Journal of development, education & technology ISSN 2959-0523 VOL. I No. 1 (FEB 2023)

THE EFFECT OF POPULATION GROWTH ON FOOD SECURITY SITUATION AMONG REFUGEES IN NAKIVALE REFUGEE SETTLEMENT, ISINGIRO DISTRICT

Zamzam Ally*1- Corresponding Author
Prof. Firimooni R Banugire*2 – Co-Author
Assoc. Prof. Gershom Atukunda (PhD.) *3– Co-Author
Johnson Atwine*4 - Co-Author

ABSTRACT

The study was about the effect of population growth on food security situation among the Refugees in Nakivale Refugee Settlement, Isingiro District. The study objectives were; to determine the main population changes taking place in Nakivale Refugee Settlement, and also to establish the effects of age composition on food availability among the Refugees.

The researcher used a cross-sectional research design. The study used a sample size of 133 respondents.

Qualitative data was analyzed using content analysis while quantitateive data was analyzed using SPSS. Basing on the field findings, there was a significant relationship between Population Growth and Food Security situation among the Refugees of Nakivale Refugee Settlement. This was due to the fact that when the population fertility and refugee influx is high, food becomes insufficient to the refugees and when the mortality is highly, the population reduces as most of the people become sick and weak and food is highly consumed by the weak people.

Based on the age composition, it was evident that working age bracket increases food security the fact that most households involved in work and their consumption rate is reserved compared

to the younger population who are dependants as well as existing mothers who produce more young kids. The researcher recommends that the government and NGOs institute more technical personnel in the camp to help refugees by training them on better farming skills, helping them to create employment. It is also recommended that the refugees need to be trained with income generating activities both entrepreneurial and life skills. Further recommendation to the government and NGOs is that there should be addition of various food types that refugees prefer to eat, also, different seedlings should be given to refugees for them to grow more crops and improve on yielding. NGOs should intervene towards empowering mothers specifically those who have children below 12 years.

***Keywords*: Population Growth, Food Security and refugees, SPSS, entrepreneurial and life skills.**

BACKGROUND TO THE STUDY

According to Bashaasha et al, (2010), food situation performance today depends more on climate than it did in 200 years ago; the possible impacts of population growth on food security situation have tended to be viewed with most concern among the refugees in locations where rain-fed agriculture is still the primary source of food and income. However, this viewpoint is short-sighted. It was also indicated by Benhin JKA, (2006) that it does not take account of the other potentially significant impacts that climate change could have on the global food system as well as affecting the refugee situation.

Developed countries have recognized the severity of refugee situations by allocating humanitarian aid as a policy response. Czaika and Mayer (2011) indicates that

humanitarian aid can be directed either to the country of origin, in the hope of addressing the root causes of forced migration or to the refugee host country as an act of burden sharing (Morel 2009), or to both. Paradoxically, both proponents and opponents of providing humanitarian assistance to address refugee situations blame refugees for being a burden on their host country. Refugees interact with their host economies in various ways and can have far-reaching consequences on their local hosts.

It is however established that the negative consequence is the threat that refugees pose to the food insecurity of host countries. Bashaasha et al, (2010) shows that this situation is caused by civil wars which can be long lasting, most refugees are likely to reside in host countries for protracted periods, implying significant long-lasting impacts on host communities and their food security situation. Furthermore, most refugees are hosted in neighboring countries that do not necessarily face better economic conditions and often have pre-existing food insecurity. This may place a further burden on hosting populations and may erode their resilience to withstand shocks and achieve food security over time.

It is indicated that Population dynamics on food security situation continue to escalate and Human population trends are centrally significant to food insecurity as well as environmental destruction causing global warming and its impacts (Benhin JKA, 2006). It is also indicated that rising populations in developing countries put increasing demands on natural resources such as land, water, and energy supplies and the end result is food insecurity (Wheeler and Von Braun 2013). As human communities use more resources, they generate contaminants, such as air and water pollution and greenhouse gas emissions, along with increasing quantities of waste. In different refugee camps in USA, Germany,

Uganda, the problem has increased as most of the refugees continue to seek for asylum.

The links between population growth and food security situation in Africa are further reinforced by studies examining the ability of food production systems to keep pace with long-term demographic changes in the developing world since they have a higher rate of refugee escalation (Conway and Toenneissen 2003; Gilland 2002; Alexandratos 2005). Most of the developed countries and UN NGOs have intervened to rescue the refugees but they remain being affected with the food problems.

Furthermore, the rate at which population is increasing is so alarming with increasing horst of refugees. It is increasing at rate that is far higher than food production in the continent. In fact, African countries like Rwanda, Niger, Uganda, Nigeria, Kenya and Senegal are experiencing a population growth rate of between 2.8-3.4 percent per annum as refugee life continue to increase, which is unacceptably high and making it difficult for these countries to feed their people (Apuuli B., Wright J., Elias C. and Burton, 2011).

