

FOOD INSECURITY AMONG WORKING POOR AND THEIR COPING STRATEGIES IN DAR ES SALAAM, TANZANIA

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Abstract

Food insecurity is one of the contemporary global challenges as a large number of people in the world have inadequate access to sufficient and quality food. The objectives of the paper are as follows: to assess the status of food insecurity among working poor class members in Dar es Salaam, examine their coping strategies, and determine the association between the status of food insecurity and coping strategies. The study used a cross-sectional research design. A structured questionnaire and Focus Group Discussions (FDGs) were used to collect data from 336 respondents. Chi-square was used to determine the association between the status of food insecurity of the working poor and their coping strategies in Dar es Salaam. The findings show that the working poor mainly relied on loans from friends and relatives and participating in Rotating Savings and Credits Associations (ROSCAs) as coping strategies. Furthermore, less than 20% of the working poor households experienced food insecurity. Coping strategies such as changing the place of residence, receiving financial assistance from friends and relatives, and participating in ROSCAs were significantly associated with food insecurity status of the working poor. It is concluded that food insecurity among the working poor is a relatively invisible aspect. Being a worker with a monthly wage does not prevent the working poor from falling into the food-insecure population category. It is recommended that the information on the association between the status of food insecurity and the coping strategies used by the working poor should be considered in the amendments of policies such as the Food Insecurity Policy for them to be efficient.

Keywords: Associations, Coping strategies, Food insecurity, Working Poor

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INTRODUCTION

Food insecurity is one of the contemporary global challenges since a large number of people in the world have inadequate access to sufficient quantity and quality food. FAO (1996) defines food insecurity as a situation when all people, at all times, do not have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. From this definition, an individual is considered to be food insecure if he/she does not have economic and physical access to food. In some instances, they are compelled to eat foodstuffs that do not meet their dietary requirements. Food insecurity is related to physical unavailability of food items in a given area. Individuals may fail to consume adequate and nutritious food simply because they are not available in that locality.

FAO, IFAD, UNICEF, WFP and WHO (2021) estimated that between 720 and 811 million people faced hunger in 2020. The numbers show regional disparities where 21% of people in Africa were facing hunger, ahead of Latin America and Asia. Seven hundred sixty-eight million people are undernourished worldwide, and Africa accounts for more than one-third (282 million) of that population. Several factors such as income, unfavourable climatic conditions, frequent armed conflicts, difficult international economic situation resulting from falling prices of extractive and non-extractive commodities and weak growth as well as absence of good governance contributed to the recent increase in food insecurity in sub-Saharan Africa (FAO, 2017; Smith *et al.*, 2000&Pingali *et al.*, 2006).

Availability of foodstuffs at the local market, in some instances, may not prevent households from becoming food insecure. Food insecurity is related to the ownership of resources by individuals. Usually, poor people are deprived of resources which they could use to access essential commodities such as food, which is important for their survival. Sen (1981) and Cook and Frank (2008) consider this a sufficient supply of food nationally or internationally, which does not guarantee food security at the household level. People need to have financial resources that they can use to buy food items available at the market. Inadequate access to food is largely related to income, which affects its market demand (Sibhatu *et al.*, 2015& Yu *et al.*, 2004). Nevertheless, an increase in

income, in some instances, does not necessarily guarantee that more income will be spent on buying adequate food (Korir *et al.*, 2020).

Among the social groups affected by food insecurity are the working poor, defined by ILO (2020) and Bennett (2017) as employed persons living in households with incomes below the nationally determined poverty line. The official minimum wage in Tanzania is TZS 150 000 (URT, 2022), whereas HBS 2017/2018 cited in MoFP *et al.* (2020) indicates that the mean expenditure per household in Tanzania mainland is TZS 488 676. Thus, individuals earning such an amount or less definitely fall into the working poor category.

The working poor are not passive when they encounter life-challenging situations such as shortage of food. They use limited resources at their disposal to cope with

food insecurity. Dercon (2002) points out that the poor in developing countries, including the working population, use different coping strategies when facing hardship such as food insecurity. Though they consider the strategies useful in a difficult situation, in some instances, the strategies employed expose them to more vulnerability.

Food insecurity and coping strategies are two sides of the same coin since they are related, depending on the degree of severity of the former. The need to study the association between food insecurity and coping strategies would inform policies that focus on improving income among the working poor and their living conditions in general. Economic access to food and its stable supply in a given community is one of the essential aspects of food security because people become food insecure when they are missing.

Different scholars, such as Klarner, Knabe, 2019; Amendah *et al.* 2014; Paul *et al.* 2020; Yurdakul (2016) have largely studied how individuals use different strategies to cope with hardships in their attempt to survive. Nevertheless, information is lacking on how the working poor in Tanzania, who are food insecure, cope with that situation. This paper attempts to contribute to the growing literature by using empirical data to understand the status of food insecurity among the working poor, examine their coping strategies, and determine the association between the status of the working poor's food insecurity and their coping strategies in Tanzania.

