

**LABOUR CONSTRAINTS, POPULATION DYNAMICS
AND THE AIDS EPIDEMIC: THE CASE OF RURAL
BUKOKA DISTRICT, TANZANIA**

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Abstract

Poverty, though noted to have no universally agreed definition, is given as a condition of living below a set minimum standard level, the poverty line. In rural Tanzania, it is widespread.

This study investigates factors exacerbating poverty conditions in rural Tanzania by a case study of Bukoba Rural District. Literature review shows that there still exists gaps in knowledge on factors exacerbating poverty.

Two poverty-exacerbating factors are identified: (a) labour constraints in the labour intensive smallholder agricultural production, the basis of rural livelihoods: (b) population dynamics: the onset of fertility decline. Recent developments, namely tolls from the AIDS epidemic and possible reduction of traditionally significant child labour contributions with the onset of fertility decline are focused on. The central role of the woman in the household economy is recognised. With deteriorating economic conditions, women have added cash earning activities to their already heavy workload, thus becoming the cornerstone of livelihood of households, but then with serious health and productivity consequences.

The study notes that although the majority of couples desire to have fewer children, yet very few adopt measures to limit fertility. This is seen as a pauperising factor of having unwanted children that drain family resources.

Data was collected through a sample survey drawn from 400 households in two villages: Bugombe and Kigarama in Kanyigo Ward in Bukoba District. The methodology of data collection included a multiple method approach, interviews in the sample survey, focus groups, and participant observation.

Poverty was measured by a possessions index and; labour constraints was estimated through direct questions to and time allocation of respondents, and indirectly by gaps in the age structure of the sample population due to tolls of the AIDS epidemic. Excess children was measured by survey questions on children born, living, desired, and practice of fertility limitation and reasons thereof.

Data was analysed by both descriptive(cross-tabulations) and multivariate (logistic regression) methods.

Findings are presented showing pervasion of poverty: over 50 percent of households living below the poverty line, with half in abject poverty (having no possessions and no access to enough food). Women-headed households were found to be the poorest; over five times poorer than those headed by a male with a wife. Furthermore, households headed by a male without a wife were found to be as poor as female-headed ones.

Time allocation data analysis showed that women worked over 9 hours a day, against 3.5 for adult males. This was confirmed in focus group interviews and participant observation: men actually admitted that they did little work but could do change what seemed a pre-ordained situation. This is interpreted as the economics of patriarchy: as long as they are under the control of men women would shoulder a heavy workload. However, a male head without a wife also worked long hours.

A possible pauperisation arising from an excess number of children was observed for the majority. Thus, for example, of those with excess and still at risk of further childbearing, only 30 percent were practicing fertility limitation. This may be a result of social stigma or perhaps that there were still advantages of having many children.

LABOUR CONSTRAINTS, POPULATION DYNAMICS AND THE AIDS EPIDEMIC: THE CASE OF RURAL BUKOBA DISTRICT, TANZANIA

1.0 The problem

Poverty, defined by Bagachwa (1994), Mtatifikolo (1994), and Semboja (1994) as a condition of living below a minimum standard level, the poverty line, is widespread in Africa. Tanzania's rural population, which constitutes about 85 percent of the total, is reported, using various measures of poverty, to have about 60 percent living below the poverty line (Bagachwa, *ibid.*; Cooksey, 1994). This condition makes the study of causes of rural poverty a priority.

The basis of African economies, and the livelihood of the majority of the population is smallholder household-cum-family based (peasant) agricultural production. Poverty, therefore, is invariably connected to low agricultural production, translating to low income and consequently low standards of living.

Given the labour intensity of the peasant socio-economy labour supply is a critical factor in agriculture production. Indeed labour shortages in African smallholder agriculture have been reported way back since 1950's (Cleave, 1974). Recent changes, such as effects of the AIDS epidemic and fertility decline aggravate labour shortages and consequently rural poverty.

Further, complexities of gender inequality connected to women's heavy workload point to higher vulnerability not only to women but the entire household. Deteriorating economic conditions and the need to care for AIDS-victims have forced women to add on cash earning activities, thus increasingly becoming the cornerstone of a household's livelihood.

The fertility decline has to a certain extent led to a decrease of a traditionally important labour contribution from children.

Research Questions requiring investigation are as follows:

- (i) Does the rural farming household face labour constraints? If so what are the source elements? Is it declining labour contributions from children? What has been the effect of the AIDS epidemic on household labour supply? Have there been gender differentials to this? Has the household's welfare deteriorated due to labour constraints? How is the situation perceived by the people themselves?
- (ii) Have the traditionally high values of children that had led to desire for, and bearing of many children declined? What about their costs? Have they increased? Do many children erode the welfare of families, and perceived so?

- (iii) What are people's responses to declining benefits of children? Is it desire for fewer children? If so, do they practice controls?

1.1 Objectives of the Research

1.1.1 General Objectives

The overall objective of this study is to investigate the underlying factors of poverty among peasant households, paying particular attention to gender factors and associated effects.

1.1.2 Specific Objectives

- (i) To assess the extent to which declining child labour contributions and the AIDS epidemic have aggravated labour constraints, particularly for women, leading to lower agricultural production and consequently low incomes.
- (ii) To investigate whether having a higher number of children erodes family resources, resulting in poverty to a family.
- (iii) To investigate the extent to which the wish for a smaller number of children is a way of avoiding erosion of the welfare of the family due to having many children.

1.2 Significance of the Study

Rural households in Tanzania are dependent on the supply of household labour. Labour supply is the very foundation of the economy and the continuity of families and the local communities and therefore society at large. The failure to provide effective family planning to individuals, families and communities has severe economic consequences on individual families and the nation at large, hence contributing to poverty. Hence the importance of studying this basic input, cannot be over emphasized.

This study will also show the linkage between population factors, socio-economic-cultural factors and problems of development and demonstrate the contribution of demography to the issues of poverty.

1.3 Hypotheses

- (i) The household is facing labour constraints, which are being exacerbated by declining labour contributions from children and the AIDS epidemic, leading to low production, consequently aggravating poverty.

Specific hypotheses:

1. Women have the heaviest workload due to being involved in farming And other income earning activities, domestic work, childbearing and rearing, and acre for AIDS victims.

2. Due to heavy workload women are unable to spend enough time farming, leading to low production, hence pauperisation of the household.
 3. In households where a woman is absent, there is a higher degree of poverty.
 4. The AIDS epidemic, by taking a toll of middle labour force ages, has reduced labour supply to household production.
 5. Children's labour contributions to the household are declining due to school attendance and erosion of parental control.
- ii. The wish for a smaller number of children is in response to effects of rising costs and limited family resources.
- iii. Ineffective use of family planning methods by the majority of people arises because parents consider children as investments whose future net benefit is' positive.

