

The Health and Socio-Economic Status of the Buvuma Main Island Community in Buvuma District, Uganda

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Abstract

Background: Uganda Christian University's Department of Public Health with Buvuma District local government, the local communities and the local Anglican Church of Uganda conducted a study to assess the household health and socio-economic status of communities on Buvuma's main island.

Methods: The Study design was cross-sectional and descriptive. The sample was 212 households and data were collected using Pretested Questionnaires, Focus Group Discussions, and Key Informants Interviews.

Results: Most respondents (59.9%) were female, aged 18-59 years (89.9%) with primary education (48.1%). About 21% of respondents had no formal education. Housing was mainly (73.1%) one or two roomed with earthen floors in 84.4%; the lake was a source of water in 41% of households and water was used untreated in 36.8% of households; latrine coverage was 62.7%. Wood (70.5%) and charcoal (29.5%) were the energy sources for cooking and solar energy was used for lighting in 54.3% of the households. Malaria was the commonest cause of morbidity; 100% of households had nets, but 32.1% did not use them. 92% of mothers received antenatal care but 88.2% delivered in health facilities. Income was mostly from subsistence farming (74%) with per capita income of 20,000 to 50,000 Uganda shillings for 45% households. Most income (54%) was spent on children's education. About 50.9% of respondents did not own land but 89.6% had a garden to grow food.

Conclusion: Overall, the study community, in a hard to reach island district, had poorer health and socio-economic indicators than the Country.

Keywords: Hard-to-reach; Buvuma; Island; Survey, Household, Health and Socio-Economic Status.

Introduction

This study was conducted in the hard-to-reach Buvuma Island District by Uganda Christian University's Department of Public Health, in partnership with Buvuma District Officials, the local Anglican Church of Uganda (COU) and the Local Communities. The Uganda Bureau of Statistics (UBOS) Census Report of 2014 states that at national level, 71% of Uganda households had access to safe water and 92% had access to a toilet facility, whereas in Buvuma District the same report stated that less than 50% of population in Buvuma District had access to latrines and less than 50% of the population had access to safe water implying that the district had poorer health indicators than at National level. This study was conducted to provide district specific baseline socio-economic

and household health indicators to inform evidence based public health and other interventions by the District Local Government, the Church and Uganda Christian University.

Methodology

Study design

It was mixed, cross-sectional and descriptive with the household as the unit of analysis.

Selection of the study area

The setting was the hard-to-reach Buvuma district comprising 52 islands in Lake Victoria. The main Island was purposefully selected since it has 16% of the 89,960 people residing in the district (UBOS, 2014). Buvuma's official link to the mainland is one government ferry which works thrice a day on working days and twice a day on weekends or public holidays. The

district's Health Centre level IV functions as the referral health facility headed by the only Medical Officer in the district. The population in Buvuma district is heterogeneous comprising indigenous Islanders who are mostly peasants and fishing communities which are mobile with no permanent settlements.

Sample size determination

The minimum sample for quantitative data, using the 1963 Formula by Cochran, was 207 households. $N = \frac{(P-P^2)Z^2}{d^2}$ N being the sample, p the estimated proportion of households with a mosquito net which according to UBOS (2017) was about 0.84. Household ownership of mosquito nets is used as one of the key indicators of household health (UBOS, 2017); Z corresponding to 95% confidence interval is 1.96 and d being the maximum error allowed in the study which was 0.05. For qualitative data, 16 key informants and 4 FGDS were purposively selected.

Sampling technique

From the main island, three sub-counties, one fishing community, 16 key informants (KIs) and participants in the 4 FGDS were purposively selected. Five parishes were randomly selected from the three sub-counties. The parishes had a total of 30 villages from which the households were randomly selected. With guidance from local council officials, it was assumed that a typical village on the island had about 30 households and therefore, to achieve the desired minimum sample of 207, a sampling interval of 4 or 5 was used depending on the size of the village.

