

"It Is Just That We Are Alive But We Are Suffering" Experience Of Food Insecurity Among Elderly In Morogoro-tanzania

UPENDO KILUME (✉ upendokilume@yahoo.com)

Health School <https://orcid.org/0000-0001-8600-7729>

TUMAINI NYAMHANGA

Muhimbili University of Health and Allied Sciences

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Abstract

Background Studies on food insecurity in Tanzania have been quantitative in nature and have focused on specific population groups such as those of people living with HIV and women. However, there is very little, if any, qualitative research information in Tanzania on experiences of food insecurity among elderly with respect to its magnitude and associated circumstances. Methods Interview guide and focused group discussion guide were used to explore the magnitude of food insecurity among elderly and its associated circumstances. A total of 25 elderly and 3 district officials were involved in in-depth interview and another 25 elderly were involved in focused group discussion. Results The study found that elderly had limited access to food, eat less number of meals as well as insufficient amount. The circumstance associated with food insecurity were found to be limited strength to engage themselves in farm activities or working as casual laborers to earn some money to buy food, limited strength to prepare food, burden of taking care of grandchildren and inadequate food support from children. Conclusion In conclusion, this study has demonstrated that the elderly people experience food insecurity with respect to both quantity and quality. Therefore, it is high time that a strategy was developed to ensure that all elderly in Tanzania are food secure.

Background

Food is an important basic human need for survival, growth and good health(1). Freedom from hunger is the most fundamental human right that can be attained if an individual is food secured. Despite this reality the number of people suffering from food insecurity globally is disproportionately big, In 2014/15 approximately 7.5% of the world population aged 15 years and more, nearly 406 million people experienced severe food insecurity. In sub Saharan Africa about 26% of this age group representing 153 million people, suffered from severe food insecurity. This rate is the highest prevalence of severe food insecurity in the world. Estimates for middle Africa (31 percent) and eastern Africa (28 percent) are relatively higher than the regional average(2) In Tanzania mainland 2% of households, both rural and urban usually have only one meal a day and six in ten households in Zanzibar have at least three meals a day. Nationally only 57% of households reported that they never had a problem satisfying their food needs (3)

Food insecurity is occurring when “the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain”(2). Food insecurity is of concern because of the important implications for healthcare costs, its association with chronic conditions such as malnutrition and hypertension, poor glycemic control for those with diabetes, and functional impairments(4). It contributes negatively to the health status of elderly people by increasing the risk of developing chronic diseases or exacerbating existing conditions.

With the size of the aging population growing dramatically and rapidly, it is imperative that our society focuses its attention on supporting this generation, as it will soon become the majority population in the world. Worldwide the number of people aged 65 and above is projected to grow from an estimated 524

million in 2010 to nearly 1.5 billion in 2050, with most of the increase in developing countries(5). The sub-Saharan Africa has double the number of older adults than northern Europe and this number is expected to grow faster than anywhere else increasing from 46 million in 2015 to 157 million by 2050(5). In Tanzania mainland elderly people from 60 years and above comprised of 5.6% of total population(6). With this trend of demographic transition into the elderly population, a wide range of laws, policies and actions is therefore required to help create the appropriate conditions to ensure that elderly people can enjoy the highest attainable standard of health(7). Most Africans enter old age after a lifetime of poverty and deprivation, poor access to health care and a diet that is usually inadequate in quantity and quality. However, nutrition interventions in African countries are directed primarily towards infants and young children, as well as pregnant and lactating women(8).

All individual groups experience food insecurity but it has been observed that it is highly experienced in old population than younger population(9). Since the majority of elderly people live in poverty and uncertainty(10)(8), food insecurity can bring further physical, emotional and economic burdens to the elderly persons themselves, their formal or informal caregivers, and the health care system. Many of them experience economic exclusion, and are often denied employment and access to insurance or credit schemes, they also encounter social exclusion due to age discrimination and changing roles and practices within the family(8).As the population pyramid changes with more citizens living longer than before special measures are required to care for the health of the elderly including food security

Studies have been done to determine the extent of food insecurity among elderly people and its associated factors(11)(12). Most of these studies were quantitative and were conducted in the developed countries.(11)(12). Similar quantitative studies on food insecurity in Tanzania have been focused on people living with HIV(9) and women (13). However, there is a very little, if any, qualitative research information in Tanzania on experiences of food insecurity among elderly. Therefore, this study aimed to deeply understand the experience of food insecurity among elderly. Specifically we explored the magnitude of food insecurity among elderly and its associated circumstances