Despite expected increases in food production in Africa, rapid refugee population growth will lead to notable increases in the size of its population living in food insecurity (Conway and Toenneissen 2003). Similar links are found in policy recommendations that target population growth reduction as a cornerstone for developing interventions for improving food security outcomes in Africa among the refugees (Jarosz 2011).

However, the relationship between population and food security in Africa is likely to present a more complex policy challenge for efforts to improve sub-Saharan Africa's food security disadvantage relative to other regions as the number of displaced people continue to exist (Apuuli B., Wright J.,

Elias C. and Burton, 2011). In other words, as a result of its underlying high fertility regimes and expected decreases in mortality trends, subSaharan Africa population will still grow faster than populations in other regions (UN 2009). Yet, some studies suggest that trends in its food supply will considerably lag behind those found in other developing regions (Long et al 2006; Muller et. al. 2011).

Furthermore, Sub-Saharan African and its populations face a number of challenges that increase their vulnerability to the causes and consequences of food insecurity as caused by an over-increasing populations as well as wars that lead to a refugee situations (Wheeler and von Braun 2013). Also, combinations of other factors including poverty cause hunger problems. The African people have learnt and re-learnt nothing from the interventions.

Within the region of Africa, progress towards improving human welfare is constrained by the high prevalence of refugees and as a result hunger, malnutrition, and wide-spread poverty as well as wars and conflicts have led to refugee living life. Not surprisingly, African countries have collectively made the least progress towards achieving the Millennium Development Goal of reducing hunger by half by 2015 (Clemens, Kenny, and Moss 2007). In fact, Africa is the only region in which levels of hunger increased in recent decades (Sanchez et. al 2005), and currently, close to one third of its population lives in chronic hunger and the affected persons are the refugees (Lobell et al. 2008).

On the other hand, the constraints can have deleterious consequences for increasing population dynamics in the region of Africa as caused by refugees (Apuuli B., Wright J., Elias C. and Burton, 2011). Clemens, Kenny, and Moss (2007) also underscore the fact that there are still significant challenges to achieving food security situation in sub-Saharan Africa as there is an increasing cases of refugee life.

At the same time, these challenges are not insurmountable. Among the countries in Africa, progress towards the goal of food security requires new efforts to develop appropriate interventions for mitigating its causes and consequences for populations at risk especially the most refugees (FAO, WFP, and IFAD 2012). For these efforts to succeed, policy makers need to develop a comprehensive understanding of the demographic factors that will affect food security in sub-Saharan Africa in the coming decades.

Uganda is hosting 1,064,043 refugees as of 01 February 2017, according to reports from UNHCR and the Office of the Prime Minister's (OPM) Department of refugees. The number of refugees coming to Uganda from South Sudan remains very high, and there are currently over 443,000 refugee children from South Sudan. As of 21 February 2017

Imvepi settlement is now hosting new refugees as the Palorinya, Yumbe and Pagirinya settlements have reached their capacity. According to UNHCR 2017 reports, refugees arriving in Uganda – mainly women and children – continue to report general insecurity, limited access to food and basic services, violence, incidents of rape and sexual and gender-based violence (SGBV) of women and girls, arbitrary detention, indiscriminate killings, and destruction of property by armed forces, as reasons for fleeing their homes in South Sudan (UNHCR 2017 reports). Refugees indicate that due to insecurity they are unable to use the main roads to the border, and are thus forced to walk in the bush to reach Uganda many for several days and usually with few belongings and limited access to food, water and other needs.

The Burundi Minister for Home Affairs was in Uganda in February (2013) to appeal to the Burundian refugees in

Nakivale settlement and the Isingiro district to return home. There is reportedly increased fighting in the DR Congo, although, this has not resulted in a major escalation of Congolese fleeing the country into Uganda. The average daily influx from DR Congo is 40 persons, but it has been as high as 81 (as observed at the beginning of February) (UNHCR 2017 reports). The main reasons for people leaving include night attacks by armed groups leading to injuries and deaths, SGBV, and forceful recruitment of youth into armed groups.

Findings from the UNICEF, UNHCR and WFP led food security and nutrition assessment conducted in December 2016 (UNICEF, UNHCR and WFP 2016, reports), within refugee settlements indicates critically high global acute malnutrition (GAM) levels in settlements receiving the bulk of the new arrivals from South Sudan. GAM rates in Rhino Camp are currently 21.5 per cent and 14.9 per cent in Lobule camp. Other settlements recorded rates above the WHO "serious" threshold (above 10 per cent), including Kiryandongo, BidiBidi and Adjumani. The remaining settlements predominantly in the western region have GAM below 10 per cent. In comparison with findings from the same time in the previous year (UNICEF, UNHCR and WFP 2015 reports), a notable deterioration of the nutrition situation is observed in Rhino camp from 10.5 per cent to 21.5 per cent and Lobule camp from 2.6 per cent to 14.9 per cent. Minimal changes are observed in the other settlements. According to the Integrated Food Security Phase Classification (IPC, 2017 report), the proportion of food secure population (IPC 1) has declined from 83 per cent in July 2016 to 69 per cent in January 2017. In Uganda, the population is composed of different backgrounds as they come from various countries including Burundi, Somalia, and DRC among others (UNHCR 2017 reports). Majority of