Data collection

Questionnaires and checklists were used to collect quantitative data from the households in the month of June 2017. Key Informant Interview guide and a Focus Group Discussion Guide were used for qualitative data. The tools were specifically designed and pretested for the survey. Research Assistants recruited from the local and University communities were trained on the survey objectives and use of data collection tools.

Data analysis

Quantitative data was analyzed using the SPSS version 20. Qualitative data was

transcribed, encoded and analyzed manually and the findings used to triangulate those from the quantitative analysis.

Ethical considerations

The proposal was submitted to Uganda Christian University Research Ethics Committee (REC) for approval; permission to conduct the study was granted by the Buvuma District Officials.

Findings

Response rate

The actual quantitative sample was 212 households and a checklist filled per household. For qualitative data, there were four (4) FGDS and sixteen (16) Key Informant Interviews (KII).

Demographic characteristics of the respondents n=212

The majority of respondents (89.6%) were aged between 18 and 50 years; they were peasants (83.5%) and mostly female (59.9%); married (81.1%) and with a primary level education (48.1%). A substantial proportion (21%) of the respondents had no formal education (Table two).

Household Health Status and access to health services n=212

The commonest illnesses in the households were Malaria (85.4%) and respiratory infections (26%) which was confirmed during the KIIs and FGDS. Approximately 100% households owned insecticide treated mosquito nets (ITNs) received from government sources (77.8%) or bought from shops (22%) but 32.1% of the households did not use their ITNs. Majority of respondents (70.8%) cited Kitamiro HCIV, which serves as the district hospital, as the nearest health facility. Transport costs to health facilities was an average of 6,500 Uganda shillings (1 USD = 3700 Shillings) with motorcycles as the quickest means of transport for 68.4% of the respondents. The majority of respondents (54.2%) lived beyond the WHO (2015) recommended five-kilometer distance from the nearest health facility. The services at the Health Facility were free for over 95% of the respondents although 4% indicated that they made under the table payments and only 12.3% got all the medicines they needed all the time

from the public health facility. About 84.4% of the respondents said that health workers were kind and friendly (Appendix VIII Table 8). The FGDs and KIIs reported gaps standing at approximately 71% and 65% of the required staffing at HC1V and at the lower health facilities respectively. Participants in the FGDs and KIIs interviews reported serving people from fishing communities from neighboring districts and yet the supply of medicines was determined according to the population in Buvuma. According to KIIs and FGDs, there were hardly any Youth friendly services on Buvuma Main Island. The only related services were the Safe Medical Male Circumcision (SMMC) and distribution of condoms among the youth. Apart from government health facilities, households used private clinics (69.8%) and drug shops (21.7%). Use of herbalists was mentioned by about 4% of the respondents. Approximately 13% of the households in the survey had experienced a death of a family member in the twelve months preceding the survey with 14.8% of the deaths being maternal deaths. Malaria (37%) and AIDS (10%) were the commonest causes of death, although HIV & AIDS was not mentioned among the common illnesses in the households. Other causes of death (33.3%) included drowning, Anemia, Bilharzia, Cancer, Sickle Cells, TB, Tetanus and Yellow Fever. The highest proportion of deaths (52%) in the community occurred among children five years and below. The in-depth interviews indicated that there were no cases of maternal deaths reported at the time of the survey and that the uptake of maternal health care at the health facility was low with about 4 – 6 deliveries in a day, with some mothers being delivered by TBAs and others going to the mainland.

Children of the 212 households, 56.6% had more than four children under five years with 66.5% being fully immunized. Immunization uptake was said to be good with children immunized any time they visited a health facility. In 59% of the households only the older children were at school while in 33.3% cases all school age children were in school. The children attended mostly (73.6%) private schools. KIIs and FGDs indicated that education was lacking in accessibility and quality. Some schools were reported as having no latrines, classrooms or qualified teachers. The only secondary school on

the Main Island was said to be private and not well equipped. The school dropout rate was reported to be high especially affecting the girl children who dropped out of school at primary level due to early marriages and teenage pregnancy. The commonest illnesses among children were Malaria (84%) and respiratory infections (31%). Households with children with a physical disability were 19.3% and 30.7% had an orphaned child.