Theoretical Framework: Application of Social Ecological Model

This study was guided by social ecological model(14). The model categorizes levels of influence which are intrapersonal, interpersonal, organizational/institutional, community, and public policy. Food insecurity start at the individual level, characteristics of the individual such as marital status may predispose an elderly to food security. The next level of influence is the interpersonal support - which refers to the personal network and social support system. They include children and other relatives who can provide food support. Moreover, the organizational/institutional structures also influence food security status as there might be government or non-governmental institutions that provide food support. Thus, the role of such institutions was explored – with a particular focus on adequacy of the support provided. Moreover, at the public policy level which consists of local and national laws and policies, exploration was done to see if there are any policies and laws supporting provision of food support. All

these were explored through document reviews and interviews with district officials dealing with welfare of elderly people.

Methods

Study Design

This was a qualitative study that used explorative study design, to explore the experience of food insecurity among elderly with respect to its nature, perceived magnitude and associated circumstances.

Study Setting

The participants in this study were drawn from Mvomero district council involving two villages, Wami Dakawa and Kipera. The district had a total population of 312,109 in which 1514,843 are males and 157,266 are females(6). It comprised of 73 villages with 7577 households of TASAF beneficiaries. The total number of beneficiaries was 29524 regardless of the age with 12626 males and 16898 females. Mvomero district council was chosen because it was among the 46 council in Tanzania mainland that have been identified as area under stress in terms of food security

Study Population

Study population was elderly people aged 60 years and above living in food insecure households (TASAF beneficiaries) and the district officials dealing with welfare of the elderly in Mvomero district council. Households of elderly people who are also beneficiaries of Tanzania Social Action Fund (TASAF) were targeted. TASAF is the Programme which focuses on the poor and vulnerable households, hence elderly people from these households will be recruited in this study with the assumption that these are poor households and therefore food insecure.

Sample Size and Selection

Sample size:

The sample size was based on the saturation principle. That is, data collection stopped when there was saturation (the point in data collection when new data no longer bring additional insights to the research questions) of the collected information. A total of 25 elderly were involved in in-depth interviews and the other 25 were involved in focused group discussions.

Sampling procedure

Two villages were selected based on the number of TASAF beneficiaries. A purposive sampling technique was used to recruit the participants. That is, focus group discussants and in-depth interviewee were purposely drawn from a specific population of interest to the study. The leaders of the selected villages and TASAF district coordinator were approached and asked to assist in recruiting the participants. They were provided with specifications of eligible respondents (elderly men and women living in food insecure households- TASAF beneficiaries).

Data Collection Methods

Establishment of relationship

Before starting data collection the researcher established trustful relationship with the participants by introducing herself and telling the main objective and importance of the study. She introduced herself that she was a Master's students who was also an employee of the Ministry of Health, Community Development, Gender, Elderly and Children. All those who were requested kindly agreed to participate, and they were interviewed at their homes. The participants were assured that all information provided would be handled carefully and that confidentiality would be maintained throughout. Indeed, arrangements were made such that during interviews and FGDs no one else was present besides the participants and researchers.

In-depth interviews

A total of 25 interviews were conducted with elderly people. The interviews were conducted by the first author (UK) through a face to face approach. She used an interview guide which consisted of broad but focused open ended questions. Under each broad question there were probe questions. Moreover, some follow up questions were asked spontaneously. Field notes were made during and immediately after each interview. The interviews were conducted in the Kiswahili language, audio recorded, transcribed verbatim, and later translated into English. Each interview lasted between 30 and 45 min. The use of IDIs enabled the researchers to gain an in-depth experience of food insecurity among elderly.

Focused group discussions (FGDs)

Three sessions of FGDs were conducted with elderly people. A total of 25 elderly participated in the FGDs, with each FGD involving 8-9 participants. Two facilitators were involved, one was a moderator and the other a note taker who made field notes during and immediately each FGD session. Each FGD sessions lasted between 60 and 90 minutes. The FGD method provided an opportunity for participants to explain their food insecurity experience without personalization and therefore added up information that was not captured in the in-depth interviews.