LITERATURE REVIEW

Food insecurity

FAO (1996) defines the term food insecurity as the situation where all people, at all times, do not have physical and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life. This definition is considered comprehensive since it comprises the four dimensions of food insecurity: availability, access, utilization, and stability. The definition diverges from traditional ways of defining the concept of food insecurity, which focus much on food availability. Alternatively, food insecurity can be defined as lack of consistent and adequate access to affordable, safe and healthy foodstuffs.

Coping strategies

Despite different initiatives by the government and non-governmental organizations to address the problem of food insecurity, individuals tend to find other ways to meet their daily food requirements. These alternative ways can be referred to as coping strategies. UNDP (2011) defines coping strategies as “all strategically selected acts that individuals and households in a poor socio-economic situation use to restrict their expenses or earn some extra income to enable them to pay for the necessities and not fall too far below their society’s level of welfare”.

Theoretical Framework

The study is guided by the sensitivity and resilience theory of vulnerability (Moser, 1998). The theory states that vulnerability involves both threat and resilience or responsiveness in exploiting opportunities and resisting or recovering from the negative effects of a changing environment. The theory implies that individuals, households, or communities possess assets and entitlements that can be mobilized and managed during hardship. The more the assets individuals own, the less vulnerable they are, and vice versa. Strength-wise, the theory considers that individuals are not passive in the event of vulnerability but are proactive and capable of using different resources to recover from hardship. It also considers material and immaterial resources, which can be used to cope with hardship. Nevertheless, the theory does not consider the degree of association between variables such as food insecurity and coping

strategies, and the extent to which the two are associated. Therefore, the study fills the gap by examining the association between these variables.

Empirical Studies

As a multidimensional phenomenon, food insecurity significantly impacts different aspects of human life. Studies indicate that food insecurity has adverse effects such as suicidal ideation, depression, malnutrition, obesity, diabetes, anaemia, deficiency of other nutrients, and mental disability. A combination of these effects has both direct and indirect negative impact on people's socio-economic lives. Undernourished individuals may find it challenging to undertake different economic activities which are important for the socioeconomic development of a given country (Khatri-Chhetri and Maharjan, 2006; Davison and Marshall-Fabien, 2015; Ramsey *et al.*, 2012; Psaki *et al.*, 2012; Pan *et al.*, 2012; Ke and Ford-Jones, 2015 & Lee *et al.*, 2001).

FAO (2017) considers that despite an improvement in agricultural production since 2000, still 27% of the population in Sub-Saharan Africa live with severe food insecurity because of an increase in inequality and income disparity. People with relatively low income find themselves in a difficult position to access food. The region is largely affected compared to other regions in the world and food insecurity is expected to increase in the future due to factors such as climate change and civil unrest.

In the event of food insecurity, people tend to use different coping strategies such as migration, reducing the quantity and frequency of food intake, skipping meals, borrowing food and money, food aid, selling property, and engaging in other income-generating activities (Wabwoba, 2015; Ngidi and Hendriks, 2014; Rebecca and Ige, 2013; Daninga and Ke, 2014 & Zvikomborero and Chigora, 2010). These strategies might vary by geographical location, season, the magnitude of hardship, and other socio-economic factors.

Literature on food insecurity in different African countries (Sasson, 2012; Babatunde, 2020; Bahru *et al.* 2020; Korir *et al.*, 2020 & Guo *et al.*, 2020) provide information on the trends and effects of food insecurity in different geographical locations and on different groups of people such as women, children, elderly people with disability, and rural as well as urban communities. However, information on the status of food

insecurity among the working poor in Tanzania, as well as the different coping strategies they use to cope with it is lacking.

Therefore, the study attempts to cover that gap by providing valuable empirical information related to food insecurity in Tanzania, specifically in Dar es Salaam.

METHODOLOGY

The study was conducted in five districts of Dar es Salaam Region, namely Kinondoni, Ilala, Temeke, Ubungo, and Kigamboni. The 2021 Integrated Labour Force Survey findings revealed that 54.8% of Dar es Salaam's labour force was employed, and about a quarter (22%) was the working poor (URT, 2021). Dar es Salaam was chosen because it has many working poor. The study used cross-sectional research design. The design was chosen because it enables the researcher to study multiple variables at the time of data collection. The household was the unit of analysis. Quantitative data were collected using a structured questionnaire administered to 336 heads of households working in security and cleaning companies. The two groups were randomly chosen because they reflected the characteristics of the working poor who earned below TZS 150 000 (USD 65) per month while an average monthly expenditure per household is TZS 488 676. Thus, the researcher could draw inferences about the population from which they were selected. Qualitative data were collected through Focus Group Discussions (FGDs) to supplement quantitative data and increase the understanding of the study problem. Ten (10) FGDs were conducted where respondents were randomly selected from groups of men and women, each with 10 participants. Each FGD took 45 minutes. A pre-test study was conducted in the two companies to check the reliability and validity of the data collection tools. Verbal consent was obtained from respondents before taking part in the study.