these refugees are vulnerable and this vulnerability affect food security. Most of the refugees have produced many children as they can though family planning methods have been emphasized by WHO but most refugees do not adopt these methods (Nakivale Refugee Settlement report, 2016).

The recent Food Security and Nutrition Assessment (FSNA), supported by UNICEF with the OPM, UNHCR and WFP (2017 report) indicates an overall stable and improved under-five nutrition situation, although there are critical hotspots for urgent action and close monitoring. Populations in Uganda are expected to grow as agricultural production, an important part of food security, declines.

Most people in Uganda depend on agriculture for their livelihoods. The sector employs 65 percent of the labor force and produces 32 percent of GDP growth. However, agricultural production per person did not change in the region from 1960 to 2017 in terms of both overall production and cereal yield (FAO, WFP, and IFAD 2017). Population growth is putting pressure on farmland. Almost quarters of rural households in refugee camps are virtually landless and have little non-farm income. Population pressure caused by refugees contributes to food insecurity by increasing a country's vulnerability to food shortages as it leads to droughts and floods.

Due to the increased refugees in Uganda, population pressure is more pronounced in areas that are susceptible to these events and increased demand for food in districts like Isingiro, Kamwenge have escalated. This puts additional pressure on the food supply system and limited food resources, such as food stocks. Uganda continuing to host refugees in their camps has put the population dynamics on food tensions and this calls for an intervention by government and NGOs to help in reducing the challenge (Nakivale Refugee Settlement report, 2016).

It is further established that due to a higher increase of wars, many refugees have run away from their mother countries and have lived a refugee life in foreign countries. Due to this kind of life, the dynamics in which this population has lived is quite varying basing on age, size, and gender and due to this; it has affected the food security of the refugees (FAO, WFP, and IFAD 2017).

Isingiro-Refugees in Nakivale Resettlement in Isingiro District are crying following a food crisis that has hit the camp. The refugees depend on food given by United Nations High Commissioner for Refugees (UNHCR) and harvests from land given to them to supplement food supplies. But recently food rations by UNHCR were reduced and this has been worsened by persistent drought that has been experienced in the district. The refugees, for example, used to get 15kgs of maize flour per individual every month but this has since been reduced to 1.5kgs.

As a result of refugee crisis, Officials from UNHCR and the Office of the Prime minister (OPM) say there has been a food crisis across the world which has led to reduction of food rations (UNHCR 2017 reports). They advise refugees to use the little food given sparingly as they devise other means like practicing kitchen gardens (FAO, WFP, and IFAD 2017). Refugees used to grow their own crops but due to climate challenges, especially prolonged drought and increased population, they cannot make any harvests. This study assessed the effects of population growth on food security situation among the refugees of Nakivale Refugee Settlement, Isingiro District.

STATEMENT OF THE PROBLEM

The issue of food security situation is a worldwide concern. It is established that 72% of the refugees die of hunger. Uganda being a horst country for refugees, it currently continues to receive a large influx of refugees year after year which has a great effect on food security situation (IPC, 2017 report). According to FAO, WFP, and IFAD (2017), currently Nakivale refugee settlement is a home to 35,000 refugees. These refugees require food and also land for cultivation.

It is important to note that the high influx of refugees which continue to trickle in the settlement camp required a lot of food which outstretches the efforts of UNHCR and WFP. For example, in Nakivale refugee settlement 45% of the refugees receive enough food while 55% of the refugees cry foul that they receive little food. Even the host communities also continue to cry foul that refugees have resorted to stealing their food from their gardens (UNHCR 2017 reports).

Available research indicates that refugees in Nakivale refugee settlement depend on food given by United Nations High Commissioner for Refugees (UNHCR) for example, refugees, used to get 15kgs of maize flour per individual every month but this has since been reduced to 1.5kgs. Officials from UNHCR and the Office of the Prime minister (OPM) say there has been a food crisis across the world which has led to reduction of food rations (UNHCR 2017 reports) and it has affected the food access and availability to the refugees in Nakivale refugee settlement.

The problem that remains unanswered is whether the food crisis among the refugees in Nakivale refugee settlement is as a result of the high population caused by the high influx of refugees. This research therefore assessed the

effects of population growth on food security situation among the refugees of Nakivale Refugee Settlement in Isingiro District.

