



Socioeconomic and demographic profiles of households with children aged 6-59 months, Mbita Division, Suba District, Kenya

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Abstract

Household socioeconomic and demographic characteristics have been shown to have significant influence on nutrition and health status outcome. Their role in nutrition and health status of individuals infected or in households affected by HIV cannot therefore be ignored. Several studies and scientific literature have identified socioeconomic status (SES) as powerful determinant of health status. In fact, today health disparities as a result of SES have become important issues of public health concern worldwide. Higher morbidity and mortality among people with lower SES have been extensively reported. Moreover, household SES has been shown to have great influence on the nutritional quality of children's diet in turn affecting their nutrition status. The survey was carried out to establish the socioeconomic and demographic characteristics of households with children aged 6-59 months in Mbita Division, Suba District. A descriptive cross-sectional survey study was conducted in three sub-locations. Also a pre-tested structured questionnaire was administered in 265 households with at least one child aged 6-59 months inclusive. Verbal consent was sought before the questionnaire was administered. Data obtained was coded, edited and statistically analyzed using SPSS software. Over 30% of the study population was children under-five, followed by those in the 16-25 age-ranges (23%). The average household size was 4.8. Overall, the study area has young population with 92% falling between 0-36 years, an indication of low life expectancy. Females (53.9%) constituted more than half of the total household members (n = 1278), while males constituted 46.1%. A large proportion of the households were male-headed (87.2%) compared to 12.8% headed by females. Thirty nine percent of the households belong to the protestant religion, followed by Seventh Day Adventists (36.1%). Literacy level in the study population was relatively low, 56% has primary education, < 18% and 5% secondary and tertiary education respectively. The study also revealed high level of unemployment rate in the study area, with 17.1% involved in unpaid employment. Finally the majority of the households fall within the low SES with deepening poverty background depicted by low educational achievement, occupational status and small land holding acreage. Attention to education and poverty alleviation programs might assist in curbing the possible negative effects associated with low SES on the nutrition and health status of members of such households.

Key words: Socioeconomic, HIV/AIDS, household, children 6 months – 5 years, Suba District.

Introduction

Household socioeconomic and demographic characteristics have been shown to have significant influence on nutrition and health status outcome. Their role in nutrition and health status of individuals infected or in households affected by HIV cannot therefore be ignored. Several studies and scientific literature have identified socioeconomic status (SES) as powerful determinant of health status¹. In fact, today health disparities as a result of SES have become important issues of public health concern worldwide². Higher morbidity and mortality among people with lower SES have been extensively reported³⁻⁵. Moreover, household SES has been shown to have great influence on the nutritional quality of children's diet in turn affecting their nutrition status⁶⁻⁹. For example, Crawford and colleagues in one of their study on analysis of data from the NHLBI National Health and Growth Study in the United States found an inverse relationship between kilocalorie intake from fat and parental education and income⁶. In a more recent study, Kikafunda and colleague have found a significant and positive correlation ($P < 0.05$; $R^2 = 0.068$) between household size and childhood malnutrition. This study found that children from large households (>5) have high chances of being underweight than those from small households (<5 people)¹⁰.

Existing literature also shows that maternal socio-demographic factors including education, income and control of household income highly influence children eating patterns, choice of infant feeding method, care and health outcomes¹¹. Many studies have found positive correlation between maternal control of resources and child's nutrition status. Compared to men, women tend to allocate their resources towards nutrition inputs like food, making them key promoters of household food and nutrition security. Therefore, in regions hard hit by HIV and AIDS, particularly in the Sub-Saharan Africa such as Suba District in Kenya, the importance of data on household socio-demographic characteristics need not be emphasized (Table 1).

HIV/AIDS and nutrition are closely linked and the relationship between them is well recognized¹². When HIV gets into the body of a human being, it destroys the immune system, thereby compromising the nutritional status of the infected individual(s) and, in turn, poor nutrition hastens the progression of HIV to AIDS^{12,13}. This interaction is likely to cause growth retardation in children leading to a vicious cycle of malnutrition-infection complex. This cycle is likely also to be worsened by poor SES (Table 1). Poorly nourished persons, particularly children, are more

susceptible to many infections and their infections are often more severe and prolonged¹⁴. When a child is mildly malnourished, the mortality risk is increased in the event of infection. The objective of this study was to establish the socioeconomic and demographic characteristics of households with children aged 6-59 months in an area reported to have a high prevalence of HIV/AIDS.

Table 1. Vital statistics of Ministry of Health, Suba District.