Proportionate stratified random sampling was used to get the number of participants, as shown in Table 1. The respondents were divided into two groups: security guards and cleaners. Each group was further divided into subgroups of males and females. A sampling fraction was computed to get several respondents in each stratum. Two companies, Kishengweni Cleaning Companies and Ultimate Security Companies

from which the respondents were drawn were randomly chosen among five security companies and five cleaning companies with more than 500 workers in their domains and which operated in the five districts of Dar es Salaam Region. An excel software was used to generate sub-sample sizes from the sampled companies.

The sample size was calculated using Cochran’s correction formula to adjust the sample size for smaller populations (Cochran & Talwani, 1977). The Cochran formula was chosen because it enables the computation of an appropriate sample size when the desired confidence level, precision level, and the estimated quantity of the characteristics are present in the population. The formula is: $n = n_0 / [1 + (n_0 / \text{population})]$, where:

n = Sample size,

n_0 = Sample size for an infinite population, and

384 = Sample size for an infinite population, obtained using a z-value of 1.96 for the selected alpha of 0.25 in each tail, corresponding to a 95% confidence interval, a 0.5 estimate of standard deviation in the population, and an acceptable margin error of 0.05. Therefore, the sample size was: $n = 384 / [1 + (384 / 2696)] = 336$

Table 1: Number of Participants Sampled from Each Company

Occupation and sex of participants		The participants (n)	Sampling fraction	Sample (n)
Security guards	Male	2054	0.1246	256
	Female	101	0.1246	13
Cleaners	Male	46	0.1246	6
	Female	494	0.1246	61
Total		2696	-	336

Source: Field Data (2024)

Quantitative data were analysed using IBM SPSS version 22 statistics software. The analysis involved descriptive and inferential statistics. The chi-square test was conducted to determine the association between the food insecurity levels of the working poor and their coping strategies.

Furthermore, qualitative data were analysed through content analysis. Through content analysis, the main themes that came out of FGDs were identified.

Household Food Insecurity Access Scale (HFIAS) determined the status of food insecurity among the working poor. HFIAS involved nine occurrence questions that were asked to the households to assess access to food in the previous four weeks (30 days). HFIAS has four indicators: Household Food Insecurity Access-related Conditions, Household Food Insecurity Access-related Domains, Household Food Insecurity Access Scale-Score, and Household Food Insecurity Access- Prevalence.

HFIAS was chosen because its questions inquire about the respondents' perceptions of food vulnerability or stress and their behavioural responses to insecurity. It also assesses the prevalence of food insecurity and its evolution over time in a given population (Coates *et al.*, 2007). Based on the responses to the HFIAS, households are judged to be food secure if they score 0-9, moderately food secure if they score 10-18 and food insecure if they score 19-27. The coping strategies the working poor households reported were analysed using multiple response analysis.

RESULTS AND DISCUSSION

The findings and discussion in this section are organized into three parts. The first part presents the food insecurity status of the working poor, the second part discusses the coping strategies against poverty used by the working poor, and the last part presents the association between the status of the working poor's food insecurity and their coping strategies.

The Status of Food Insecurity among the Working Poor

The study findings based on HFIAS show the status of food insecurity in the working poor households. The respondents indicate their perceptions of food vulnerability of their households and their behaviors concerning food insecurity. Discussions on the status of food insecurity are based on four indicators of HFIAS: Household Food Insecurity Access-related Conditions, Household Food Insecurity Access-related Domains, Household Food Insecurity Access Scale, and Household Food Insecurity Access- Prevalence.

Table 2: Proportions of Respondents’ Food Insecurity Status Concerning Various Items (n=336)

Food insecurity	Yes		No	
	n	%	n	%
Whether in the previous four weeks, they worried that their households would not have enough food	233	69.3	103	30.7
In the past four weeks, they were not able to eat the kinds of foods they preferred because of lack of resources	333	99.1	3	0.9
In the previous four weeks, they had to eat a limited variety of foods due to lack of resources	334	99.4	2	0.6
In the past four weeks, they had to eat some foods they did not want to eat because they lacked the resources to obtain other types of food	333	99.1	3	0.9
In the past four weeks, they had to eat a smaller meal than they needed because there was no enough food	249	74.1	87	25.9
In the previous four weeks, they had to eat fewer meals daily because of insufficient food	242	72.0	94	28.0
In the past four weeks, there was no food to eat in their household because of lack of resources to get food	99	29.5	237	70.5
Whether in the previous four weeks, they went to sleep at night hungry because there was no enough food	89	26.5	247	73.5
In the previous four weeks, they went a whole day and night without eating anything because there was no enough food	263	78.3	73	21.7

Source: Field Data (2024)