THEORETICAL FOUNDATION OF THE STUDY

This study was guided by self-reliance theory where it was founded that newly arriving populations have inherent capabilities when given opportunities, and its objective is to assist refugees to obtain economic and social self-sufficiency as quickly as possible after arrival in the horst area (Goldsmith, 2013). The theory argues that refugees have the skills, capacity and agency to stand on their own and be able to sustain them without depending on external humanitarian aid. This theory has been universally embraced by policymakers and aid agencies and has now become an increasingly visible part in refugee assistance and protection programmes worldwide.

METHODOLOGY OF THE STUDY

The study used a cross sectional research design. The justification for this cross-section design was that it was flexible and provided opportunities for considering many different aspects of a problem in-depth at a particular time. The application of a cross-sectional study design was also to enable the researcher to compare the effect of population growth on food security among the refugees of Nakivale Refugee Settlement.

The study was carried out in Nakivale refugee settlement. The settlement is located near the Tanzania border in Isingiro district, Southern Uganda, currently hosts the largest number of refugees in the country. Refugees from

the Democratic Republic of Congo (DRC) constitute the majority of the settlement's population; Nakivale also accommodates refugees and asylum seekers from diverse countries, such as Somalia, Rwanda, South Sudan, Ethiopia and Burundi. Although the size of the settlement varies, it is estimated at well beyond 100 square kilometres. This enormous area is geographically divided into three administrative zones – Base camp, Juru and Rubondo. These three zones, in turn, contain a total of 74 individual villages (Nakivale Refugee Settlement report, 2016).

The population in Nakivale is heterogeneous with many cultures and groups from different nationalities. The settlement now accommodates over **62,000** persons of concern. There is an estimated population of over 35,000 nationals surrounding the Refugee Settlement who directly benefit from water, education, health and nutrition programmes in the settlement. Therefore, the study population comprised of the entire population of Nakivale Refugee Settlement and these were categorized as the refugees, Camp Management including the Camp leaders, UNHCR staff, WHO staff, WFP staff, prime ministers staff members and Health workers.

Data was collected using a number of mixed methods, which included; interview method, focused group discussions (FGDs) and questionnaire survey method. Data from questionnaires was analyzed using the descriptive and inferential statistics with the help of data analysis software - Statistical Package for Social Sciences Package (SPSS). Analysis of qualitative data was done manually using content analysis, notes were written and scripts were analyzed by coding; where information of similar code categories was assembled together meaningfully.

RESULTS AND ANALYSIS

Field findings established various effects of population size on food security situation in Nakivale Refugee Settlement. Results were analysed using simple inferential statistics, were results were obtained inform of tables, frequencies, graphs as well as percentages. The findings were as follows:

Effects of population size on food security situation

The Researcher posed a question to the respondents to establish when the respondents receive food. The elicited response as indicated the following Table.

In Table 1.1, majority of respondents 101 (97.1%) indicated that they receive food every month compared to those who receive it every after 6 months 1 (1%). This is an indication that almost all the refugees in the camp receive food monthly. However, respondents revealed that those refugees who receive food quarterly or half a year were mobile and some of them were spies though the refugee management had never notified these refugees, also, some refugees keep on moving from Nakivale to Mbarara, Kampala and this affects them to be given monthly foods.

Table 1.1: Showing the Respondents' opinion on when they receive food

Period	Frequency	Percent
Monthly	101	97.1
Quarterly	1	1.0
Half a year	1	1.0
Total	103	100.0

Source: Primary Data, June 2018

A question was also paused to establish how much food is received per month elicited response indicated below.

According to Table 1.2 below, majority of the respondents 35 (33.9%) revealed that the most commonly supplied food to the refugees was posho/maize flour. An average person per household gets 12kg per month.

Table 1.2: Showing how much food received by an average person per month

Common Food supplied	**Number of kgs**	**Frequency**	**Percentage**
Posho/maize Flour	12	35	33.9
Beans	2	34	33.0
Cooking oil	1/2ltr	34	33.0
Total		**103**	**100.0**

Source: Primary Data, June 2018

While beans were also said to be supplied to refugees and 34 (33.0%) of the respondents indicated that 2kgs are given to the individual while 34 (33.0%) reported that cooking oil was supplied to individuals as an average person gets a half litre. However, some respondents were reporting that these foods were not enough to complete a month as some respondents were asking the management of the camp to increase on the amount of food received.

The researcher also posed a question to ascertain the main causes of food insufficiency in Nakivale Camp. The elicited response indicated as follows:

Table 1. 1.2: Showing the main causes of food insufficiency in Nakivale Camp

Main causes of food insecurity	**Frequency**	**Percentage**
Many members of a		
family due to high birth rate	37	33.0
Inadequate food supply	32	28.6
Lack of enough lands for farming	8	7.1
Drought	35	31.2
Total	**112**	**100.0**

Source: Primary Data, June 2018 (Multiple Responses)

Field research showed that the main causes of food insecurity were due to many members of a family due to high birth rate as indicated by 37 (33.0%) of the respondents. it was revealed by the respondents that most of the households have 5-10 young people or households. The category of these young people eat a lot as they do not contribute anything hence the little food provided by WFP become insufficient.