2.0 Literature Review

2.1 Labour Constraints in Smallholder Agriculture

Economists (Lewis, 1955; Fei and Ranis, 1961) have suggested existence of surplus labour in peasant economies, meaning zero marginal returns to labour which could be withdrawn without reduction of output. However severe labour constraints have been observed in micro-level farm research across Africa earlier than 1950's (Cleave, 1974). Tanzania is no exception. Studies in the 1960's, in virtually all regions and in both perennial and annual farming systems, show labour shortage as a characteristic of smallholder agriculture, and expressed by farmers themselves, as the most critical, "binding" constraint to production (Ruthenberg, 1968), including Bukoba District (Friedrich, 1968), the focus of this study.

Paradoxically again, only a few hours (2-4) per day are put into fanning, which could have been the basis of classical theories of surplus labour in traditional economies. However research, notably those based on time budget studies reveal reasons for the few hours input. They include non-farm work activities where farmers do a multiple of activities even on a single day (Cleave, 1974), and seasonality of agricultural operations (Cleave, 1974). In a time budget study of smallholder farm households in Bukoba District, Kamuzora (1980) reports of other factors that constrain labour time apart from non-farm work, to include obligatory social activities, e.g. care for the sick, being ill, attending funerals etc.

This partially explains why well-meant additional development activities have failed, because they do not take into account labour constraints. This problem is also not well recognised by policy makers, planners and donors. For example, Tanzanian politicians incessantly urge farmers to work harder and have received wide criticism in feminist studies (cf Mbilinyi (1988), Njiku (1990) and Bryceson (1995b)).

2.1.1 Women and Heavy Workload

Recent studies, notably in Bryceson (1995), have shown that despite modernisation and programmes targeted to improve conditions of women there is still deteriorating situation of a rural African women, connected to heavy work loads, and related to a complexity of gender inequality in production and reproduction. Analysis of biographies of women from various parts of Tanzania in Ngaiza and Koda (1991) have shown similar situations.

Under patriarchy where women have no ownership or control over means of livelihood, they occupy low status and are allocated a heavy workload (Meillassoux, 1972, 1973). The situation becomes worse when women have to add more time and labour demanding activities to their heavy workloads due to withdrawal of male labour from subsistence to cash earning activities. Thus women became the backbone of agricultural production (Bryceson, 1995a), which ironically makes them more dependent on men, especially for goods and services acquired with cash.

As a result of structural adjustment programmes (SAPs) and liberalization women have taken up various cash earning activities to supplement household income and have become the cornerstone of family/household livelihood and survival. This is articulated in a case study of tea growing in Rungwe by Mbilinyi (1988, 1985), where women demonstrate a range of adaptations, e.g. taking up various illegal and legal cash earning activities, such as prostitution, illegal brewing, and agricultural and non-farm employment. A similar study by Silberschmidt (1991) in Kisii District, Kenya, shows increase of women's burdens, especially by adding men's roles, thus becoming the main "breadwinners" of families. It has been suggested that these changes have led to disintegration of families (Mbilinyi, 1988; Bantje, 1995).

Similar cases have been reported in Bukoba District. Patriarchal relations leading to lack of ownership of means of livelihood, notably land, resulting into dependency on males, and heavy workloads, have been observed by Bader (1975), Swantz (1985), Larsson (1991), Ngaiza (1991a) and Kironde and Kayuza (1996).

Attempts by governments and donors through development projects, aimed at easing women's lives, have ironically only increased their labour burdens (Mbughuni, 1994). Apparently ill-conceived, they have resulted in competition for time and labour, hence evaluated as having resulted in marginalisation of women (Njiku, 1990; Bryceson, 1995). A notorious example has been Ujamaa villages in Tanzania which resulted in a longer working day, as women had to walk longer distances to the fields and sources of water (McCall, 1984). Studies show long working days for women averaging 8-10 hours (Bagachwa, 1994), with particular case studies in Bukoba District (Kamuzora, 1980), Rungwe (Mbilinyi, 1988) in Tanzania and Zambia (Sjonsberg, 1995).

Heavy workload on top of reproduction has been observed by Bantje (1995) to result into general ill health and reproductive complications including low birth weights. In the 1991/92 Tanzania Demographic and Health Survey (DHS), about 10 percent of women with a child

under the age of 5 years are reported to have "chronic energy deficiency", and 17 percent had height below 150 cm, "the optimal cut-off point to identify high-risk deliveries" (Tanzania, 1993, p. 111). Ill health reduces labour supply, leading to low output and pauperisation.

Labour demands on women are more complicated with severe consequences on agricultural production. Due to responsibility for care, even one member of a family falling ill affects time and labour of other women, as observed by Caplan (1995) on Mafia Island (Tanzania): with a pregnant daughter sick, a mother had to take care of her in the face of an urgent task of harvesting rice before vermin destroyed it; another daughter, had to walk five kilometers each way from her home to come to provide some relief, but her rice also was waiting for harvest. It is therefore no surprise that on a revisit to the island Caplan (*ibid.*) observed that although population had increased, production had declined because women had become more burdened with various chores.

For relief of heavy labour burdens, children became a woman's "survival strategy", hence high fertility (Kamuzora, 1987). This phenomenon is true not only in Africa, e.g. Nigeria (Caldwell, 1977) or Tanzania (Kamuzora, 1984), but also in similar socio-economies e.g. Asia, Bangladesh (Cain, 1977). The "economic" importance of children is vividly seen in the analysis of the biography of "Paulina" (from Tanzania) who having lost three of her five children production decreased due to less labour being available (Koda, 1991). There is thus a link between production and reproduction.

It is curious to note the conflict between labour needs and the wish for bearing fewer numbers of children as seen through fertility decline in Africa and in particular under the toll of the AIDS epidemic in Bukoba District. Although the majority do not act to regulate their fertility, high number of children is seen as leading to poverty aggravation, signifying the interrelationship between demographic and socio-economic factors (population dynamics).

2.2 Population Dynamics

The onset of fertility decline in sub Saharan Africa, has been recorded in almost all Demographic and Health Surveys (DHS), notably in Botswana, Kenya and Zimbabwe (see respective country DHS reports), Nigeria (Caldwell *et al*, 1992), and now, (1991-94), in Tanzania (GOT 1993, 1995). For the latter, it is not appreciable given a drop from a total fertility rate (TFR) of 7.0 to 6.1 children per household between 1978 and 1994 (*ibid.*). This development in Africa is insignificant in the face of rapid declines in Asia (Leete, 1987), e.g. in Thailand, dropping to half in less than 20 years from a 1965 level of 6 children per household (Knodel *et. al*, 1984).

What makes the onset of fertility decline in Africa significant in poverty aggravation is that while the majority of men and women desire fewer children or do not want to have more children, mostly because of rising costs of children (Kamuzora, 1993; Dow *et al*, 1994), yet few practice fertility limitation, being 5 to 13 per cent for most countries in Africa, except for

Botswana, Kenya and Zimbabwe at respectively, 33, 27 and 43 percent (DHS Newsletter, 1995).