Data Analysis

A thematic approach was used to analyze the data. The English translated data were analyzed through the examination and categorization of respondents' opinions. The analysis was carried out manually in three stages(19), first the line-by-line coding of field notes and transcripts; second, the in-depth examination and categorization of the resultant codes into descriptive themes; and third, the interpretation and development of an analytical theme. The coding involved the development of concepts - that is, the data were unpacked into discrete elements in order to expose underlying thoughts and meanings. Data were coded by the first author and the codes were reviewed by the second author before proceeding to the next stages of analysis. The process generated a list of 45 codes, which were further interpreted and categorized into 23 descriptive themes. These themes were further distilled into 13 analytical themes around which results are presented. Table 1 illustrates how the analytical themes were obtained.

Ethical clearance:

Ethical clearance for conducting the research was sought from the Research Ethics Committee of the Muhimbili University of Health and Allied Sciences. The purpose of the study was explained to all and each eligible individual and consent was sought before conducting an interview or FGD.

Results

Socio-demographic Characteristics of Participants

A total of 50 elderly participated in in-depth interviews and focused group discussions. More than half of participants were females. Majority of the participants were aged 70-79 years and most of them had never attended school. Additionally most of the respondents were widows with majority having either three or more children. A substantial number of participants were peasants and more than half had no any activity for earning income.

Perceived magnitude of food insecurity:

Limited access to food

Participants reported that obtaining food to them is very difficult. Because of old age they no longer have energy to do extensive farm activities and often experience food shortage whereby sometimes they end up with nothing to eat at all as expressed by one of the in-depth interviewees:

"Sometimes we don't get food to eat at all, you sleep without eating and during morning you have to wake up and do farm activities with empty stomach. For sure it is a very terrible situation, we don't have anywhere to obtain food and we have lost the energy to do farm activities, it is just that we are alive but we are suffering". (Old man 75yearsold)

They also added that obtaining food is very difficult. They depend on sympathizers who may happen to give them food, as reported by one of the participants:

"I have a very difficult situation, I don't have even a child, I just live by the grace of God eeh, If someone says grandmother take this food 'I eat' but if there is no anyone to give me food, I will stay the whole day and go to sleep without eating." (Old woman 76 years old)

Less number of meals

Some participants complained that they do not consistently get the commonly required three meals per day; that is: breakfast, lunch, and supper. Most of the participants reported that they eat inadequate number of meals as said by one of the participants

"I eat only one meal, where can you get two or three meal? May be if someone passes here and due to my charming behaviour one can decide to give me some money. In that case I can buy some sugar and doughnut (maandazi in kiswahili) to have some tea and then wait for lunch and when I eat that lunch I will have to wait until the next day afternoon" (Old woman 80 years old)

This was also reported by another participant

"Me, I eat only once during evening at 4pm, once I eat at that time I have to wait until the next day the same time eeh, I don't know about tea kha!, obtaining food is very difficult" (Old woman 90 years old)

Another FGD participant added:

"The situation of obtaining food among elderly is worse, here the government is required to help us. Some of us we sleep without eating, some of us cannot afford two or three meals, we eat only once". (Old man 76 years old)

Insufficient amount of a meal:

Apart from eating inadequate number of meals most of the participants reported to eat insufficient amount of food per meal. They said they eat just to get a little bit of a relief but they don't get satisfactory amount. One of the participants in a focused group discussion said:

"The amount of food to make you satisfied as it is normally supposed to be is very difficult to get, I can give the example of myself, per day or let say for a meal of a whole day, during afternoon I cook 1/2kg of flour with my grandchildren and during night I also cook 1/2kg, so for the whole day we eat only 1kg, this is not enough with the grandchildren I told you(4 grandchildren), but we just thank God if you eat even that small amount we say it somehow helpful because there is no any assistance." (Old man 78 years old)

Another participant said

I eat food when I get support from someone. So do you think you can eat a satisfactory amount? no you cannot eat satisfactory amount, you have to budget. You have to think what you will eat later, so you just eat a small portion and top up with water” (Old woman 73 years old)

Compromised quality of food

The study participants also expressed concerns on quality of food they eat. They asserted that they eat only one kind of food every day as could not afford variety. Majority claimed they often eat stiff porridge (Ugali) and boiled vegetable only as explained by one of the participants