Indicator	Value (2006)
Population	174,524
Population growth rate %	2.9
Population density/km ²	147
Crude birth rate per 1000	49.9
Total fertility rate per woman	5.9
Percentage of birth to women aged 15-19 years	16.5
Mean age at first birth, years	18.9
Mean age at first marriage, years	Males 24.6, females 19
Crude death rate per 1000	23.9
Infant mortality rate per 1000	146.9
Under 5 mortality rate per 1000	247
Life expectancy at birth, years	Male 36.5, females 42
Sex ratios	1:1
Percentage of population ages <18years	53.6
Percentage of population ages <55years	6.4
Median age, years	17.2
Percentage of unborn population	5.1
Women of reproductive age	41,886 (24% of total population)
Population aged 15-49 years	80,282 (46% of total population)
Population aged 5 years and above	139,619 (80%)
Population under five years of age	34,907 (20% of total population)
Population sexually active	19,268 (24% of population in reproductive age)
Population 6 months to 59 months	31,415 (18% of total population)
Expected pregnant women	7,854 (4.5% of total population)

Materials and Methods

Area and population study: The study was conducted in Mbita Division of Suba District located on the Southwestern part of Kenya along the shores of L. Victoria. Suba District borders Bondo to the North across the lake, Homa bay to the east, Migori to the south and Lake Victoria to the west. It is located between the longitudes 34°E and 34°20'E and latitudes 0°20'S and 0°52'S and comprise of 16 islands. The district covers an area of 1056 km² exclusive of water surface, which also covers an area of 1190 km². According to the 1999 population and housing census, the district has a total population of 174,524 people with an annual growth rate of 2.9%¹⁵. Mbita Division was purposively selected for the study and three sub-locations, namely Township, Kayanja and Kaswanga, participated in the study. The study targeted households with at least a child aged 6 to 59 months. Village elders helped in the identification of the households.

Study design and participation: A descriptive cross-sectional survey study was carried out in Mbita Division, Suba District in May 2006. This study covered three sub-locations in three locations of Mbita Division described in the above section. A total of 265 households with at least one child aged 6 to 59 months were surveyed. The sample was proportionately distributed to the three sub-locations using population proportional sampling procedure. Structured questionnaire was developed for the purpose of this study and pre-tested before the actual study.

After pre-testing, the questionnaire was modified according to cultural sensitivity. It sought information about the socioeconomic and demographic characteristics of the household, food consumption practices and production. The questionnaire was administered to the principal caregivers in the household who were responsible for family meals, food production as well as the care of the under-fives. Each interview lasted between 35 to 40 minutes. Observations were also made on the general health status and conditions of children under-five years. The random walk method was used to select the target households. A team of two interviewers started from the middle of the village and moved in one direction to select every third household with the index child. Verbal consent was sought and the respondents were assured of the confidentiality of the information they provided and interviews proceeded following their consent. A village elder accompanied interviewers and introduced them to the households. To ensure quality control of data collected, completed questionnaires were cross-checked for consistency continuously.

Data analysis: Collected data was edited, coded and analyzed using Statistical Package for Social Sciences¹⁶. Descriptive summary statistics such as frequencies, proportions, means and percentages were used to describe socioeconomic and demographic profiles of the study population. Inferential statistics was used to establish relationship between research variables. Chi-square (χ^2) was used to test for significant differences. A p-value of <0.05 at the confidence level of 95% was considered significant. In addition, analysis of variance (ANOVA) was used to establish differences in means.

Results

Socio-demographic and socio-economic characteristics of households: The details of household socio-economic and demographic characteristics are presented in Tables 1-3 and Figs 1 and 2. A total of 265 households (162 Township, 50 Kayanja and 53 in Kaswanga) were surveyed. A large proportion of the total household members (32.2%) were children under-five years old, followed by those in the 16-25 age-ranges (23%). More than half of the total household members (n = 1278) were female (53.9%), while males constituted 46.1%. The difference was, however, not significant at p>0.05. The average household size was 4.8 with Township, Kayanja and Kaswanga having 4.5, 5 and 5.6 respectively. The study findings also showed that overall, the study area has young population with 92% falling between the age brackets of 0-36 years, an indication of low life expectancy.

Most of the study population (>50%) were either under-five or still in school and not married. However, about 0.5% of married persons were less than 18 years. Notably, there were significantly (P<0.05) more females (15.4%) than males (7.6%) in the 16-25 years age group. Similarly there was a significant difference (p<0.05) among male-headed households (87.2%) and female-headed ones (12.8%). Further analysis revealed that slightly more than 25% of the household members were spouses to the household head, while children, grandchildren and other relatives constituted 53.9, 2 and 4.7% respectively.

