ASSESSMENT OF FACTORS INFLUENCING THE AVAILABILITY AND UTILISATION OF HOUSEHOLD LATRINES: A CASE STUDY OF PURANGA SUB-COUNTY, PADER DISTRCT.

 $\mathbf{BY}$ 

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An undergraduate research report presented to the Institute of Health Policy and Management in partial fulfillment of the requirements for the award of the degree of Bachelor of Science in Public Health, International Health Sciences University.

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# **DECLRATION**

I, Okidi Dominic declare that this research report is my own original work and has never been
submitted any else where for any other academic award. Wherever work of other authors has
been cited acknowledgement has been made.
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# **APPROVAL**

This is to certify that this research report has be	en submitted for examination with my approva	1
as the University supervisor		
SIGNED	Date	
MRS. MIRIAM ONDIA		

# **DEDICATION**

I, dedicate this research report with love and appreciation to my parents. Mr. Adonga Philip and Atoo Prizina for their parental support and guidance, my wife Lakot Grace and all my beloved sons and daughters, to all my relatives most especially to my cousins Mr.Okidi Joseph, Dr. Emmanuel Otto, Odongkara peter and Dr.Charles Okidi for their kind support and contributions for the success of my study.

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### LIST OF ABBREVIATIONS/ACRONYMS

ARTI Acute Respiratory Tract infections

OECD Organization for Economic Corporation and Development

WHAB Water, Energy, Health, Agriculture and Biodiversity

WHO World Health Organization

UNICEF United Nation children's Fund
DHS Demographic Health Surveys

MFPED Ministry of Finance Planning and Economic Development

H/C Health Centers

PNFP Private Not for Profit Facilities

AMREF African Medical and Research Foundation

HIV Human Immunodeficiency Virus

AIDs Acquired Immune Deficiency Syndrome

MTI Medical Team International

IRS Indoor Residual Spraying

NTDs Neglected Tropical Diseases

OPD Out Patient Department

ENT Ear, Nose and Throat Infection

ASB Abe tier Samaritan bound

NGO Non Governmental Organization

PDLG Pader District Local Government

VHT Village Health Teams

PHAST Participatory Hygiene Awareness and Sanitation Transformation

MOH Ministry Of Health

RWASA Rural Water and Sanitation

DALY Disability Adjusted Life Years

DANIDA Danish International Development Agency

MOWE Ministry of Water and Environment

UBOS Uganda Bureau of Statistics

AHSPR Annual Health Sector Performance Report

WSCC Water Supply and Sanitation Collaborative Councils

UWASNET Uganda Water and Sanitation NGO Net work

NSD National Service Delivery Surveys

UNHS Uganda National Household Surveys

DPTC District Planning Technical Committee

L.Cs Local Council

FGD Focus group discussions

DHO District Health Officer

H.Is Health Inspectors

H.As Health Assistants

H.H Household

CHW Community Heath Workers

DTPC District Technical Planning Committee

KII Key informant Interview

HSD Health Sub-District

CHW Community Health Workers

NETWAS Net work for water and sanitation

EHD Environmental Health Division

PHC Primary Health Care

### **DEFINITION OF TERMS**

**Gender-** The economic, social and cultural attributes and opportunities associated with being a male or female in a given social settings at any given time.

**Ecological Sanitation-**Latrine design builds for the excreta to be stored and recycling for use as manures

**Pit Latrines-** Pit dug for the collection and decomposition of the excreta while allowing the resulting liquid to infiltrate into the surrounding soil.

Excreta- Means feaces and urine

**Sanitation-** Ranges of interventions including solid waste management, safe water supplies, vector control and construction of facilities for safe management of feaces.

**Ventilated improved Pit Latrines-** Latrines with vent pipe design to keep flies out and to minimize smell.

**Household:** Group of people who eat from the same cooking pot and are accommodated in the same homestead

**Good latrine:** A pit latrine which has good superstructure, door and with adequate privacy for user's comfort during defecation.

Fair latrine: Pit latrine that has a superstructure, no door, a leaking roof and very weak walls.

**Bad latrine:** A pit latrine with no superstructure and lack adequate privacy for protection during defecation.

**Functional latrine:** A latrine that was already in use by the time the data collection was being carried out.

**Satisfactory use of latrine:** Household with functional latrine with no feaces scattered all over the compound, squat hole and the foot path is not over grown and covered with grass

Own latrine- The household's usage of a latrine of any type provided by them.

**Shared/Latrine-** The household non-ownership of any form of latrine but can access the one which is shared by others

No access-The household do not have their own latrine and cannot access any type from any where else.

**Near latrine-** Household latrine within 10m away from the household

Far latrine- Household latrine within 10-20m away from the household

#### **ABSTRACT**

**Background:** Latrines are facilities that are normally constructed at the household levels for the purpose of safe excreta disposal. Poor latrine coverage and usage at household level in any given community can leads to greater risks of spreading the feaco-oral diseases through water, soil and food contaminations. The major objective of the study research is to assess the factors influencing the availability and utilization of the household latrines in Puranga sub-county, Pader district in northern Uganda.

**Methodology:** A cross sectional study composed of 387 households was done in Puranga subcounty. The sub-county was stratified in to six Parishes and in each parishes, villages were selected using simple random sampling. In each village selected, a complete list of households were obtained and all these households were numbered. The first household for data collection (refers to as the reference) was also selected by simple random sampling using table of random numbers. Data collection then started immediately from the household which was much closed to the reference household. This procedure was used until the required sample size were reached in a given village.

Data collection was done using standard questioners, observation checklists, key informant interviews to health workers and focus group discussions. Pre-testing of the tools was done before the actual data collection started and Data analysis was performed using SPSS version 16.

### **Main findings:**

# 1. Household latrine availability and usage

In this study, households with functional pit latrine were 206 (53%). Out of this functional pit latrines, 159 (38.7%) are owned by the individual households and 56 (14.4%) are owned by the landlords. The major type of pit latrine in the area is traditional pit latrines 176 (545.5%), followed by VIP pit latrines (4.4%).

### 2. Quality of the household pit latrines in use

Of the latrines found in the households, 156 (75.7%) are properly sited on a well drained ground, 45(21.8%) are in the standard distance of 10 meters away from the main building, 172 (83.4%) are made up of temporary materials, 24 (11.6%) are made up of semi permanent and 6 (2.9%) are made up of permanent materials.

#### 3. Socio-economic information

323 (83%) of the house hold members were settled on their own land. The analysis of the chi-square showed that there is a significance in owning land and the availability and usage of household latrines in the sub-county (chi-square = 184.209; P-value = 0.0005). and 287 (74%) of the respondents have ever attended school. The analysis of this result shows that, there is a significance in the education status and latrine availability and usage in Puranga sub-county (chi-square = 80.953; P-value = 0.0002).

Only 15(3.9%) of the household reported that there are cultural practices affecting the availability and usage of latrines in the area. Among them were children feaces should not be mixed with adults 9 (2.3%) and that use of latrine can sometimes involves the use of ashes on feaces which is a taboo 6(1.5%)

# 4. Scale up efforts for latrine availability and usage

235 (60.7%) households received health education on latrine use, while 215(55.5%) of the households had attended meeting on latrine availability and usage. The chi-square analysis of this result showed that there is a significance in attending community meeting on latrine and possessing and using household latrine (chi- square = 4.344; P-value = 0.037). The availability and usage of the household latrines were much higher among the household who have knowledge on pit latrine 192(49.6%), followed by those household that are settled on their own land 187(48.3%), those who went to school 148(38.2%), those who attended the community meetings on latrines 131(33.8%) and those who are aware of the existence of the bye-laws 109 (28%).

### **Conclusion:**

The latrine coverage of Puranga sub-county is 53% which is slightly higher than the one for the overall district 46%. However it is still lower than the national target of 77%.

The major factors that are affecting the availability and usage of pit latrine at house hold level includes Inadequate political support on household latrine use, low level of education of the household members, poverty, limited visits to house holds by health workers to inspect homes, no prioritization of the household latrine as one of the necessity, lack of skills on latrine construction and negligence of some local communities.

#### **Recommendations:**

The sub-county authorities should organize home improvement campaign in order to raise the level and use of latrine at home, Advocacy meeting on household sanitation should be done to political leaders in the sub-county, Health workers should start regularly inspecting home for hygiene and sanitation standard, train more household member on how to construct latrine at home including the various latrine options and the sub-county authority should disseminate and implement the bye –laws created in the sub-county to all the lower levels.

### **CHAPTER ONE: INTRODUCTION**

#### 1.0 Introduction

Many infections and infestations are related to indiscriminate disposal of excreta. Uganda faces a lot of problem related to poor excreta disposal every year in term of mortality and morbidity. This study is intended to examine some of the factors that might affect safe excreta management at household levels in order to prevent the transmission of the above diseases in Puranga subcounty, Pader District. Hence this chapter presents the background to the study, problem statement, research objectives, the general objective of the study, specific objectives of the study, research questions, significance of the study and the conceptual framework of the study and its descriptions.

# 1.1 Background to the study

Latrines are facilities that are constructed for purposes of safe disposal of excreta. They are normally constructed within households, schools and in public places. Structurally, latrines are made up of a latrine pit dug (about 1.5m wide and 3-5meters deep) which are normally covered using a concrete slab with a squat hole or made of logs/wood which are then covered with compacted soil or marrum and sometimes covered with reinforced concrete. Superstructures of internal dimension of usually 940cm in width, 110cm in length and 205cm in height are then constructed to provide both shelter and privacy to the users. Walls are made of bricks or mud and an opening of not less than 0.2m squared is always left on the wall to give natural lighting and ventilation, roofs are made of grass or iron sheets. They could also be improved upon by use of ventilation using a vent pipe which is either metalic or plastic (normally covered with a fly screen) placed into the pit to communicate with the external air 500 mm above the latrine roof for the purpose of reducing fly infestations and bad odors of the latrine. There are many types of latrine facilities that can be provided at household level these includes ordinary traditional pit latrines, traditional improved pit latrines which lack vent pipes, ventilated improved pit latrines, and ecological sanitation latrines which have vent pipes. In ecological sanitation latrines, excreta are periodically removed and used as manures.

Safe management of excreta at household level by use of latrines is one of the best ways to protect water and food from contamination and it is the most important primary preventive

measure with greatest impacts on the health of people by reducing the transmission routes of many diseases, which help to contribute greatly to the reduction of morbidity and mortality rates. (WSSCC and WHO, 2005).

Globally, approximately 2.6 billion of the world's populations do not have access to improved sanitation facilities (WHO, 2006) and (EcoSanRes, 2008). According to estimations computed by Hutton and Bartram, (2008) developing countries needed financial resources amounting to about US\$142 billion in order for the MDG7 target of halving the proportion of the people who do not have access to sustainable safe water and sanitation facilities by the year 2015. Beside for improved sanitation to be attained by 2015, it will require approximately US\$216 billion to be utilized in the operation and maintenance of the existing available sanitation facilities.

Poor excreta management can results into many serious consequences. Appleton and Van Wijk (2003) state that the cholera outbreaks which took place in Peru in 1991, made the country spend up to estimated US\$1billion to cater for health cost and other looses resulting from reduced productivity and tourism.

The Ministry of health Uganda recognizes household ownership and use of pit latrine as a means of human waste disposal and also serves as a primary means of disease prevention. The joint monitoring programme, indicated that Uganda was not on truck in achieving the sanitation target of MDG7 (WHO/UNICEF, 2008). It showed that basing on the data; Uganda needed more seven years to put more efforts to increase the sanitation coverage from 38% to 77% and 49% to 71% for urban and rural areas respectively. And according to the AHSPR, MOH, (2009/2010), the household latrine coverage of the country was still at 69% against the country set target of 77%.

The inadequate access to better latrine facilities and their usage at household levels has increased the morbidity and mortality among children under 5 years of age. The burden of diarrhea diseases in Uganda according to National Sanitation Guide lines of 2000 estimated 440 children affected with diarrhea weekly and has long been suggested that diarrheal morbidity can be reduced as low as 35-40% with the improvement of the sanitation condition of the communities. Indiscriminate defecation can results into many diseases and health problems. Diseases like dysentery( amoebic and bacillary), hepatitis A, polio, cholera typhoid fever, infestations with helminthes such as hookworms, round worms, pin worms, guinea worms, schistosoma ,trichuriasis, tapeworms,

thread worms and protozoan diseases like gardiasis. These infections and infestations gain entry to the human body through ingestions of food and water contaminated with infected feaces and through contact with the contaminated soils. (Uno and Kilama, 1990).

In Puranga sub-county, there have still been experiences of high incidence and prevalence rate of diseases related to poor disposal of excreta.

#### 1.2 Statement of the Problem

The household pit latrine coverage for Uganda stood at 67.4%, (AHSP Report MOH, Uganda, 2008/2009). Meanwhile, within the same period, the household pit latrine coverage of Pader District was 40% (MOH, 2009). Currently, the coverage and utilization of household pit latrines for Puranga sub-county is not clearly known and therefore not documented as yet.

Despite the various efforts made by MOH, Pader District Local Government, International Agencies like UNICEF and AMREF and local NGO like ASB, in mobilization and sensitization of the community, training of community leaders and Village Health Teams on Participatory Hygiene Awareness and Sanitation Transformation, along with distributing Sanitation kits to help in digging of Latrines to scale up house hold latrine availability and usage in the subcounty, There have still been experiences of high prevalence of diseases.

These included high incidences of diarrhea, worm infestations, dysenteries, typhoid fever, schistosomiasis, and skin diseases, contributing to high morbidity and mortality rates of infants and children under five years of age, and adults as well have not been exempted. Thus leading to reduced productivity, lost of valuable time, increased household medical spending, increased stunting rates of children, reduced learning performance of school children. In Puranga Subcounty, diarrheal diseases and intestinal worms, dysenteries and gastroenteritis have always been among the top ten diseases affecting people especially children under 5years of age (UNICEF, 2006). This situation to date has not changed much.

The study therefore sought to explore the major factors influencing the availability and utilization of household pit latrines, and to examine the quality of the existing household pit latrines in Puranga Sub-county, Pader District.

### 1.3 Research Objectives

### 1.3.1 General Objective of the study

To investigate the factors influencing the availability and utilization of household latrines in Puranga sub-county, in Pader District.

### 1.3.2 Specific Objectives of the study

- 1. To determine the current latrine coverage and utilization response in Puranga sub-county.
- 2. To assess the quality of household constructed latrines in Puranga sub-county.
- 3. To identify the socio-economic factors influencing availability and usage of household latrines in Puranga sub-county;
- 4. To establish the contributions of the scale up efforts being carried out to promote household latrine availability and usage in Puranga sub-county.

# 1.4 Research questions

- 1. What is the latrine coverage and the utilization response in Puranga Sub-county?
- 2. What is the quality of latrines constructed at household level in Puranga sub-county?
- 3. What are the socio-economic factors influencing the availability and usage of household latrine in Puranga sub-county?
- 4. What are the contributions of the scale up efforts being carried out to promote the availability and usage of household latrines in Puranga Sub-county?