In the Tanzania Knowledge Attitude and Practice Survey (TKAPS) the unmet need for family planning is estimated at a about 27 percent, tilted more to spacing needs (17.5%) (GOT, 1993; 1995). More revealing of desire for lower fertility, perhaps, is the proportion of women wanting no more children. It is high among women still in childbearing ages, rising from a little over 14 to 28 percent in age groups 25-29 and 30-34 respectively, and thereafter to above 40 percent. Further, by the number of living children one has, it rises sharply, from over 16 percent at 3 children to a little over 34 at 4, and higher after that (ibid., pp. 59-62). Moreover women in Tanzania are shown to desire a bit fewer births than men do (ibid., pp.63-64). Yet overall less than 10 percent practice fertility control (GOT, 1995). The latest 1996 survey puts it at 18 (GOT, 1997).

This situation is in effect resulting in having a high number of children, with probably unintended pressure on family resources. The concern for this study, is peoples's expressed wish for fewer children. While this is suggested to be due to declining benefits and rising costs of children, no study has been conducted on declining labour contributions nor a high number of children as a potential source of one's pauperisation. It has only been implicit in cost-benefit analysis of fertility e.g. by Faucett (1972) and Espenshade (1977), or suggestions to that effect in the case of Tanzania by Mtatifikolo (1990) and Omari (1994). Mbughuni (1994, p. 209) has remarked on children as having an intrinsic value and cannot be uprooted like crops. Nevertheless, children, once they are born, an outlay of resources has to be made for their care. Regardless of how parents conceive and portray the number of children, the issue whether more children contribute to poverty is of interest for this study.

If desire for low fertility is due to rising costs of, and declining returns from children, which threatens families' economic status, of research interest is why most people do not go beyond the wish and adopt fertility limitation. Most studies, particularly now, have concentrated on the extent/magnitude of the unmet need for family planning (most probably to determine the demand for services); and agreement on measurement is yet to be reached (Bongaarts, 1991; Dixon-Mueller and Germain, 1992; Westoff, 1988). So far the analysis of unmet needs especially by Demographic and Health Survey reports show only characteristics such as education, rural-urban residence, etc. There is however lack of explanation; for example for Tanzania, the TKAPS shows the unmet need to be higher among women with no education, and equal for rural and urban areas (GOT, 1995). The issue is why these categories and these in-depth studies are necessary.

Easterlin (1975, 1978) provides an exhaustive framework of determinants of fertility limitation, and thus demand for family planning. The first aspect is motivation, defined as $C(n)-C(d)$. The larger the difference between the potential number of surviving children $C(n)$, (in the absence of deliberate fertility control), and number desired $C(d)$, which implies the number of unwanted children one could have, the stronger the motivation. But women are

observed to end up with more children than they say they desire, because of impediments of time, financial and socio-psychological costs of fertility regulation. In a high mortality situation or low level of development/modernisation there is a possibility of negative motivation, where $C(n)$ is lower than $C(d)$; even in a "positive" situation people may hedge against mortality by bearing many children in the hope that some will survive.

Significant in the socio-psychological cost is the gender relations aspect. Apart from lack of autonomy under patriarchy, socialisation of women from an early age by older women, e.g. mothers and handover to mothers-in-law, keeps them in check, as reported of "Mama Koku" whose mother was against her going away for further education, which for girls was considered a waste of time, and being out of the sight of her mother for fear of premarital pregnancy (Ngaiza, 1991a). On a day to day basis, Epstein's (1982) domestic cycle explains lack of autonomy: a young wife is under the control of a mother-in-law; as she bears children, she is too busy with child bearing and rearing, and other chores to seek alternative life styles; further on, her children become older and start becoming useful (labour service, remittances etc); at old ages she socialises the young to follow the beaten path; so the cycle is repeated. This is what has been called socio-cultural and circumstance circumscription (Kamuzora, 1992).

It is apparent that women face a complex reality from which they try but probably hardly settle on an optimal solution. They are not only torn between benefits and costs of children including health risks of childbearing, but also finding a modus operandi to keep their marriage together, in a hierarchical patriarchal system. This is well portrayed in observations by Caplan (1995) of farm households in Mafia Island (Tanzania) where a woman who wanted to stop childbearing due to health concerns, but perceiving the value of children, and in need of a son to cement a bond with a husband, went ahead but died of childbirth! Similar "Mama Koku" of Bukoba District was virtually ostracised by her family for refusing to divorce her cruel husband because she was concerned about the upbringing of her children who would not be with her at divorce (Ngaiza, 1991a).

This signifies an interaction of demographic with social, economic and cultural factors that results into varying outcomes. Thus the declining net benefits (economic factors) of children encouraged the wish for fewer children, but due to social and cultural impediments, actual limitation of fertility is adopted by only a few. The result is continued childbearing with unanticipated difficult economic consequences on the family. In addition, the AIDS epidemic has made the situation more difficult.

2.3 The AIDS Epidemic

The AIDS epidemic in Bukoba District broke out in the early 1980's, first along areas bordering Uganda's Rakai District which is the most affected by the disease (Obbo, 1995). The epidemic has taken a toll in young adults thus affecting labour force between ages 15-50 years, and it has affected families and the local economy, consequently increasing poverty. Indeed the situation is more serious when gender is put into perspective as women face a

higher risk of HIV infection and probably also for consequent AIDS and related morbidity and mortality.

Male to female sexual transmission rate of HIV is higher than the reverse (Schumann and Sobel, 1992), suggesting higher female levels of infection/seroprevalence and consequent mortality. For example in Uganda, male to female seropositivity of 1:1.42 is reported (Barnett and Blaikie, 1992). Higher ratios are suggested for the Lake (Victoria) regions of Tanzania that includes Bukoba District. Moshi (1994) points to AMREF estimates of 1:2 in the rural, 1:6 on the road side and 1:7 in urban areas. Ngaiza (1991b) looks into factors for this situation, being, *inter alia*, the failure of women to bargaining for safer sex, e.g. use of condoms. Thus gender differential effects on aggravation of labour constraint is suggested.

The death of a woman in a household has more severe consequences compared to that of men but the situation is worse when both parents die, leading to orphans who often are left under the care of old grandparents, lacking resources as observed by the researchers in Rakai District.

Apart from suppositions of possible economic impact, no study has yet assessed the effect of the epidemic on household labour supply at least in Bukoba District, the most affected area in Tanzania. Most studies have focused on the epidemiological and medical aspects of the epidemic: HIV 1&2 infection, blood tests and seroprevalence, incubation and conversion to AIDS (Chin and Lwanga, 1989, 1990; Kilewo, 1994; Kampala 1995 AIDS and STD Conference), and consequent demographic impact, notably mortality (United Nations, 1994; Kamuzora, 1995). Social science research has focused mainly on transmission, notably sexual networking (Caldwell et al. 1991), care for AIDS patients and orphans (e.g. the Dar es Salaam USAID Feb., 1995 workshop; the Kampala 1995 International Conference on HIV/AIDS and STDs in Africa and its satellite SAREC Sexual Networking Workshop in Mbarara 1995) and gender inequality in the risk to infection (Ngaiza, 1991b). The closest study to labour and economic impact at micro village level has but dealt with deficits in age structures in the young adult ages (Barnett and Blaikie, 1994).