Household food insecurity access – related conditions

The study findings in Table 2 show that more than 99% of the respondents ate less food than required and they did not want to eat in the previous four weeks. The findings imply that limited financial resources prevented them from having a wide variety of food. They had no different options for eating food of their choice, but rather, they ate any food at their disposal, given their financial capacity to purchase food. Furthermore, the FGD findings were consistent with quantitative findings. Participants in FGD had the following to say: *“We would like to eat properly in our families but our income does not allow us to do so. Prices of food items are high and keep on increasing daily while our income remains the same. This prevents us from eating quality food or changing the types of food we eat. We normally eat the same types of foodstuff daily. However, we normally save our money to eat quality food on festivals”... (FGD, Dar es Salaam).*

Moreover, the study findings in Table 2 show that about three quarters (a combined percentage of 75) of respondents said “yes” to questions 5, 6, and 9. The results suggest that their limited financial resources prevented them from eating adequate food; sometimes they went day and night without eating. Lacking sufficient food to eat and not having food at all may have serious harmful effects, such as illness and other health-related problems for the members of a given household. Health problems may further negatively affect the individual’s capacity to perform economic activities and generate the income necessary for the improvement of one’s well-being. The findings were consistent with previous studies by Adesoye and Adepoju (2020) which revealed that nearly 80% of the working poor were food insecure. With meagre monthly wages, the working poor are less likely to spend much money on foodstuffs and hence eat adequate quantity and quality food. Furthermore, Tsegaye *et al.* (2018) point out that households react to food insecurity by wisely handling the amount of food available in their home. Household members tend to skip some of their usual meals and sometimes eat smaller quantities than they would otherwise consume.

Household Food Insecurity Access – Related Domains

As illustrated in Table 2, the study findings show that 99% of respondents reported that they experienced insufficient quality food in the past four

weeks. The findings imply that the respondents were compelled to eat some foods they did not want to because of limited resources at their disposal. Furthermore, 69.3 % of households experienced anxiety and uncertainty in accessing food. The findings suggest that they werenot sure of getting food regardless of the availability of foods in the market. The findings coincide with other findings obtained from Nigeria and Ghana by Chagomoka *et al.* (2016) and Rebecca and Ige (2013) who reported that in response to economic hardship, the working poor tended to stay hungry and try to manage the small quantity of foodin their households. Normally, the working poor tend to reduce and diversify their expenditure on different aspects of life to cope with poverty (Bakasa, 2016; De Haan *et al.*, 2002). Furthermore, the findingsfrom the FGD concerning anxiety and uncertainty are indicated by the following quote: *“Our wages are too low and sometimes we are not paidon time. Therefore, we are not sure of getting enough food every day. Thesituation becomes harder as we approach the end of the month becausewe are usually short of money to buy food. Most days of the month, we are uncertain of getting enough quality food, and our children are the main victims of these food shortages”.... (FGD, Dar es Salaam).*

Table 3: Household food insecurity access scale score (n=336)

Condition	Responses	Average
Worry about food	587	1.74
Unable to eat preferred food	644	1.91
Eat just a few kinds of food	679	2.02
Eat the food they do not want to eat	644	1.97
Eat a smaller meal	676	2.01
Eat fewer meals in a day	693	2.06
No food of any kind in the household	701	2.08
Go to sleep hungry	703	2.09
Go a whole day and night without eating	664	1.97
Total	5991	17.83

Source: Field Data (2024)

The findings in Table 3 indicate that the average score of HFIAS is 17.83. The findings suggest that the respondents experienced food insecurity in the past 30 days. They expressed the prevalence of food

insecurity in terms of frequency of occurrence by showing how often they experienced a particular condition during the past four weeks. The frequencies varied from rare occurrence to habitual occurrence. The findings coincide with Piaseu and Mitchell (2022) who argue that lower-income households have difficulty meeting their fundamental needs, such as food provision and access to quality education and health services. Additionally, Chatterjee *et al.* (2021) argue that food insecurity is significantly related to lower monthly income of household and other socioeconomic status indicators such as lower household per capital income of the month, lower rank in the standard of living index (SLI), and lower monthly per capital expenditure on food items.

Coping Strategies Used by Working Poor Households

This section presents participants’ responses indicating different coping strategies against food insecurity in relation to the second objective of the study. Some strategies aim to increase their income while others intend to ensure that their consumption levels are protected.

Table 4: Proportions of household heads who used different coping strategies(n=336)

Coping strategies	Responses (n)	Percent
Selling items on the street after working hours	97	28.9
Gardening or crop farming	92	27.4
Taking loans	259	77.1
ROSCAs	214	63.7
Financial assistance from relatives and friends	82	24.4
Food assistance	128	38.1
Changing place of residence	115	34.2
Sending children to relatives	18	5.4
Removing children from school	2	0.6
Selling assets	68	20.2

Source: Field Data (2024)

Multiple responses were allowed; hence, the per cents do not add up to 100%

Taking loans

More than three-quarters (77.1 %) of the respondents were reported to have taken loans from friends and relatives to cope with poverty. The findings imply that their relatively meagre monthly income prevents them from saving. Therefore, they resort to loans from friends and relatives in the event of hardship. The findings suggest that low-income populations are denied regular access and use of appropriate financial services at reasonable costs. Accessibility to financial services would ensure individual economic growth and poverty reduction. Kashuliza *et al.* (1998) argue that because of strict regulations and conditions imposed by formal financial institutions like high interest rates and collateral requirements, many urban populations resort to informal and semi-formal financial services despite the concentration of formal financial institutions such as banks. According to Kislat *et al.*, (2013), informal lenders rely less on collateral in lending money to low-income people. Closeness and relationship between the lenders and loan applicants may enable private lenders to secure the confidential information of loan applicants, thus reducing the need for collateral.