“I don’t eat varieties of food because I don’t have money. I eat only stiff porridge and sleep, sometimes even that stiff porridge is not possible to get, and you know what this is because of my old age, and you see that one (pointing at an old man) is my husband” (Old woman 86 years old)

Another participant similarly asserted that:

“Eating variety of food, where is the money to buy that? Here is just stiff porridge of unrefined maize flour, if you want to change may be you take that unrefined maize flour and change into refined maize flour then now you can say I have a different food though it is the same maize. If you want varieties of food like rice it needs money to buy.” (Old woman 70 years old)

In-depth analysis revealed that participants are not in position to get other food groups such as fruits and body building foods, as expressed by one of the participants:

“Because we don’t have any income we do not entertain eating fruits like water melon, an orange etc, what we are struggling to get is just stiff porridge but fruits, meats no way” (Old man 68 years old)

Circumstances associated with food insecurity

Intrapersonal factors: Limited strength as a result of ageing

It was reported that food insecurity experienced by elderly is partly attributable to limited strength which is a consequence of the ageing process. Less strength causes them not to engage in cultivation or in other economically productive activities at all or do quite minimally. Ultimately they become poor and experience difficulty in accessing food with respect to both quantity and quality. This was succinctly expressed by one of the participants:

“You drink only water and then you go to sleep, we don’t have the ability to find money to buy food. The strength to go and work as casual labour we don’t have, other people (young ones) can work but for us we feel pain all over the body” (Old woman 69 years old)

Again, it was reported that limited strength renders elderly unable to prepare meals on their own or do so with difficulty. As a result, some said that they occasionally get food support but lack energy to go

through the chores involved in preparing the meals such as collecting firewood, fetching water, and cooking itself. This barrier to food security was well described by one of the participants:

A child may send you sugar but he/she cannot come and help you prepare the food, I have lost the energy to do cooking activities, I just go to the kitchen to prepare food because there is no way and I feel hungry”(Old woman 68 years old)

Interpersonal factors:

i) Inadequate food support from children

Contrary to the general assumption that elderly are supported by their children, this study found out that children offer minimal support, if any. Most of the participants reported that much as children are willing to help their parents, they also have difficult economic situation which renders them incapable of rendering food support sufficiently. One of the participants said

My children don't help me in anything, they are also hard pressed economically. They cannot adequately feed their own children. I had my house but now it is broken, I thank God saved me because it was almost falling on me.”(Old woman 60 years old)

Another participant expressed a similar concern

The situation in the villages is very difficult unless your child is able to help you. For old people like us if your child is able to help, you get a very big relief, for my side my child has nothing to help me so I am suffering all alone” (Old woman 69 years old)

Other participants reported that they do get some support from children or grandchildren though insufficient and is provided inconsistently, as explained by one of the participants:

“As I told you I don't have a child but I have a grandchild, sometimes if he has something to offer he assists me though it is not a reliable source because he has got children that he is also supporting”(Old man 80 years old)

Apart from economic difficulty, some participants charged that some sons or daughters are simply selfish. They do not help their parents at all, they take care of their family only and forget about their parents. One participant from a focused group discussion emotionally expressed his feelings:

“Children have no use to their parents, they don't provide any assistance to their parents. To be concern that my parents need this, no way, what they care about is their family. Since you have already brought him/her into the world then everyone should take care of his/her own”(Old man 62 years old)

A similar concern was expressed by another participant

"A large number of children worry about their family only, if you keep on asking them for help they tell you that you are stubborn so you decide to keep quite. There is no any care and you can't complain." (Old woman 70 years old)

ii) Burdened by grandchildren:

Besides limited support from children, some participants complained that food insecurity they were experiencing can partly be attributed to the burden of looking after grandchildren. That, some young men or women who face difficult economic situation in urban areas do take their children to their old parents (children's grandparents). As a result, it was asserted, the elderly are compelled to share the meagre food with the grandchildren. This was narrated by one of the participants who said:

"My situation is very difficult, it would have been better if I was living alone but I have three grandchildren! With 87 years of age I needed to be looked after but there is no one to do that, I have to struggle by myself. So the little food I get I have to share with my grandchildren" (Old woman 87 years old)

Another FGD participant added:

"Sometimes grandchildren depend on us, their father and mother have nothing so when you buy some flour and cook food they run to you and wants to eat. I have then to give them regardless of whether we will be satisfied or not" (Old woman 73 years)

Social support system for enabling availability of food to the elderly.