One of the new studies on labour impact of AIDS (Obbo, 1995) reports of increased women's workload due to their role in caring for AIDS victims i.e. patients and orphans, and further limiting their working day due to daily AIDS-related funerals. Obbo's work also shows women's dynamism of shortening mourning period and formation of women's mutual help organisations. Obbo has however focused only on women.

On Tanzania, Moshi (1994), provides possible effects of HIV/AIDS on female labour force, and in turn on the household livelihood and on women themselves. Economic aspects and labour impacts of AIDS is new ground; the assessment and call for research by Cooksey (1994) is therefore timely.

3.0 Survey Area and Methodology

The main villages of Kanyigo Ward, Bukoba district, are situated on the greater East African plateau at about 1,200 meters above sea level, beyond the steep cliffs along the western shores of Lake Victoria, and eastward of the Rwamukuma marshes which are part of the Kagera River basin. It is about 6.4 kilometers from the Tanzania/Uganda border. Being just south of the equator and within the climatic influence of Lake Victoria, the area experiences even temperatures, with minima and maxima of 20 and 30 degrees centigrade respectively, and plenty of rainfall, over 2000 mm annually, well distributed over the year. Agricultural activities are therefore year-round (Kamuzora, 1978b).

The ward is densely populated with households of an average size of 5-6 persons living on mixed banana-coffee farms of between an eighth and a quarter of a hectare. Population growth for the region was estimated at 2.7 to 3 percent per annum between 1967 and 1978 (Central Bureau of Statistics, 1981). Shortage of land is therefore acute: this is indicated by rapidly increasing sales of farms and their prices, and by migration to other areas in Bukoba District. Although the village, as the rest of Bukoba District, is experiencing an economic crisis now, "stagnation at a high level" (Friedrich, 1968), it has had tremendous economic growth between the 1940s and the late 1960s because of good coffee prices. Expansion of supply of coffee was facilitated by cheap labour from Rwanda and Burundi: these were mainly destined for Uganda coffee and cotton farms but significant trickles went into rural Bukoba. For example estimates of over 20,000 migrants from these countries by as early as 1926 are given (Bakengesa, 1974; Kamuzora, 1978).

This saw the extension of education by indigenous resources through the ducation und of the Bukoba (now Kagera) (Native) Cooperative Union which offered fellowships to those who were unable to meet school fees and later established econdary schools in the district. The introduction of education was mainly through missionary activity, complemented by the colonial government.

By 1984 a second phase of development set in. Economic conditions had been worsening, and this was a cause for concern; but an immediate cause of worry were the primary school leavers staying aimlessly in the villages. It was because over the preceding decade, out of about 600 pupils per year graduating from nine primary schools in Kanyigo Ward, less than ten were being selected each year for the few places in existing secondary schools, none of which was located in the area. Therefore the Kanyigo Development Association (KADEA) was formed by the inhabitants of Kanyigo Ward and its natives living elsewhere.

From members' fees and contributions, subsequently, formers' commitment of a shilling per kilogram of coffee sold through the Ward's six village primary cooperative societies, and support activities organized in Dar es Salaam by Kanyigo natives resident there, a classic case of returns from migration towards rural development, a secondary school was

planned as the first project of KADEA. In 1985, the school, Kanyigo Secondary School (K.SS). was opened with a yearly intake of a total of 135 students, using temporary buildings within the village provided free by the Lutheran Church for the initial years. Permanent buildings with a potential for four streams for FORM I to IV and two streams for FORM V to VI, and associated buildings, e.g. a hostel, water tank, offices and teachers houses have been constructed at Nyakiziba on the edge of the village.

These developments illustrate the continued concern for a more universal share in education and modernization in the area. One cannot say modernization has not had an effect on the current desire for a low number of children. However, a desire to curtail fertility is recent, and has not been much heard of, because the costs of children have never reached prohibitive levels. Fertility has been high, with a total fertility rate of 5 to 6 children per woman (Ngallaba, 1983), and from casual observation even the educated have these high levels of fertility.

Since the early 1980's the area has been devastated by the AIDS epidemic. A common saying is, "tikyomoi", meaning no family has been left unaffected by the epidemic. By the mid-1980's virtually everyday there was a death in almost every village, mainly of the young men and women creating an unprecedented tragedy. The epidemic has had far reaching effects such as aggravation of labour constraints.

3.1 Methodology

In order to study source elements of pauperisation, both objectively and as perceived by respondents themselves, multiple methods were used to measure the nature, extent and perception of labour constraints, benefit and costs of a high number of children, adaptations and associated factors.

Both quantitative methods dealing with basically numerical data and providing information on 'what' there is and association between pertinent variables and qualitative methods which enable in-depth study of the subjects from various dimensions, providing clues as to 'why' things are as they are were used. Data was also further discussed and confirmed by respondents of the survey.

3.2 Data

Data was obtained from primary sources, by a household sample survey and focus group interviews in rural Bukoba District. Key information needed were:

- (a) establishing poverty level, and
- (b) factors hypothesised as aggravating poverty namely,
 - labour constraints and elements of declining children's labour contributions and tolls from the AIDS epidemic, and

population dynamics, focusing on people desiring fewer" children, yet not practicing fertility control.

Measurement of poverty

Poverty, and specifically pauperisation, was measured in two ways:

- (a) *by a possessions index*: A comprehensive but concise list was drawn during a pilot study showing a composite of scores on a list of items considered for wellbeing of a household, for example housing quality, ownership of radio, bicycle etc. This measure has advantages over direct measures such as income and expenditure. As argued convincingly and used successfully in a study in Lushoto by Sender and Smith (1990) this index of material well-being,
- is not only simple but importantly, its inputs have generally been observed to be closely correlated with current well-being and shows overall economic status of respondents as measured by other indicators e.g. landholding, cropping patterns, use of productive inputs, and access to education and health services;
 - is not distorted by memory lapse, nor subject to ability of respondents to distort or mislead, and exaggerate or underestimate;
 - produces definite rather than arbitrary or estimated answers;
 - requires information which is both easily collected by research assistants with little training, and its elements are physically seen e.g. housing.
- (b) *overtly as felt by respondents*: survey questions to each household as to whether and how each of the factors being investigated, namely elements of labour constraints and a high number of children have affected wellbeing. Further, focus group discussions was used to show how these are felt generally at community level.