# 1.5 Significance of the study

The information obtained from the study could be used in the following areas:

- 1. In the planning together by the local authorities and the communities for household improvement in general sanitation of Puranga sub-county.
- 2. To guide policy formulation, developing district ordinances on house hold sanitation and setting of bye-laws on sanitation in Puranga sub-county.
- 3. In lobbying for additional resources to support scaling up of latrine provision in the subcounty.
- 4. For further research in the similar field on sanitation in other Geographical locations as this information adds to the existing body of knowledge.

### 1.6 CONCEPTUAL FRAME WORK AND IT'S DESCRIPTION

# a) Socio-economic factors b) Socio- demographic d) Scale up efforts -Mobilization and -Income level factors sensitizations -Marital status -Occupation status -Advocacy meetings -Religion believes -NGOs activities like -Educational Level training of community -Community knowledge & - Economic status leaders, Manson & CHWs, perceptions -Construction cost Distribution of sanitation -Access to credit services digging kits -Hygiene education Cultural practices & taboos -Inspection &follow up of -Gender constructions -Enforcement f bye-laws Latrine availability and usage c) Quality of the constructed latrines -Minimum depth of 3m **Out comes** -Sound/strong smooth floors, well drained - Reduced Sickness -Good fitting covers for squat hole -Increased productivity -Valuable time saved -sound /strong smooth walls -Improvement in school -Strong /leak proof roofs performances -Adequate privacy -Located in raised well drained place. -Located within 10m of the household for convenience use

From the conceptual framework above, the variables that were more likely to influence the availability and usage of the household latrines were grouped as Socio-demographic factors which includes; religion, marital status and community perceptions and knowledge; Socio-economic which includes; income level, educational level, occupation, economic status, cost of latrine construction, and access to credit facilities, cultural believes and taboos and gender, Scale up efforts which could includes activities such as mobilization, sensitization, participation of the community, coordination efforts, hygiene education, house holds follow up and inspections, enforcement of the bye –laws, NGOs activities like trainings of leaders, masons and hygiene promoters, advocacy meetings to the communities and support distributions of sanplats and digging kits for latrine pits and the quality of the constructed household latrines which could includes latrine pits of 3m minimum depth, with strong floors well rammed and smooth finished, strong smooth walls, Strong /leak proof roofs, adequate privacy to protect the user and well sited in raised well drained place with locations that are convenience for use not more than 10 meters away from the household. All the above factors would positively influenced the availability and the utilization of the household latrines

These socio-economic variables such as income level, educational level, occupation, economic status, cost of latrine construction, and access to credit facilities, cultural believes and taboos and gender, had also influenced the quality of the household latrines constructed in providing sound floors, walls windows and doors and roofs including adequate privacy.

#### **CHAPTER TWO: LITERATURE REVIEW**

### 2.0 Introduction

This chapter mainly, deals with the literature review of the coverage of household latrine, quality of the household pit latrines constructed, socio-demographic factors that can influence the availability and usage of the household pit latrines, socioeconomic factors and various scale up efforts to increase the availability and usage of household pit latrines

# 2.1 Coverage of household latrines availability and usage

2.4 billion people, which is about 40% of the world's population, lack better sanitation and 80% of these affected communities are found in the rural part of the developing countries (United Nations Environment Program, UNICEF, WHO. Children in the new millennium: Environmental impact on health; 2002).

The coverage of the safe excreta disposal by regions in the developing nations can be seen as the region with highest coverage is Western Asia 84%, eastern Asia 45%, southern Asia 38% and the lowest is the sub-Saharan African with 37% coverage.

According to (WHO/UNICEF 2004), the coverage of the improved latrines in Africa stands at 84% for urban and 41% for rural areas.

In 2002 in African Region, 631 million people where not in the position to access better sanitation facilities of any type, which is roughly (40%) of the population figures indicated, had no access to any kind of improved sanitation facilities in 2000 (World Health Organization, UNICEF. African Regional water supply and sanitation assessment Report; 2000). According to the publication of WHO/UNICEF Africa is lagging behind to achieve the MDG goals in sanitation that is to achieve improvement in coverage from the current 38% coverage in 2006 to 66% by 2015.

Access to sanitation facilities in Ethiopia currently had been reported to be at 43% (Water Aid, 2010) towards the MDG target of 52%. The literature still point out that latrine coverage in Amhara Region has increased from 4 percent in 2004 (OLoughlin et al., 2006) to 63 percent in 2010 (WaterAid, 2010). The proportion of available pit latrines which where not in use was estimated to be more than 80% in Ethiopia (Gebreselassie, 2007) in which the situation is almost

the same with other region. But if the existing trend of the latrine not in use continues, then the rate at which sanitation related diseases transmits will increase as well as the mortality rate among children below 5 years..

In Ethiopia, the report also shows that over 60% of th burden of diseases are due to poor hygiene and sanitation in the area. (Gebreselassie, 2007 and Admassu et al. (2004)). Mortality among under five years is one of the indicator in the MDG goals (United Nations, The Millennium Development Goals Report 2005. United Nations report, New York; 2005.)

In Vietnam, released statistic (general Office, 2006) showed that, 71% of their population especially north-eastern do not access latrine facilities. The incidences and prevalence rate of diseases due to poor sanitation like worms, diarrhea, and trachoma is high in the northern region.( Department of prevention, medicine and environment, 2009: Khanderkor, ton & Do, 2006: shaikla, Haran & Hatcher& Hatcher, 2000).

DANIDA (1996) and National Sanitation Guide Lines, Ministry Of Health Uganda (July, 2000), reported that there was a sharp decline in the coverage of household pit latrine from 90% in the 60s up to 30% in 80s and again, there was an increased to 47.6% during the 90s. There is a great regional difference in the latrine coverage with other district having less than 10% in the sanitation coverage while some have more than 85%. And in district like (E.g. Moroto) where nomadic pastoralist exists, latrines are only be found in trading centre including the institutions but not in rural areas. Urban areas also have low coverage of about 50% with only 23% of the house holds having their separate household latrines and about 30% of the households share latrine with about 4 other different house holds and also majority of the latrines are poorly constructed.

Repot from Uganda (2006e), indicated that the best districts with house hold latrine coverage are Rukungiri, 98%; Bushenyi, 91%; Kabale, 89%; Kabarole, 86%; Masaka, 86%; Mukono, 86%; Ntungamo, 86%; Ibanda, 80%; Kasese, 80%; and Kaliro, 79%. Good latrine coverage in the country are mainly found in the west and southwest of the country. The worst parts in attaining the coverage in the country are north east, midnorth and northwest which are mainly affected by the conflicts.

Uganda used to have the highest household latrine coverage rates in Africa in 1960s. By 1960s, the latrine coverage of Uganda was above 90%. In those years more than 90% of the house holds

in Uganda have their own latrines. Current, the National household improved sanitation coverage is at 57% Environmental Health Division MOH, (2007). But as per report from the MOW/Environment, (2007), the coverage lie just around 57%-59%.

The report even point out that even if Uganda achieved the target of MDGs, some proportion of both rural and urban population will still have no access to better sanitation facilities 29% and 23% respectively.

The major consequences of the poor excreta disposal in Uganda can be seen, there is high stunting rate of 38% in 1995 due to poor nutrition which are aggravated by diarrhea diseases, high drop out rat of female adolescent girls in primary schools due to inappropriate sanitation facilities, and sickness and injuries related to poor sanitation waste about 2.7% of the students and pupils times to be lost in the sickness an. 3.5% for adults are also lost du to sickness related to poor environmental sanitation. (Report on National Integrated Household Survey, 1992-1993)

# 2.2 Quality of latrines constructed and the availability and usage of the household latrines

NSDS,(2004) and UNS,(2006), revealed that the quality household latrines includes covered pit latrines with Concrete Slab and or slabs are made of structurally sound woods/logs, VIP latrines, Ecosan latrines and compost latrines. According to the MOH, (2006) also recognized the same standards but it included other parameters like the pit be 15feets in depth and wastes in the latrine in use should be 3feets below in the pit from the surface and appropriate /acceptable privacy which is adequate for people not to go to the bush to seek for some protection. In addition to the above, the latrine must be well sighted in well drained place and be convenience to the users in term of the distances.

Report from DANIDA, (1996) and form National Sanitation Guide Lines, Ministry Of Health Uganda, (July, 2000), also point out that pertaining the privacy of the latrines; only 30% of the household pit latrines in Uganda provide proper protection and privacy.

# 2.3 Socio-demographic factors and the availability and usage of household pit latrines.

### a) Religion believes and household latrine availability and usage:

Conclusion that was reached in a study by (Zanden, 1990), was that religion can serve as one of the effective ways of changing community behaviors and their attitudes because its link people to what they say and are doing. Religion shape people belief together with their attitudes .This means religious affiliation can influence the behaviors of a given house holds to practice a certain behavior s in relation to improved sanitation facilities use and the provisions. Muslims doctrine requires people to pray five times every day and before the time to the prayer; they do ablution and the cleansing of all their bodies to remove the dirt from their body. This will improve their health status and hygiene improvement to the society. Traditionally, it is also a not allowed and is regarded as a taboo if a food is picked from the ground to be eaten or if some one enters the shrine with the shoe put on. This practices can leads to prevention of diseases and promote live of the communities. There for religion can play a very important role in promoting hygiene and sanitation of the individuals.

### b) Marital status and the house hold latrine availability and usage:

A study done by (Barrett 1999; Ross 1995; Gore and Mangione 1993; Ross, Mirowsky, and Goldsteen 1990; Gove, Hughes, and Style 1983) shows that married people normally face fewer psychological distress compared to the single ones and they also have greater living satisfaction. In another study, Hughes et al. (2002); Lund et al. (2002); Michale et al. (2001) concluded that household composition together with living styles in marital status conditions most likely explain the differences that is being experience in the health status among the different marital groups of people. Several studies suggest two theories i.e theory in relation to marriage protection and theory in relation to marriage selection. They explain some of the ways in which association between being married and health activities (Kobrin and Hendershot 1997; Gove 1973). The former one talk on how marriage can bring a protective benefits on health by encouraging the social integration including the social regulation (Kobrin and Hendershot 1977); and in boosting the economic resources (Trovato and Lauris 1989); scaling down some of the risky health behaviors like smoking, excessive drinking and reduction in the substance abuse; because it provides social, psychological and bring an instrumental support to most of the household activities to improve on the health.(Umberson et al. 1992). The latter suggests, healthier are more likely to be married and they maintain their marriage, but those who are less healthier can either not marry or they are prone to leave the marriage system by separation, divorce and they end up in widowhood. Although marriage status can positively affects the health of both men and women, many studies suggest that it is for the advantages of men than

women (Lillard and Waite1995; Cherlin 1991; Hu and Goldman 1990; Ross et al. 1990; Weiss 1984; Kobrin and Hendershot 1977; Gove 1973; Gove and Tudor 1973).

# c) Children and availability and the usage of the household latrine:

Children especially below 5 years of age may not defecate in the pit latrines. Because their feaces are regarded by other people as not being harmful in some other areas. (Yusuf et, 1990). In a study conducted in India, 85 percent of children under 5 years were not defecating in the latrines but they were defecating in the open (Murty, 1990). Another study was also conducted in Bangladesh, where by although 23% of the household had latrines, Only 12% of the children under 5 years were actually using the latrines.

A study conducted in Uganda in Mpigi district discovered that, children always contaminate environment by defecating their indiscriminate defecation everywhere. This is because adult had never provided the latrine facilities for them to use. (Barton and Wamai, 1994). Also a study in Kapcohrwa district in Uganda also shows that mothers do not properly care for their children. When they defecates their feces are left in the open and the do not instruct them to use the latrines. (Barton et al, 1994).

# d) Community knowledge and perception on household latrine availability and usage.

Jenkins and Scott, (2006) and Jenkins and Sugden, (2006), maintained that it may be not easy for the poor people who mainly survive on subsistence incomes to spent most of their money on sanitation improvement when they think they have been surviving without the use of improved latrines. Although they are totally convinced about the benefit of having improved household sanitation, the perceived latrine construction cost which some times very high keeps many people away from providing and using household latrines. The main factors for non availability and usage of improved household latrines or not accepting it are mainly poverty, no space for constructing it and high cost of installations of household latrines.

# 2.4 Socio- economic factors influencing availability and usage of household latrines.

# a) Income level and household latrine availability and usage

The low level of income status of the community affects their revenue generating potential and hence limited financial support which can have an effect on the family and their ability to participate in community development activities (Hausknet, 1962) and health inequalities are closely associated with economic conditions (Wagstaff, 2000). Research conducted by Hausknet (1962) shows that the low economic conditions, in terms of occupation types, income and education shows a negative correlation which affects the community rates in the participation to the developmental activities because of them being powerless. They might not participates in the dissemination of the health messages because of the lack of knowledge they have couple with their being isolated which will cut them completely from information as they can not attend community meetings. This means the resources they have will be put in to use for other activities part from sanitation promotions at house holds.

A study done by the MOH (2005) showed that there is also a negative correlation between poverty rates and the improvement of sanitation rates. In the study they discovered that in most of the sub counties with high poverty rate below one dollar a day were also having low level of sanitation and hygiene improvement than those who were well off. The arguments supported that most poor house hold lacks incomes and of other resources to be put in to bring improvement in their sanitation situations. However, according to survey study by (MFPED, 2002b; MFPED, 2003) showed that Some of the better-off sub counties also have low latrine coverage rates, and some of the sub counties with high poverty rates also have high latrine coverage rates which indicates that the relationship is not just straight forward as the case may be as the surveys indicated that more of the affluent house holds were lacking improved sanitation facilities at their disposal despite the fact that they can afford to build them and they also show that most of the affluent house holds lack the interest and demand to sanitation improvement and they spent most of the household incomes on improvement of other structures of the buildings like roof, walls, doors or floors and not on sanitation facilities.

### b) Economic conditions and household latrine availability and usage.

Poverty is still a very big set back to Ugandan population, Even though there is growth in gross domestic product at average yearly rates of 6.9 % in 1990s and 5.5 % during the period from 1999–2005, the same 37.7% of the Uganda's population still lived below poverty line in the year 2003 (World Bank 2008d).

Poverty is the major contributor to poor health, low productivity, escalates illiteracy rate and affect income generating ability of any given community as a result, the communities can not be in a position to acquire adequate finances to help them in the putting up of proper sanitation at their house holds. The proportion of people in Uganda according to UBOS, (2007), indicates that those living below living below poverty line have declined to 31 percent in 2005 from 52 percent in 1992. The statistics also shows that there is also a direct relationship with poverty and prevalence of infections E.g. malnutrition, diarrhea and malaria since they are more prevalent among the poor communities than the rich communities. A study conducted in Uganda by Nakiboneka (1998), also shows that poverty is the main factors hindering construction, possession and usage of the pit latrines at house hold and at community level.

In Bangladesh, approximately 42% of the population does not accessed latrines resulting in to open defecation. Also 73% of the Bangladesh households lacks latrines in use at their disposal as a results of limited access to finances, 25% o the house holds are unaware about the benefits of using latrines and 4% of the house hold practice indiscriminate disposal of feaces. This has resulted in approximately 110,000 under 5 years of age dying yearly due to diarrheal infections with more than 75 episodes due to diarrhea to children less than 5 years yearly. The survey result also shows prevalence of other diseases related to poor excreta disposal. This has led in high medical cost, income losses, reduced productivity and hindered the proper growth and development of children In Bangladesh Diarrhea contributes to lose of up to 5.7 million DALYS and 61% of total DALYS. (Bangladesh Nation wide survey Report, 2003).