The study investigated the extent to which various social groups enabled elderly to get rid of food insecurity. Two social groups that featured prominently in data included: Tanzania Social Action Fund (TASAF) and religious groups. Detailed description of the role played by these social institutions with respect to food support follows:

Inadequate social support from government

Study findings revealed that the only reliable assistance from government is through Tanzania Social Action Fund (TASAF) support programme. All participants admit to receive assistance from TASAF though they find it to be inadequate. One of the participants said

"The only help from the government is just this program of TASAF but if you totally rely on that you will die, you know the problem is that we have no place to complain, it is true that we receive the assistance but not every month, it is after three months . So my daughter just imagine TZS 20,000/= for three months will you be able to budget for food all that time?"(Old woman 63 years old)

It was also found that the assistance they obtain from TASAF has to cover a lot of other activities apart from fulfilling food needs, as stated by one participant:

"I get 20,000/= from TASAF after three months, if you buy food the whole money is gone, for example my house was falling, so I had to take that money and fix it. It was very terrible, I was not able to sleep in this house" (Old woman 80 years old)

Another participant added:

"I get money from TASAF after three months, but when I get that money I have to buy shoes and other needs for a student who is now in form three as that is how we have been directed. For that case then nothing is left to buy food."(Old woman 75 years old)

Analysis of data also found that the District Councils have no budget for supplying food to the elderly due to budgetary constraints. One of the district officials said:

"The council has no budget for supplying food to the elderly people, what we are doing is to work in collaboration with stakeholders to help these people, For example last year Mama Janet Magufuli (First lady-United Republic of Tanzania) supplied food to elderly who are staying in the elderly camp and through her visit other stakeholders pledged to give assistance, some of them they have already fulfilled their promise."(DKI No.1)

Study findings also found that the Central government provides support to few elderly people who stay in elderly camp, but for those who live at home there was no any program arranged to help them, as reported by one of the district officials:

"In the district we have one disability centre with elderly people who are supported by the Central government, but those who stay at home we hope they get food through the community that surround them such as their children, neighbours etc."(DKI No.2)

The elderly policy not explicit on food support:.

It was also revealed that although the policy for elderly instructs on the provision of support services, it does not speak directly on the issue of providing food to the elderly.

Discussion

Perceived magnitude of food insecurity

This study has found that elderly people have limited access to food, eat less number of meals as well as insufficient amount of meals, this implies that elderly do not obtain sufficient quantity of food for an active and healthy life. These findings agree with findings obtained in some studies which revealed that food insecure elderly eat less food than usual or insufficient intake(20)(21). The study found that due to limited budget or lack of money the elderly people compromised the quality of food by eating only the available food or cheap ones, they rely on only one kind of food (mainly carbohydrate). They do not

afford varieties of fruits, vegetables, and proteins foods. Similar findings have been reported elsewhere (22)(23)(24)

Intrapersonal contributing circumstances: limited strength

Intrapersonal circumstances associated with food insecurity were found to be limited strength to engage themselves in farm activities or working as casual laborer to earn some money to buy food. Limited strength also hinders them from being able to prepare food even if the food is available in the house. These findings suggest that food insecurity among elderly is real. They can best be explained by the fact that the aging process reduces body functional ability and strength - hence limiting ability to carry out activities for enabling food availability and preparation of meals. These findings are in agreement with those of a study done in New York which reported that although money is a major cause of food insecurity, elders sometimes may have money for food but are not able to access food because of transportation or functional limitations, or are not able to use food (i.e., not able to prepare or eat available food) because of functional impairments and health problems(20)(25).

Interpersonal factors: Inadequate food support from children

It is generally assumed that children provide support to their parents, surprisingly according to this study elderly were not receiving support from their children because they also had difficult situations and some didn't care about their parents and focused only on their families simply because of selfishness. The current study is in disagreement with a study done in Canada which found out that having a child was an advantage to the elderly people of not being food insecure(16).

Sharing inadequate food with the grandchildren

The study also revealed that besides being elderly and not able to support themselves with food needs, they also have a burden of taking care of grandchildren. This burden causes the elderly to have insufficient amount of food per meal as they are compelled to share the little they have with the grandchildren. The finding is a reflection of the difficult economic situation facing some of the young people who opt to delegate their parental responsibility to their elderly parents. This finding is in line with a study done in U.S which revealed that having dependants like the grandchildren increases the food insecurity burden to the elderly people, majority of them are unemployed and this limit their resources for purchasing food(18). Likewise, a study done in Kenya reported that, in households with food insecurity priority for food is given to children against adults (15).