Family planning services

57.5% of the households in the survey had no access to formal Family Planning (FP) Services in health facilities. The majority of mothers (92%) accessed antenatal services from health facilities and 88.2% had delivered at health facilities where services were said to be free in 80.3% of cases.

HIV and AIDS

Most Respondents (82.1%) had ever seen a person living with HIV and 10.9% had lost a person to HIV & AID within 12 months preceding the survey; 12.6% of the respondents knew a family member who was on treatment for HIV and 90% knew the treatment to be ARVs. The treatment venue was largely the health facility (81.8%) and the treatment was known to be free (77.3%). In 55.2% of the households, people were said to be freely talking about their HIV status. From in-depth interviews, HIV&AIDS was reported to be very common ranking Buvuma as having the 3rd highest HIV prevalence in Uganda due to the high mobility of the population in Buvuma. The health centers were reported to be well stocked with ARVs but sometimes people were said to fear going for either testing or treatment due to the attached stigma. According to FGDs and KII, it was revealed that when people got weak, they would go to their home areas in other districts and die there and that sometimes AIDS related deaths were attributed to witchcraft.

Water and Sanitation n=212

There were no latrines in 37.3 % of the households attributed to either the soil being waterlogged, rocky or sandy (47.8%) or to unaffordability (25.4%); This was confirmed by the KIIs and FGDs. Kirongo landing site's one latrine was used by about 300 people and it had filled up. Open defecation was reported in the

FGDS as a common practice partly because of myths. One respondent said; *“If I use a toilet that night, I will not catch fish”*. In the municipality, there was no clear system to manage waste which was mostly burnt. On the checklist (Appendix V), 62.7% of the households had latrines, but approximately 50% of them were not useable and 44.3% of the households had no defined path to latrines to indicate regular usage. The majority (80.2%) of the observed latrines had no anal cleansing materials and only 36.3% had a hand washing facility. About 34% of the households had water harvesting facilities. There were no dish racks in 53.3% of the households. Most of the households 90.6% had a garden for food and 75.9% reported having an income generating activity such as piggery or local chickens.

Housing

In this survey, permanent houses were those built with fire backed bricks/stones/cement blocks and roofed with either iron sheets or tiles. Semi-permanent houses were made of mud and wattle and roofed with iron sheets or grass. The temporary houses were made of cardboards, tarpaulins, mats or dry banana leaves and roofed with grass. The findings indicated that the majority of the houses were either semi-permanent houses (47%) or temporary houses (30%) and one (42%) or two (31%) roomed.

Household fuel

Fire wood (70.5%), charcoal (29.5%) and solar (54.3%) were the energy sources for cooking and lighting respectively. The traditional smoky paraffin lamps (Tadooba) were used in 24.9% of the households. The KIIs and FGDs validated the main energy sources as being charcoal and fuel for cooking and solar for lighting.

Household Income, expenditure and food security

The households' income was 20,000-100,000 Shillings with the major sources of income being subsistence farming (74%) and small trading (21%). Fishing was a major source of income for 8.5% of households. The main areas of household expenditure were school fees (54%), food (26%) and medicines (16%). Although 50.9% did not own land, 89.6% had a

garden where they grew food and 74.5% of the households said that they had sufficient food.

Discussion

Demographic Characteristics

The unit of analysis was the households and respondents were the household heads or any adult found at home. The respondents were mostly aged 18-50 years (89.4%); predominantly female (60%) probably because it was done during working hours of the day when most men were out working. This illiteracy rate of 21% among persons above 18 years was lower than the UBOS (2017) Buvuma area specific profile which was about 35.7%. This may be partly because the study was conducted on the main island which is more developed compared to other islands and therefore with a higher literacy rate. The respondents were predominantly peasants (84%) which contrast with the UBOS (2017) area specific profile showing that 43.9% of the households depended on substance farming. This could be due to the fact that the respondents were predominantly the indigenous Buvuma who are mostly substance farmers. The survey indicated that only 3.3% of the respondents depended on fishing as an occupation probably because the survey was conducted at a time when there was restriction on fishing across all lakes in Uganda (The Fishing rules, 2010).