According to table 4.12, respondents revealed that the main causes of food insufficiency Nakivale Camp was inadequate food supply as cited by 32 (28.6%) of the respondents. it was said that the supporters who help refugees give them little food and by the end of the month, food is finished. In a FGD with the refugees in Kabahinda village, they had this to reveal; '***sometimes, we are given less***

food or posho only, this tempts us to become more traumatized because we do not afford supplements like beans*' *(FGD, June 2018)

Further research showed that lack of enough land for farming caused the refugees access less food as indicated by 8 (7.1%) of the respondents. it was said that the land portion given to a household is too small to grow beans, tomatoes, maize, graze goats. Moreover, the household keep on increasing as reproduction of the young ones exist. This means that the little land that is provided does not lead to enough food supply.

It was lastly indicated by 35 (31.2%) of the respondents that drought was causing food insufficiency in the Camp. This was evidenced that last year, crops were distracted because of draught. During an interview in Kabahinda village, one local refugee established that; '***in 2017, had grown dodo, spinach, and beans but these crops were destroyed by the draught, I could not get enough water to put on my crops, some goats in the neighbor also died***' ***(Interview, June 2018)*** while in the Documentary review in the officer of agriculture, it was found out that; '***20 people died because of draught, 122 goats died, 167 chicken died***' the causes for these living things were draught. This indicates that the supply of food in the long run was affected.

Ways of food security improvement

A question was also posed to establish ways of food security improvement. The elicited response indicated the following:

Table 1.3: Showing the ways of food security improvement

Ways of improving food security	**Frequency**	**Percent**
Birth control	23	17
Land	25	18.5
Kitchen Gardens	36	26.7
Training on income generating activities	32	23.7
Not sure	19	14.1
Total	**135**	**100.0**

Source: Primary Data, June 2018 (Multiple Responses)

The study findings in table 4.13 indicate that most of the respondents constituting 36 (26.7%) reported that kitchen gardens have been practiced by the refugees. It was said these gardens are friendly manageable because looking at a portion of land given to the household, almost one can utilize the land throughout the seasons. However, the respondents revealed that government and NGOs should provide seedlings to plant in these gardens. However, in a Documentary review from the office of WFP, ***in 2016, it was found out that 90% of refugees who come to the office seeking for seedlings to grow in their gardens are provided with them, however, 80% of these refugees who take seedlings to grow have ended up eating them before they mature (Documentary Review, June 2018)***. This indicates that there is need for NGOs to find a way of how they can strengthen this program as a way of improving food security in the Camp.

Also, as way of improving food security as 32 (26.7%) respondents established that there was need of training in income generated activities especially skilling including had craft, tailoring, carpentry and joinery, juice making. These skills were important as they were good at creating employment among the redundant refugees. In an interview with one youth in New Congo village, he had this to say; **'*when I reached in Nakivale in 2016, I was trained on how to make mats, I have continued with this business, I have created employment for myself and even I am able to earn a living where I easily buy food and other usable to my family*' *(Interview, June 2018)***

Research as shown by 25 (18.5%) established that enough land needs to be provided to the refugees as a way of improving on food security. This is in comparison with the small land given to a household and the type of crops that may be grown on this land. Therefore, if the refugees are given enough land, they may easily grow some crops to sustain their families.

Also, 23 (17%) of the respondents said that refugees need to control on the birth rates through the use of family planning methods like use of pills, condoms. It was exemplary shown by one refugee who said that he had 2 children but with a difference of 5 years and challenges food, education and medication were not affecting him so much as compared with the other households who have 10 dependents. However, this was in contrast with the ideas of some refugees from Somalia who were interviewed during a FGD and had this to say; **'*Allah is annoyed when one kills or does not produce, producing is a natural gift from Allah, our religion and culture condemns family planning and so, if we produce, Allah will guide us in providing food to our children*' *(FGD, June 2018)***

Looking at this attitude, few people have adopted the methods and other refugees continue producing as they want and children have suffered the consequences.

The response indicated by 19 (14.1%) did not show any side but when asked, they were not affected by all conditions. Their families were living in good conditions as required by an average person s/he can live on the earth.

In table 4.4 below most of respondents 50 (48.1%) suggested that camp management should control birth rate through sensitizing people on the use of family planning methods. Refugees should be advised that the use of family planning does not prevent one to produce but rather it encourages the partners to plan for the children in terms of providing foods, education and medication.

Table 1.4: Showing the Respondents' opinion on how camp management should improve food security.