Participating in ROSCAs

The study findings in Table 4 further show that slightly more than five-fifths of two-thirds (63.7%) of the respondents resorted to be participating in Rotating Savings and Credit Associations (ROSCAs) as a coping mechanism against poverty. The findings imply that certain poor households save a small amount of money to meet their future financial demands and improve their socioeconomic conditions. The associations also provide individuals with access to funds during unexpected events. The money contributed is kept by the treasurer, who is appointed among the members. The treasurer keeps the money at their home and in some cases they can misuse the money contributed and negatively affect the continuity of the association. The findings are consistent with Kinyondo and Kagaruki (2019) who indicated that these associations provide financial services to millions of Tanzanian households. 5/5

Food assistance

About two-fifths (38.1%) of the respondents reported receiving food assistance from friends and relatives in the previous twelve months. The findings suggest that people who have limited financial capacity to buy

food seek food assistance. The findings align with Tam *et al.* (2014) who argue that the urban poor rely on social networks to secure food assistance to meet their food demand in hardship. Ume *et al.* (2018) also say that food assistance provided to poor individuals helps them tackle hunger in emergencies or help with more profound, longer-term hunger alleviation and achieve food insecurity.

Changing place of residence

The study findings in Table 4 further show that 34.2% of the respondents reported moving from one residence to another, where living costs were relatively low. Changing the place of residence remains an important livelihood strategy for millions of food-insecure and poor people across the globe. Poor people tend to move to areas where they consider life to be relatively more straightforward and have more opportunities for increasing their income (WFP, 2008; Deshingkar and Start, 2003; Mc Dowell and De Haan, 1997).

Selling items on the street after working hours

The research findings in Table 4 show that selling items on the street after working hours was reported by 28.9%. In comparison, 27.4% of the respondents reported engaging in farming or gardening to increase income, hence coping against poverty. Households can increase revenue by making employment choices and diversifying economic activities. In this way, households protect themselves from adverse income events before they occur (Morduch, 1995; Busato *et al.*, 2008; Berloffia and Modena, 2009). Poor people diversify their livelihoods to survive in a risk-prone and uncertain world to cope with temporary crises. Diversification of livelihoods can also be considered an adaptive response to the long-run decline in income due to severe economic changes beyond their control (Berry, 1989; Heyer, 1996). Furthermore, the findings suggest that the working conditions of the working poor prevent them from participating in income-generating activities after working hours.

Financial assistance from friends and relatives

Financial assistance from friends and relatives as a coping strategy was reported by almost a quarter (24.4%) of the respondents. The findings suggest that in the event of hardship, the working poor tend to resort to financial assistance from friends and relatives. This coping strategy was reliable based on relationships developed between the individuals.

Empirical studies show that financial aid is considered as an informal insurance mechanism in the event of adversity. Financial assistance is regarded as a safety net since it helps poor households meet their basic needs in difficult times. The amount of assistance to be received depends on the relative magnitude of income adversity and the level of social networks (Mpia, 2004; Pajaron, 2017; Frimpong, 2019).

Selling assets

As indicated in Table 4, 28% of the respondents reported selling their assets to cope with poverty. Nevertheless, the findings imply that selling assets may hurt the household economy as it may deepen poverty levels. With the inadequate income they earn, they stand a better chance of not being able to buy similar assets in the future. According to Leive and Xu (2008), selling assets is a common coping strategy in middle and low-income sub-Saharan Africa. Lower-income households were more likely to sell their assets to cope with uninsured catastrophic health expenditures. Below a given asset threshold, households tend to reduce consumption to preserve their stock of assets. In some circumstances, assets are sold to protect consumption (Morduch, 1995; Busato *et al.*, 2008; Berloff and Modena, 2009). The working poor's coping strategies confirm the sensitivity and resilience theory of vulnerability that individuals, households, or communities possess assets and entitlements that can be mobilized and managed in the event of hardship. Individuals are not passive when facing hardship but actively find solutions to their problems.

Association between Food Insecurity Status and the Working Poor's Coping Strategies

The study findings presented in Table 5 are based on Chi-Square tests conducted to establish the association between food insecurity status and the working poor's coping strategies.