Household Health Status and access to health services

Malaria was reported to be the leading cause of ill health in the households and its high prevalence may be partly explained by the non-use of ITNs (32%) even though all households in the survey owned at least one net. Nets are a core strategy in malaria prevention and when they are not used, prevalence may be high in endemic areas (WHO, 2017). The disease pattern in the survey on Buvuma Main Island was consistent with the Uganda Demographic Health Survey (UDHS) 2016 where the prevalence of Malaria among children less than 5 years in islands is 44%. According to the WHO (2015), a key indicator for measuring provision of equitable, safe and sustainable health services is “Population living within 5 km of a health facility”. In the MOH (2017/18) Annual Health Sector Performance Report, at national level, 86% of households in Uganda

were within 5 kilometers of a health facility and yet that of Buvuma Main Island was found at 46%. In the survey, 70.8% of respondents were using Kitamiro Health Centre IV, which is the district's referral health facility, as their nearest health facility. However, respondents had to spend an average of 6,500 Uganda Shillings (1 USD to 3700 UGX) to get to the health facility using motor cycles and yet the average monthly household income was 20,000-100,000 Shillings. This indicates that accessibility of health services among respondents on Buvuma Main Island was limited at least partly, by distance and out of pocket expenses. A few households (3.7%) mentioned the use of herbal medicine yet it is estimated that there is a traditional medicine practitioner for every 200-400 Ugandans (MoH, 2015/2020; De Coninck 2016). Respondents may have been reluctant to talk about going to herbalists because some people think that it is devilish (Galabuzi et al., 2009).

Child health

With more than 53% of households having more than four under-fives, children were a large proportion of the population in the households surveyed (UBOS, 2014). In the 13% households which experienced a death in the previous year, children contributed more than 50% of the deaths suggesting high child mortality. However, relatively high immunization coverage and the fact that none of the immunizable diseases were listed among the most frequent causes of morbidity, giving credit to the immunization program in the country. With 19.3% households having at least one child with disability and with more than 50% of households having more than four children imply that the disability distribution may be similar to the national rate of 1.6% and 1.8% for girls and boys respectively at national level (UBOS 2019).

Maternal, Child Health and Family Planning

The UDHS (2016a) indicated that 73% of births were delivered in a health facility and 55% of children received all basic vaccinations. Most respondents (88.2%) reported having delivered at a health facility while 66.5% of children received full vaccination. The findings from the in-depth interviews differed from the above statistics as communicated below; "...The

uptake of maternal health care services is very poor with about only 4 – 6 % deliveries being conducted in health facilities. The mothers prefer delivering by the help of Traditional Birth Attendants (TBAs)... I would have expected to have double digit numbers because the maternal ward is well equipped". The Uganda Ministry of Health (MoH) Annual Health Sector Performance report (2017/18) gave health facility delivery for Buvuma as 21%. The qualitative interactions with respondents, suggested that most of the women go the Mainland for delivery after antenatal care on the Island and this may explain the differences between the KIIs findings and the household findings. Antenatal services were used in 92% of respondents which is similar to 97.1% from the UBOS report of 2016 for islands in Uganda. Access to FP was limited (57.5%) and among those who had access, 97.1% received only counseling on child spacing and information on the different FP methods. Supplies for other health needs were also limited with only 12.3% of prescriptions filled at the health facility. At national level, the contraceptive prevalence rate (CPR) is also still low at 39% implying that in hard to reach areas, CPR may be much lower (UDHS 2016a). A maternal death was reported in 14.8% of households in the year preceding the survey although the District Health Officer reported that they had not registered a maternal death in the same period. The discrepancy may be related to the fact that most pregnant women at Buvuma may be going to the main land to deliver.