Opinions	**Frequency**	**Percent**
Control birth rate availing refugees with enough land to farm	50	48.1
Control birth rate availing refugees with enough land to farm	13	12.5
Increase on the number of food suppliers to refugees	39	37.5
Others	1	1.0
Total	**103**	**100.0**

Source: Primary Data, June 2018

The second category of respondents showed that there is need to Increase on the number of food suppliers to

refugees in Nakivale refugee camp as indicated by 39 (37.5%) of the respondents. it was said that the food given to an average individual was small for a month and this was even getting over before the ends hence affecting the young children with malnutrition and the old persons with ulcers. An increased food supply of foods to the refugees meant improved nutrition to the people.

The camp management should help to improve food security by availing refugees with enough land to farm as it was indicated by 13 (12.5%) of the respondents. it was said that the refugees are given little land to practice farming hence affect them. However, in an interview with officers from the OPM and WFP, they had this to say; **'*the land given to refugees is much more enough to practice any business of their kind, the farming they practice is not extensive where it requires a lot of land but a moderate farming where one can eat and earn income to sustain the livelihoods*' *(Interview, June 2018)*** However, the last response belonged to others as indicated by 1 (1%) in others included security of the grown crops, harvesting techniques. These were also important in the farming process, though at this stage, most people have different challenges depending on the time of use.

Research from the field showed that, there was a reduced population size which affected food accessibility as established by 44 (33.3%) of the respondents. It was indicated that households who are few and powerless in the family setting have faced a challenge of food as compared with the households who are many and coordinative to work. Respondents also revealed that there was an out flow of hardworking population and hence weak population is left in the camp and are affected by the quantity of food output as indicated by 61 (46.2%).

This was true when most of the families with many dependents were having challenges food and they had increased cases of malnutrition as it was established by 27 (20.5%) of the respondents. It was also said that most refugees tend to move to USA so as to have asylum hence keep on sending money to their relatives in the camp.

Table 1.5: Showing the effects of population size and migration on food security

Effects of Population Size and Migration	**Frequency**	**Percent**
Reduction of population size which affects food accessibility	44	33.3
Out flow of hardworking population hence weak population is affected by the quantity food out put	61	46.2
Increased cases of malnutrition	27	20.5
Total	**132**	**100.0**

Source: Primary Data, June 2018

Relationship between family size increase and meals taken a day

Interpretation: there is significant evidence of relationship between family size and meals taken a day ($p<0.05$)

Interpretation: from Figure 1.2 in the above Bar Chart, most of the households that had members who missed a meal in a day in some months not every month had increased by 02 people whereas the least that missed a meal in some months had increased by 04 and above people.

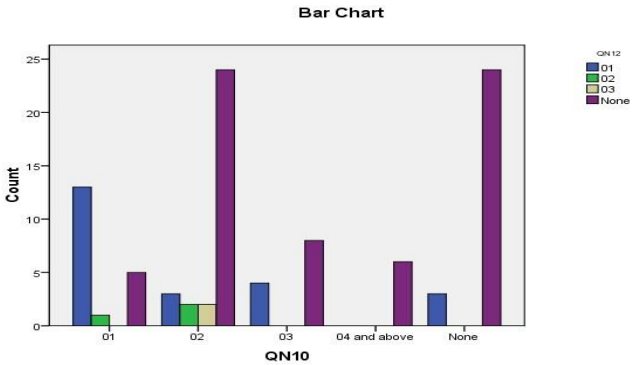

Figure 1.2 shows the relationship between family size increase and meals taken a day

Discussion of findings on the effects of population size and food security

Field findings showed that population size and migration affect food security situation and to this, respondents said that migration lowers population size which affects food

accessibility. This was true in a way that most refugees were migrating to Mbarara, USA, Kampala or sometimes migrating to their home countries and this reduced food production to the people that remain in the camp. It was also said that during the time of people in trying to move away, they destruct their fellows' foods hence the crops are destroyed when they are younger at their premature stage hence it affects the owners of these crops.

In the related instance by (WFP 2011, 2013a, 2013b), many refugees who are energetic have left their camps and the population that remains there is powerless and they are not active to secure food hence they become affected due to this challenge.

Further research showed that the out flow of hardworking population has left weak population in the camp hence affect the quantity food output as the less powerful people are left in the camp. The weak people including the older and the young have less power that may encourage them work. This is in relation with the views that refugees have their freedom to ask for any asylum and they look for areas that have better conditions which may favour them. However, in trying to do so, they have affected the remaining population where these people have suffered from challenges of food (Jacobsen, 2000).

As a result of population size and migration, there have been effects of increased cases of malnutrition in Nakivale Refugee Camp. It was said that the people left in the camp are weak to engage in hard work of digging and in the process the young ones are affected with hunger challenges hence malnutrition.