Social support system for enabling availability of food to the elderly.

The findings from this study revealed that the only reliable source that facilitated availability of food to the elderly was Tanzania Social Action Fund (TASAF), which is a government programme for supporting poor households. However, it was revealed that the TASAF assistance was not adequate and was not wholly meant for food support. The fund targets the entire poor population and consequently meager resources are spread thin, leaving the elderly with unmet food need. Nevertheless, the study found that

the government through Central government was providing food assistance to the elderly people who were staying in elderly camps. Little attention is paid to those who stay in community (at their homes). This limited attention can be best explained by the general assumption by the government and other stakeholders that elderly people who live in communities are cared by their families and community members surrounding them. This study has proven the contrary. Family food support for the elderly is very limited, if any, particularly in low income countries which have been, and still are, experiencing economic difficulties

The findings also revealed that there was little and unreliable social support from community groups including religious groups, these findings are in disagreement with the findings obtained in a study done in Ireland which revealed that food poverty interventions are predominantly characterized by downstream approaches that are heavily reliant on the community, voluntary sector and religious organizations(17). Besides, the current study revealed that although the policy for the elderly underscores provision of social services to the elderly, it does not state directly on the provision of food to the food insecure. This might give a loop hole to the policy implementers not to give it (food support) a deserved attention.

Trustworthiness

Trustworthiness of this study was secured through piloting the IDI and the FGD guides to improve the questions and the moderating skills. The data collection period was planned such that the researcher had enough time for reflection between field visits and therefore able to conduct preliminary analyses that guided the subsequent data collection. Moreover, a member check technique was applied during group discussion and in-depth interview whereby the moderator restated or summarized the information from the discussant(s) and interviewee to ensure what was heard was in fact correct. Additionally, Besides, this study benefited from the data collection method triangulation whereby in-depth interview and focused group discussion were used. The author is therefore confident that the findings are valid and grounded in the data.

Limitations and strengths

This study relied on self reported data by the respondents and therefore it was subjected to participants' recall bias and reluctance to respond truthfully when asked about their food insecurity experiences. For example, they may have exaggerated their perceived magnitude of food insecurity. However, this was mitigated by interviewer carefully introducing the aim of the study to the respondents and requested them to be honest. Moreover, the respondents were assured that all answers were valuable, and that there was no right or wrong answers. Additionally, this study used the pre-tested in-depth interview and focused group discussion guides with open ended questions that were able to explore the magnitude of food insecurity among elderly and its associated factors

Conclusions

This study has demonstrated that the elderly people experience food insecurity with respect to both quantity and quality. That is, they have limited access to food, eat less number of meals as well as insufficient amount of meals. Moreover, they are unable to get food varieties. Food insecurity and adverse outcomes have been attributed to very limited support from both the family and government authorities. In essence, this study has disproved the general assumption by the government and other stakeholders that elderly people who live in the communities are cared by their families and community members surrounding them. Therefore, it is high time that a strategy was developed by the government and other stakeholders to ensure that all elderly are food secure.

Abbreviations

DKI = District Key Informant

TASAF = Tanzania Social Action Fund

IDIs = In-depth interviews

FGDs = Focused group discussions

Declarations

Ethics approval and consent to participate

The study from which this paper was drafted was ethically cleared by the Ethics Committee in the Directorate of Research and Publications at Muhimbili University of Health and Allied Sciences. Prior to consenting to participate, the researcher informed the prospective participants about the main objective of the study. Written informed consent, through signature or thumb print, was obtained from all participants.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests

The authors declare that they have no competing interests

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Authors' contributions

This manuscript is part of an MPH Dissertation authored by Upendo Kilume (UK) [first author] and Tumaini Nyamhanga (TN) served as the supervisor. UK conceptualized and drafted the manuscript and TN reviewed it. Both authors read and approved the final manuscript.