Table 5: Association between status of food insecurity and coping strategies

Coping Strategies			Statuses of food insecurity			Chi-square value	p-value
			Food secure (%)	Moderately food secure	Food insecure		
Taking loans	Used (%)	77.09	31.54	32.44	13.09	0.527	0.768 ^{ns}
	Didn't use (%)	22.91	08.63	10.71	03.57		
Changing place of residence	Used (%)	34.23	10.12	16.96	7.14	8.420	0.015*
	Didn't use (%)	65.77	30.05	26.19	9.52		
Selling assets	Used (%)	20.23	05.95	10.12	4.17	4.172	0.124 ^{ns}
	Didn't use (%)	79.77	34.23	33.04	12.5		
Financial assistance from relatives and friends	Used (%)	24.40	06.25	15.48	02.68	18.155	0.000***
	Didn't use (%)	75.60	33.93	27.68	13.99		
Food assistance	Used (%)	38.09	13.39	18.75	05.95	3.195	0.202 ^{ns}
	Didn't use (%)	61.90	26.78	24.40	10.71		
Sending children to relatives	Used (%)	5.35	02.38	01.78	01.19	0.863	0.649 ^{ns}
	Didn't use (%)	94.64	37.79	41.36	15.47		
Removing children from school	Used (%)	0.59	0.29	0.00	0.29	2.258	0.323 ^{ns}
	Didn't use (%)	99.41	39.88	43.15	16.36		
Selling items on the street	Used (%)	28.86	12.79	12.79	03.27	2.950	0.229 ^{ns}
	Didn't use (%)	71.13	27.38	30.35	13.39		
Gardening or crop farming	Used (%)	27.38	11.30	11.01	05.05	0.543	0.762 ^{ns}
	Didn't use (%)	72.62	28.86	32.14	11.60		
ROSCAs	Used (%)	63.69	29.16	28.27	06.25	21.446	0.000***
	Didn't use (%)	36.31	11.01	14.88	10.41		

Source: Field Data (2024)

ns = no significant association, *significant at 5%, *** significant at 1%

The study findings in Table 5 show no statistical association between the levels of food insecurity and taking loans as a coping strategy ($p=0.768$). The results suggest that in some instances and given the nature of the working poor's living conditions, they may use the loans taken to cover other household expenditures such as paying water and electricity bills, and treatment for sick household members. In the meantime, they could use different coping strategies related to food consumption, such as skipping meals, eating less quality food, or spending the whole day without eating. The findings contradict Nabarro *et al.*, (2021) and Sultana & Rayhan (2022) who argue that when a household experiences food insecurity, it resorts to taking loans. The borrowed amount would be used to buy food to meet household needs.

Findings in Table 5 show that statistically there was an association between changing the place of residence and food insecurity status ($p=0.015$). The findings imply that given food insecurity status, the working poor tend to change their residence and move to an area with relatively low living costs. The findings are in line with Snel (2021), Kotic and Anna (2023), and Gemenne (2022) who consider changing the place of residence as one of the necessary measures in coping with food insecurity among the working poor. They tend to move to localities where they can access foodstuffs at relatively affordable prices and reduce their monthly expenditure on food items.

In addition, the study findings in Table 5 indicate that selling items in the streets after working hours was not statistically associated with the households' food insecurity status. The results suggest that, given the unreliable nature of the business activities conducted by the working poor, their effects on the status of food insecurity cannot be apparent. The working poor residing in the poor neighborhoods are surrounded by low-income people whose demand for different non-food items is also common. The findings are consistent with Sultana, Rayhan 2022; Murphy *et al.*, 2019 and Helgeson *et al.* (2023) who point out that people with low income do not buy non-food items regularly, given their income level and the price of items sold. Poor people's income is geared towards purchasing daily necessities and food. Therefore, the working poor cannot rely on selling different items to cope with food insecurity. Selling items to generate more income depends on the demand side of the given products. In poor localities with low-income people, the

working poor who sell items after working hours are not expected to fetch much money.

The study findings further show a significant association between food insecurity status and participating in Rotating Savings Credit and Associations (ROSCAs) ($p=0.001$). The findings imply that the working poor, with meagre monthly wages, resort to participating in ROSCAs to supplement their small income. The income from this source enables the households to purchase foodstuffs and meet their other daily requirements. Scholars consider participation in ROSCAs as informal insurance where their members tend to resort to it when they experience certain hardships, such as food insecurity. In such a situation, they can easily access a certain amount of money they had previously contributed. Getting money from the ROSCAs treasurer is easier than banks, far from individuals' residential areas (Calomiris,Rajaraman, 2020;Ali, Abdulai, 2022 &Baland *et al.*, 2019).

Furthermore, the study findings in Table 5 indicate no significant association between receiving food assistance and the status of food insecurity. The results suggest that reliance on food assistance is an unreliable coping strategy since the availability of food assistance depends on surplus production by their relatives in rural areas and their willingness to provide such assistance when required. Nevertheless, the findings contradict Bekele and Abdissa,2019; Farzana *et al.*, 2020 and Sassi (2021) who consider food assistance as one of the important measures in the event when a household is food insecure. Urban dwellers depend on relatives and friends in rural areas to assist them when needed.