Measurement of variables

Hypothesis (i) on labour constraints being exacerbated by the AIDS epidemic, and declining labour contributions from children due to school attendance and to erosion of parental control was measured and indicated by:

- The toll from the AIDS epidemic shown by gaps in the household age structure after enumeration of members of a household and family including all children. Enumeration of AIDS deaths had been planned but dropped after the pilot survey experience because as observed in censuses and surveys, deaths are under-reported (Brass *et al*), more so for those due to AIDS which has a stigma attached to it.

- Labour contributions of household members (including children) to various tasks; being a record of all of a person's activities of a day. These time budgets indicate labour constraining activities, as studied before (1976) in Bukoba District by Kamuzora (1980), particularly for heavy-burdened women.

The time allocation data, is powerful as shown from experiences from Zambia as expressed by Sjonsberg (1995). "Observations of human activities provide a unique insight into daily living.." as what people do is often different from what they say they do and even what they think they do; work habits, social habits and use of labour may be studied in great detail (ibid. p. 228). "From a methodological point of view time allocation studies are most rewarding. They offer a fairly objective account of behaviour...", detailed gender division of labour, labour intensity of activities and indicate prevailing social demands on time and labour (ibid. p. 229).

The survey was conducted in December (1996) which is a peak labour period, with short rains then, and a time for weeding and pruning banana trees and inter-cropping with beans, and growing of annual crops in outer fields. In any case rainfall in Bukoba District is distributed throughout the year, making agricultural activities a year-round phenomenon (Bantje, 1995).

- As felt/perceived by respondents through direct questions and group interviews/discussions.

Hypothesis (ii) on the wish for a small family size being a response to declining labour contributions and rising costs of children was measured by a survey question on the ideal number of children, labour contributions and costs of children. Focus group discussions provided in-depth understanding of these aspects.

Hypothesis (iii) on reasons for lack of limitation of fertility, and perception of many children as eroding family welfare were measured by survey questions on reasons for ideal number of children, advantages/disadvantages of a small/large family and available resources. Focus groups discussions gave details, particularly on the conceptualisation of having many children and perception of many children eroding resources and/or as leading to aggravation of poverty.

3.3 Sampling

The focus of analysis was the household and its members (those "sharing common kitchen/expenses"). Due to budget limitations the sample size was limited to 400 households. The sampling design was multi-stage random cluster sampling. However, the first stage was purposive: Kanyigo Ward was selected, as it borders southern Uganda's Rakai District which had early (late 1970's) contact with the HIV/AIDS epidemic and was expected to have high intensity of and longest exposure to the disease to allow observation of effects. Therefore, some effects were expected to be seen in Kanyigo where the disease is known to have spread from Rakai.

There was random selection of one village, Bugombe, in the ward. There were 3 sub-villages, each with 10 ten-cell clusters giving a total of 300 households. The remaining 100 households were randomly selected from Kigarama village (10 ten-cell clusters from 30 in three sub-villages). This village was purposively selected because the principal researcher had done a survey there 10 years back (1986/87) and the main interest was to see changes that had taken place. During fieldwork however, a total of 378 households were actually covered.

For the qualitative survey, interviews were conducted with focus groups of 6 to 8 persons each for four age groups, young (18-29), young-adult (30-39), middle (40-49), and old (50 and over) for both males and females.

Final interpretation of the research findings was done by two sub-samples of the focus groups; the sub-sample focus groups were an age crosssection: from young to old.

3.4 Data Analysis

Numerical data was analysed statistically at two levels. First, descriptive statistics show characteristics of the sample population. Thus frequency distributions and crosstabulations, hence simple correlations and contingency table analysis was done. At the second level multivariate analysis was employed which enabled estimation of the effect of a variable while holding others constant. Logistic regression methods, a powerful technique over standard multiple regression for dealing especially with dichotomous dependent variables was used: e.g. use(=1) or non-use (=2) of family planning methods being a function of various social, economic and demographic variables. The SPSS Version 4.0 (Norusis,1990) computer software was used.

Qualitative data, which was tape recorded focus group discussions, was transcribed and translated into English for use by the co-investigators and verbatim quotations in the research report. Content analysis was made of these by creation of subject files from which the respondents' views and variations thereof was discerned. These provided concrete interpretation of the results of the quantitative analysis. Experience on these was acquired while studying the value of children and fertility in Bukoba District (Kamuzora, 1989, 1993).

4.0 Findings

4.1 Characteristics of Respondents

Table 1 shows the characteristics and distribution of the sample population by poverty levels.

With the exception of the house they live in, almost a quarter of the households do not possess much for normal living, and almost two thirds of the households reported not getting enough food from farms, and had no means of supplementing life such as buying food.

Table 1: Distribution of households by poverty levels and median characteristics of a household at these levels

Poverty Level	Possessions	Households						Remarks
		No.	%	% with thatch roof	Age of Head	% farm food insuff.	Food supplement have	
0	Housing: Walls: poles with mud Roof: Corr. iron sheets Floor: earth, grass matting Crowding: 3+ persons/room	91	24.1	45	49.5	60	Do with what have	Poorest
1	Table or Chairs Housing: as above Crowding: 1-2 persons/room	21	5.6	29	60.0	62	Buy	Poor
2	Lantern and bicycle or radio (and some or all of above) Housing: as above Crowding: below 1 person/room	137	36.2	27	45.0	42	Buy	Poverty line

Table Constraints: Population Dynamics and AIDS: Kamuzora and Gwatemala

3	Bicycle and radio (or all or above) Hosing: as above Walls: brick/stone Crowding: 1-2 persons/room	89	23.5	9	55.0	40	Buy	Just above poverty line
4	Sewing machine (and some or all of above) Housing: as above Walls: brick/stone Floor: cement-plastered Crowding: 1-2 persons/room	28	7.4	7	54.0	46	Buy	Above poverty line
5	Motoycle, car, lorry (and some or all of above) Housing - Walls: brick/stone Roof: corrugated iron sheets Floor: cement-plastered Crowding: below 1 person/room	12	3.2	0	54.5	67	Buy	Above poverty line
Total		378	100.0					
AVERAGE HOUSEHOLD Bicycle or radio, tables/chairs Housing: (as level 0 above) Crowding: 1-2 persons per room				73	49.5	45	Buy	

The condition of an average household isn't better either. The houses are built of poles/mud walls, earth floor (though matted with "scalable" special grass (ekinshwi), roofed with corrugated iron sheets, and they own a bicycle or radio and a table and chairs. This portrays conditions of absolute poverty.

Table 2: Median Household Characteristics of Selected Poverty Levels

Type and Head of Household	Poverty Level	Age of Head	Education (years) of Head	No. of Households
Male with wife	3	53	8	170
Female	2	48	0	99
Male w/out wife	2	51	8	80

Table 2 presents the median household characteristics of selected poverty levels. It can be clearly observed that female headed households or the ones with a male head with no wife are much poorer than a "normal" household with husband and wife.