Suba District has a total of 182 primary schools with a total population of 48,743 pupils, of whom 25,574 (52.47%) are boys and 23,169 (47.53%) are girls. There were a total of 5,072 (10.41%) orphans in schools at the time of the survey. Mbita Division

with 51 primary schools had a total pupil population of 13,660, with 6,983 number of boys and 6,677 of girls. Mbita had a total of 1,396 (10.22%) orphans in the schools. The other divisions had orphans ranging between 1,624 (Gwesi) highest and 418 (Mfangano) lowest. The total percentage of orphans in schools for Suba District is 10.41% (Table 2).

Thirty nine percent of the households belonged to the protestant religion, followed by Seventh Day Adventists (36.1%). Catholics, Muslims, those with no religion and others including traditional constituted 19.8, 1.8, 1 and 2.3% of the total population respectively.

Table 2. Distribution of primary schools and orphans by division.

Division	No. of schools	Boys	Girls	Total	Orphans
Mbita	51	6,983	6,677	13,660	1,396 (10.22%)
Gwesi	55	8,649	7,704	16,353	1,624 (10.04%)
Central	28	4,499	4,088	8,587	877 (10.21%)
Mfangano	24	2,084	1,922	4,006	418 (10.43%)
Ambwe	24	3,359	2,778	6,137	757 (12.34%)
Total	182	25,574	23,169	48,743	5,072 (10.41%)

Source: Ministry of Education, Science and Technology, Suba District.

Literacy and education levels: Fig. 1 shows the distribution of household members by education level, while Fig. 2 shows their distribution by sex and education level. It is clearly evident from the results that a large proportion of the study population (78%) had at least some formal education. Those with primary education constituted 47.2%. Nevertheless, despite the large proportion who attained primary education, the percentage that proceeded to secondary and tertiary level of education were <20 and 5% respectively. About 1% had no formal education at all, while 17.7% were preschoolers.

When data was disaggregated in terms of males and females, it emerged that more females than males attended primary school, while the reverse was true in secondary and tertiary levels of education (Fig. 2). The differences were, however, not significant ($P>0.05$).

Nearly all the children (97%) were living with their biological mother, while the rest with a principal caregiver who was mostly the grandmother. Only 0.8% of the mothers/caregivers had not attended school at all while 69.2% of them had attained primary education with most (62.8%) of them proceeding to upper primary. On the contrary, only 25.3, 4.4 and 0.4% proceeded to secondary, college and university respectively (Fig. 3).

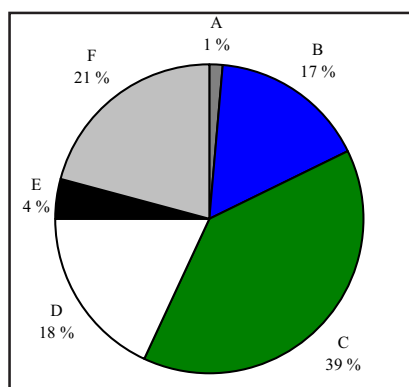


Figure 1. Distribution of household members by education levels.

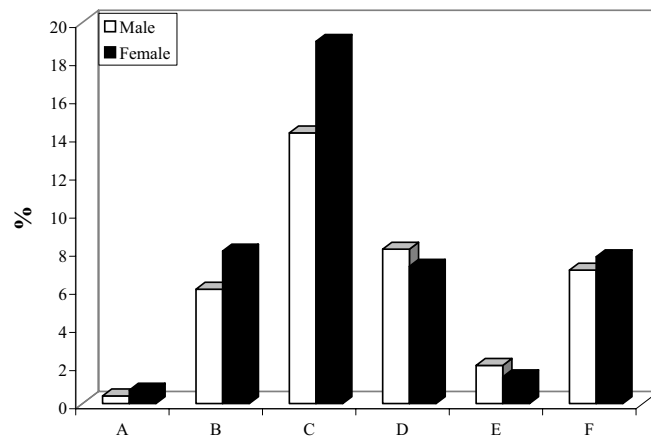


Figure 2. Distribution of household members by sex and education levels: A = not attended school, B = lower primary, C = upper primary, D = secondary, E = college/university, F = preschool.