Youth Friendly services

Absence of Youth Friendly services (84%) was a sign that the health needs of youths and adolescents are neglected and yet the population of Uganda is 21% youth (UBOS 2016). This will slow progress towards SDG3 target 7 (UN, 2016).

HIV/AIDS

The findings suggested high levels of HIV/AIDS awareness and prevalence with those infected on free ARV treatment which was available at the HCIV. These findings were consistent with the Uganda Aids Commission Report (2018) report on HIV/AIDS in Uganda and the UDHS (2016a). The availability and use of free ARVs, which improve general health,

may partly explain why HIV/AIDS was not mentioned among the commonest illnesses among households and yet awareness appeared to be high.

Water and Sanitation

According to the Buvuma area profile report (UBOS 2017), more than 50% of households on the Main Island do not have access to safe water. This resonates with the study findings that 41% of the households depended on the lake as the main source of water which exposes the community to water borne diseases such as schistosomiasis, cholera and shigellosis which kill millions of people each year globally (WHO,2010). In this survey, Schistosomiasis was not reported as one of the common diseases by household respondents although, one of the KI said that an unpublished survey that had been conducted on Buvuma Main Island, indicated that over 90% of school children tested positive for Schistosomiasis. According to previous studies, (Nalugwa et al 2015) the prevalence of Schistosomiasis on the shores of Lake Victoria is about 39%. Literature suggests that many patients with schistosomiasis are asymptomatic or have subclinical disease and this may explain the lack of awareness seen in areas endemic with the disease (Kabaterine et al., 2014; CDC, 2018). In the Survey 36.9% of the respondents drank water from the lake without filtering or boiling it partly because of cultural beliefs. One of the Key informants stated that, “...*Changing people’s attitude is very difficult. Like telling them to boil water is hard because people have a belief that when water is boiled, the taste changes...*” The fact that 36.8% of the respondents were not doing anything to make their drinking water safe could explain why diarrhea, skin and respiratory diseases were among the commonest causes of morbidity among the surveyed households. For sanitation, 62.7% of the households had latrines but most of these were not functional and were not being used since observations using a checklist showed that there were no defined paths to the latrines from the main house. Approximately 50% of the latrines were not useable based on their observed state. The Buvuma pit latrine coverage is below the national average of 91.9% households with latrines (UBOS 2016). The low literacy levels, poverty, challenging soils (water

logged, sandy or rocky) and mobile populations may partly explain the low pit latrine coverage.

Housing

The findings were similar to the Buvuma district profile report (UBOS, 2017), where 67.5% houses were semi-permanent, 3.6% were permanent and 28.9% were temporary. The type of house affects the general health of the occupants especially the children because temporary or semi-permanent houses may be breeding grounds for parasites and vectors since keeping them clean is a challenge. Most of the houses in the study were either one (42%) or two (31%) roomed and yet over 53% housed more than four children under five years which implied congestion. The Buvuma district profile specific report (UBOS 2016) had similar findings where nearly 50% of houses were one roomed. Most of the housing structures including school buildings were temporary. The quantitative information tallied with the qualitative information obtained from FGD and KIIs. For example, one respondent said, “...*they do not have good structures. One school does not have any structures at all...*” Poor housing is associated with many health challenges including spread of infectious diseases, injuries and indoor air pollution which increases the risk of respiratory and cardiac problem (WHO, 2010).

Household Fuel

In the survey, 100% of the households used either firewood or charcoal as fuel for cooking as the case is in other parts of Uganda (UBOS, 2016; UBOS, 2017). The health implications of biomass use include household indoor pollution and increased prevalence of respiratory diseases (WHO, 2018; Bruce et al., 2000; Fullerton et al., 2008; Amegah & Jaakkola, 2015; Belkin, 2018). The use of firewood and charcoal may have negative environmental effects associated with deforestation if more wood than is growing, is used (EIA, 2020; Wu et al, 2018). The use of Solar energy for lighting was in 54.3% of the households compared to 7% found in the national census of 2014 implying rapid growth in solar use for lighting UBOS (2016).