Constituting almost one third (28 %) of the rural households, atypical (median) <female headed household, besides living in an average house (poles/mud walls with corrugated iron roof) possesses only a lantern and occasionally tables or chairs. These households are in level two, compared to level 3 where male headed households with a wife belong. Further, lack of education for females compared to males can be noted. Logistic regression analysis shows the odds are over 5 to 1, statistically significant at virtually zero level (i.e. no error), that a female headed household is likely to be much poorer than a male headed with a wife. This is regardless of the role played by the woman in the household as well as household size.

A male headed household without a wife is in a similar situation, only that he has a lantern and both tables and chairs. The odds are 1.5:1 with the female headed being poorer.

The poorest condition of female headed households is an issue of great concern. The condition is explained through disruption in society. These households result from either situation of being single, separated/divorced, or v/idowed. The critical issue is not that households are female headed but rather what factors make female headed households the poorest category. It is a gender issue of inequality in access to resources, whether one is in marriage or not.

The study concentrated on the already poor conditions and contributing factors in rural societies, which are related to the social structures and functions within the society itself. Two factors were identified:

- (a) labour constraints related to the rural/peasant mode of life, but being aggravated by declining contributions from children, and the toll of the AIDS epidemic;
- (b) population dynamics: desiring fewer number of children, yet not taking action to limit fertility, thus ending with more children than wanted, but whom one has to feed.

4.2 Labour constraints

Existence of labour constraints was measured both subjectively and objectively. Objectively by: (a) identifying gaps in the household age structure to indicate tolls from AIDS and outmigration and (b) recording respondents' use of their time the previous day. Subjectively by soliciting views of the respondent on his/her experience. Qualification and confirmation of these are provided by mainly in-depth, focus group interviews in the survey area and general (participant-like) observation by the researchers during fieldwork.

Existence of Labour Constraints

(a) Subjective data

Table 3 shows percentage of respondents stating their experience of labour constraints by age group and household status.

Almost all respondents, regardless of age and household status stated that they are usually unable to complete tasks that they plan to do. (Chi-square tests (contingency table) confirms it: no significant differences by these groups). Whether this inability to complete planned tasks is due to labour constraints is checked in the reasons respondents gave.

Table 3: Percent of Male and Female Heads and wives unable to complete planned tasks by age group

Age Group	Male Heads		Female Heads		Wives		Male Heads w/o Wives		Total	
	%	(n)	%	(n)	%	(n)	%	(n)	%	(n)
15 - 16	-		96.2	(26)	100.0	(4)	-		96.2	(26)
20- 29	96.3	(25)	100.0	(6)	100.0	(49)	100.0	(6)	97.3	(37)
30-34	96.3	(27)	100.0	(7)	100.0	(33)	100.0	(8)	97.6	(42)
35 -39	100.0	(22)	100.0	(12)	96.7	(30)	100.0	(11)	100.0	(45)
40- 44	95.5	(22)	100.0	(14)	96.2	(26)	100.0	(6)	97.6	(42)
45 -49	97.1	(34)	100.0	(12)	100.0	(16)	100.0	(11)	• 98.2	(57)
50- 59	100.0	(33)	100.0	(18)	100.0	(7)	100.0	(18)	100.0	(69)
Total	97.5	(163)	98.9	(95)	98.8	(165)	100.0	(11)	98.4	(434)

Table 4: Percent distribution of types of heads of households and wives by reasons for inability to complete tasks

Reason	Male Heads with Wife (%)	Female Heads (%)	Wives (%)	Male Heads w/o Wife(%)	Total (%)
No help in household	6.2	11.6	10.4	16.7	9.8
Poor health	14.2	30.5	9.8	21.7	20.5
Children's help little	-	3.2	1.2	1.7	1.3
Children do not help	3.1	1.1	3.0	-	1.9
No money for paid labour	19.1	15.8	12.8	13.3	17.0
Other tasks	54.9	37.9	60.4	46.7	48.3
Other reasons	2.5	-	2.4	•	1.3
Total	100.0	100.0	100.0	100.0	100.0
(Sample Size)	(162)	(95)	(164)	(60) ^x	(481)

Table 4 shows distribution of respondents by reasons for their inability to complete planned tasks. Overall, with the exception of lack of money to hire labour (and other unknown reasons), all stated reasons indicate labour constraints, facing about 81.7 percent of respondents. Leading among the latter was unplanned tasks like attending association meetings, bereavement and illness, stated by almost half (48.3 percent) of the respondents; followed by poor health (20.5 percent). The two factors thus account for almost 70 percent of reasons given.

The reasons differ significantly (Chi-sq. $p < .005$) depending on whether one is a male or female head of the household or wife. Poor health is stated more among female and male heads without a wife, which may be marital and age selection. (There are statistically significant differences by age (chi-sq. $p < .01$) for the reasons given).

These statements were further corroborated by checking the respondents' explanations as to how they manage to have the unfinished tasks done. Table 5 shows distribution of respondents by methods they use to finish tasks.

Table 5: Percent distribution of heads of households by methods used to finish planned tasks

Reason	Male Heads with Wife (%)	Female Heads (%)	Wives (%)	Male Heads w/o Wife (%)	Total (%)
Use hired labour	11.9	7.7	7.6	12.1	10.7
Help: relatives/ friends	0.6	3.3	1.3	-	1.3
Help: Self-help groups	0.6	1.1	-	-	0.6
Postpone tasks	70.6	70.6	77.2	70.1	71.5
Fail	16.3	16.3	13.3	17.2	15.9
Other	-	-	0.6	-	0.0
Total	100.0	100.0	100.0	100.0	100.0
(Sample Size)	(162)	(80)	(158)	(60)	(475)

Reasons given show that those who fail are almost 16% while postponement is by over 71% of respondents. No statistical difference exists following a person's household status on the reason given (contingency table analysis).

Another labour constraint mentioned is declining labour contributions from children as shown in Table 6. The reasons children do not work are also given.

The majority of respondents stated that children do not help. Not because they refuse to do so, as over 75 percent of respondents state that children are in school or live far away (52%) or gave other reasons (a further 23%).

About 13 percent of respondents stated that children are reluctant or that they do their own (thing) jobs. Information from focus group interviews showed that children are out of control of parents with only the very young listening to parents because they can be ordered to do so, even if by threat of a cane.

Table 6: Explanations given by households whose children do not help

	Male Heads with Wife (%)	Female Heads (%)	Wives (%)	Male Heads w/o Wife (%)	Total (%)
% stating children do not help	80.0	78.3	76.1	80.4	78.0
(Sample Size)	(155)	(92)	(157)	(56)	(460)
<i>Explanations given</i>					
Have no children	3.4	18.5	7.0	24.4	11.5
Reluctant to help	2.5	7.7	2.6	6.7	4.7
Do own work	7.6	6.2	8.7	11.1	8.5
Away in school	26.9	13.8	22.6	20.0	21.4
Live far away	26.1	43.1	26.1	26.7	30.8
Other reasons	33.6	10.8	33.0	11.1	23.1
Total	100.0	100.0	100.0	100.0	100.0
(sample)	(119)	(65)	(115)	(41)	(414)

From the responses it seems there are labour constraints although there is need to further clarify this through objective data.