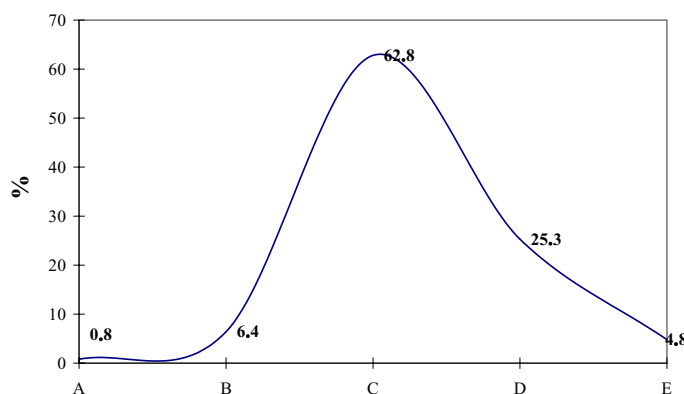


Figure 3. Distribution of maternal/principal caregivers by education levels.

Occupation status: The results show that 17% of the study population (≥ 18 years and above) was unemployed, while 5.4 and 4.1% were in temporary and permanent employment respectively. Sixteen percent were involved in their own private business. Fishing is the major economic activity in the study area. Fishing and fishing-related activities constituted 16.2%, while 4, 5.2, 4.5, 1.3 and 8% were small-scale farmers, *jua kali* artisans, casual laborers, teachers and business people respectively. More females (12.1%) were significantly ($p<0.05$) involved in unpaid employment (housework, childcare and small-scale farming) than males (4.9%). On the other hand, significantly ($p<0.05$) more males (7.4%) were involved in paid employment than females (2.1%). The results further indicate that majority in unpaid employments had low levels of education (primary school) (Table 3).

For the mothers/principal caregivers, slightly more than half (56.2%) were engaged in unpaid employment while 4.2, 4.9 and 34.7% were in temporary, permanent employment and business respectively. A large proportion (36.3%) were businesswomen, followed by farmers (29.1%), fisherwomen and casual laborers at 5.7% each, teachers 2.6% and Civil servants 1.1%.

Table 3. Distribution of household members by sex, age group and marital status (N=1278).

Age group	Sex (%)		Marital status (%)					Total
	Male	Female	Single	Married	Separated	Widowed	*Not applicable	
Under 5 years	15.3	16.9	-	-	-	-	32.2	32.2
6-15	8.7	11.8	0.6	0.5	-	-	19.4	20.5
16-25	7.6	15.4	4.2	16.4	0.3	0.2	1.9	23
26-35	9.4	6.9	0.9	15.1	-	0.3	-	16.3
36-45	2.8	2.0	-	4.5	0.1	0.2	-	4.8
46 and above	2.3	0.9	0.1	2.4	0.2	0.5	-	3.2
Total	46.1	53.9	5.8	38.9	0.6	1.2	53.5	100

*Under fives and/or children/students still in school.

Land size and food production: At the time of the survey, 36.6% of the respondents reported that they were not farming. These results were not dependent on sub-locations or locations. The land holdings under cultivation ranged from <1 acre to 6 acres with a few individuals holding 7, 8 and 15 acres each. The mean land size was 1.1 acres. Those with one acre and below reported to be farming slightly less than half of the land (36.2%). The mean land size allocated to food crop production was 0.89 acres.

Discussion

The objective of this study was to establish the socioeconomic and demographic characteristics of households with children aged 6-59 months in an HIV/AIDS epidemic region. Children under-five constituted more than 32% of the total household members in the study area. This is an extremely vulnerable group. Several SES factors including low level of education of caretakers, large household size, low levels of income and orphanage due to HIV/AIDS have been found to have negative influence on the nutrition status of children¹⁰. Although the average household size reported in this current study is not very different from the national figure of 4.4 and that of Nyanza Province of 4.5¹⁷ and are in agreement with what has been reported in other studies elsewhere in Africa^{10,18}, it has serious implication to health and nutrition status of the study population. Provision of adequate nutrition in such families is not guaranteed. However, it is important to note that Township sub-location recorded lower household size compared to Kayanja and Kaswanga. Being an urban centre, most households consisted of young families with at most three children. Household size is a powerful determinant of nutrition status of children¹⁰.