In Bangladesh the above study also shows that better sanitation in combination with safe water supply can reduce the prevalence rate of diarrhea by 99%, medical spending by 55% monthly in rural areas and 26% in urban areas, worm infestations by 51%, reduced work days lost from 77 to 33 days each year and days lost for school days from 16 to 7 days each year especially in rural

areas and expenditures on other necessities like food items and clothes have improved to 6% in rural areas

Approximately, 13.8 million Ugandan still use unimproved latrines and many are being shared also, about 3.2 million Ugandan do not have pit latrine and all are defecating in the open. Expressing these in percentages, the proportion of population practicing open defecation is 10%, those who share the latrine is 26% and the proportion of improved sanitation facilities is at 48%.

The proportion of the poorest population are less likely to build and use sanitation facilities and resort to open defectaion is 13.5times than the richest and illiminating this will require Uganda a huge efforts.

# c) Cost of construction and the availability and usage of household pit latrines.

Cairncross and Curtis, (undated, page 1) revealed that most Sanitarians & hygiene specialists noted that, E.g., latrine acquisition for the household may not be their priority item for them to spend more of their expenditures, especially for the households who are poor Therefore supporting the house holds to put up a sanitation facilities at their place who have not prioritized them may make them don't use it even after the installation.

In Mozambique, survey done on households pertaining the latrine provision and usage indicates that many of people look at the total cost of building the as a medium cost (cotton, 1998).

Also in Kenya, immediately when they introduce the VIPs latrine type, it did not expand very easily in the project areas because the project used to provide all the construction material for the communities. So after the project ended, the communities abandoned the construction of the VIP as the material needed for the construction were mainly concretes introduced they did not seem to expand far from the project areas. This means they were amore expensive to construct than the traditional pit latrines that were always built with locally available materials. And this has affected the sustainability of the VIP Latrines in the area because the price of a latrine construction doubles when a household want to build a conventional VIP of five meters in depth than a simple traditional pit latrine of the same depth. This is the reasons why the coverage of VIP latrines were low because the communities were not in a position to replicate the project because of the cost involved. (Water and Sanitation Programme field note June, 2004)

Economic factors may sometimes affect pit-latrine provision and the usage. Example, in 1991, digging of a latrine pit in Masindi was costing approximately US\$1.25 as cost per foot, and since the recommended depth of a latrine pit should be 40 feet, this means there should be a lot of capital to be utilized in the construction of household pit latrines. (Munro, et al, 1991).

In some cases, the area may rocky, have high water tables with sandy, loamy or granules which may require additional support (Fraceys, et al, 1992). These means that households must adopt other technology options which might be costly for them.

Cost is the key constraint mentioned in documents and is very common in rural areas where majority of Uganda's are poor. Most expenses occurred in paying for the dug latrine pits are common in the case through out most of the rural Africa for the household members who intend to seeks for more good latrine design that are more comfortable to them (Jenkins 2004).

### d) Educational level and household latrine availability and usage

The 1993 world development reports shows that maternal education was key factors in the reduction of the infant mortality rates and the recorded data from the 13 African countries between 1975 to1985 indicated that a 10% increased in the level of female literacy rate can reduce child mortality by 10%.

For women, they always spend most of their times in doing small petty trading activities and subsistence agricultural works when away from home. There are always no or little time including the resources for them to attend to the education of children in their households. Formal education is important because it will give the opportunity to become aware about the health benefits of safe water supply and improved sanitation and they will be more likely to utilize and maintained the improved services once availed to them. (World Bank, 1993)

According to Taylor (1995), health attitudes and behaviors are always learned in the one's most greatest learning environment, in this case is the home, and from the most powerful models, are the parents. The kind of behavior that the parents portray in their household can therefore have a great effect on hygiene and sanitation conditions of a given house hold at a given time.

A study by Nakiboneka (1998), observed that low level of education had been sighted as one the prominent factor affecting the construction and usage of house hold pit latrine in most parts of Uganda. Education level of any given community is very important because the knowledge and skills acquired can be used in the understanding of the provision and the usage of the latrine especially at house holds in order to prevent the transmission of the diseases. Education of women plays very important roles in this respect for the overall improvement of the health status of the house hold members and in the promotion house old hygiene and sanitation standards.

### e) Access to credit assistance the availability and usage of household latrines.

Access to credit is something which is lacking in most countries in sub-Saharan African especially the micro-credit for informal service providers, both community-based and private. Loans available may only be for income generating interventions but not to improve access to better sanitation facilities both at household and at community level. Such credits can not even be affordable to the poor house holds who want to borrow because of high interest rate (WSP 2003).

# f) Gender issues and the availability and usage of household latrine:

Women perform most households work as well as outside the home. It is also said that with wives working, men tend to leave the burden of contribution to the wife as the responsibility of sanitation rests with them traditionally. This is supported by a World Bank study (WB 1993) which established that men tend to abdicate responsibility once the wife starts earning income.

As far as construction and usage of the of the pit latrine is concerned, women are mostly affected because they need to have a separate latrine facilities as they require more privacy. Women always try to boycott using pit latrines because they have the feelings of not being adequately protected. When caring for some one and other family members who are sick, they handle soiled clothes which are hazardous to them especially when they do not have access to safe water supplies including sanitation facilities. Provision of sanitation facilities is very important for the women both for their physical health and their safety & dignity. (OECD, WHO2003)

Income levels do not affects latrine ownership. In Kenya, both of the households headed by either male or female households own latrines irrespective of their income levels, even those that

have been grouped as absolute poor. Access to and ownership of household latrines is how ever lower in the households which are headed by a females. There is no clear reasons pointed out but it seems to relate some of the gender issues relating to the problems of property ownership. (Water and Sanitation Programme field report June, 2004).

Other reports had shown that women normally are responsible for the household sanitation works like, maintenance including cleaning (MOH, 2000, DANIDA, 2001). Assigning of this responsibility has put a burden on women, as far as promoting of households sanitation and hygiene.

Poor sanitation generally had contributed the reduced health status together with poverty at many households; this has also brought serious environmental degradation and reduced school performance for girl children in Uganda (MOH, 2000, PEAP 2000).

Pertaining issues relating to the female-heading households, formative research suggested conducted both in Gahna and tanzani shows that pride was in more motivator for women as compared to men. Also the WaterAid formative research report (WaterAid 2007) showed that Uganda pride was a big driver men and women. Analysis of interviews papers could allow deeper understanding of the gender- drives for sanitation to be adopted. Since (40 percent) of the households in rural Uganda are headed by female, understanding the different motivations and barriers to availability and sage of the latrines among genders is very important n designing sustainable sanitation program.

Study conducted by WHO / UNICEF (2012) (JMP) indicates that daily, 1 in 3 women globally risk shame, infections, harassment and attack because they do not have access to safe latrines. Access to safe toilets can make 1.25 billion women to be safe and live healthier.

In Uganda, above 10 million people have no access to proper sanitation facilities. A survey done by Water Aid in Uganda,2012 indicates that of women who are staying in Bwaise slum, Kampala, one in five women who were interviewed had experienced verbal harassment, intimidation, threatened and physically assaulted last year when they want to defecate in the safe place after dark.

#### g) Existence of cultural believes and taboos on household latrine availability and usage

According to (Kalbermatten, et.al.1980, p.141), some technologies encourage the re-use of excreta as fertilizers which are not feasible to some communities where such handling of waste is not culturally and socially unaccepted in their society. Also, some communities needs water to clean up them selves and not toilet paper or leaves and others may refers to use water carriage system as appropriate to remove their waste. Some communities also do not share latrine facilities for the reasons that their privacy consideration can be compromised. Therefore cultural attitudes regarding defectation vary; but it should be treated as a private personal or individual act. In designing the communal pit latrines, privacy should be considered as one of the essential requirement.

In most households, the father is the person responsible for the organization and managing the household. Women are always the caretakers of the children and they are supposed to training to children since they spend a lot of time with the children. The major work of the fathers is to give confidence and the supportive care to the mother. The way the father always tends to be; will also portray when the child become mature. (Mc Connell, 1982).

Roark, (1980) and Amsyari et al, (1978) concluded that, women are consider mostly to be the controllers in local learning setting as regard to water, sanitation and family health.

This situation always dos not reflect in reality in the promotion of good hygiene and sanitation at household level since women who have the required knowledge, may not take part in the decisions making in the household. Then Kendie (2002), notes the low status of women in the community has may promote poor environmental hygiene and sanitation resulting in to the heavy burden of disease by most women& children than the male. The majority of most of the informal learning on water and sanitation mostly takes place through interpersonal communications among women. (Wijk-Sijbesma, 1985:1);

Nukunya, (1992) observed that early marriage of women who are young in traditional had contributed to high fertility rates The bigger the family sizes, means there will be more economic resources needed to sustain the family in terms of meeting the basic needs such as water, food supply health care and clothing for the family. The study was further reinforced by

Awortwi, (1999) who explained that, little attention will be paid to the improvement of household hygiene and sanitations.

A study conducted by World Health Organization indicates that cultures play much role in sitting of the pit latrines at homes. Latrines can be placed behind a house so that those who are defecating can not be seen or can be sited to be infront of buildings for prestige (Fraceys et al, 1992). Study one by (cotton, 1998), showed that there is a belief by local Indians that all latrine must be placed at the nearest corer of land (plot) because ,this place, most latrines are not use because of its inauspicious location which always forced people not to use them.

Cairn cross and Feachem, (1983), observed that in some Africa and Asia communities, latrine can not be shared by both the daughter in low and the father in law. In South America they also believe that pregnancy can results if a women continue to use or share the same latrine together with men.

In Kenya traditional beliefs can also affects the disposal of the excreta. Digo in Kwale are composed of Muslims, their excreta disposal need availability of water and they believe that excreta disposal should not be in the house including the latrine facilities. But the kikuyu community accept the use of the latrine and they believe that good excreta disposal system improve the community image. And culturally the value the condition that before one start building the main house at his home, he/she must first start with the construction of the latrine. (Water and Sanitation Pragramme field note June, 2004).

In Uganda a study conducted in Tororo indicated that they believe that there is always taboo for the in lows (obuko), the study shows when in-laws visitation, 37percent used bush, 33percent use the latrine belonging to that house hold and 27 percent used neighbor's latrines. Expressing this belief, 22% of respondents said that any persons suffering from diarrhea are not supposed to use the latrine, but should defecate openly in the bush (Karamagi and Aboda, 1993). In Nebbi district, it was found out that the main reasons why people are not using the latrine were the bad smells, few latrines latrine blocks in most public places (Arube-Wani, et al, 1992). There were also fear of using the latrine especially the elderly and young people, myths of possibility of being poisoned, contracting infections such as STIs/HIV/AIDS, snake bite in the latrine, taboo

when shared the latrine with in lows, fear of infertility, miscarriages and abortion and use of feaces as fertilizers which is undesirable to them.

In Uganda, study carried out by (Nakiboneka, 1998), also point out taboo & cultures as some of the major factors affecting the proviso and utilization of households latrines in the societies.

According to Jenkins Scroll (2007), cultural beliefs and practices also contribute to low latrine coverage and usage. As it is seen with other tribes in Uganda. A numbers of traditional beleieves and taboos exist that is affecting the latrine useage. For example, in Katakwi, they believed if a women is pregnant, he should not use pit latrine as it can cause miscarriage leading to the death f the baby, while Karimojong believed that staying near the latrine facility is a taboo.

#### 2.5 Scale up efforts for household latrine availability and usage.

# a) NGOs household sanitation promotion activities and household latrine availability and usage.

NGOs are playing an important role as far as the implementation of water, hygiene and sanitation is concerned. Approximately 150 local & international NGOs are now registered UWASNET since 2001 when the umbrella organization was formed.

NGOs provide many activities in the area of household latrine promotion among others includes baseline surveys, training of hygiene promoters, creating awareness and working with and through community based organizations to train people to build their own latrines and use them and sensitizing the community to engage in sanitation promotion (Uganda 2007c)

In Uganda according to (UWASNET Uganda, Performance report, 2010/2011).there are various sanitation improvements activities that had been under taken by the NGOs and SCOs in creating demand, improvement in supply and building enabling environment as far as hygiene and sanitation promotion is concerned. Activities like creating community structures and training them on sanitation promotion, community mobilization and sensitization, provision of sanitation tool kits, provision and slabs and sanplats, bicycles and wheel burrows. These activities have accelerated the creation of open free defecation villages, increased the adaptation of sanitation marketing and CLTS approach in hygiene and sanitation promotion as is seen in northern and

north eastern Uganda. More than 30 villages have been declared open free defecation and more than 27,421 traditional pit latrines constructed and 18,770 drying racks in the regions.

# b) Mobilization, sensitization and health education of the community on latrine availability and usage.

In the Sanitation study conducted by (Munro, et.al 1991) on Sanitation and hygiene education in Masindi & Kabarole District in western Uganda, The study showed that people in the rural areas have some under standing of the concepts of sanitation (obwecumi in Rutor). This includes food hygiene, excreta disposal, and housing, washing clothes, personal hygiene and eating clean food. The study how ever shows that health educators were only focusing themselves mainly on latrine construction as part of sanitation promotion and yet the local communities already have wider under standing on what constitute sanitation.

#### c) Coordination activities and household latrine availability and usage.

According to (Schaub-Joneset al 2006, page 26), co-ordination is very much needed to set up a link between institutions so that performance is enhanced. By this, the planning process will be improved, tasks will be allocated and possibility of duplications will be avoided.

#### d) Community participation and household latrine availability and usage

Francis and James (2003, 331), maintained that Local Governments generally do not follow the principle of bottom up planning as villages should prepare their community action plans which reflect their local needs and the priorities, these will then be incorporated to make the parish plans, which are again incorporated to make the sub county plans. The DTPC will then collect all these sub-county plans and prepares them and integrates its to make the district plan that will be ratified by district council. This had shown that in reality the villages including other lower-level local priorities are often not integrated into the district-level development plans.

# h) Availability of qualified health staff and the household latrine availability and usage.

Evans (2005, page 25), discovered that promoting behavior change at household level always remains challenge since most countries lack these essential capacities which make them to be unfamiliar to perform their roles in respect to this.

Promotions of good sanitation & hygiene have communication challenges. As it was already explained by an Indian specialist: Having and presenting the statistics to people may have no impact. Real challenge should be addressed by letting people be aware of the clear link between diseases and their practices of open defecations (WSSCC, undated, page 26).10 If the focused is made only on construction of house hold latrines, then there will be some people who are very poor, will not build the latrine and will continue to defecate out side to contaminate areas leading to the spread to diseases. So high coverage of the house hold latrines are not enough to change behaviors.