(b) Objective data

The impact of AIDS can be observed by analysing household age structure and identifying gaps. This was done by comparing age structures of all sampled family members (residents and non-residents) with the smoothed age structure for Tanzania as shown in Table 7.

Table 7: Impact of AIDS in the Survey Area Compared to Tanzania as Indicated by the Age Structure

Age Group	Survey Results					Tanzania 1988 Census
	All households			Reporting AIDS deaths		
	Total	Males	Females	Males	Females	Total
0 - 14	29.2	30.7	27.7	30.4	24.7	45.7
15 - 19	10.3	10.1	10.5	11.6	11.6	10.9
20- 39	35.4	35.7	35.1*	36.0	34.3*	26.3
40- 49	9.2	8.6	9.8	6.3*	10.5	6.7
50- 59	6.1	5.1	6.9	2.7*	8.0	4.7
60- 69	4.6	4.8	4.4	5.7	4.7	3.1
70+	5.2	4.9	5.5	7.4	6.1	2.6
Total	100.0	100.0	100.0	100.0	100.0	100
(Population)	(2459)	(1204)	(1255)	(336)	(361)	

Note: * Gaps in age structure indicating death toll from AIDS.

If totals only are taken into consideration with the exception of young ages, no gaps would be observed. This would show no effect of the AIDS epidemic. However as data are disaggregated by sex the effect begins to emerge, and are more visible when households that had AIDS deaths are isolated. Since proportions at each age are normally balanced between males and females, the differences indicate differential mortality effects.

It can be observed that females AIDS deaths have occurred at younger ages, 20-39, than for males, 40-49 and 50-59. These patterns have been observed elsewhere, e.g. villages in the world famous Rakai District (Barnett and Blaikie, 1992), that is an immediate neighbour to the survey area, Kanyigo Ward.

Deficits of children below age 15 are also of interest. These are disaggregated into five-year age groups and shown in Table 7a.

Table 7a: Five-year age cohorts of children below 15 years by gender (Percent of total population)

Age Group	Kanyigo Survey		Tanzania 1988 Census	
	Males	Females	Males	Females
0 - 4	10.0	9.1	18.0	17.9
5 - 9	10.7	8.2	15.5	13.6
10 - 14	10.0	10.3	13.5	12.9

In comparison with the 1988 Census, survey data shows large deficits of about 8, 5 and 3 percentage points at age groups 0-4, 5-9 and 10-14 respectively. This could not be due to age misrepresentation, as age reporting at these ages has been assessed to be good (Kamuzora, 1994). The AIDS epidemic became visible in the early 1980's, that is 14 years before the survey date and the survey age structure definitely indicates heavy tolls from AIDS through vertical infection from mother to child. Parents have therefore been deprived of child labour as reported in focus group discussions. This supports the hypothesis that death toll due to AIDS epidemic aggravates labour constraints.

Another piece of independent and different type of information to measure labour constraints is time allocation. In Table 8 is shown the average number of hours reported spent on various activities on a day (0500 to 2200 hours) previous to the visit by an interviewer. Activities are grouped into 6: resting, taking meals or bath, social (e.g. attending meetings, funerals), non-farm, domestic and farm work. These are shown for the different status of household members.

Results show the critical overworking of women (9 hours of work plus 3 hours of taking meals and personal hygiene (mainly washing up), a total of twelve hours of the day) while men, especially those with a wife at home, spend only 3.5 hours of work and another 3.5 for meals and hygiene. However, a man without a wife at home has additional hours (2.5) of cooking and household maintenance (domestic activities). Thus a woman has a different kind of day from that of a man. This is similarly observed among children where the girls have more labour hours than boys. These are found to be statistically significant (analysis of variance (controlling for age, $p < .001$)). It would appear therefore that the group with most labour constraints is women.

Table 8 Median number of hours per day spent on various activities by household members

Activity	Total	Male Heads w/wife	Female Heads	Wives	Male Heads w/o wife	Child Age 15+	Child 10-14	Child 6-9
Resting	3.5	4.0	4.0	2.5	4.0	3.0	3.5	2.5
Meals/hygiene	3.0	3.5	3.0	2.9	3.0	3.0	2.5	4.8
Social*	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Non-farm	0.0	0.0	0.0	0.0	0.0	0.3	1.0	0.0
Domestic	2.5	0.0	4.5	4.8	2.5	2.0	2.5	0.8
Farming	3.6	3.5	4.5	4.5	4.0	3.0	0.0	0.0
(Sample: person days)	(856)	(170)	(99)	(170)	(42)	(165)	(85)	(20)

Note: *for children (age 6-14 years), social activity is attending school

Analysis of reasons for poverty in focus group interviews showed that people were lazy. This was stated by men 50 years and above, some youths, and all women who stressed that men were lazy. When questioned further men agreed that they viewed their women's workload as extremely heavy and that they were sympathetic, although one still gets men who view it as normal on a biological basis.

The behaviour of men can be explained in their relationship with women and their subordination of the latter. The women shoulder the responsibility of feeding the family in terms of food and cash earning. With the traditional banana farm becoming less of the source of food, women have to travel long distances to grow annual food crops. A deeper crisis is foreseen as women will not cope with labour demands, in the least for food, hence endogenous pauperisation.

Children, despite their labour contribution, were seen as not working at all except the young ones who did so because they would get a beating if they did not behave.

4.3 Population dynamics

Poverty was linked with having an excess number of children beyond what one desired, and the attendant rising costs of and declining benefits from children, yet few people practice fertility control.

Table 9 shows the distribution of heads of households in relation to the number of children tated as ideal and/or too many.

The median ideal/desired number is about 5 children, and 10 or more children was the number considered by the majority as too many. The rather wide (5 children) difference between ideal and many raises some interest: it shows that although few are desired, a few more above the ideal is within tolerance limits.

Concern on the cost of children is clearly noticeable. However, the over 30 percent of respondents who stated children were of benefit cannot be ignored. They act as an important indicator of reasons why the majority do not practice fertility control. Thus, inspite of the concern for cost of many children it can be seen in Table 10 that only small proportions, that is less than 17 percent of husbands and wives, are currently practicing fertility control. Only 39.2 percent of women in age group 30-39 currently control while the majority, over 60 percent do not. Even for those controlling fertility, nearly half (43.5 percent) use unreliable methods, namely rhythm and unspecified traditional methods. Thus the true proportion of persons at risk of bearing more children than the number desired is probably higher than estimated here.