Household Income, expenditure and food security

Monthly household income, mostly from subsistence farming (73.6%), was low 20,000-100,000 Shillings compared to the national per capita monthly income of 135,000 Shillings in the same period (1\$ is equivalent to 3,700 Uganda shillings). Buvuma being predominantly rural and hard to reach with little development, low per capita income and associated health consequences is not surprising. Most income was spent on school fees (54%) since most children (73.6%) were said to be going to private schools. Households are food secure when they have access to the amount and variety of safe foods their members need to live active and healthy lives. At household level, food security is the ability of the household to secure, either from its own production or through purchases, adequate food for meeting the dietary needs of all members of the household (Clover, 2003). The survey findings revealed that although 74.5% said they had sufficient food, less than half of the respondents (49.1%) owned land which may be a threat to food security at household level since majority were peasants. The coming of Developers who are buying off and sometimes grabbing land from the local people, may lead to food shortage in the future (National Association of Professional Environmentalists, 2012).

Conclusion

The survey population had a lower income per capita than the national statistic. They were mainly peasants, with a high level of illiteracy, poor access to safe water and low pit latrine coverage. Housing was largely semi-permanent with one or two rooms and with most households accommodating more than four children below five years which implied congestion. The population relied on wood and charcoal for cooking and solar energy for lighting. Households were food secure although this was being threatened by the increasing sale of land to developers. Malaria, respiratory and skin infections were the commonest illnesses. HIV was not highlighted as a major health problem probably due to access to antiretroviral treatment which improve general health. Schistosomiasis was not reported as a health problem among the households although the

district authorities reported it as a serious health problem especially among school children. There is limited access to healthcare facilities with the majority of households living beyond the recommended five kilometres from the nearest health facility. There was limited availability of family planning services with the respondents only given counselling and information on child spacing where family planning services existed. The households had access to mosquito nets but about one third did not use them.

Recommendations

- i. The Buvuma District officials should lobby Government to upgrade the district's HCIV to hospital status so that it can access more national resources.
- ii. The district's health department should work with the local community leaders to sensitize communities on health issues such as drinking boiled water, using insecticide treated nets, family planning and improving sanitation.
- iii. Households should be empowered to build affordable pit latrines using the technology appropriate for the district's environment.
- iv. The University, in collaboration with the District's Local Government should carry out a Survey to measure the prevalence and identify factors associated with Schistosomiasis so that evidence-based interventions can be affected.

Recommendation for further study

Schistosomiasis, based on Key Informants in this baseline, is a serious health issue but awareness of the problem in the community seems to be very low. A study designed to establish the prevalence of this disease would inform and underpin any efforts to raise awareness and to design interventions.

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Appendices

Appendix I Table 1. Number of Villages in the Selected Parishes

Parish	No of Villages
Lunyanja	7
Kirongo	7
Tome	6
Buwanga Ward	5
Buwanga Central Ward	4
Lukale numba emu	1
Total	30

Appendix II Table 2. Demographic Characteristics of the Respondents

Characteristic	Category	Frequency(n=212)	Percent
Age(years)	18 – 28	61	28.8
	29 – 39	84	39.6
	40 – 50	45	21.2
	Over 50	22	10.4
Gender	Male	85	40.1
	Female	127	59.9
Marital status	Married	172	81.1
	Single	14	6.6
	Separated	8	3.8
	Cohabiting	15	7.1
	Widowed	3	1.4
Religion	COU	27	12.7
	Roman Catholic	70	33.0
	Pentecostal	43	20.3
	Muslim	56	26.4
	SDA	12	5.7
	Other	4	1.9

Level of education	None	45	21.2
	Primary	102	48.1
	Secondary	57	26.9
	Tertiary	8	3.8
occupation	Fisherman	7	3.3
	Peasant	177	83.5
	Civil Servant	4	1.9
	Other	24	11.3