#### d) Enforcement of bye-laws.

In the Teso, enforcement was pointed out as the major motivation factors in constructing of the latrine at home by few households. In the study done by Nuwagaba (2003), enforcement appeared only to produce short lived results. However, it reflected that different weights that are normally on enforcement by most districts, can bring minor results but addressing the cultural issues in relation to latrine provision and use can leads to high latrine coverage as in the case of south western part of Uganda.

#### e) Further Findings.

#### Hand washing with water and soap.

According to UBOS, in the financial year 2006/07, households who were accessing and were using facilities for hand washing was about 14%. But the survey of 2011 which was carried out, indicated that the percentage rose to 27%. Hand washing prevent the transmission of disease which can reduce the spread of diseases such as diarrhea, cholera, skin diseases, trachoma and respiratory track infections. This study agreed with Mukungu in the New Vision of Friday, 22 November 2013, who commented that currently about 28% out of the 34million people in Uganda are in access to the facilities for hand washing making majority of the population to be at high risk of diseases. Review by (Curtis et al. 2003) also concluded that hand cleaning with

water and soap, after using the latrine or cleaning a child that can reduce the incidences of diarrheal diseases by around 42-47 percent, while another ongoing study by (Rabie et al). Estimated that there will be reduction of respiratory track infection by 30% through proper hand washing with soap.

#### **CHAPTER THREE: METHODOLOGY**

#### 3.0 Introduction

This chapter present the methodology utilized in the study, it highlights the study design, geographical scope of the study area, study population, study variables, sources of data, sample size determination, sampling procedures, sources of data, study variables, Data collection tools, Data collection techniques, Data management, quality control issues, limitation of the study, ethical considerations and plan for dissemination of the results.

#### 3.1 Study design

The study design that used was cross sectional which involved the collection of Data at one point in time. This study design enabled the collection of the current data on the factors influencing the availability and the utilization of the household latrines in Puranga sub-county. This involved employment of both quantitative and qualitative techniques to collect data on the factors affecting latrine availability and usage at household level in Puranga sub-county.

#### 3.2 Geographical scope of the study area

**Location:** The study was conducted in Puranga sub-county in Pader district; 59 Kilometers away from Pader district headquarter in the south following Kitgum -Lira road. The sub-county is boarded by Kilak and Arum sub-county in Agago District from the north, Oyam sub-county in Lira District to the south, Utuke District to east and Awere Sub-county to the west, Omot sub-county in the east, Lira palwo sub-county in the north-eastern part. The sub-county is composed of 6 parishes, 53 villages and 1 trading centre.

**Population**. According to Uganda Demographic and Health survey year 2011, Puranga has a population of 20,327. The population density of the sub-county is 38 people per square Kilometer.

#### 3.3 Study population

This comprised of all the households in Puranga Sub-county. The main respondents of this study were household heads and housewives and adults who were the residence of the sample households got during the survey time.

#### 3.3.1 Inclusion criteria

Household with any adult, household heads and wives and any adult visitors that had taken more than three months in the very given household were eligible respondents to the study.

#### 3.3.2 Exclusion criteria

Household with no any adult, household heads and wives and those household that exempted them from the study, any visitors who have not yet spend more than 3 months in a given household are also excluded from the study.

#### 3.4 Study variables

The study variables involved both independent and dependent variables.

#### 4.4.1 Dependent variable

Was latrine availability and usage at household level. From these, aspect that indicates availability and usage of the latrine were:-

- -Clean and not bushy path ways
- -Cleanliness of the latrine
- -Presence of the cleansing materials (leaves, toilet paper, papers etc.)
- -Functional hand washing facilities after latrine usage

#### 3.4.2 Independent variables

Aspects of the Independent variables that were used includes the following listed down below:-

#### a) Socio-economic factors:-

- -Income level
- Occupation status
- -Educational level
- -Land ownership

-Cost of latrine construction -Access to credit facilities -Gender issues b) Socio- demographic factors -Marital status -Religion -Cultural believes and taboos -Community perceptions and knowledge c) The quality of the household latrines:--Proper sitting on well drained ground -Have a pit with a minimum depth of 3m -Structurally soundness • Sound/strong smooth floors and well drained • Squat hole have tight fitting cover • Sound /strong smooth walls • Strong /leak proof roofs -Located within 10m away from the household -Adequacy privacy size (about 94cm width x 110cm length x 205cm height) d) Scale up efforts:--Mobilization and sensitization activities -Hygiene education

-NGOs activities like (training of community leaders, mason, CHW, and distribution of sanitation digging kits)

-Sanitation inspection and follow up at households

-Participation of the local community in planning and decision on latrine making

- Coordination efforts

-Formulation and enforcement of the bye-laws.

#### 3.5 Sources of Data

Data sources were composed of both primary and secondary Data. Primary data was mainly from from research administered questionnaires to household heads and their wives, from key informant interviews with health workers and NGO representatives, and also from focus group discussions done with youth and elders to obtained information on factors influencing the availability and usage of the household latrines in Puranga sub-county. Secondary data were obtained from the records in the sub-county headquarter, from the DHO's Office and from the health centers to cross check on the prevalence o diseases relating to poor human waste disposal.

#### 3.6 Sample size determination

The study consisted of 387 households sampled for data collection all within Puranga sub-county in Pader District. This sample size was determined using the formula by Kish and Leisle (1965):-

Sample size = 
$$\frac{Z \text{ squared x p(1-p)}}{e \text{ squared.}}$$
 Where Z =Confidence level (1.96)

P = Prevalence of the variable

1-p = Probability that event can not happen

e = Margin of error (0.05)

[1.96squared x0.4x 0.6] = 0.9216 = 368.64.

 $\frac{(0.05 \text{ squared})}{(0.05 \text{ squared})}$  0.0025

With the design effects of 5%, Sample size n = 368.64 + 18.432 = 387.

Therefore investigations were made on a sample size of 387 households.

#### 3.7 Sampling procedure

A cross sectional study composed of 387 households was done in Puranga sub-county. The sub-county was stratified in to six Parishes and in each parishes, villages were selected using simple random sampling. In each village selected, a complete list of households were obtained and all these households were numbered. The first household for data collection (refers to as the reference) was also selected by simple random sampling using table of random numbers. Data collection then started immediately from the household which was much closed to the reference household. This procedure was used until the required sample sizes were reached in a given village.

#### 3.8 Data collection tools and instruments

The tools used constituted of:

- 1. Key informant Interview guide
- 2. Questionnaires
- 3. Observations checklist
- 4. Focus group discussion guide
- 5. Digital Camera

The questionnaires consisted of both open and closed ended questions which where prepared in English and translated into the local language to gain the understanding of the respondents. It was from these that a lot of information on factors influencing availability and usage of household latrines was collected.

#### 3.9 Data collection methods

Data collection took place in a period of to weeks using structured and unstructured research administered questionnaire, key informant interview guides and observational checklist. The research assistants used questionnaires to obtain information from the household heads or their about factors influencing availability and the usage of the household latrines.

Interviews were conducted together with health workers and NGO representatives to obtain information on factors influencing latrine availability and usage at household level in Puranga sub-county.

Focus group discussions were held with elders and youth to establish factors influencing the availability and usage of household latrines.

Observational checklist was used to observe and record the relevant information affecting the availability and usage of household latrines.

#### 3.10 Data Analysis

At the end of each day's work, questionnaires were edited; notes from the focus group discussion were arranged and completed.

Data was collected for validation to ensure that all the missing information required was corrected and all the questionnaires were completed and kept properly

Quantitative data was analyzed using statistical soft ware package - SSPS version 16 to obtained the University and Bivariate information.

Univaraite information was obtained on parishes, population, households, sampled villages and number of questionnaires used per village, general information on respondents, latrine coverage, children and latrine use, distances of the latrine from the homestead, types of household latrines, knowledge about household latrines, reasons for have pit latrines at home, barriers in providing household latrines, educational status, source of incomes, occupation, health education on latrine, roles of both men and women on latrine availability and usage, training of people on household latrine construction and the existence of cultural practices that can influence latrine availability and usage. Bivariate information were obtained on relationship between marital status and household latrine availability, relationship between land ownership and latrine availability, relationship between educational status and latrine availability and usage, relationship between socioeconomic factor and latrine availability and usage, and on the relationship between bye law use and latrine availability and usage.

Qualitative data was analyzed manually. Themes were generated as per the study objectives, triangulation of data was done and the report containing both qualitative and quantitative data was compiled.

Photographs for interpretation on the different household latrines status were taken to indicate the different latrines and their conditions.

#### 3.11 Quality Control issues

Selected research assistants were trained for five days. Questionnaires were numbered, given to peer supervisors. Control over validity and adequate supervision was done by the peer supervisor to ensure quality data for the analysis.

**Pretesting:** The Data collection tools were pretested for validity and reliability in one of the village in Puranga sub-county before proceeding to do the Data collection.

#### 3.12 Ethical Considerations

Approval of the research proposal was made and a letter of introduction was obtained from International Health Sciences University, presented to the District Officials and Sub-county authorities of Puranga to seek their permission to conduct the study. This letter also was presented to Local Council IIs and Local council ones for their consent. Permission for the study was obtained from the respondents through their informed consent after explaining to them the study purposes. All questionnaires administered to individual house hold heads were treated with confidentially.

#### 3.14 Limitations of the study

During the study the major limitation was that the study was restricted to only Puranga subcounty at that very time. However the study results might not give the true picture of the household latrine availability ad usage for the rest of the other sub-counties in Pader District.

# 3.15 Plan for Dissemination of data

The dissemination plan for the research report includes plans to circulate research report copies to the International Health Sciences University, to the local authorities and on internet sites. Community meetings will also be held to provide feedback and for planning and circulating bulletins.

#### **CHAPTER FOUR: PRESENTATION OF RESULTS**

#### 4.0 Introduction

The section elaborates on the analysis of the study findings about factors influencing household latrines availability and usage in Puranga sub-county. The findings are grouped according to the objectives of the study as general information, household latrine availability and usage, quality of the constructed household latrines, socio economic factors influencing availability and usage of household latrines and scale up efforts to promote household latrine availability and usage.

#### 4.1 General information

Data collection took place in all the six parishes in Puranga sub-county and it started on 2<sup>nd</sup> September, 2013 and ended on 16<sup>th</sup> September, 2013.

Table 1: Summarized the parishes population, parish household numbers, numbers of villages in the parish, sampled villages and the numbers of questioners used to collect the information from the sampled households

S/no.	Parish	Population	NO. H/Hs	NO. of	Sampled villages	Number of
				villages		questionnaires
1.	Oret	3,202	700	05	1. Purber	34
					2. Loborom	33
2.	Laminocwid	1,863	437	05	1. Amugo	21
	a				2. Acwinyo	21
3.	Aringa	3,834	705	11	1. Ajanyi	34
					2. Okocokabila	33
4.	Apwor	3,202	554	08	1. Omuna	27
					2. Onyede	26
5.	Laminajiko	2,564	433	07	1. Barongera	21
					2. Apwo Kampala	21
6.	Parwech	5,662	1,232	14	1. Puranga T.C. A	58
					2. Puranga T.C.B	58
	Total	20,327	4,071	54	12	387

# 4.2. General Information about respondents

# 4.2.1 Socio-demographic information

**Table 2: The Socio-demographic information of the respondents** 

Socio-demographic information	Present	% of present	Absent	% of
				absent
Marital status				
Single	34	8.7	353	91.2
Married	265	68.4	122	31.5
Cohabiting	20	5.2	367	94.8
Widowed	49	12.6	338	87.3
Divorced/separated	20	5.2	367	94.8
Religious status				
i) Catholic	208	53.7	179	46.2
ii) Protestant	124	32	263	67.9
iii) Islam	4	1	383	8.9
iv) Born again	46	11.8	341	88

265(68.4%) of the respondents were married couple, followed by widowed 49(12.6%), single 34(8.7%) and cohabiting and divorced /separated constituted 20(5.2%)

Majority were mainly Catholics with 208 (53.7 %), followed by protestants with 124(32%), born again with 46 (11.8%) and slam with 4 (1%).

#### 4.3. Current latrine coverage and utilization response

#### 4.3.1. Household latrine coverage

Table 3: The household latrine availability.

Household latrine availability.	Present	% Present	Absent	% Absent
Households with functional latrines	206	53	181	46.7
House holds with their own latrines	150	38.7	237	61.2
Latrines owned by land lords	56	14.4	331	85.5

From the table, a total of 206 (53%) households had latrines and 181(46.7%) lacked latrines.150 households (38.7%) use their own latrines while 237 households (61.2%) do not use their own latrines for excreta disposal. In the study area, a total of 56 (14.4%) of the latrines belonged to the landlords.

#### 4.3.2. Children and latrine usage

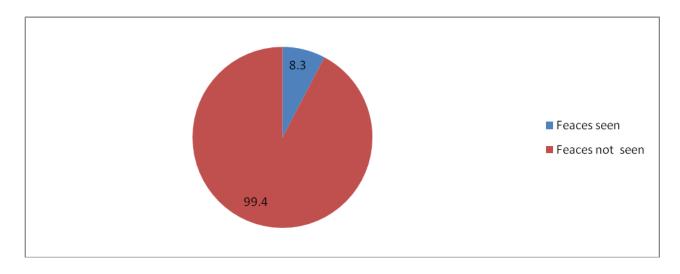
Table 4: Ages at which children started using the latrines

Age	Present	% of present	Absent	% of Absent
2years	2	0.5	385	99.4
3years	41	10.5	346	89.4
4years	50	12.9	337	87
5 years	47	12.1	340	87.8
6years	15	3.8	372	96.1
7years	46	11.8	341	88.1

The table shows that 50(12.9%) of the households reported of children starting using pit latrines at the age of 4 years,47(12.1%) reported at the age of 4 years,46(11.8%) at the age of 7 years, 41(10.5%) reported at the age of 3 years followed by 15(3.8%) at the age of 6years and 2(0.5%) at the age 2years. The mean age for children to start using the latrine facility according to the respondents is 5 years.

# 4.3.3. Presence of feaces seen in the compounds

Figure 1: The percentage of the households with feaces seen on the compound



32 (8.3%) of the households had feaces seen littered in their compounds while 355 (99.4%) had no feaces seen in the compound during the time of the visits.

#### **4.3.4.** Distance of the latrine from the homesteads

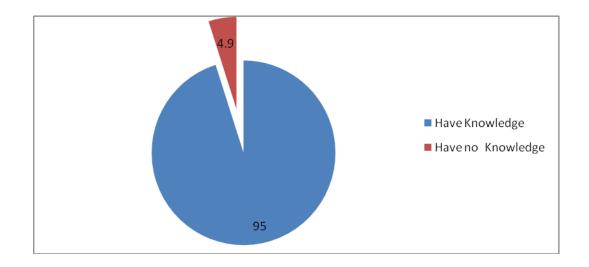
Table 6: The distances of the latrine from the households

Distance	Present	% of present	Absent	% of Absent
i)Less than 10 meters	39	10	348	89.9
ii)Equal to 10 meters	113	34.3	274	70.8
iii) more than 10 meters	45	11.6	342	88.3

The table indicates that 113(34.3%) of the households had their pit latrine 10 meters away from the main house, 39(10%) had them less than 10 meters, while 45(11.%) had their in the location of more than 10 meters from the main houses.