Table 9: Percentage distribution of heads of households' views on the ideal number of children

	Male Heads w/wife (%)	Female Heads (%)	Wives (%)	Male Heads w/o wife (%)	Total (%)
Ideal Number of children					
Median ideal number	5.0	5.0	5.0	5.0	5.0
Reason:					
Help with work	9.6	2.1	7.8	10.7	7.3
Old age security	9.6	27.7	13.6	10.7	16.1
Clan continuity	1.3	1.1	0.6	7.1	2.2
Hedge against mortality	5.8	3.2	5.2	3.6	4.7
These are enough	16.0	16.0	21.4	23.2	16.7
Children costly	55.8	50.0	47.4	42.9	51.7
Other	1.9	-	3.9	-	1.3
Total	100.0	100.0	100.0	100.0	100.0
(Sample Size)	(1-56)	(94)	(154)	(56)	(471)
Number of children considered many					
Median number	10.0	10.0	10.0	8.5	10.0
Reason:					
Costly	51.5	58.9	42.7	62.1	55.0
Children spend more than contribute	4.9	4.2	8.5	5.2	5.5
Cannot take care	43.6	35.8	48.2	32.8	39.1
Other	-	1.1	0.6	-	0.3
Total	100.0	100.0	100.0	100.0	100.0
(Sample Size)	(163)	(95)	(164)	(58)	(491)

Table 10: Percentage practicing fertility control by age group and type of head of household

Age Group	Male Heads w/wife	Female Heads	Wives	Male Heads w/o wife
	% (n)	% (n)	% (n)	% (n)
Total				
15 - 19	-	22.2 (27)	0.0 (4)	0.0 (1)
20 - 29	n.5 (26)	0.0 (6)	13.7 (51)	•0.0 (7)
30 - 39	22.6 (31)	0.0 (7)	39.4 (33)	13.3 (15)
40-49	36.4 (22)	7.7 (13)	16.1 (31)	0.0 (13)
50 and over	12.1 (91)	2.2 (46)	5.9 (51)	4.5 (44)
Total	17.1 (17.0)	8.1 (99)	16.5 (170)	5.0 (80)
At risk of 2+ excess children				
Age of woman/wife				
15 - 49	18.5 (65)	22.2 (9)	30.0 (35)	-

Table 10 also shows the practice of fertility control by currently married couples with a wife in childbearing ages (15-49) and female heads, at risk of childbearing excess number of children, i.e., over and above what they stated as ideal. The results also show that this group gives low priority to fertility control.

Non-practice of fertility control has poverty consequences as it increases pressure on household resources. However, the respondents who stated benefits of children as a reason for the number desired are an important reminder that children are still beneficial: work, old age security, clan augmentation, and even many children as a buffer against mortality. Table 11 gives the views of heads of households on the number of children they considered to be too small

Table 11: Percentage distribution of heads of households on the Views about few children

Reason	Male Heads w/wife (%)	Female Heads (%)	Wives (%)	Male Heads w/o wife (%)	Total (%)
Low old age security	11.7	31.9	20.1	28.8	21.1
Less labour contribution	42.3	36.2	41.5	52.5	41.6
Clan discontinuity	6.7	7.4	5.5	-	5.5
House like empty	22.1	14.9	17.7	10.2	17.1
Fear of mortality	17.2	9.6	15.2	8.5	14.7
Total	100.0	100.0	100.0	100.0	100.0
(Sample size)	(163)	(94)	(64)'	(59)	(491)

63% of the respondents considered insecurity at old age and lack of support from children labour to be the main reasons for seeking many children. Logistic regression analysis shows that households with fewer than 4-5 children (controlling for age and type of head of household) are poorer than those with a higher number (odds are 1.5:1, $p < .07$). A look around the village shows large/big families as the well-to-do. It has been observed elsewhere, e.g. Nigeria (Caldwell, 1977) that the African culture encourages large families.

Even with much probing during focus group interviews, and although they complained of high costs of child upbringing, the idea of many children contributing towards increased poverty did not seem to be conceptualised by many. In many cases these matters are not publicly discussed. Thus one could conclude that people are ambivalent about benefits of few children, because a high number still see having more children to be beneficial.

Logistic regression analysis shows that education contributes towards fertility control especially those who attended school. The other factor is age.

5.0 Summary and Conclusions

5.1 Summary

The main objective of the study was to discern poverty level in rural areas and source factors aggravating it, with the latter shedding some light on possible solutions. Many people in rural Bukoba live in absolute poverty. More than half of the households were found to live under these conditions with houses built of poles with mud and iron sheets, and about a quarter not

having any simple possession, a measure used to indicate poverty, and reported starvation level of food supply. The study focused on factors hypothesised to aggravate poverty: (a) labour constraints due to tolls of the AIDS epidemic, thus affecting labour intensive peasant economy, and (b) population dynamics.

Labour constraint was measured by gaps in the age structure indicating tolls from the AIDS epidemic and time allocation reports. The latter has shown that women are the most constrained, as indicated by full occupation by farm and domestic work, on average taking 9.3 hours against 3.5 for men. Women are the basis of household survival. Therefore, any interruptions to their labour supply increases poverty of families.

About 76 and 70 percent of married men and women respectively, still in childbearing ages, do not practice fertility control, in spite of some having an excess number of children. They are, therefore, at risk of having more children than they want.

5.2 Conclusions

Given the high levels of poverty, it is important to develop policies and strategies that will get people out of absolute poverty. The importance of participatory approach in the development of policies and strategies has to be emphasised.

Conservative culture overburdens women with a lot of work and assigns them low status. Unfortunately women may also be their own worst enemies. Discussions in the women's focus groups showed that, whether indirectly from socialisation or from peer group pressure, a woman is coerced to maintain the *status quo*. Organised seminars should be held to discuss the issue and find solutions.

Bananas as a staple food is no longer a viable alternative. Population growth and consequent subdivision has reduced the size of a household's plot; poor basic soils need relatively expensive manuring inputs; and banana weevil infestation, have reduced productivity considerably. Buying food for a peasant family is not viable due to non-availability of cash. Therefore, people have resorted to cultivating farms in distant areas. In the long run the land on which bananas are grown should be rotated for growing maize which is more efficient in terms of food availability and given the yearlong rainfall of the region, at least there can be two harvests and the crop can be stored easily. Food habit change is no longer a constraint, as most families are now used to maize flour in response to nonavailability of bananas.

Although the respondents preferred to have few children due to the high costs of taking care of them, they did not consider excess number of children to be a source of poverty. There is need to research further and find out how people can achieve the family size they desire.

6.0 Suggestions for further research

Pertinent to the broad theme of poverty alleviation and as per the findings in this paper, further research can be suggested in two areas:

- how to reduce patriarchy and draw more men into sharing the workload with women;
- how to remove barriers that hinder the adoption of methods of fertility control so that people can have family sizes they desire.

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