Our findings also revealed that more than 87% of the households were male-headed, compared to about 12% that were female-headed. These are slightly different from the National and Nyanza Province figures reported in the Kenya Demographic Health Survey Report of 2003¹⁷. According to the KDHS 68.3 and 31.7% of households are male-headed and female-headed nationally, while 63.4 and 36.6% of households are male- and female-headed in Nyanza Province respectively. This is important for any organization that might want to initiate any economic empowerment or nutrition and nutrition-related program in the region. Disparities in nutrition status of children in male-headed and female-headed households have been extensively documented; with those in female-headed households having better nutrition compared to their counterparts in male-headed households¹⁹⁻²¹. In households where women have more control over resources, skewed allocation towards food and nutrition has been reported^{20,21}. In other studies,

maternal socio-demographic factors including education, income and control of household income has been found to influence children eating patterns, choice of infant feeding method and health outcomes¹¹. Mothers and women in general are more likely to spend their extra income on nutrition inputs, particularly food.

The literacy level in the study population was relatively low (Table 4). Although more than half (56%) of the population had primary education, less than 18 and 4% proceeded to secondary and tertiary level respectively. This trend clearly shows a high level of educational wastage. Not surprisingly though, the trend is not very different from the national figures, which showed that 59.6% have had primary education with only 13.5% proceeding to secondary school and 4% proceeding to colleges and universities¹⁷. One of the key findings of the present study was that nearly all the children (97%) were living with their biological mothers. The rest live with principal caregivers (mostly the grand mothers). Of all the mother/caretakers only about 0.8% had not attended any formal school at all while 69.2% of them had attained some primary education. The study also showed that there are many orphans as indicated by the statistics from the school records; which could be attributed to the high prevalence of HIV in the study area (17%). This could explain some of the attrition rates that would be associated with school dropout; hence low education attainment. This is important given that several studies have reported high prevalence of malnutrition among children whose mothers have no formal education^{10,22,23}. In highly illiterate community adoption of new or improved technology becomes very difficult¹⁰.

A large proportion of the study population (17.1%) was involved in unpaid employment. The study also revealed that a more significant number of men (P<0.05) than women was involved in paid employment. This could be due to the fact that since majority of them was household heads, they were expected to provide for their families; hence they had to be involved in paid occupation. This finding also conquers with many cultures and traditions in Kenya and in Africa at large, where women are considered to be caretakers of children and housewives, while men serve as the breadwinners. Our study further revealed that most of the people engaged in unpaid employment were those who had low level of education. Low levels of educational attainment lead to unskilled labor, which could explain the lack of formal employment. High unemployment is likely to result in low household income, which is one of the key determinants of nutritional status of children^{6,11}. In numerous studies high proportion of underweight children have been found in low income households compared to families with better occupation and income and vice versa^{20,24}.

Results of land ownership and acreage under food crop showed inadequacy to produce sufficient food to feed the family. The mean land holdings sizes in the households and size of land under food crop is not adequate to produce enough food to feed households of average household size of 4.8 on a deepening poverty background depicted by low educational achievement and low occupational status as highlighted above. Most of the respondents preferred to grow a variety of food crops on the same piece of land at the same time. They reported to grow maize, beans, kales, cassava, sweet potatoes, fruits, sorghum, millet and African leafy vegetables. Household food and income insufficiency has been associated with poorer health outcomes²⁵. In addition, acreage utilized and income has also been shown to be associated with nutrition status.

Table 4. Distribution of household members by highest education levels attained and occupational status.

Occupational Status	Highest education level attained						
	Not attended school	Lower primary	Upper primary	Secondary	College	University	Preschool
Unpaid employed	5 (0.4)	23 (1.8)	142 (11.1)	42 (3.3)	3 (0.2)	2 (0.2)	0
Temporary employed	0	1 (0.1)	36 (2.8)	26 (2)	5 (0.4)	1(0.1)	0
Permanent employed	0	0	5 (0.4)	29 (2.3)	15 (1.2)	4 (0.3)	0
Business person	4 (0.3)	9 (0.7)	126 (9.9)	61 (4.8)	4 (0.3)	1(0.1)	0
*Not applicable	5 (0.4)	147 (11.5)	115 (9.0)	37 (2.9)	7 (0.5)	1(0.1)	187 (14.6)
Total	14 (1.1)	180 (14.1)	424 (33.2)	195 (15.3)	34 (2.7)	9 (0.7)	187 (14.6)

Figures in parenthesis represent percentages. * Students and children under-five years.

Conclusions

Results from this study show that majority of the households fall within the low SES with deepening poverty background depicted by low educational achievement, occupational status and small land holding acreage. The results underscore the need to pay attention to education and poverty alleviation programs that might assist curbing the possible negative effects associated with low SES on the nutrition and health status of members of such households. It is therefore recommended that intervention programs that focus on income generation and education should be undertaken.

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