### 4.3.5. Knowledge of the households about the use of latrine at home

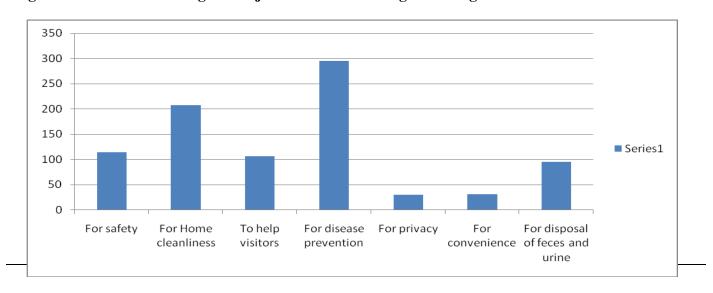
Figure 2. Pie Chart showing percentage households knowledge about the use of household latrines



The figure shows that 368 (95%) of the households were knowledgeable on why they should use the latrine at their homes, while only 19(4.9%) did not have any clear knowledge on why they should use the latrine at home.

#### 4.3.6. Reasons for having and using latrines at home

Figure 3. Bar chart showing the major reasons for having and using latrine at home



208(53.7%) of the respondents said they used latrine at home for home cleanliness,114(29.4%) for home safety, 107 (27.6%) for helping visitors,95 (24.5%) for the disposal of feaces and urine,31 (8%) for convenience while 30 (7.8%) for privacy at home

#### 4.3.7. Barriers for not having and using latrines at home

Table 7: Major barriers for not having and using the latrine at home

Barriers	Present	% of Present	Absent	% of Absent
i) Lack of land	5	1.3	382	98.7
ii) Latrine construction very expensive	55	14.2	332	85.7
iii) No responsible person at home	59	15.2	328	84.7
iv) Negligence on latrine construction	46	11.8	341	88
v) Water logged ground	20	5.2	367	94.8
vi) Lack of digging tools	9	2.3	378	97.6
vii) Latrine under construction	6	1.5	381	98.4

For the barrier to the latrine usage at home shown on the table above,59 (15.2%) reported that they lacked latrines because of no responsible person to help for them at home,55(14.2%) that building latrine is very expensive,46 (11.8%) due to the negligence,20(5.2%) as due to water logged areas,9 (2.3%) as being due to lacked of digging tools, 6(1.5%) because their latrine are still under construction while 5(1.3%) reported as because of lack of land.

#### 4.4 Quality of the household latrines constructed.

#### **4.4.1.** Site of the latrine

Table 8. The household latrines sites.

Latrine sites	Present	% of	Absent	%of
		Present		Absent
Latrine constructed on raised well drained	158	76.7	48	23.3
soil				

Of the household visited, 158 (76.7%) latrines had been constructed on a raised well drained

place.

# 4.4.2. Major materials used for the construction of the latrine

**Table 9 Materials used in the latrine constructions** 

Materials	Present	% of Present	Absent	% of Absent
i) Permanent materials				
	6	2.9	200	97
ii) Temporary materials	172	83.4	34	16.5
iii)Semi-permanent materials	24	11.6	182	88.3

Of the functional latrine found, 172 (83.4%) of the household latrines were made of temporary materials, 24 (11.6%) were made of semi permanent materials and only 6 (2.9%) were made out of the permanent materials.

#### 4.4.3. Suitability of the latrine stances/Floor & space

Table 10 The suitability of the latrine stances.

	Present	% of	Absent	%of
		Present		Absent
Strong stance with adequate size	79	38.3	127	61.6
Fair stances with inadequate sizes	91	44.1	115	55.8
Latrine have a good fitting cover for squat	59	28.6	147	71.3
hole				
Latrine is maintained cleaned	117	56.7	89	43.2

79 (38.3%) of the latrine in use had strong stances with adequate sizes while 91 (44.1%) had fair stances with inadequate sizes. 117 household latrines(56.7%) were maintained in a clean state, and only 59(28.6%) household latrines had tight fitting cover for the squat holes to minimize flies from entering the pit.

# 4.4.4. Types of household latrines

Table 11. The main types of household latrines in use.

Latrine types	Present	% of Present	Absent	% of Absent
i) VIP Latrines	17	8.4	189	91.7
ii) Traditional pit latrines	176	85.4	30	14.5
iii) Latrine with no structure	12	5.8	194	94.2

Traditional pit latrines constituted the majority type in the study area 176 (85.4%), followed by VIP latrines 17 (8.4%) while latrines that were in use but had no superstructure were 12 (5.8%).



Pictoral: One of the Quality household latrine observed in Amugo Village in Laminicwida Parish. It had a non leaking roof, strong walls, well fitted doors and a clean surrounding compound



Pictoral: One of the household latrine of poor quality observed in Loborom Village in Oret Parish. It as a leaking roof, weak walls, no fitting doors and a busy surrounding compounds



Pictoral: One of VIP household latrines belonging to the landlord in Puranga Trading centre. B in Parwech Parish. It has permanent walls, metallic well fixed doors and a corrugated iron sheets roof



Pictoral: One of the traditional household pit latrine in Puranga T.C.A in Parwech Parish. It is made of grass thatch roof, un burnt bricks and the door made of mat. The compound, poorly maintained.

# 4.5. Socio- economic factors influencing availability and usage of the households and latrine availability and usage

# 4.5.1. Land ownership

Table 12: Land ownership by households.

Land ownership	Present	% of Present	Absent	% of Absent
Household that were settled on their own	323	83	64	16.5
land				

323 households (83%) were fully settled on their own land while 64 (16.5%) were not settled on their own land.

#### 4.5.2 Education status.

Table 13. The education status of household heads

Land ownership	Present	% of Present	Absent	% of Absent
Households	287	74	100	25.8
heads who had				
attended school				

<sup>287</sup> respondents representing (74%) had received formal education while 100 (25.8%) did not

# 4.5.3. Occupation of the households.

Table 14. The occupational status of the household heads

Occupations	Present	% of Present	Absent	% of Absent
i) Peasant farmer	332	85.7	55	14.2
ii) Business man/woman	30	7.8	357	92
iii) Civil servants	19	4.9	368	95
iv) Self employed	5	1.3	382	98.7

By occupation, 332 respondents (85.7%) were peasant farmers, 30 responded (7.8%) were businessmen, 19 respondents (4.9%) were civil servants while 5 (1.3%) were self employed.

#### 4.5.4. Sources of income of the households

Table 15. Major sources of income of the households

Income	Present	% of Present	Absent	% of Absent
i)Farm Produce				
	321	82.9	66	17
ii) Business	34	8.8	353	91
iii) Formal employement	19	4.9	368	95

The major sources of income as reported during the study were through sale of farm produce 321 (82.9%), 34 (8.8%) of the household did business while 19 (4.9%) were employed and so got monthly salaries

#### 4.5.5.Existance of the cultural believes and taboo

Table 16 The existence of cultural believes about latrine usage in a home setting

<b>Cultural believes</b>	Present	% of Present	Absent	% of Absent
The existence of	15	3.9	372	96
cultural believes				

372 households (96%) reported having no cultural practices that exist that could affect latrine availability and usage, while 15 (3.9%) reported that there were some cultural practices that affected the availability and usage of the latrine in their area. Major cultural practices sighted were children feaces that were believed to be harmless and should not be put in latrines, 9 (2.3%) and latrine some times involved the use of ash which was a taboo if it mixed with feaces 6 (1.6%).

#### 4.5.6. The role of men in household latrine availability

Table 17. The major roles of men in latrine availability and usage at home

Roles of men	Present	% of	Absent	% of
		Present		Absent
i) They make decisions on latrine availability at home	143	36.9	244	63
ii) Construct the latrines	265	68.4	122	31.5
iii) They maintained the latrines	68	17.6	319	82.4
iv) They clean the latrines	42	10.8	345	89
v) They teach people how to use the latrine	7	1.8	380	98

The major roles of men on latrine availability and usage were to construct the latrine 265(68.4%), making decision on latrine construction 143 (36.9%), maintaining the latrine 68 (176%), cleaning the latrine 42 (10.8%) while teaching household members on latrine use 7 (1.8%)

#### 4.5.7. The role of women in household latrine availability

Table 18. The major roles of women in latrine availability and usage at home

Roles of women	Present	% of	Absent	% of
		Present		Absent
i) They make decisions on latrine availability at	31	8	356	91.9
home				
ii) Construct the latrines	45	11.6	342	88.3
iii) They maintained the latrines	230	59.4	157	40.5
iv) They clean the latrines	218	56.3	169	43.6
v) They teach people how to use the latrine	7	1.8	380	98

The major roles of women on latrine availability and usage were to maintain the latrine 230

(59.4%), cleaning the latrine construction 218 (56.3%), constructing latrine 45 (11.6%), making decision on latrine availability 31 (8%) while teaching household members on latrine use 7 (1.8%)

#### 4.5.8. Decision making on household latrine availability

Table 19. Person responsible for the decision making on household latrine availability

<b>Decision Making</b>	Present	% of Present	Absent	% of Absent
Household decision by	290	74.9	97	25
man				
Household decision by	94	24.2	293	75.7
wife				

The main decision makers as far as latrine availability and usage were the household heads - men 290 (74.9%) while 94 ( 24.2%) of women were able to make decisions.

# 4.6. Contributions of the existing scale up efforts to promote household latrine availability and usage

# 4.6.1. Health Education on Latrine use

Table 20. Health education talks carried out about household latrines

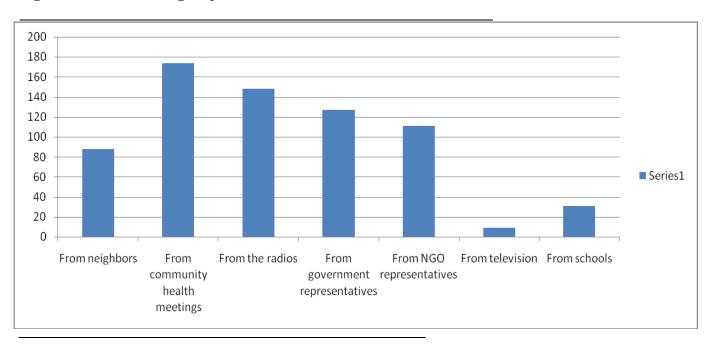
Scale up efforts	Present	% of	Absent	% Of
		Present		Absent
Health education talks given on household	235	60.7	152	39.2
latrine availability & usage				
Major categories of people who are involved	in he health	talks		
NGO representatives	63	16.2	324	83.7
Relatives	10	2.5	377	97.4
Government staff	46	11.8	341	88
Health workers	89	22.9	298	77
Local leaders	43	11	344	88.8
VHTs	131	33.8	256	66.1
The frequency of the health talk				
Daily				
Monthly	79	20.4	308	79.5
Quarterly	111	28.6	276	71.3
Annually	29	7.5	358	92.5

235 households (60.7%) reported that they always received health education talk on latrine availability and usage compared to 152(39.2%) who reported that they do not receive the health talks.

The major categories of staff that are involved were Village health teams 131(33.8%), health workers 89

(22.9%), NGO representatives 63(16.2%), Government staff 46(11.8%), local leaders 43(11%) and relatives 10 (2.5%). By frequency, 111 (28.6%) of the respondents reported that they receive the talks on quarterly basis, 79 (20.4%) said they received the talks on monthly basis and 29 (7.5%) reported that they received this on annual basis.

# **4.6.2.** Household sources of information on latrine availability and usage Figure 4. Chart showing major sources of information on latrine use at home



The figure shows that the major sources of the information on household latrine availability and usage by the respondent were from the meetings 174(44.9%), 148 (38.2%) from radios, 127 (32.8%) from the government representatives, 111 (28.6%) from NGOs representatives, 88(22.7%) from their neighbor 31 (8%) from schools and 9 (2.3%) reported that they receive most of the information from the televisions.

#### 4.6.3. Training on household latrine constructions

Table 20. Training of people on household latrine construction

Training	Present	% of Present	Absent	%	of Absent			
Training	134	34.6	253		65.3			
Major categories of peo	Major categories of people who help in the training							
NGOs	40	10.3		347	89.6			
Local Government	19	4.9		368	95			
VHTs	74	19		313	80.8			

134 households with 34.6% were trained on latrine construct while 253 households with 65.3% reported that they never received training on latrine constructions at all. They also reported that the major groups of people who participated in the training were VHTs 74 (19%), NGOs 40 (10.3%) and local government 19 (4.9%)

#### 4.6.4. Use of the bye-laws to scale up latrine availability and usage

Table 21. The use of the bye-laws to scale up latrine availability and use

Formulation and enforcement of bye-laws on latrines	Present	% of	Absent	% of
		Present		Absent
	173	44.7	214	55.2

173 households (44.7%) were aware of the bye laws that were enacted and formulated on latrine availability and usage while 214(55.2%) were not aware of the bye-laws on latrine.

#### 4.6.5. Village meetings on household latrine availability

Table 22. Attending the village meeting on household latrine availability and usage.

Meeting	Present	% of Present	Absent	% of Absent
Organizing village meeting on	215	55.5	172	44.4
latrine				

251 respondents (55.5%) attended village meetings on home cleanliness while 172 (44.4%) never attended any village meetings of this kind.

#### 4.6.6. Home inspection and follow up by health workers

Table 23.Inspections and follow-up of homes by health workers.

Inspections and follow up	Present	% of	Absent	% of	
		Present		Absent	
Inspections and follow up by health workers	36	9.3	351	90.6	
Frequency of inspections of homesteads					
Daily	0	0	0	0	
Monthly	18	4.6	369	95.3	
Quarterly	5	1.3	382	98.7	
Annually	13	3.4	374	96.6	

By inspections and follow-up of the communities on the provision and use of sanitation facilities at home, only 36 (9.3%) reported that they were always being followed up by health workers. However the frequency varied 18 (4.6%) on monthly basis, 13 (3.4%) on annual basis and 5(1.3%) on quarterly basis.

### 4.7. Availability and usage of household pit latrines in Puranga sub-county.

# 4.7.1. Relationship between socio-economic factors and household latrine availability and usage

Table 24. The relationship between marital status and latrine availability and usage

Item description	Latrine a	Latrine availability and usage						
	Yes	Yes % No % Total						
Married	98	25	111	28.6	209			
Not married	108	27.9	70	18	178			
Total	206	52.9	181	46.6	387			

Of the respondents who were married, 98(25%) have household latrines at their homes and 111(28.6%) of the married respondents did not have latrines at their homes and also of the respondents who were not married, 108(27.9%) had latrines at their homes as compared to 70 (18%) who were not married and they did not have latrine at their homes. The Chi-square analysis therefore showed that marital status (Being married or not being married) was not significant to latrine availability and usage (Chi-square value = 2.653, P- value = 0.103).