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Authors' Information

1. Upendo Kilume, BScN, MPH, is a Principal Tutor
2. Tumaini Nyamhanga, BScN, MA, PhD, is Senior Lecturer

References

- [1] Coff C, Nordstro K, Nordenfelt L. Food and Health: Individual, Cultural, or Scientific Matters? .. 2013;357–63.
- [2] FAO. The State of Food and Agriculture. 2016.
- [3] Tanzania. Demographic and Health Survey and Malaria Indicator Survey 2016.
- [4] Seligman K, Laraia B. Food Insecurity is Associated with Chronic Disease Among Low-Income NHANES Participants. J Nutr. 2010;
- [5] WHO. Global Health and Aging. 2012.
- [6] Basic Demographic and Socio-Economic Profile Tanzania Mainland. 2014.
- [7] WHO. Ageing and Health. 2015.
- [8] Help Age International. Older people in Africa: a forgotten generation [Internet]. Help age International. 2008.
- [9] Semali A. I, Edwin T, Mboera L. Food Insecurity and Coping Strategies Among People Living With HIV in Dar es Salaam , Tanzania. Vol. 13, Tanzania Journal of Health Research. 2011.

- [10] Tanzania. National Ageing Policy. In 2003. p. 5–22.
- [11] Russell J, Flood V, Yeatman H, Mitchell P. Prevalence and Risk Factors of Food Insecurity Among a Cohort of Older Australians. *J Nutr Health Aging*. 2014;18(1):3–8.
- [12] Myles T, Starr K. Food Insecurity and Eating Behavior Relationships Among Meal Participants in Georgia. *J Nutr Gerontol Geriatr*. 2016;35(1):32–42.
- [13] Mccoy S, Ralph L. Food Insecurity, Socioeconomic Status, and HIV-Related Risk Behavior Among Women in Farming Households in Tanzania. 2015;18(7):1224–36.
- [14] Centers for Disease Control and Prevention. Social Ecological Model. 2013. [Online]. Available: <http://www.cdc.gov/cancer/crccp/sem.htm>.
- [15] Kimani-Murage E, Schofield L, Wekesah F, Mohamed S, Mberu B, Ettarh R, et al. Vulnerability to Food Insecurity in Urban Slums: Experiences from Nairobi, Kenya. *J Urban Heal*. 2014;91(6):1098–113.
- [16] Krondl M, Coleman P, Lau D. Helping Older Adults Meet Nutritional Challenges. *J Nutr Elder*. 2008;27(3–4):205–20.
- [17] O'Connor D, Cantillon S, Walsh J. Rights-Based Approaches to Food Poverty in Ireland. 2011;
- [18] Starr K, McDonald S, Bales C. Nutritional Vulnerability in Older Adults: A Continuum of Concerns. *Curr Nutr Rep [Internet]*. 2015;4(2):176–84.
- [19] Thomas J, Harden A. Methods for the Thematic Synthesis of Qualitative Research in Systematic Reviews. 2008;10:1–10.
- [20] Wolfe W, Frongillo E, Valois P. Understanding the Experience of Food Insecurity by Elders Suggests Ways to Improve Its Measurement. *J Nutr*. 2003;(April):2762–9.
- [21] Green-lapierre R, Williams P, Glanville N, Norris D, Hunter H, Watt C. Learning from “Knocks in Life”: Food Insecurity Among Low-Income Lone Senior Women. *J Aging Res*. 2012;2012.
- [22] Quddus M, Bauer S. Food Security and Morbidity of Elderly in Disadvantaged Rural. *J Bangladesh Agr Univ*. 2014;12(1):95–104.
- [23] Kruger R. Food Variety and Dietary Diversity as Indicators of the Dietary Adequacy and Health Status of an Elderly Population in Sharpeville, South Africa. *J Nutr Elder*. 2008;(March 2015).
- [24] Gadag V, Hunter K. A Study on Food Security Among Single Parents and Elderly Population in St. John's. 2015.
- [25] Lee J, Frongillo E. Factors Associated with Food Insecurity Among U.S. Elderly Persons: Importance of Functional Impairments. *J Gerontol*. 2001;56(2):94–9.