Appendix III Table 3: Housing

Characteristic	Category	Frequency	Percent
Type n=212	Permanent	45	21.2
	Semi-permanent	103	48.6
	Temporary	64	30.2
Number of rooms n=212	One	89	42.0
	Two	66	31.1
	More than two	57	26.9
Type of floor n=212	Earthen	179	84.4
	Screed Cemented	32	15.1
	Other	1	0.5

Appendix IV Table 4. Water and Sanitation (Multiple responses given)

Characteristic	Category	Frequency	Percent (%)
Source of water	Protected spring /well	85	40.1
	Harvested rain water	2	0.9
	Municipal water	4	1.9
	A spring/borehole	18	8.5
	A stream	16	7.5
	Lake	87	41.0
Safety of Drinking water	Boiling	125	59.0
	Filtering	5	2.4
	Water guard treated	4	1.9
	None	78	36.8
Storage of Drinking Water	Earthen pot	69	32.5
	Jerry cans	138	65.1
	Saucepan	2	.9
	Other	3	1.4
Availability of latrine	Present	145	68.4
	None	67	31.6
Reasons for the absence of a latrine(n=67)	Cannot afford	17	25.4
	Soil rocky/sandy/waterlogged	32	47.8
	No space	12	17.9
	Use public toilet	6	9.0
Garbage disposal	In the bush	64	30.2
	In the lake	1	.5
	By burning	45	21.2
Other means of garbage	Rubbish pit	59	57.8
	Garden/banana plantation	33	32.4

disposal(n=102)	Dustbin	9	8.8
	Any where	1	1.0

Appendix V: Table 5. The Observation Check list

Observed Facility	Present		Absent	
	Freq.	%	Freq.	%
Presence of a latrine	133	62.7	79	37.3
Well defined path to the Latrine – evidence of frequent use	118	55.7	94	44.3
The Latrine has Anal cleansing materials	42	19.8	170	80.2
Facility to wash hands after Latrine use	77	36.3	135	63.7
Facility for harvesting rain water	72	34.0	140	66.0
Dish Rack for drying dishes	99	46.7	113	53.3
A garden for food	192	90.6	20	9.4
Any income generating activity	161	75.9	51	24.1

Appendix VI Table 6. Sources of Household Fuel and Lighting

Characteristic	Category	Frequency	Percent
Source of energy for cooking Multiple responses given (n=234)	Charcoal	69	29.5
	Firewood	165	70.5
Source of energy for lighting Multiple responses given (n= 221)	Solar	120	54.3
	Paraffin lamps	55	24.9
	Candles	29	13.1
	Battery	5	2.3
	Torch	12	5.4

Appendix VII Table 7. The Nearest Health Facility

Facility	Frequency	Percent
Kitamiro HC IV	150	70.8
Bukayo HC III	37	17.5
BusamuzI HC III	16	7.5
Others	9	4.2
Total	212	100.0

Appendix VIII Table 8. The Attitude of Health Workers

Attitude of health workers	Frequency	Percent
Kind and friendly	179	84.4
Do not care & unfriendly	31	14.6
Come late to work	2	0.9
Total	212	100.0

Appendix IX Table 9. Experience of HIV/AIDS

Variable	Response category	Frequency	Percent
Has ever seen anyone with HIV&AIDS (n=212)	Yes	174	82.1
	None	36	17
	Not sure	2	0.9
Ever lost any member of this Household to HIV & AIDS (n=174)	Yes	19	10.9
	No	155	89.1
Household has known a family member to be currently living with HIV (n=174)	Yes	22	12.6
	No	152	87.4
Is this person on treatment with ARVs (n=22)	Yes	20	90.9
	No	2	9.1
Source of ARVs (n=22)	At a health facility	18	81.8
	At a clinic nearby	1	4.5
	I do not know	3	13.6
Cost of this treatment(n=22)	It is free	17	77.3
	I do not know	5	22.7
Do people freely talk about their HIV status? (n=174)	Some do	96	55.2
	Never	78	44.8