CONCLUSION

Food insecurity among the working poor is a relatively invisible aspect. Being workers with monthly wages does not prevent the working poor from falling into the food-insecure population category. The findings from this study indicate that 75% of the respondents reported that they experienced a problem of inadequate food. Nevertheless, the working poor are not passive when facing hardship situations such as food insecurity. They vary their coping strategies to ensure that they survive in given conditions. The respondents reported that they mainly relied on loans from relatives and participating in ROSCAs as coping strategies against food insecurity. With the meagre income they earn monthly, they can manage to pay back loans that are provided without tough conditions.

RECOMMENDATIONS

To achieve food security for different groups of people, including the working poor households, the Ministry of Agriculture should develop an integrated long-term response to food security by ensuring an increase in food production and removal of trade barriers. The initiative would eventually lower food prices and make it accessible to the poor category of the population, such as the working poor. It is further recommended that the companies where these people are working should provide entrepreneurship training to develop different skills among the working poor. After acquiring advanced skills, they will focus on coping strategies to increase their income. With relatively good financial capacity, they would do away with coping strategies that are detrimental to their health.

Lastly, the association between the status of food insecurity and the coping strategies used by the working poor should be considered in the amendment of policies such as the National Employment Policy and Food Security Policy for them to be efficient. The data on the association between coping strategies and status of food insecurity among the working poor should be among the bases for improving the existing policies.

LIMITATIONS

Since the coping strategies and food insecurity status are much related to the level of poverty of individuals, certain respondents were somehow reluctant to provide information on those issues. The information needed would indicate how poor the respondents were. Under normal circumstances, people would prefer to hide information that would depict their vulnerability. Therefore, the researcher made an effort to build rapport and trust with entice the respondents to provide the needed information.

AREA FOR FURTHER STUDY

This study was focused on the association between food insecurity status and coping strategies used by the working poor in the private sector. Further analysis could be conducted to expand knowledge about these associations for the people working in the public sector. Furthermore, the study could analyse the impact of coping strategies on employees' lives.

REFERENCES

- Adesoye, O.W., & Adepoju, A.O. (2020). Food insecurity status of the working poor households in South West Nigeria. *International Journal of Social Economics*, 47(5):581-597.
- Ali, W., & Abdulai, A. (2022). The impact of informal risk mitigation measures on input use and welfare: Evidence from Ghana's rotating savings and credit associations (ROSCAs). *Essays on Formal and Informal Risk Management in Agriculture: Behavioral Insights on Cocoa Farmers in Ghana*, 128pp.
- Amendah, D. D., Buigut, S., & Mohamed, S. (2014). Coping strategies among urban poor: Evidence from Nairobi, Kenya. *PloS one*, 9(1), e83428.
- Babatunde, A.O. (2020). Local Perspectives on Food Insecurity in Nigeria's Niger Delta. *The Extractive Industries and Society*. 7(3): 931-939.
- Bahru, B.A., Jebena, M.G., Birner, R., & Manfred, Z. (2020). Impact of Ethiopia's Productive Safety Net Program on Household Food Insecurity and Child Nutrition: A Marginal Structural Modeling Approach. *SSM-Population Health*, 12(2). (<https://doi.org/10.1016/j.ssmph.2020.100660>).
- Bakasa, E. C. (2016). An exploration of urban teachers' livelihood and coping strategies in post-economic crisis Zimbabwe, 2009-2015. Dissertation for Award of MSc Degree at University of Pretoria, South Africa, 62pp.
- Baland, J. M., Guirking, C., & Hartwig, R. (2019). Now or later? The allocation of the pot and the insurance motive in fixed roscas. *Journal of Development Economics*, 140: 1-11.

- Bekele, A. E., & Abdissa, F. M. (2019). Vulnerability to food insecurity and households' coping strategies. *Journal of Rural Development*, 529-542.
- wBennett, R. F. (2017). *Size and Profile of the Working Poor in Chile*. Turin School of Development. Working Paper No. 10. International Training Centre, Italy. 37pp.
- Berloffa, G. & Modena, F. (2009). Income shocks, coping strategies, and consumption smoothing. An application to Indonesian Data. [<https://core.ac.uk/download/pdf/>].
- Berry, S. (1989). Social institutions and resource access [<https://doi.org/10.2307/11607662>].
- Busato, F., Chiarini, B. & Marzano, E. (2008). Consumption and Income Smoothing. *Applied Economics*, 40(17): 2191 – 2207.
- Calomiris, C. W., & Rajaraman, I. (2020). What is the role of ROSCAs: lumpy durables or event insurance. *Journal of Development Economics*, 56(1): 207-216.
- Chagomoka, T., Unger, S., Drescher, A., Glaser, R., Marschner, B. & Schlesinger, J. (2016). Food coping strategies in northern Ghana. A socio-spatial analysis along the urban–rural continuum. *Agriculture and Food Insecurity*, 5(4): 334–342.
- Chatterjee, N., Fernandes, G., & Hernandez, M. (2012). Food insecurity in urban poor households in Mumbai, India. *Food Insecurity*, 4:619-632.
- Coates, J., Swindale, A., & Bilinsky, P. (2007). Household food insecurity access scale (HFIAS) for measurement of household food access: Indicator guide (v. 3). Food and Nutrition Technical Assistance Project, Academy for Educational Development: Washington, D.C.