### 4.7.2. Relationship between Land ownership and the availability of household latrines

Table 25. The relationship between Land ownership and the availability of household latrines

Item description	Latrine availability and usage					
	Yes	%	No	%	Total	
Own land	187	48.3	140	36.1	327	
Do not owned land	13	3.35	47	12.1	60	
Total	200	51.6	187	48.3	387	

187(48.3%) of the respondents who owned land, had pit latrine at their homes compared to 140(36.1%) of the respondents who owned land but they did not have latrine at their homes also, 13(3.35%) of the respondents who did not own land had latrines at home compared to 47(12. %) of the respondents who did not own land and also did not have latrine at their homes. The analysis of the Chi-square showed that there was a significance in owning land and the availability and usage of household latrines in the sub-county (chi- square = 184.209; P-value = 0.0005).

4.7.3. Relationship between education status and the availability of household latrines

Table 26.Relationship between education status and availability and usage of household pit latrines

Item description	Latrine availability and usage						
	Yes	%	No	%	Total		
Went to school	148	38.2	105	27	282		
Never went to school	48	12.4	57	14.7	105		
Total	196	50.6	189	48.8	387		

Of those respondents who went to school, 148(38.2%) had latrine in place compared to 105(27%) of the respondent who went to school but they did not have latrine at their places. Similarly, 48(12.4%) of the respondents who had not gone to school had latrine at home as compared to 57(1.7%) who did not go to school and also did not have latrines at home. The analysis of this result therefore showed that, there was a significance in the education status and latrine availability and usage in Puranga sub-county (Chi- square = 80.953; P-value = 0.0002).

### 4.7.4. Relationship between community meetings and the availability of household latrines

Table 27. The relationship between community meetings on latrine availability and usage

Item description	Latrine availability and usage					
	Yes	%	No	%	Total	
Participated in community meeting on latrine	131	33.8	83	21.4	214	
Never participated in community meetings	64	16.5	109	28	173	
Total	195	50.3	192	49.6	387	

131(33.8%) respondents who had latrines at their home reported attended meetings on latrine use but 83(21.4%) of these respondents although attended the community meetings on latrines had no latrines at their places Of those who never participated in the community meetings on latrines 64(16.5%) had latrines compared to 109(28%) who never participated and they did not also have latrine at their places. The Chi-square analysis of this result showed that there was a significance

in attending community meeting on latrine and having the households possessing and using household latrine (Chi-square = 4.344; P-value = 0.037).

# 4.7.5. Relationship between training of the household members and the availability of household latrines

Table 28. Relationship training and availability and usage of household pit latrines

Item description	Latrine availability and usage						
	Yes	%	No	%	Total		
Trained on latrine construction	89	22.9	47	12.1	176		
Never trained on latrine	107	27.6	144	37.2	211		
construction							
Total	196	50.6	191	49.3	387		

Training of the household members including VHTs was one of the scale up efforts carried out. Of the respondents who received the training, 89(22.9%) had latrine at their homes compared to 47(12.1%) who were trained but did not have the latrines. Some of the respondents who were not trained on latrine constructions but they had latrines at their homes 107 (27.6%) as compared to 144(37.2%) who were not trained and also did not have latrines.

The Chi-square analysis results showed that training of household on latrine construction had no significance to household latrine availability and usage in Puranga sub-county (Chi-square = 3.165; P-value = 0.075)..

#### 4.7.6. Relationship between bye-laws use and the availability of household latrines

Table 29. The relation ship between existence of the bye-laws and the availability and usage of household latrines

Item description	Latrine availability and usage				
	Yes	%	No	%	Total
Household awareness of existence of bye-laws	109	28	67	17.3	176
Household not aware on bye-laws	90	23	121	31.2	211
Total	199	51	188	48.5	387

Of the respondents who were visited, 109(28%) who are actually aware of the existence of the bye-laws in place had latrines at their homes compared to 67(17.3%) who were aware but did not have latrines. Similarily, 90(23%) of the respondents who were not aware of the existence of the bye-law had latrine at their places compared to 121(31.2%) who were not aware and did not have latrine at their places. The Chi- square analysis of the results showed that the existence of the bye-laws was not significant to latrine availability and usage in Puranga sub-county (Chi-square = 3.165; P-value = 0.075).

#### 4.8. Further findings

#### 4.8.1. Use of the anal cleansing materials

Table 30 Anal cleansing materials in use by household members

Anal cleansing materials	Present	% of	Absent	% of
		Present		Absent
i) Toilet papers	8	3.9	198	96.1
ii) Paper	89	43	117	56.7
iii) Leaves	8	3.9	198	96.1
iv) Water	1	0.48	205	99.5

Of the households with the functional household latrines, 106 (51.5%) had anal cleansing materials for cleaning after defecation while 100 households (48.5%) lacked anal cleansing

materials in them during the time of Data collection. Of the major types of he cleansing materials, paper constitutes 89(43%), followed by toilet paper and leaves 8 (3.9%) and cleaning with water 1(0.48%) last.

## **4.8.2.** Use of hand washing facilities

Table 31. showing Hand washing facilities in use

Hand washing facilities	Present	% of	Absent	% of
		Present		Absent
Households with functional hand washing	89	43	117	56.7
facilities				
Hand washing facilities filled with water	55	26.6	151	73.3

Of the households with functional household latrines, 89(43%) had functional hand washing facilities at the time of visits while 117(56.7%) households lacked hand washing facilities for hand washing after using the latrine. Households with water filled in the hand washing facilities at the time of the study were 55 (26.6%) while 151(73.3%) of the household with functional latrine had hand washing facilities without water filled in.

## 4.8.3. Common hand cleaning materials in use

Table 32. showing hand cleaning materials in use used

Hand cleaning materials	Present	% of	Absent	% of
		Present		Absent
i) With soap	57	27.6	147	71.3
ii) With ash	8	3.8	198	96.1

The major hand washing materials in use was with soap 57(27.6%) followed by the use of ash for hand washing 8 (3.8 %.)

#### **CHAPTER FIVE: DISCUSSION OF RESULTS**

#### 5.0 Introduction

This section focuses on the discussion of the results on household latrine availability and usage, quality of household latrines, socio economic factors influencing household latrine availability and usage, the various scales up efforts for latrine availability and use, and discussion on further findings of the research.

## 5.1 Current latrine coverage and usage

The household latrine coverage of Puranga is 53% which is below the national standard of 77%. The study also agrees with the one done by (WHO/UNICEF, 2004), which showed that the coverage of the improved latrines in Africa stands at 41% for rural areas. Reported by Uganda 2006e, good household latrine coverage in the country were mainly found in the west and southwest of the country. The worst parts in attaining the coverage in the country were north east, mid north and northwest which were mainly affected by the conflicts. This has contributed to the indiscriminate defecation of the community resulting in the transmission of many diseases. The finding also indicated that 181(46.7%) lack latrines, 38.7% of households use their own latrines while 61.2% did not use their own latrines for excreta disposal meaning that they are sharing them and 14.4% of the latrines in use were belonging to the landlords. This study also agreed with the one done by (WHO/UNICEF JMP, 2008) that maintained that 34% of the rural population used improved sanitation facilities, 45% use unimproved sanitation facilities, 11% used shared facilities while 15% used open defecation. The sharing of the household latrine means that other household will be forced to do open defecation leading to the contamination of the environment

# 5.1.1 Ages at which children start using the latrines

The study result showed that the mean age for children to start using the latrine facility according to the respondents is 5 years. This is inline with the study done by (Yusuf et, 1990), which showed that children especially below 5 years of age may not defecate in the pit latrines. This is because their feaces were regarded by other people as not being harmful. The result also agrees with a study done in Kapcohrwa district in Uganda which showed that mothers did not properly

care for their children. When they defecate their fecaes were left in the open and the did not instruct them to use the latrines (Barton and Wamai, 1994). This also had resulted into the indiscriminate defecation as evidenced by 32 (8.3%) of the households had feaces seen littered in their compounds during the time of the visits. Contamination of the environment can result from this, breeding of disease vectors and consequently the spread of diseases such as diarrhea, cholera, dysentery and worm infestations.

#### **5.1.2** Distance of the latrine from the households

The distance to the latrine facilities affects people in using the latrine frequently. Women and children were heavily affected by this in the darkness that would force them not to use latrines at times. The study showed that only (11.6%) of the household latrines were found at the recommended distance of 10 meters from the main building in homes. This was very low and can encourage indiscriminate defecations. This is in agreement with the study done by (OECD, WHO2003) which elaborates the important of sanitation for the women both for their physical health, their safety & dignity. During the darkness as they could be exposed to other problems like rape and defilements. The result of this study also is not in accordance to the MOH, (2006), which emphasized that latrine must be convenience in term of distances, to the users.

# 5.1.3 Having knowledge about the use of household latrines

The table shows that 368 (95%) of the households were knowledgeable on why they should use the latrine at their homes, while only 19(4.9%) did not have any clear knowledge on why they use the latrine in homes. 174(44.9%) of the household members visited who have latrine at their homes were knowledgeable about pit latrine usage and the importance compared to 192(49.9%) who have the knowledge but they did not have latrines. The chi-square analysis showed that having knowledge on latrine was significant to latrine availability and usage (Chi-square value = 307.5, P- value = 0.0000). The study is in agreement with the one done by (Munro,et.al 1991) on Sanitation and hygiene education in Masindi & Kabarole District in western Uganda which shows that the community had broader understanding of general sanitation and its importance not only on latrines use.

#### 5.1.4 Major reasons for having and using latrine at home

295 (76.2%) reported latrine were important in disease prevention, 208(53.7%) for home cleanliness, 114 (29.4%) for home safety, 107 (27.6%) for helping visitors, 95 (24.5%) for the disposal of feaces and urine, 31 (8%) for convenience while 30 (7.8%) for privacy at home. This result showed that majority of the local community had understood the major drivers for putting up and using the latrine at home.

#### 5.1.5 Major barriers for not having and using the latrine at home

For the barrier to the latrine usage at home shown on the table above,59 (15.2%) reported that they lacked latrines because of no responsible persons to help them at home,55(14.2%) that building latrine was very expensive,46 (11.8%) due to the negligence,20(5.2%) as due to water logged areas,9 (2.3%) as being due to lacked of digging tools, 6(1.5%) because their latrine were still under construction, while 5(1.3%) reported as because of lack of land. This result showed that poverty, ignorance and lacked of latrine technologies still affects the community. The study also agreed with the one done by (Jenkins and Scott, 2006; Jenkins and Sugden, 2006) also showed that the main factors for non availability and usage of improved household latrines or not accepting it were mainly poverty, no space for constructing it and high cost of installations of household latrines. The study was also in line with the study done in Uganda. (Cairncross and Curtis, undated, page 1) and (Munro, et al, 1991).which also revealed poverty and construction cost acting as a barrier to the latrine construction to households.

# 5.2. Quality of the household latrines constructed

#### **5.2.1** Sites of the household latrines

Of the household visited, 158 (76.7%) latrines were made and sited on a raised well drained place. This was still low as by recommendation from the MOH, (2006) quality household latrines must be well sited in well drained place. This result showed that the household members were not informed on where and how they should put up their home latrines properly.

#### **5.2.2.** The construction materials used for the latrines

172 (83.4%) of the household latrines were made of temporary materials, 24 (11.6%) were made of semi permanent materials and only 6 (2.9%) were made out of the permanent materials. This

proof that the local communities has accessed to the local available material like wood/logs and grass thatch for the construction of their latrine. Very few who are in the trading center can afford corrugated iron sheets and cement for latrine construction. This finding agreed with the finding in the report by (Water and Sanitation Programme field note June, 2004) in Kenya which indicated that VIP latrines needed materials for the construction which were mainly concretes and were amore expensive to construct than the traditional pit latrines that were always built with locally available materials. And also, building a semi permanent latrine with roof covering material made of corrugated iron sheets were also expensive for the rural communities.

## **5.2.3.** The conditions and the adequacy of the stances

The finding showed that 79(38.3%) of the latrine in use had strong stances with adequate sizes while 91(44.1%) had fair stances with inadequate sizes, 117(56.7%) were maintained in a clean state, and only 59 (28.6%) household latrines had tight fitting cover for the squat holes to minimize flies from entering the pit. Many of the latrines have weak stances, small in sizes and are poorly maintained. This concluded tat most rural societies lacked skills and technologies n the construction of the household latrines. The study is agree with the study done in Uganda by (DANIDA, 1996 and National Sanitation Guide Lines, Ministry Of Health, July, 2000 Uganda), which shows that, pertaining the privacy of the latrines, only 30% of the household pit latrines in Uganda provide proper protection and privacy

The poor states and conditions of the latrine may discourage the people from using the latrine in the fear of falling in to the latrine pit. This make them to go for open defecations that can encourage the transmission of diseases.

#### 5.2.4. The major types of the household latrines in the study area.

Traditional pit latrines constitute 176(85.4%), followed by VIP latrines 17(8.4%) while latrines in use without the superstructure were 12(5.8%). This shows that the local communities can not afford to buy permanent materials like corrugated iron sheets and cements for the construction of the latrines. And since they were in the rural settings where the locally available materials like logs and grass thatch are at easy reach, they resort to use them.

#### 5.3. Socio- economic status of the households and latrine availability and usage

# 5.3.1. Landownership and household latrine availability and usage

323 households (83%) were fully settled on their own land while 64 (16.5%) were not settled on their own land. The analysis of the Chi-square showed that there is a significance in owning land and the availability and usage of household latrines in the sub-county (Chi- square = 184.209; P-value = 0.0005). Puranga sub-county is a sub-county that suffers most from the two decades of the insurgency. After the war some of the household members returned back to their original land. However some have still remained in the satellite camps in those lands that were not belonging to them. This might have affected them from providing latrines on those lands. The study also agree with the one done by (Water and Sanitation Programme field report June, 2004) that access to and ownership of house hold latrines were however lower in the house holds which are headed by a females as a result related to the problems of property ownership.

#### **5.3.2** Education status of the household heads

287 respondents (74%) had attended classes while 100 (25.8%) never attended classes at all. The analysis of the Chi-square result also shows that 148(38.2%) of the respondents who had latrine had been to school as compared to 48(12.4%) who had latrines but have not been to school. This result is in agreement with the study done in Uganda by (Nakiboneka, 1998) that concluded that, low level of education is one of the factor affecting the construction and usage of household pit latrine in most parts of Uganda. Community department in the sub-county should therefore accelerate the programme of functional adult literacy to educate mothers and also take all the children to school. The education department must make sure those latrines are provided in schools for both boys and girls.

## 5.3.3. Major sources of income

The major sources of income as reported during the study were farming 321 (82.9%), 34 (8.8%) were business while salaries were 19 (4.9%) The main occupation was peasant farmer (85.7%) and farming was the major source of income in the area 321(82.9%). This had affected the latrine availability and usage in the area. A more income generating projects should be made accessible to the local communities in the area so that they can raise more money. This study is in

agreement to a study done by (Jenkins and Scott, 2006; Jenkins and Sugden, 2006), which shows that it is not easy for the poor people who depend purely on subsistence incomes to spent most of their money on sanitation improvement when they think they have been surviving without the latrines and also by study done by (Husked, 1962) and (Wag staff, 2000) which shows that the low level of income status of the community affects their revenue generating potential and hence limited financial support which can have an effect on the family and their ability to participate in community development activities

#### 5.3.4. Existence of cultural believes and taboos

372 households (96%) reported having no cultural practices that exist that can affect latrine availability and usage while 15 (3.9%) reported that there were cultural practices that were affecting the availability and usage of the latrine in the area. Major cultural practices sighted were children feaces were harmless and should not be put in latrines 9 (2.3%) and that latrine some times involved the use of ash which was a taboo if it mixed with feaces 6 (1.6%) Only 15(3.9%). This is in agreement with the study done in Uganda, by (Nakiboneka, 1998), that pointed taboo & cultures as some of the major factors affecting the provision and utilization of households latrines in the societies.