This relates with the views that many refugees in Africa and Asia live in a unique harsh environment for extended periods while being heavily dependent on continuous international food, and other forms of assistance, often

confined to camps (Jacobsen, 2000). The international support needed to sustain their basic livelihoods has not always been forthcoming. These situations create precarious nutrition and protection situations.

Conclusion

Basing on the field findings, there is a significant relationship between Population Growth and Food Security situation among the Refugees of Nakivale Refugee Settlement. This is based on the fact that when the population fertility, and refugee influx is high, food becomes insufficient to the refugees. Also, when the mortality is highly, the population reduces as most of the people become sick and weak and food is highly consumed by the weak people. It was true that when the population increases, food availability becomes a challenge and cases of malnutrition also increases hence people start dying of hunger and other diseases.

Recommendations

The researcher recommends that government and NGOs like WFP, WHO, UNHCR should institute more technical personnel in the camp to help refugees by training them on better farming skills, helping them to create employment and avail them with enough land to grow more food as this will help on improving food security in Nakivale camp. This aspect was based on the fact that most of the refugees did not use improved farming skills like mulching, watering but training them would help them acquire good skills of improving food security.

The research further recommends that refugees should be trained on income generating actives both entrepreneurial

and life skills. This is based on the reasons that youths were lazy and were not engaged in income generating activities like carpentry and joinery, chapatti making, art and craft work yet these people are still strong to work. Therefore, training these youths in skilling is hoped to reduce food insecurity and also to increase on their purchasing power which will help on improving food security in the camp.

Further recommendation to the Government and NGOs is that there should be addition of various food types that refugees prefer to eat. Also, different seedlings should be given to refugees for them to grow more crops and improve on yielding. Also, refugees should be given balanced diet foods to improve their health" and increase on the quantity of food given to the refugees as it is still not enough for them. This will help achieve the level of food security in the refugee camp.

Areas for further research

The study was not exhaustive owing to the constraints of time and financial respondents. Hence more studies can be done on the following;

There is need for a thorough research on gender issues concerning food security and family planning among vulnerable persons.

Further research can also be conducted on the relationship between culture and food security, this is because it was found out that culture and beliefs link what they ate before and after what they eat now as refugees.

REFERENCES

Agency for Technical Cooperation and Development (ACTED, 2013), An Exploration of the Livelihood

Strategies of Durban Congolese Refugees,' *UNHCR Working Paper* No.123, New Issues in Refugee Research, UNHCR, Geneva

Alix-Garcia and Bartlett (2012), When is a refugee not a refugee? Flexible social categories and host/refugee relations in Guinea', UNHCR Working PaperNo.88, New Issues in Refugee Research, UNHCR, Geneva

Alix-Garcia and Bartlett (2012) and Alix-Garcia, Bartlett, and Saah (2013), Burden or Boon: The Impact of Burmese Refugees on Thailand', The Whitehead Journal of Diplomacy and International Relations, Winter/Spring

Alix-Garcia and Saah (2009), Sustainable Livelihood Approaches: Progress and Possibilities for Change, DFID, United Kingdom

Apuuli B., Wright J., Elias C. and Burton, (2011), Sustainable rural livelihoods: Practical concepts for the 21st century', IDS Discussion Paper 296, IDS, United Kingdom

Atkin (2013), Refugee camps or cities? The socioeconomic dynamics of the Dadaab and Kakuma camps in Northern Kenya', Journal of Refugee Studies

Baez (2011), *Refugee Livelihoods: a review of the evidence*, EPAU, UNHCR, Geneva

Bashaasha .B, Waithaka.M, Kyotalimye. M., (2010), Refugee Livelihoods: a review of the evidence,EPAU, UNHCR, Geneva

Coly et al. (2006); Prentice et al. (2013); and Hirvonen (2014), The economic and food security implications of climate change in Mali. *Climate Change*, 68: 355_378

Conway and Toenneissen (2003); Gilland (2002); Alexandratos (2005), Countries with Rapid Population Growth and Resource Constraints: Issues of Food, Agriculture, and Development", Population and Development Review, 31(2) 237–258

Crisp (2010), Maternal nutrition and socio-economic status as determinants of birth weight in chronically malnourished African women" Tropical Medicine & International Health, 2(11): 1080-1087

Czaika and Mayer (2011), Avoiding Conflicts over

Africa's Water Resources" Ambio 31(2): 236-242

Daressa et al, (2013), Warming increases the risk of civil war in Africa", Proceedings of the National Academy of Sciences, 106: 20670–20674

Ecker and Breisinger (2012), "The trouble with the MDGs: Confronting expectations of aid and development success", World Development 35(5): 735-751

FAO (2006), 'Urban refugees in Nairobi: Protection, survival and integration', Migration Studies No. 23, Forced Migration Studies Programme, University of the Witwatersrand FAO (2013), 'New Approaches to Urban Refugee Livelihoods', Refuge,