Tables

Table 1: An illustration of line-by-line coding and development of analytical themes

Text	Codes	Descriptive themes	Analytical themes
<p>Sometimes we don't get food to eat at all, you sleep without eating and during morning you have to wake up and do farm activities without eating, for sure it is very terrible situation, we don't have anywhere to obtain food and we have lost the energy to do farm activities, it is just that we are alive but we are suffering</p>	<p>No food to eat</p> <p>Sleep without eating</p> <p>Lack of energy to do farm activities</p>	<p>Lack of food result into sleeping without eating</p> <p>Lack of energy to do activities lead to lack of food</p> <p>Limited food support</p>	<p>Limited access to food</p>
<p>My health is deteriorating because of lack of food, if you get sufficient food to eat and you become satisfied then you will have a good health and you can carry up to 100 bricks from there to here, but if you don't have sufficient food only 4 bricks it will be difficult to bring them from there to here. Work is done through eating, farm activities without eating you cannot do</p>	<p>Deteriorated health</p> <p>Lack of food</p> <p>Inability to carry out activities</p> <p>Insufficient food</p> <p>Inability to do farming</p>	<p>Lack of food cause deterioration of health</p> <p>Deteriorated health limit ability to carry activities</p> <p>Eating sufficient food lead to good health</p>	<p>Limited strength</p>

Figures

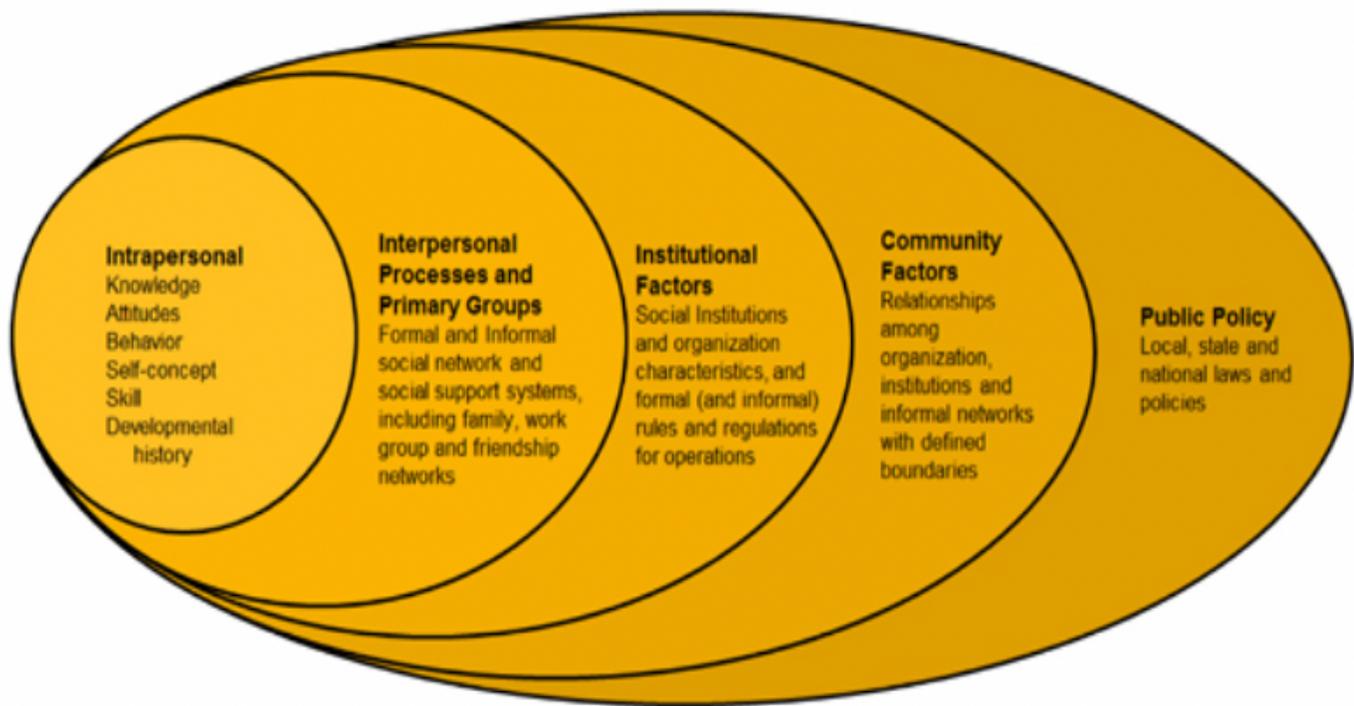


Figure 1

Social ecological model

Supplementary Files

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- [ConsolidatedCriteriaforReportingQualitativeStudies.docx](#)