#### 5.3.5. Major roles of men

The major roles of men on latrine availability and usage were to construct the latrine 265(68.4%), making decision on latrine construction 143 (36.9%), maintaining the latrine 176 (68%), cleaning the latrine 42 (10.8%) while teaching household members on latrine use 7 (1.8%). These results indicated that men have a big role to play to make sure that household have latrine in place and in the maintenance of the provided latrine facilities at home.

## 5.3.6. Major roles of women

The major roles of women on latrine availability and usage were to maintain the latrine 230 (59.4%), cleaning the latrine construction 218 (56.3%), constructing latrine 45 (11.6%), making decision on latrine availability 31 (8%) while teaching household members on latrine use 7 (1.8%). This result showed that women participate very much in the cleanliness of the household latrines at home.

#### 5.3.7. Main decision makers on latrine availability

The main decision makers as far as latrine availability and usage were the household heads -men 290 (74.9%) while women contribute 94 (24.2%). The study also agrees with the one done by Then Kendie (2002). This said, although women have the knowledge on hygiene promotion at household level, they are not involved in the household decision making. Household latrine promotion programmes should be tailored to women groups to encourage them to participate in the household decision making by the local authorities.

# 5.4. Some of the scale up efforts to promote household latrine

# 5.4.1 Health Education talks and follow up of community actions on household latrine availability and usage.

235 households (60.7%) reported that they always received health education talk on latrine availability and usage compared to 152(39.2%) who reported that they did not receive the health talks. 125(32.2%) of the household who had latrine at their disposal, received health education talks on latrine use at home compared to 105 (27%) of the household who received this health education talk but they do not have latrine at home. The study was in agreement with the study done by (Evans 2005, page 25) which noted that, promoting behavior change at household level always remains challenge since most countries lack these essential capacities which make them to be unfamiliar to perform their roles in respect to this.

## 5.4.2. Major sources of information about the use of latrine at home

The sources of the information on household latrine availability and usage by the respondent were from the meetings 174(44.9%), 148 (38.2%) from radios, 127 (32.8%) from the government representatives, 111 (28.6%) from NGOs representatives, 88(22.7%) from their neighbor 31 (8%) from schools and 9 (2.3%) reported that they receive most of the information from the televisions. This study agreed with the (National development Plan Uganda, Monitoring survey-Pader District, 2012) which showed clearly that 18% of the household sanitation improvement efforts comes from the local councils, 16% from Government health extension staff and 13% from the NGOs. This result indicates that most of the local councils had not yet been oriented about household latrine availability and usage. Therefore, The District

should organize advocacy meeting focusing on household latrine availability and usage right from the District, sub-county, parishes and at village levels to raise this level of understanding to the local leaders at various levels in order for them to follow up and advise household members on the availability and usage of the household latrines

# **5.4.3.** Training of households on latrine constructions

134 households with 34.6% were trained on latrine construct while 253 households with 65.3% reported that they never received training on latrine constructions at all. They also reported that the major groups of people who participated in the training were74 with 19%, NGOs 40 with 10.3% and local government 19 with 4.9%. 89 (22.9%) of the households who own latrine during the study, reported of being trained on latrine as compared to 107(27.6%) of the households who owned the latrine they had not been trained on latrine construction. Most of the training were being carried out by Village health teams 74(19%) and by NGOs 40(10.3%). More VHTs should be trained in the villages on Latrine constructions and their activities should be followed closely by the local authorities in the sub-county also, the sub-county leaders should lobby and coordinate NGOs activities in the area to promote sanitation activities. This agreed with the studies done in Uganda as indicated by (Uganda 2007c) and (UWASNET Uganda, Performance report, 2010/2011). They showed that NGOs conduct activities such as baseline surveys, training of hygiene promoters, creating awareness and working with and through community based organizations to train people to build their own latrines and use them and sensitizing the community to engage in sanitation promotion.

#### 5.4.4. Existence and usage of the bye –laws on household latrines

173 households (44.7%) were aware of the byelaws that were enacted and formulated on latrine availability and usage while 214(55.2%) were not aware of the bye-laws on latrine. These results indicated that there was a limitation in the involvement of the local community and the dissemination of the byelaws to them which had affected the enforcement of the bye-laws set on household latrine use. This was not in accordance with the Public Health Act Chapter 281 which requires every citizen in Uganda to have access to a latrine facility at their homes. The bye laws set in place must be enforced by the local authority so that community can implement it. This

indicates that although bye-laws have been set and is in place; probably they are not being enforced effectively.

# 5.4.5. Attending village meetings on latrines

251 respondents (55.5%) attended village meetings on home cleanliness while 172 (44.4%) never attended any village meetings of this kind. 131(33.8%) of the households who attended the meeting on sanitation had latrines at their homes compared to 83(21.4%) who attend any meeting on sanitation but they do not have latrines at their homes. The study was in agreements with the one done by (Francis and James 2003, 331),that Local Governments generally do not follow the principle of bottom up planning as villages should prepare their community action plans which reflect their local needs and the priorities. Community members can be brought on boards and they will participate in any program right from the planning stage and they will own the programme.

## **5.5. Further findings**

### **5.5.1.** Use of the anal cleansing materials

Of the households with the functional household latrines, 106 (51.5%) had anal cleansing materials for cleaning after defecation while 100 households (48.5%) lack anal cleansing materials in them during the time of Data collection. Of the major types of he cleansing materials, paper constitutes 89(43%), followed by toilet paper and leaves 8 (3.9%) and cleaning with water 1(0.48%) last. Anal cleaning is a very essential human activity. Lack of materials to be used for anal cleansing can contributes to high degree of hand contamination with feaces, reduce the efficiency of hand washing practices and can leads to feaces to be smeared on the latrine doors, floors and walls. This is still law levelof practices and the study agreed with an environmental sampling study which was done in Kenya by (Greene, 2009) that found out that there is high level of children hands being contaminated with feaces in some of the schools with newly constructed latrines and also another study by (Zomerplaag and Mooijman,2005) which showed that normally in the designed of the sanitation system, the needs for the anal cleansing materials are not put into considerations

The local authority should organize hygiene educations to the communities on latrine maintenance and stress the importance of anal cleansing materials in the latrines. School

authorities should be monitored and advised on the availability of the anal cleansing materials for children use while at schools.

# **5.5.2.** Use of hand washing facilities

Of the households with functional household latrines, 89(43%) had functional hand washing facilities at the time of visits. Households with water filled in the hand washing facilities at the time of the study were 55 (26.6%) while 151(73.3%) of the household with functional latrine had hand washing facilities without water filled in. This was very low and unacceptable as it can aggravate the transmissions of sanitation related diseases. Of the hand washing facilities in place, only 55(61.7%) were filled with water. This showed that the rest of the hand washing facilities are not being used for washing hands at critical times. According to UBOS, in the financial year 2006/07, households who were accessing and were using facilities for hand washing was about 14%. But the survey of 2011 which was carried out, indicated that the percentage rose to 27%. Hand washing prevent the transmission of disease which can reduce the diseases such as diarrhea, cholera, skin diseases, trachoma and respiratory track spread of infections. This study agreed with Mukungu in the New Vision of Friday, 22 November 2013, who commented that currently about 28% out of the 34million people in Uganda are in access to the facilities for hand washing making majority of the population to be at high risk of diseases. Review by (Curtis et al. 2003) also concluded that hand cleaning with water and soap, after using the latrine or cleaning a child that can reduce the incidences of diarrheal diseases by around 42-47 percent, while another ongoing study by (Rabie et al). Estimated that there will be reduction of respiratory track infection by 30% through proper hand washing with soap.

#### 5.5.3. Common hand cleaning materials in use

The major hand washing materials in use was with soap 57(27.6%) followed by use of ash for hand washing 8 (3.8 %.). This was very low and as a result, transmissions of feaco-oral diseases due to hand contamination still a problem. This finding was not in line with study by (Luby et al. 2004) which showed that under 15 years living in households which were practicing regular hand washing with water and soap had reduced diarrhea rate of spread in the neighborhoods

# **5.5.4. Study limitations**

- 1. Some of the questions were not answered by the respondents
- 2. There was difficulties in the drawing the right conclusion from the sample size determined
- 3. Respondents were denying some information hoping that something will be given after ward.
- 4. Rain problem affecting the movement of the research supervisors

#### CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS:

### 6.0. Conclusion:

#### 6.1 Latrine coverage and the utilization response in Puranga sub-county

This study which composed of 387 sample households in Puranga sub-county showed that the latrine coverage for the sub-county is 53%. This is still lower than the national target of 77%. This had contributed to the spread of sanitation related diseases which were very common in the area.

## 6.2 The quality of household constructed latrines n Puranga sub-county.

The study indicated that, majority of the constructed household latrines were made of temporary materials (83.4%). These materials were mainly logs, grass thatch and straws. These gave rise to the commonest types of the household latrines to be ordinary traditional pit latrines which constituted u to 85.4%. 76.7% of the constructed household latrines were well placed on a raised well drained ground. These will minimize the latrines from collapsing due to dampness, storm water effects and water logging.

# 6.3 Socio-economic factors influencing the availability and usage of household latrine in Puranga sub-county

Several factors were still in existence in the sub-county that were affecting the availability and usage of household latrines these included Poor community mobilization and sensitization on household latrine provisions, poverty, low level of education of the household members, lack of prioritization as regards to household latrines, limited numbers of qualified health workers to conduct home inspections and follow up, the water logged situations in some areas, inadequate political commitments on sanitation activities and negligence of the some of the community members

# 6.4 Contribution of the scale up efforts being carried out to promote the availability and usage of household latrines in Puranga sub-county

Several activities were in place that contributed to the coverage of house hold latrines these included giving information on sanitation through radio, VHTs and through organizing

community meetings, NGO activities such as training of VHTs and household members on latrine constructions and the existence of bye-laws in some of the areas in the sub-county.

#### **6.1. Recommendations:**

# 6.1.1. Latrine Coverage.

In order to accelerate the latrine availability and usage in the Sub -county, the following must be done:

- 1. The sub-county authorities should organize home improvement campaign in order to raise the level and use of latrine at parishes and villages.
- 2. Advocacy meeting on household sanitation should be done to political leaders in the parishes and villages in the sub-county,
- 3. Local authorities should make sure that they plan and implement monthly sanitation weeks to encourage community to provide and use latrines;
- 4. Sub-county health workers and other health extension staff should conduct community dialogue and sensitization meetings focusing at the factors that are affecting the availability and usage of the household latrines and its likely dangers that may results
- 5. The local authorities should mobilize and sensitize the rural community to put up and use latrine facilities for safe excreta disposal.
- **6.** Local government should integrate sanitation and hygiene improvement to all programmes targeting the peasant farmers to help them improve on their home sanitation situations
- 7. The local authorities should as much as possible use the presence of women groups, youth groups and schools to create more understanding on demand for latrine at household levels to increase the household latrine coverage and usage.
- 8. This means, the local leaders should do monitoring and follow-up of the community actions that had been agreed.

## **6.1.2.** Latrine quality

In order to promote the availability of the quality household pit latrines, the following must be done:

- 1. The MOH should develop and disseminates guidelines to districts on latrine standard including the technology options so as to guide the household members in the construction of standard latrines.
- 2. The district should train the local masons in the sub-county to help the household members during the construction of the standard household latrines
- 3. Health workers should start regularly inspecting home for hygiene and sanitation standard, train more household member on how to construct latrine at home including the various latrine options and the sub-county authority should disseminate and implement the bye –laws created in the sub-county to all the lower levels.
- 4. Provide sub-county health workers with means of transport to enable them regularly inspect homes
- 5. Health workers and other extension staff should intensify training of people on latrine constructions at household level as well as guide the local community to use sound local materials for latrine constructions. Supervision of latrine constructions must also be carried out by the local authority so as to increase the coverage of quality household latrines.

#### 6.1.3. Addressing the Socio- economic factors affecting the latrine availability and usage

- 1. Strengthening the community department of the sub-county to intensify the functional adult education (literacy) in order to raise the level of education in the area.
- 2. Introduce, support and educate the community on income generating activities in order for them to raise their income levels to fight poverty e.g. NUSAF.

3. Increase the availability and accessibility to financial institutions by the local community micro finance, cooperatives, Saccos and banks so that the local community can access any financial help that they might need.

## 6.1.4. Scale up effort for household latrine availability and usage

- 1. Developing and distribution of IEC materials to facilitate hygiene education at the community levels
- 2. Health workers should regularly conduct health education to mothers on the danger of not disposing children feaces in the latrine to minimize this.
- 3. The district should recruit and deploy more health extension staff to help reach all the community members
- 4. Organize integrated out reaches as part of the PHC strategies to hard to reach areas in the sub-county so as to enable health messages and services to reach the communities
- 5. The local authorities should coordinates all the efforts of the NGOs in the place as far as hygiene and sanitation promotion is concerned
- 6. Allocation of more funding to support environmental sanitation at district and sub-county levels
- 7. Sub-county health workers should therefore frequently visit homes to help in the location of the household latrines not to be too far from the households.
- 8. More community dialogue and participatory planning should be done with the community to under stand the main issues affecting them in household latrine availability and usage.

# **6.1.5** Recommendations of further findings

- 1. Health workers should regularly organize health education talks to mothers attending ANC and OPD services to persuade them to start washing their hands after visiting the latrines to stop the transmission of diseases due to contaminated hands.
- 2. The District should integrate hand washing campaign into the district development plan and launch hand washing campaign to all the sub-counties in the district to increase the hand washing coverage.
- 3. The District authority should commemorate global hand washing day in the sub-counties to help educate people and to raise the profile of hand washing at the community levels.

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# ANNEXX I RESEARCH WORKPLAN

WORK PLAN FOR THE RESEARCH ACTIVITIES													
Activity	Mon	th									Re	spoi	nsible Person
	J	F	M	A	M	J	J	A	S	О	N	D	
Developing Proposal					X								Researcher
Developing Questionnaires					X								Researcher
Selection /Training of							X						Researcher&
Research Assit													Super.
Field Pre-Testing							X						Researcher
													&Super.
Data Collection and handling							X						Researcher&
													Super.
Supervision by supervisors					X	X	X	X	X				Researcher&
													Super.
Data Processing and Analysis							X	X					Researcher
Report writing							X	X	X				Researcher
Dissemination of reports									X				Researcher

## ANNEXX II RESEARCH BUDGET

Items	No. of Pple	Days	Freq	Rate	Amount
(specify)	or Items				
Stationary	12	7	1	5,000	
					420,000
Allowance for facilitators	2	4	1	50,000	
					400,000
Allowance for research Assistants	10	7	1	20,000	
					1,400,000
Supervision Allowance	2	4	1	50,000	
					400,000
Transport refund for research	10	7	1	10,000	
Assistants					700,000
Hall Hire	1	2	1	50,000	
					100,000
Fuel Provision	15	4	1	3,000	
					180,000
Hiring data analyst	1	2	1	100,000	200,000
Sub total					
					3,800,000

# **Informed consent:**

Greetings. My name is	and I	am	a s	student	at	Internatio	nal
Health Sciences University Kampala.							

I and my team are conducting a research study on latrine availability and usage in Puranga Sub-county, Pader District. We would very much appreciate your participation in this research study. The information you provide will be for purely academic purposes, though the Data may also help plan and improve on the latrine coverage and usage in this sub-county and the district at large.

We may spend about 25 minutes to complete the questionnaire.
What ever information you will provide will be kept confidential and will not be shown to other
person.
Your participation in this study is voluntary and you can choose not to answer any individual question or all the questions. However we hope that you will participate in this study since your views are important.
At this time, do you want to ask me anything about the study?

Do you agree to participate in this survey?

YES

NO

# **ANNEXX 111. House holds questioners:**

Latrine availability and usage in Puranga sub-county, Pader District. Questioner No:

# **Section 1: General information.**

a)	Parish:	b) Village:	
α,	I WIIDII	······································	

# Section 2: Latrine coverage and usage at the household

	Questions and Filters	<b>Coding Categories</b>	Skips
1	Does this household have a latrine	Yes 1	
	facility?	No2	18
2	Where is the location of this latrine	Inside the yard(10m)1	
	facility?	Out side the yard(>10m)2	
	OBSERVE THE LATRINE		
	LOCATION		
	CIRCLE ONE RESPONSE ONLY		
3	Is there evidence of the latrine facility	Path well worn as sign of regular use 1	
	being use? Observe the access path to	Path over grown, does not look regularity used	
	the latrine facility for signs of regular	2	
	use	Other observation3	
4	Who owns the latrine provided?	My self1	
	<del>-</del>	Family2	
		Relative3	
		Land load4	
		NGO5	
		Neighbor6	
		Community7	
5	What is the main type of latrine used in	ECOSAN	
	this household?	VP Latrine2	
	OBSERVATON AND RECODNG	Traditional pit latrines3	
	THE MAN TYPES OF	Latrine with super structure4	
	LATRNE/TOLET FACLTES USED	Latrine with no superstructure5	
	BY THE HOUSE HOD MEMBERS.	Others specify8	
	CRCLE ONLY ONE RESPONSE		
6	Do you have anal cleansing materials in	Yes1	
	the latrine facility?	No	8
7	What do people use for cleaning them	TOILET PAPER1	
	selves after defecating?	PAPERS2	
	OBSERVE FOR EVIDENCE OF	LEAVES3	
	ANAL CLEANSINGMATERIALS	WATER4	
0	D	- 1	
8	Do you always wash your hand after	Y es	

	using the latrine?	No2	⇒ 12
9	Can you show me your hand washing facility for hand washing after using the latrine?  ASK TO SEE AND OBSERVE.	Near latrine facility1Near Kitchen2Else where in the yard3No specific place4	
10	OBSERVATION ONLY Is there water in the hand washing facility?	Yes	
11	<b>OBSERVATION ONLY:</b> Is there soap or detergents or ash for hand washing?	Soap       1         Detergent       2         Ash       3         None       4	
12	In this household, at what age do young children start using the latrine?		
13	Where do you dispose young children feaces when they can not use latrine by them selves?	Latrine	
14	Are there children feaces littered in the compound?  OBSERVATION OF THE COMPOUND FOR PRESENCE OF CHILDREN FEACES	Feaces present in the compound 1 Feaces absent	
15	If in the church, market or when travelling and a child want to defecate what do you do?	Defecate near the path ways	
16	What do you normally use for cleaning the child after the defecation?	Water       1         Leaves       2         Papers       .3         Pieces of clothes       .4         Others- Specify       5	
17	How many other family members/people share this latrine with you?	Number of other family members  Number of people in each family	
18	If the house hold is not using pit latrine, where do you dispose off your excreta?		
19	Why do you dispose the excreta in this way?		
20	What are some of the main barriers or problems that stop you from using the latrine?	1	

Section 3: Quality of the household latrines constructed.

Skips
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ie
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with adequate
th inadequate
te privacy3
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1

28	What is the cleanliness of the latrine	Clean 1
	facility?	Dirty2
	OBSERVE AND RECORD FOR THE	
	CLEANLINESS OF THE LATRINE	
29	How often is the latrine facility cleaned?	Daily 1
		Weekly2
		Monthly3
		Never at all4
30	Where did you get the materials for the	Used local materials1
	construction of this latrine?	Bought from the town
		Donation 3

# Section 4: Socio-demographic information.

No	Questions and Filters	Coding Categories	Skips
31	How old are you?	Age in completed year	
32	What is your relationship with the	Self1	
	household head?	Spouse2	
		Son/daughter3	
		Parent4	
		Brother/Sister in law5	
		Other specify6	
33	What is your <u>current marital</u> status?	Single, no partner	
		Married	
		Cohabiting 3	
		Widowed 4	
		Divorced /separated5	
24	What is your religion	Catholic	
		Protestant2	
		Islam3	
		Born again4.	
		Others (Specify)	
35	How many people live in this	Number of people	
	house?	a) 0-5 years	
		b) Above 5 years	
36	Is it necessary for people to have	Yes 1	
	latrine at their homes?	No2	
		Don't know3	
37	If yes, what are some of the major	For safety1	
	reasons for having and using a	For home cleanliness2	
	latrine at homes	To help the visitors3	
	CIRCLE ALL THE	To prevent disease4	
	RESPONSES	For privacy & comfort5	
		For convenience	
		For disposing feaces and urine5	
		Other (Specify)6	

38	If no, what are some of the reasons	No land1
	for not having and using the latrine	High construction cost2
	at household level?	No skills in the constructions3
	CIRCLE ALL THE	Absence of the responsible person in the household
	RESPONSES GIVEN	4
		Lack of time5
		Not comfortable in using the latrine6
		No construction materials7
		Loose soil8
		Rocky soil9
		Others specify10
39	How did you come to know about	Neighbor1
	latrine use at home from?	Meetings2
	CIRCLE ALL THE	Radio3
	RESPONSES GIVEN	Government representative4
		Ngo representatives5
		Billboards6
		Manson7
		Relatives8
		Television9
		Others10
40	Can you tell me any other methods	
	of excreta disposal at home apart	
	from latrine?	

# **Section 5: Socio economic Information.**

No	Questions and Filters	Coding Categories	Ski
			ps
41	Who owns this main house?	Myself1	
		Land lord2	
		Relative3	
		Employer4	
		Government5	
		Others Specify6	
42	Is the main house constructed on your	Yes1	
	own land?	No2	
43	Have you ever attended school?	Yes 1	
	-	No	45
44	What is the <u>highest level</u> of education	incomplete primary1	
	you attained?	Complete primary2	
	PROBE FOR SPECIAL LEVEL	incomplete O-level3	
		Complete O-level4	
		A-level5	

			6		
		Vocational training7			
45	What is your main occupation?				
46	What is your major source of income	Farming			
	for the daily living?	Business	2		
		Salary	3		
		Gift	4		
			5		
		Others (specify)	6		
47	What expenses did you encounter in building your latrine	Description	Amount		
	RECORDS OF ALL THE	_	Amount		
	EXPENSES INVOLVED IN THE	Sinking pit			
	LATRINE CONSTRUCTION IN	Slabing			
	UGANDA SHILLINGS IF	Walling			
	MONEY WAS USED IN THE CONSTRUCTION	Plastering			
	CONSTRUCTION	Roofing			
		Fixing doors			
		Timing doors			
48	Did you consider these expenses for latrine construction in your household as good value for money?			<del></del>	
49	If no, why not good value for money?	Wasted money for medical expenses1			
			et2		
			ting3		
		Termites can destroy	it and will collapse4		
		Others (specify)	5		
50	Did you borrow money for latrine construction in this house hold?		1	<b>⇒</b> 54	
51	From where did you borrow the	Family members	1		
	money?		2		
			3		
			4		
			5		
<i>-</i>	TT 1 1'1 1 0				
52	How much did you borrow?		UGH		
53	How long did you take to pay loan?	Month	specify		
		Years	specify		
		Not expected to pay b	oack3		

55	Are there cultural believes and taboos that are influencing household latrine usage in this area?  If yes, can you list them	Yes
56	What major roles do men play in household latrine availability and usage	Make decision on building latrines
57	What major roles do men play in household latrine availability and usage	Make decision on building latrines
58	In this household, who have a say on the decisions regarding household latrine availability and use?	Household heads 1 Household wives 2 Grand son 3 Son in law .4 Children .5
59	Who are heavily affected with the problems related to lack of latrine usage in this area.	Men       1         Women       2         Children       3         Orphans/Vulnerable groups       4         Other specify       5
60	What are some of the activities that are being carried out in this area to involve women in the decision making regarding the household latrine availability and usage	

# Section 6: Scale up efforts for latrine availability and usage

No	Questions and Filters	Coding Categories	Skips
60	Did any body ever talk to you about	Yes1	
	latrine availability and use at home	No2	62
61	Who visit you for advice on latrine	Relatives /friends	
	availability in your home?	NGOs2	
		Government staff3	
		Local leaders4	
		VHTs5	
		Others specify 6	

62	Do you know some of the diseases community can get as results of not using latrine facility?	Yes	66
63	If yes, can you mention any four that you know?	1	
64	Do you know some of the ways how these diseases can be prevented?	Yes	
65	Can you list 4 of the preventive measures of the diseases?	1	
66	Do health works always visit you in this household?	Yes	69
67	How often health workers do visits you?	Daily1Monthly2Quarterly3Annually4	
68	Have they ever talked to you on the issues connected to proper pit latrine usage and disease prevention?	Yes	
69	Do you know any NGO who are supporting people on hygiene and sanitation promotion in this area?	Yes	71
70	What are some of the activities they are doing	1 2	
71	Have you ever been trained on latrine construction?	Yes	73
72	By whom?	NGO1Local Government2By VHTs3Others Specify4	
73	Have you ever attended a village meeting on sanitation?	Yes	75
74	What was the main issues for the village that was organized	On health issues1On education issues2On agricultural issues4On home cleanliness5Others specify6	
75	Are there set bye-laws by the local authorities on latrine use in the area?	Yes	77
76	What is the agreed penalty if these bye-laws are not followed		

77		Yes	END
78	Can you name for me some of the programme?		

# THE END.

# THANYOU FOR ANSWERING THE QUESTIONS:

#### **ANEXX 1V FOCUS GROUP DISCUSION GUIDE:**

Date:
Venue:
Participants:

Topic: Latrine use in Puranga Sub-county, Pader District. Despite the various efforts made by MOH, UNICEF and other local NGO like ASB, AMREF and PDLG to scale up house hold latrine availability and use in the sub-county, the latrine coverage of the sub-county is still very much below the national standard.

- 1. In your opinion, do you think the household members in this community have pit latrines?
- 2. Are the local communities aware of the benefits they can get from using the pit latrines at their homes?
- 3. Are there some problems associated with poor excreta disposal in this community (for not using the pit latrines?) probe for them.
- 4. What are the key major problems do the household members face in the construction of household pit latrines? Probe for the problems.
- 5. What are some of the problems that household members face that are hindering them from using the pit latrines? Probe for the challenges, culture, taboos, religion Etc...
- 6. In this community, are there some people who are against the household pit latrine use?
- 7. If yes, probe for reasons-taboos, attitudes, cultures, religion etc...
- 8. What is the general perception of the community on household latrine availability and usage
- 9. In this community, children normally start using the pit latrines at what age? Probe for reasons
- 10. Before children start using the latrines, where do the household members normally dispose off their excreta?-probe for the reason why?
- 11. How do you associate and interact with people who do not have latrines in their households in this community?
- 12. In this community, are there some byelaws that have been set by the local authorities to enforce on the availability and usage of household latrines? –probe for some actions

- 13. What do you think about these bye-laws on house hold latrine promotions?
- 14. In your opinion, what do you think was done well and what was not done well in the effort to scale up household latrine availability and usage
- 15. What do you think can be done to improve on the efforts to increase on the provision and use of house hold latrine use in these communities?-Probe for some support, facilitation etc...
- 16. What are some of the activities being carried out in the sub-county to involve women in the decision making ion household latrine availability and usage?

# THANKYOU FOR YOUR PARTICIPATION, COOPORATION AND THE TIME:

# ANNEXX V OBSERVATION CHECKLIST FOR HOUSEHOLD LATRINE AVAILABILITY AND USAGE IN PURANGA SUB-COUNTY:

Parameters	Sample Question	Yes	No
Availability of household latrines and the usage	a)Does the household have a latrine in use? b)Does the household have tight fitting squat Hole cover? c)Is there a clear sign in place that the latrine is being used?		
Durability of the latrine and it's maintenance	<ul><li>a) Is the materials used for the construction of latrine wall, floor and roof strong enough?</li><li>b) Is the latrine being constantly repaired and maintained regularly?</li></ul>		
Excreta free surroundings/compound for the household	<ul><li>a)Are there human feaces seen scattering all over the surroundings including compound of the households</li><li>b) Is there free open spaces set aside by individuals for open defacation?</li></ul>		
Availability of and washing facility and it's usage	a)Does the household latrine have a hand washing facilities attached to it? b)Does the household have soap for hand washing? c)Does the household have enough water in the hand washing facilities? d) Do he household members wash their hand immediately after using the latrine?		

# ANNEXX V1 KEY INFORMAT INTERVIEW GUIDE. Interviewer's Name..... Name and position of interviewee ..... a) Household latrine availability and usage programmes. 1. Is there any programme dealing with scaling up of household latrine availability and usage in this sub-county? Y/N 2. Describe how the programme is being implemented in terms of participation, training, coordinations, enforcement of bye-laws, mobilization and sensitization record keeping and reporting. ..... 3. What are the steps under taken in the introduction of the programme to scale up household latrine availability and usage at community level. 4. Who is responsible for coordinating the activities to scale up household latrine availability and usage in the sub-county? 5. Is there a functional sub-county health coordination committee for the sub county? Y/N 6 How frequently does this committee meet for their meetings?.... b)Supervision 7. What supervision and support was received for the scaling up of household latrine availability and usage in Puranga sub-county form: District

Others		
Name of NGO	Types of suppor	rt
1		
2		
3		
b) Monitoring		
8.Is there a monitoring proce	esses for activities connected t	to scaling up of household latrine
availability and usage in Pura	nga sub-county?	
-		
	om household hygiene	
d) Reporting		
_	sahold latring coverage and use	ge have been submitted to the MOH
last year (2012)?	senord ratific coverage and usage	ge have been submitted to the MOII
. , ,	nice of the nonente forwarded)	
(Interviewers should check co		
Categories	Reports available	Reports observed
11. If the observed report is le	ss than 6, then indicates why it	is less than six (6).
12. Describe other intervention	ns, activities, or programmes th	hat are being carried out in the sub-
county that have influenced or	n the household latrine availabil	lity and usage?

THE END