FAO, WFP, and IFAD (2017), Exploring the Frontier of Livelihoods Research', Development and Change, Fisk (2012), "Intensive Farming, Agro-Diversity, and Food Security under Conditions of Extreme Population Pressure in Western Kenya", Human Ecology, 28(1):19-51

Global acute malnutrition in refugee settlements, December (2016), A Life Course Perspective: Understanding Food Choices in Time, Social Location, and History", Journal of Nutrition Education and Behavior, 37(3): 121-128

Goldsmith (2013), "Rapid Population Growth and Water Scarcity: The Predicament of Tomorrow's Africa", Population and Development Review, 16: 81-94

Hendrix and Brinkman (2013), Investing in women farmers to eliminate food insecurity in southern Africa: policy-related research from Mozambique", Gender and Development, 16(1): 147-159 Hoddinott (2012), "World population and food supply: can food supply keep pace with population growth in the next half century" Food Policy, 27(1): 47-63

IPC, (2017 report), "Food security: The challenge of feeding 9 billion people", Science, 12: 812-818 Jacobsen (2002), Enhancing the crops to feed the poor", Nature

Kibreab (1997); UNEP (2005), The Effect of Refugee Inflows on Host Communities: Evidence from Tanzania." World Bank Economic Review 24 (1): 148–170

Kreibaum (2013), Civil Wars beyond Their Borders: The Human Capital and Health Consequences of Hosting Refugees." Journal of Development Economics

Lentz, Passarelli, and Barrett (2013), The Impact of Cash Transfers on Food Consumption in Humanitarian Settings*: A Review of Evidence*. Winnipeg: Canadian Foodgrains Bank

Lobell et al. (2008), Cash Transfers in Emergencies: A Synthesis of World Vision's Experience and Learning. Middlesex, UK: World Vision International

Long et al (2006); Muller *et.al*. (2011), Refugee Movements and Aid Responsiveness of Bilateral Donors." Journal of Development Studies 47 Majid and McDowell 2012;

Menkhaus (2012), Forced Displacement in Africa: Dimensions, Difficulties and Policy Directions." Refugee Survey Quarterly 29:1–27

Martin 2005; Salehyan and Gleditsch (2006), Preschool Stunting, Adolescent Migration,

Maystadt and Verwimp, forthcoming; Kreibaum (2013); Maystadt and Duranton (2013),

Maystadt and Wervimp (2009), "Humanitarian Presence and Urban Development: New Opportunities and Contrasts in Goma, DRC." Disasters

Milner and Loescher (2004), Policies and Investments for Poverty Reduction and Food Security. Food Policy Report 25. Washington, DC: International Food Policy Research Institute

Morel (2009), Large Refugee Populations, Resource Scarcity and Conflict." Paper presented at annual conference of the European Political Science Association, Berlin

Nakivale Refugee Settlement report, (2016), Self-reliance for refugees: a view from Nakivale settlement, Humanitarian Innovation Project

Pieters, Guariso, and Vandeplas (2013), Civil War."Journal of Economic Literature48 (1): 3–57.

Regan and Stam (2000); Regan (2002), Environmental Refugees*:* Myth or Reality*?* Geneva: United Nations High Commissioner for Refugees.

Robeyns (2006), Food Aid after Fifty Years: Recasting Its Role. New York: Routledge

Sanchez *et. al* (2005), The Political Economy of Armed Conflict: Beyond Greed and Grievance. Boulder, CO, US: Lynne Rienner Publishers Shroff et al. (2011); Duflo (2012), "Weather Patterns, Food Security and Humanitarian Response in Sub-Saharan Africa", Philosophical Transactions: Biological Sciences

UN (2009), Refugees in the city: status determination, resettlement, and the changing nature of forced migration

in Uganda', Refugee Law Project Working Paper No. 6, Kampala, Refugee Law Project

UNHCR (1998), Humanitarian innovation and refugee protection', Refugee Studies Centre Working Paper No. 85, Oxford, University of Oxford

UNHCR (2017 reports), "Mainstreaming livelihoods support: the Refugee Livelihood Project", Forced Migration"

UNHCR, (2012), 'Displacement in urban areas: New challenges, new partnerships', Disaster, 36, S1, S23S42

WFP (2011), (2013a), (2013b), Moving up and down looking for money': Making a living in a Ugandan Refugee Camp', In Livelihoods at the Margins: Surviving the City, (ed.) Staples, J., Walnut Creek: West Coast Press

World Bank (2011), 'Minimum standards and essential needs in a protracted refugee situation. A review of the UNHCR programme in Kakuma, Kenya', Evaluation and Policy Analysis Unit, UNHCR, Geneva

Zetter (1995); Crisp (2010); World Bank (2011), Poverty is Bad: Ways Forward in Livelihood Research, CERES, Research School for Resource Studies for Development, University of Utrecht.