- Cochran, J. R., & Talwani, M. (1977). Free-air gravity anomalies in the world's oceans and their relationship to residual elevation. *Geophysical Journal International*, 50(3):495-552.
- Cook, J.T., and Frank, D.A.(2008). Food Insecurity, Poverty, and Human Development in the United States. [<https://nyaspubs.onlinelibrary.wiley.com/doi/full/10.1196/annals.1425.001>] .
- Daninga, P.D., & Ke, W. (2014). Coping Strategies toward Food Insecurity. A Case of Morogoro Region. *Journal of Economic Sustainable Development*, 5(28):26–33.
- De Haan, A., Drinkwater, M., Rakodi, C. & Westley, K. (2002). Methods for understanding urban poverty and livelihoods. (www.careinternational.org.uk/download.php?id=138)
- Dercon, S. (2002). Income Risk, Coping Strategies, and Safety Nets. *The World Bank Research Observer*, 17(2): 141–166.
- Deshingkar, P. & Start, D. (2003). *Seasonal Migration for Livelihoods in India: Coping, Accumulation and Exclusion*. Working Paper No. 220. Overseas Development Institute. London. 37pp.
- Davison, K. M., Marshall-Fabien, G.L., & Tecson, A. (2015). Association between Moderate and Severe food insecurity with Suicidal Ideation in adults: National Survey Data from three Canadian provinces. *Socio-Psychiatry Epidemiology*. 50(6):963–72.
- FAO (Food and Agriculture Organization), IFAD (International Fund for Agriculture Development), UNICEF (United Nations Children's Fund), WFP (World Food Programme) and WHO (World Health Organization) (2021). *The State of Food Security and Nutrition in the*

World (SOFI). Rome. FAO.

FAO (Food and Agriculture Organization. (2017). *The future of food and agriculture: Trends and challenges*. <http://www.fao.org/3/a-i6583e.pdf>

FAO (Food and Agriculture Organisation). (2017). Africa Regional Overview of Food Insecurity and Nutrition: The Food Insecurity and Nutrition – Conflict Nexus: Building Resilience for Food Insecurity, Nutrition and Peace. 2pp.

FAO (Food and Agriculture Organisation). (1996). Declaration on World Food Insecurity. Rome: World Food Summit.

Farzana, F. D., Rahman, A. S., Sultana, S., Raihan, M. J., Haque, M. A., Waid, J. L., & Ahmed, T. (2020). Coping strategies related to food insecurity at the household level in Bangladesh. *PloS one*, 12(4), e0171411.

Frimpong, I. (2019). A coping strategy by people with low incomes. ([https:// www. Research gate. net/ publi cation/333039669 a coping strategy by the poor](https://www.researchgate.net/publication/333039669_a_coping_strategy_by_the_poor)).

Gemenne, F., Pattie, D., & Boulharouf, R. (2006). I understand migration choices: the UNCCD as a mechanism for developing coping strategies. In *2nd International Symposium on Desertification and Migrations, Almeria* (pp. 25-27).

Guo, B., Huang, J., & Porterfield, S.L. (2020). Food Insecurity and Health in Transition to Adulthood for Individuals with Disabilities. *Disability and Health Journal*. (<https://doi.org/10.1016/j.dhjo.2020.100937>).

Helgeson, J. F., Dietz, S., & Hochrainer-Stigler, S. (2023). Vulnerability to weather disasters: the choice of coping strategies in rural Uganda. *Ecology and Society*, 18(2):55-67.

- Heyer, J. (1996). The complexities of rural poverty in sub-Saharan Africa, *Oxford Development Studies*, 24(3): 281 – 297.
- ILO .(2020). Statistics on the Working Poor. (<https://ilostat.ilo.org/topics/working-poor/>).
- Kashuliza, A. K. Hella, J. P. Magayane, F. T. & Mvena, Z. S. K. (1998). *The Role of Informal and Semi-formal Finance in Poverty Alleviation in Tanzania*. Research Report No. 98.1. Research on Poverty Alleviation, Dar es Salaam. 87pp.
- Ke, J., & Ford-Jones, E.L. (2015). Food insecurity and hunger: a review of the effects on children’s health and behaviour. *Paediatrics and Child Health*, 20(2):89–91.
- Khatri-Chhetri, A., & Maharjan, K.L., (2006). Food insecurity and coping strategies in rural Nepal: a Case study of Dailekh District in mid-western development region. *Journal of International Development Cooperation*, 12(2):25–45.
- Kinyondo, A. & Kagaruki, G. (2019). The impact of informal financial groups on socioeconomic development in Tanzania. *African Development Review*, 31(1): 99 – 114.
- Kislat, C., Menkhoff, L. & Neuberger, D. (2013). *The Use of Collateral in Formal and Informal Lending*. Kiel Working Paper No. 1879. Kiel Institute for the World Economy, