discussion participants felt the need to get involved to put up interventions. This prompted them to draw up a plan of action. This was seen when they saw pictures poor conditions and hygiene practices around. They said something has to be done to rectify the problem.

Process of action plan development

Taking ownership of the project was evident in group members by initiating the research agenda and subsequent action. The participants made decisions about which issues were important to them and facilitated their participation. To start with the participants planned for a meeting.

- The participants held a meeting of both boys and girls. The meeting was meant to make participants realize the prevailing unsanitary conditions that were posing risks of outbreak in the schools. The first meeting participants listed the major sanitary challenges which were identified during transect walk and what was presented on the photographs during group discussions.
- They also looked at the most common and serious sanitary problems. Those which were considered most serious. Groups brainstormed on the possible solutions. The participants tackled resource identification and mobilization. These points were written using the board.
- Thereafter they identified locally available resources and labour needed to implement the planned activities. Some of these activities which required money and the schools were not able to provide were handled to other stakeholders identified like community members and local non-governmental organizations.

Though plans were pupil driven, they identified other stakeholders to support implementation of some planned activities. In their action plans, the planned activities were listed based on the identified sanitary challenges. Some planned activities are shown in the action plans below.

FIGURE 13: A girl writing on the board at Nanduba School



The picture above shows a female participant participating in developing action plan. The details of the proposed plan are shown on the table below:-

TABLE 6: Proposed Action Plan for Nanduba Primary School, 2016

Activities	Responsible persons	Time frame
Repairing and fixing doors to all the latrines.	Teachers and parents	Two term
Drawing water in buckets for hand washing.	Prefect	Term two and three.
Teaching pupils how to use the toilets.	Teachers	Term two
Slashing the grass around the school.	Prefect.	Term two
Construction of new latrines	MOE/UNICEF and community.	Ongoing.
Cleaning the school surroundings and latrines	Prefect	Ongoing.
06 Monitoring progress	Health and local authorities	Ongoing

TABLE 7: Proposed Action Plan for Chilileka Primary School, 2016.

Activity	Responsible Persons	Ciindi (time frame)
Cleaning of the latrines every day.	Prefect and pupils	On-going.
Slashing of grass around the school environment	Prefect and teachers	Monthly.
Fencing the hand pump	Parents and teachers	May.2016 (1 st week)
Fixing doors on the latrines	Parents	May, 2016.
Digging refuse pits	Prefects and teachers	May.2016 (1 st week)
Health education on sanitation and hygiene.	Peer educators	Starting in 1 st week of May, 2016
Monitoring progress	Health and local authorities	Ongoing.

CHAPTER FIVE

5.0 DISCUSSION OF THE FINDINGS

5.1 Introduction

The study applied participatory action research in exploring the perceived sanitary challenges and actions in the selected primary schools in Chikankata District.

The findings of the study are discussed under the following objectives: perceived conditions and quality, analysis of perceived practices, identification of gender specific sanitary needs for the pupils and identification of opportunities and develop actions for locally appropriate interventions. This chapter compared the findings with other studies.

5.2 Perceived conditions of sanitary facilities

Looking at research objective number one which was, “*to investigate the perceived conditions of sanitary facilities*” the findings from this study revealed that sanitation in both schools was still a challenge because of a number of factors. The selected schools depended on government grant from the Government and the grants were not consistently given to schools. Besides, these grants are meant for other necessities such as stationery. As such schools had difficulties to source funds to maintain sanitary facilities. Similar findings reported by Nthalivi (2013) stated that unsanitary conditions of most facilities for learners was as a result of not getting priority attention from the school management and that schools were more concerned with other routine activities. The current study found that schools used the little grant that was given for other programs leaving out sanitation program. Furthermore, these schools did not have preventive maintenance programs in place. This point is similar to a study conducted by David Olukanni (2013) who said most of the sanitary facilities were not well maintained in most rural schools.

The study found that inadequate knowledge concerning sanitation among the pupils contributed to poor sanitation. This clearly shows that pupils were not adequately informed about the effects of poor sanitation in these schools. Therefore, this means that pupils misused latrines out of ignorance. Other studies have also shown that ignorance in hygiene practices were barriers to

safe water use and improved sanitation due to a gap in knowledge and practice. Other studies done by (Olukanni 2013; Wasonga et al 2014), revealed that students' knowledge and perceptions were inconsistent with water, sanitation and hygiene (WASH) facilities. According to these studies inadequate knowledge was a clear indication that sanitation issues are not given adequate attention they deserve. In the current study, the group discussions clearly indicated that knowledge levels among learners was still poor. This inadequate knowledge level had an implication on the utilization of sanitary facilities as some pupils' misused sanitary facilities based on what they knew and understood about sanitation. Non-involvement of some key players in sanitation issues in the two schools has somehow facilitated poor conditions of most sanitary facilities. Similar studies have also stated that participation of key stakeholders such as school authority, CBOs, line ministries and NGOs was one way to improve sanitation. Bisungi et al (2013). This study agree with the current study in that the current study also used participatory approach to improve sanitation which encourages involvement of key stakeholders such as those mentioned above. Another factor of importance was the total number of latrines at the two schools for both girls and boys were inadequate. The inadequacy of latrines had an implication on the life span of the latrine because these latrines are few and have small volume became full quickly. This situation made some pupils to use the floors and bush for defecation. Besides population of pupils in these schools kept on increasing while that of sanitary facilities remained static. The ratio of number of persons per latrine did not tally with official Zambian sanitation policies. The ratio did not meet minimum required standards of the ratio 1:25 pupils as recommended by Public Health Act CAP 295, the drainage and latrine regulations 81 of the laws of Zambia (ZPHA CAP 295). This study reported that the schools did not conform to international standards on sanitation which stipulates the ratio 1:30 (pupils) suggested by World Health Organization (WHO, 2010). Another baseline study conducted by (SPLASH, 2014) in Zambia is in agree with the findings of the current study which states that despite many schools having latrines, these are not adequate to serve the number of pupils enrolled. Several other studies demonstrate that high school enrollments in Zambian basic schools due to the free primary education policy has facilitated increased enrollment in schools while creating a shortage on sanitary facilities (Shantuka, 2009; Global Campaign on Education, 2005; UNICEF, 2011; Olukanni, 2013). While the free primary education and re-entry policies meant to reduce the illiteracy levels in the country, this has contributed to poor sanitation. There was no

consideration in the policy to build more latrines to cater for the additional numbers of pupils. Therefore this situation has a bearing on open defecation because of the poor sanitary facilities has caused some pupils to shun latrines. Furthermore if this situation is left unchecked, is likely to facilitate ill health among pupils and their families. The other finding reported that most latrines were of substandard because key stakeholders did not scrutinize latrine plans at design stage. This was evident when participants reviewed photographs with cracked latrines. It was clear that materials used were of substandard. Sanitation is not prioritized in most rural schools despite the presence of latrines regulations for public places. Sanitation gap between urban and rural areas in most developing countries was wide.

5.3 Perceived Sanitation Practices

In reference to research objective three, “*to assess the perceived sanitation practices*” the study revealed that both schools experienced some bad practices being portrayed among pupils, such as poor hand washing habits and indiscriminate disposal of fecal matter. This study found that most pupils defecated on latrine floors and nearby bushes. Most studies conducted in both developed and developing countries such as studies done by Barnes and Maddocks in the United Kingdom and Lundblad *et al.*, in Sweden documented that pupils avoided toilets because of unsightly conditions. This is as a result of pupils not having adequate knowledge on proper use of sanitary facilities. The current study is in agreement with these studies which said that due to poor practices among pupils, some pupils decided to shun toilets. Another study conducted by the United Nations International Children’s Emergency Fund (UNICEF) and the Ethiopian Ministry of Health found that study participants in rural Ethiopia had poor status regarding knowledge, attitudes, and practices (KAP) of hygiene. School children surveyed did not know about the possible transmission of diseases through human waste especially in rural areas.

The current study found that hand washing practice was low among pupils and that both schools did not provide adequate water, soap or ash for hand washing. Similar study done by Lesile Greene et al (2012) in her study reported that soap was not provided for pupils Another study done in United States (2007) stated that scarcity of supplies in the latrines such as soap indicated that pupils did not wash their hands due to lack of supplies for hand washing. The studies agree with the current study that said pupils do not wash their hands because hand washing materials were not provided to them. Absence or low hand washing with soap among pupils may be

attributed to the lack of soap in schools and at home. The finding revealed that inadequate resources may negatively affect proper hand washing practices. Despite the similarities with other studies, current study noted that other studies did not mention or report on the use of leaves and stones as toilet paper. This was a gap the current study noted.

5.4 Gender Specific Needs

Considering objective two, *“To understand the gender specific sanitary needs for the pupils”* Regarding gender specific needs, this study revealed that most pupils were not aware about their specific needs especially the boys. Findings showed that the girls in both schools were partially provided with the specific needs as compared to the male counterpart who did not really request for anything from the school authorities. In this objective, findings of the current study reported on what is prevailing on the needs for girls in both school. This study revealed that between the two schools, Nanduba was able to provide menstruation materials such as sanitary pads and soap to vulnerable girls only while Chilileka provided these needs to all girls eligible. This situation made it extremely difficult for the girls to stay at school during menses because they feared to mess up and being embarrassed. Furthermore, they complained about the current state of latrines that did not have adequate space for bathing and schools did not provide buckets. They felt the school latrines were unfriendly to them because they did not meet their needs. Although the schools provided some of sanitary items, the girls still felt there was need for schools to provide other essential needs such as bath shelter or showers to use during menses instead of them to stay at home during this period.

Despite the provision of these items, accessibility and availability were still a challenge. Most girls did not have the courage to face the guidance teacher for sanitary pads especially when he was a male teacher. These items were only available when the schools received their grants. Meaning there was no consistency in the provision of sanitary pads by the schools. This also attributed to girls being absent and eventually drops out from schools. Somehow provision of these necessities played a major role of retaining girl child and also reduces absenteeism and dropout among pupils. Four studies conducted were two studies were conducted in developing countries while two in developed, countries documented that female’s experienced discomfort in the school environment during menses due to inadequacies in the assurance of privacy, disposal

of materials for menstruation, or sufficient school water and sanitation facilities. The situation in both developed and developing countries gives similar challenges that girls go through during menses while in schools. Economically developed countries may have sanitation facilities that enable females to privately manage menses due to an abundant supply of clean water, privacy, affordable sanitary materials and undergarments and may also have supportive female teachers and school nurses for managing menses. However, deficiencies in sanitation facilities to manage menstruation in schools in the United Kingdom has contributed to absenteeism among girls. These studies are in line with the current study that stated that inadequate menstrual materials and facilities have continued to deny girls to be in class at all times. The absence of these essential facilities and materials has a continued to infringe in the right of girls in schools. This study is in agreement with other studies conducted by (Mutunda 2013; Water Aid 2009; and El Gilanya et al, 2005), who also agreed that substandard designs for sanitary facilities for girls in schools and absence in some cases violated on their rights to privacy. This eventually causes stress and depression which is affecting their academic performances. Another study conducted by Sommer (2008) mention those girls' experiences of menstruation and learning both in urban and rural revealed similar findings of gender-unfriendly environments in schools. A study conducted by SPLASH (2014) in Zambia is equally in agreement with others studies which indicated serious inadequacies in the availability of special WASH facilities for girls in many schools. Freeman *et al.*, supports the claim that lack of water and sanitation facilities to manage menstruation in schools leads to discomfort and avoidance of school during menstruation. These studies have a lot of similar challenges as the current study. This means that menstruation is a public health issue that has to be addressed if the education of women is to be improved.

On the other hand, lack of demand for urinals among boys suggested some form ignorance among boys. In this study, Nanduba School provided the school with piped water which should be an added advantage for the school to provide urinals for boys. The urinals were very important in the boys' toilets because they prevented boys from urinating on the floors causing offensive smells. Besides in most of the rural school do not use proper shoes in the latrines and such people are at risk of contracting diseases such as bilharzia. There is need to provide urinals in the two schools for boys to prevent spread of communicable diseases. Absence of these facilities has resulted in pupils urinating outside the latrine in most cases thereby contributing to

the offensive smells around the latrines. From this sentiment, it is clear that non provision of these necessities for both girls and boys contributed to absenteeism and eventually dropout particularly among girls in these schools. It is clear that gender specific needs in schools remain a challenge among pupils mostly in rural schools and has a bearing on the academic performance of pupils.

5.5 Analysis of perceived quality of sanitary facilities

In reference to objective, “*To analyze perceived quality of sanitary facilities*” the finding reported that common hand washing facilities available for Chilileka was buckets supported by a metal stand and a tap at the bottom. The water was drawn from the communal hand pump. The schools provided buckets with water every day. Whilst Nanduba is using piped water for hand washing, it clear that these buckets were not placed near the latrines and were not refilled consistent posing a danger on pupil’s fingers being vehicle of disease transmission. The situation at Nanduba was that provision of this basic need (water supply) was intermittent making it difficult for pupils to apply proper hand washing practices. Both Schools faced with a challenge of not having soap and also the distance to the water points. These challenges contradict with the sanitation policy that requires provision of soap and adequate water in public places. The participants also reported that most of the facilities lacked maintenance and this has contributed to open defecation around the latrines and immediate surroundings. Non provision of hand washing materials compromised with the quality of hand washing practices and was likely to spread diseases. Other studies were in agreement with this study in that stated non provision of these materials was likely to spread diarrheal diseases through contaminated hands.

The findings of this study are in support with other studies done in Zambia, (2009) in Luapula where hand washing materials in most schools was inadequate and sometimes non- existent. From this explanation it is clear that initially, latrines designs and construction, did not consider comfort, population increase, privacy, provision for gender specific needs, pupils with special needs like disability. It is clear most schools did not meet the minimum required standards of latrine regulations and that these policies on water, sanitation and hygiene are undermined by these schools. The study observed that quality of most latrines was poor and from this point, it is clear that construction of the latrines did put quality into consideration.

5.6 Identification of opportunities and develop actions for locally appropriate interventions

Referring to objective four, “*Identification of opportunities and develop actions for locally appropriate interventions*” The finding of this study reported that the use participatory approaches brought about realization about their hygienic behavior and daily practice. The study found that use of transect walk and photovoice helped participants discover the gaps in terms of sanitation. Participants in the focus group discussion realized that sanitation would affect their health negatively and therefore decided to find lasting solution to the major problems identified. This was in line with the study conducted by (Bisung et al., 2014) were participants reported taking a number of actions to find solutions to the water-related challenges in the community.

Photographs discussed during FGDs made participants to visualize and reflect the daily practices. It was from these discussions that major problems were identified and listed. The study also noted that group discussions created a platform where pupils could express themselves freely and make positive contribution to promote behavior change. The photographs discussed brought shame to look at and triggered some participant to realize there was need to take part in bring change.

These planned activities were listed and the responsible persons were identified to take a lead in the implementation. The study noted that through this process, different stakeholders were identified to participate in the implementation of the planned activities and this created sense of ownership. Similar study done by Hergenrather et al, 2009, revealed that equitable partnership between the researcher and community enhances the identification of causes and solutions to community concerns from which action plans were developed and empowerment of participants to become advocates for change. The current study is in agreement with this study which emphasized on power sharing between the researcher and participants in identifying the root causes of the major unsanitary conditions and possible solutions and further development of interventions.

All in all, the study has noted that there are different factors that contribute to poor sanitation in most rural areas and one way of improving sanitation in such place is through use of participatory action approaches.

5.7 Strength of the study

The strength of the study largely lied in the participatory approaches applied. The study used multiple methods which assisted in generating rich information to the findings.

The study used three qualitative methods for data collection i.e. transect walk, photovoice and focus group discussion. These approaches were able to capture adequate data which was useful to find lasting solutions through development of workable action plans.

The participatory approaches used demonstrated that they create empowerment through power sharing between researchers and the researched.

5.8 Limitation of the Study

Due to the sensitivity of the topic regarding issues of poor sanitation in school, some participants were not willing to freely discuss the subject because they feared being punished or chased out of school.

The pupils may not be able to bring out their experiences as regards to school sanitation especially those that do not speak in public meetings. This was a case were some participants were not able to express themselves despite using homogenous groups for focus group discussion and local language this may have affected data collection and the results.

The two schools selected may not give a comprehensive report which the government needs to act on sanitation in school environment. There is urgent need to do more research in this area.

5.9 Challenges faced during research process

The study faced a number of challenges such as the methods of photovoice being expensive and time consuming. The targeted schools are in the rural and the photographs were taken to Lusaka for printing meaning the participants had to wait for that time for the photographs to be printed out as hard copies.

Data collection was usually conducted in the afternoon and during rainy season. During this period, participants were not able to attend the meeting in good time (late coming) because of the rains.

School calendar were pupils were assigned to conduct field events. Most pupils who were part of the study were also involved in the school events.

CHAPTER SIX

6.0 CONCLUSION

In Zambia, sanitation coverage is still a public health challenge especially in the rural schools and other public places. The only form of rural excreta disposal system common is pit latrine and in some instances, opens defecation. The Government estimates that, in rural areas, the percentage of sanitation facilities meeting national standards is still very low.

This study has observed challenges and factors that contributed to poor sanitary facilities in the two selected primary schools. In doing so, particular attention must be paid to sanitary facilities and hygiene practices. Three participatory methods used brought out important issues that need urgent attention.

Furthermore, the application of participatory action research in this study encouraged participants to get involved in finding lasting solutions. These approaches made participants realization on how they needed to tackle the existing problems using multi-sectoral approaches. Finally the participatory approach enhanced participation and sustainability is guaranteed.

6.1 Implications to the Government

These findings are important to the government for planning purposes because they will be incorporated during policy formulation, revision and implementation.

This study will help the District Education Office to implement sanitation policies in the future designs and construction of the sanitary facilities in schools and formulate the workable policies on the importance of maintenance.

This will also help the district to train more teachers in health promotion program so as to improve sanitation in rural schools and reduce disease burden among school going children.

6.1.1 Implications to the Schools

These themes that emerged in the study will help the school authorities to identify needy areas so as to improve school sanitation.

Policy building can only be based on the ground experiences. This research is able to act as information and experience that can improve policy building. More research in the area of water and sanitation is required.

There are many gender implications attached to the findings of this study such as:-

- Designs of sanitary facilities are likely to be adjusted to different needs of pupils.
- Education is likely to address sensitive aspects such as menstruation, initiation ceremonies and sexually transmitted diseases.
- Cleaning of sanitary facilities was shared by both sexes.

This will facilitate training of teachers in basic schools to be incorporated in public health issues and health promotion to assist in creating an enabling environment for the learners.

6.1.2 Implication to the Community

The findings of this study emphasize on the use of participatory approach in schools like photovoice as a way of also bringing behavior change among pupils and communities. Pupils are change agents and change is likely to extend to their families through knowledge acquisition. In this way sanitation is likely to improve in the rural community.

6.2 Recommendations

- There is need to incorporate national sanitation policy on school sanitation and water programs.
- The school curricula should have a component of health education on hygiene which will contribute to better health and hygiene conditions among pupils.
- Formation of clubs in schools such sanitation clubs increase knowledge among pupils concerning causes of diseases, transmission, demonstration proper hand washing and hygiene practices.
- Intensity and continuous health promotion programs have a potential to bring about behavioural change among pupils thereby improving the learning environment.

- Routine Inspection on the utilization of latrines facilities by school authority should be a must.
- Policies should be implemented at the initial stages of design and construction of sanitary facilities. Designs that are acceptable latrine for pupils. People with special needs should be considered such as people with disabilities.
- Locations of sanitation facilities indicate that most hand washing facilities are not near the toilets. All water buckets should be placed near latrines.
- Water and sanitation should be considered as a priority in the school planning and budget.

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APPENDIX I: Informed Consent

UNIVERSITY OF ZAMBIA

DEPARTMENT OF PUBLIC HEALTH

Study Title: Participatory Action Research to Improve Sanitary Conditions in Selected Schools in Chikankata District

Principal Investigator: Margaret Phiri

Purpose of research project

I am a student at the University of Zambia; this study is part of my training in Public Health. The purpose of this study is to use participatory action approach – photovoice to improve sanitation in selected schools. This will involve the capturing of photographs around the school environment. Prior to this, I wish to find out the specific needs of the pupils and perceived challenges that pupils face in school sanitation.

After I finish the study, I will share my results with you and the public in general. It is hoped that this study will increase knowledge levels of the school population and will bring about behavioural change to the community at large. This will also create confidence in the participants

Why you are being asked to participate?

I will involve pupils in the study because to empower them with knowledge and will bring out their experiences and concerns which will be useful for future planning, and may be useful to policymakers and other stakeholders.

You have been asked to participate because you have the necessary qualification of being a pupil. I expect a total of about 32 people to participate in the study from each school.

Procedures

If you agree to participate in the study, I will ask you to sign a consent form. I will then ask you to take part in the next step of the study which you will be given further instruction on what to do

I will record the interview to help me capture all that you will say, if not, I will ask to write down details of the interview. The information that I will collect will be typed in full to help me fully understand what you will say. Your name will not be included in any of the documents.

Risks/discomforts

There is no physical harm that you will experience by participating in the research. However, I recognize some information you may tell me may be personal or sensitive to other stakeholders. However, I would like to assure you the information that we get from you will not be shared with anyone outside the research team.

Benefits

There are no direct benefits to you by participating in this research, however you may find useful to information sheet that I will give you on sanitation after the interview. Moreover, by taking part in this study you will contribute to the better understanding the benefit of participating in the study. You would have helped to provide information about the benefits of good sanitation. This will make you to be a change agent in your community.

Payment

There is no payment for participating in the research. However, refreshments and snacks may be provided during refreshment breaks.

Protecting data confidentiality

All information collected in this study will be confidential and used only for research purposes. The collected information will be locked in a safe place. Your identity will not be revealed under any circumstances.

What happens if you do not want to participate in the study?

You are free to decide whether you want to take part in the study. This will not bring any problem to you.

Who do you call if you have questions or problems?

- Call me, Margaret Phiri
- Cell: +260-977899772

- Email: maggychaumaphiri@yahoo.com

Or contact the University of Zambia Biomedical Research Ethics Committee office for any ethical concerns. The Ethics Committee contact information is:

Address:

Chairperson of the Biomedical Research Ethics Committee
University of Zambia,
P.O Box 50110,
Ridgeway Campus
Lusaka.
Telephone: 256067
Fax: 250753
Email: unzarec@zamtel.zm

What does your signature (or thumbprint/mark) on this consent form mean?

Your signature (or thumbprint/mark) on this form means:

- You have been informed about the program’s purpose, procedures, possible benefits and risks.
- You have been given the chance to ask questions before you sign.
- You have voluntarily agreed to be in this program

_____	_____	_____
Print name of Adult Participant	Signature of Adult Participant	Date
_____	_____	_____
Print name of Person Obtaining	Signature of Person Obtaining Consent	Date

Consent

Ask the participant to mark a “left thumb” impression in the box below if he/she is unable to sign.



APPENDIX II: Consent Form

The purpose of this study has been explained to me and I understand the purpose, the benefits, risks and confidentiality of the study. I further understand that, if I agree to take part in this study, I am free to withdraw at any time without having to give an explanation and participating in this study is purely voluntary.

I..... (Names)

Agree to take part in this study designed Participatory Action Research to improve sanitary conditions in selected schools in Chikankata District: Two primary schools where selected Chikankata District in Southern Province.

Signed/Thumbprint.....Date..... (Participant)

Signed.....Date..... (Witness)

Signed.....Date.....

(Respondent)

For more information you may contact the principal investigator Margaret Phiri on 0977899772.

Parent/Guardian Consent Form for Participants

Project Title: Participatory Action Research to improve sanitary conditions in selected Schools in Chikankata District

Your child has been invited to take part in a research project conducted by Margaret Phiri, a Postgraduate student at the University Of Zambia, in this Participatory Action Research to Improve Sanitary Conditions in Selected Schools in Chikankata District, your child will take pictures and meet with other participants to discuss strengths and concerns of their school sanitation. This type of project is known as a photovoice research. This is a chance for your child to teach others about his/her importance of school sanitation.

This project will also provide the participants the opportunity to recognize the importance of their voices and opinions, in addition to bringing greater community awareness to their experiences and needs through their photographs. Your child was asked to be a part of this project on a voluntary basis only.

The following are some answers to general questions about the project and roles of the participants.

- What is my child's role? Your child will initially attend a photography training to learn more about taking photographs for this study. Then he/she will be given a digital camera and be asked to take photographs of his/her school environment in relation to sanitary conditions that reflect both school strengths and concerns. He/she will select photographs that he/she would like to share, and attend a series of focus group discussions with other participants (4 sessions over four weeks' time) and/or individual participants to talk about his/her photographs and why he/she chose to take the pictures, as well as photographs taken by others in the group. The discussion sessions and will last approximately 2 hours each. As part of the project, some discussion sessions will be audio or video taped and notes will be taken.

What is the purpose of the photographs? The photographs are taken as part of a project to identify strengths and concerns of school sanitation. The photographs will be used to educate others about the issues that pupils.

How will my child's photographs be used? Your child's photographs will be used to prompt discussion about his/her school in the group sessions. Some photographs may be included in, report, or publications. All of the photos that your child takes are the property of the school. The school has full ownership of the photos and has the right to decide which ones will be used for public display.

How will my child's name or identifying information be used? Your child's name will be used during group discussions; however, names and identifying information will not be revealed with photographs and narratives included in the report, presentations or publications unless you request the use of their first names or nickname. How long will the project last? The project will last approximately five weeks.

What are the benefits and risks of participating in this project? Your child will receive a copy of their photographs and may meet others for social support. Your child will be able to tell their own stories related to their photographs, express their feelings and opinions and ultimately promote community change. There are no known risks in this research because the participants will be photographing the sanitary conditions of the school environment. The only likely risk is where a participants get photographs of people accidentally.

Will my child be paid for participating in this project? Your child will not be paid for participating in this project. If he/she decides to stop participating in the project or if he/she misses two or more photovoice sessions, he/she will be removed from the project and required to return the camera to the project staff within one week of the second missed session.

How will the information be stored? Information collected during the meetings and interviews will be stored on password-protected computers, and in files designated for this project. Access will be limited to the researchers.

- What if my child (or I) change our minds and do not want to participate in group discussion. Photographs and all accompanying information will immediately be removed from the project data. Children or their parents/guardians do not have to give any reason for withdrawing. Should your child wish to continue to participate but not have their photographs or stories included in the project, they may do so. There are no negative consequences for withdrawing from the project.

Has this project been approved by an Institutional Review Board? This study has been approved by the University of Zambia Biomedical Research Ethics Committee (UNZABREC)

This is a committee that oversees research projects to ensure that the rights of participants are protected. If you have any questions about your child's rights as a research participant, you may contact (name) the chairperson, University of Zambia Biomedical Research Ethics Committee (UNZABREC)

Ridgeway Campus, P.O. Box 50110, Lusaka, Zambia, Telephone: 260-1-256067, Fax: + 260-1-250753. E-mail: unzarec@zamtel.zm

How do I provide consent for my child's participation? If you are interested in your child participating in this project, please read the following agreement statement carefully, sign, date and return this form. You will receive a copy of the form should you have any questions or concerns at a later date.

_____ (initial). My child will return the digital camera to project staff if he/she misses two or more Photovoice sessions.

My child's full participation in the Photovoice research will include the following activities:
Attend photovoice sessions Stay for the full session duration. Arrive on time to each session.
Take full responsibility for maintaining and protecting a digital camera. Take pictures of your school environment only. Discuss photographs with others in the group. Have his/her thoughts tape recorded for the research.

Remember, your child's participation is completely voluntary. Signing this paper means that you have read this and that you want your child to be in the research project.

Child's Name: _____ Date of Birth: _____

Parent/Guardian's Name: _____ Date: _____

Parent/Guardian's Signature: _____ Date: _____

APPENDIX IV: Guide for Interviews for the Key Informants- Teacher.

Name of interviewer:

Date:

Place:

Interviewee:

Time:

Introduction:

My names are and am principal investigator in this study.

Purpose: I am looking at participatory action research to understand and improve sanitary conditions at your school.

I am here to listen to your views about school sanitation. I have a number of questions to ask you. Feel free to tell me about this issue.

Demographic Data

1. What is the total population of the pupils at this school?

(a) Males.....

(b) Females.....

2. How many teachers do you have in the school?

(a) Males.....

(b) Females.....

3. What do you understand by the term school sanitation?

.....
.....

4. Please tell me what you know about adequate sanitary facilities?

.....
.....

5. From your explanation what sanitation activities is the school does to improve sanitation in the school?

.....
.....

6. As a school, what are your immediate plans to improve school sanitation?

.....
.....

7. What measures have you put in place to cater for pupils with disabilities?

.....
.....

8. How is the quality of sanitary facilities at your school?

.....

Do you have a maintenance plan?

(a) Yes []

(b) No []

(c) If yes please show me a copy.

9. Who does the cleaning and repairing of the latrines?

.....

Tell me more about this.

.....

.....

10. What are the gender specific sanitary facility needs?

(a) For boys.....

(b) For girls.....

11. What do you think could be the outcome if these specific needs are not provided and

(a) For boys

(b) For girls

12. What help can a pupil's get from the school authority regarding specific needs?

.....

.....

13. What is the source of your water supply?

.....

14. How is the supply?

.....

15. How are far is the nearest water point?

.....

16. To what extent do you think this issue is affecting attendance of the pupils at your school especially girls.

.....
.....

17. What are some of opportunities and actions identified as a school for local appropriate interventions?

.....
.....

18. Who are the major stakeholders interested in sanitation at your school?

.....
.....

19. How would you want to mobilize the opportunities to promote sanitation?

.....
.....

20. Who do you think should be involved in the activities to improve sanitation?

.....
.....

21. How does the school communicate on sanitation issues to the pupils?

.....

What are the challenges to improving school sanitation?

.....
.....

I wish to thank you for your time!

APPENDIX V: Guide for Interviews for the Key Informants- Stakeholders (Health & Local Government)

Name of interviewer:

Date:

Place:

Interviewee:

Time:

Introduction

My names are and am principal investigator in this study.

Purpose: The purpose of this study is to.....I am looking at participatory action research to improve sanitary condition at Nanduba Secondary school.

I am here to listen to your views about school sanitation. I have a number of questions to ask you. Feel free to tell me about these issues.

The reason why you have been chosen to participate in this study issues to do with confidentiality

Demographic data

1. From your data base, how many schools are in your district?

- (a) Primary.....
- (b) Secondary.....
- (c) Community.....
- (d) Private.....
- (e) Mission.....

2. What programs/activities have you put in place for school sanitation in this district?

.....
.....

3. Please tell me what you know about adequate sanitary facilities?

.....
.....

4. From your explanation what sanitation activities have you planned to do in the school?

.....
.....

5. How often do you visit the schools to monitor sanitation programs?

.....
.....

6. How much technical support do you give to the schools?

.....
.....

7. How far is the nearest water point?

.....
.....

8. Who are the major stakeholders of sanitation programs in schools?

.....
.....

9. How would you want to mobilize the opportunities to promote sanitation?

.....
.....

10. Who do you think should be involved in the activities to improve sanitation?

.....
.....

11. How does the school authority communicate on sanitation issues to the pupils?

.....
.....

12. What are the challenges to improving school sanitation?

.....
.....

I wish to thank you for your time!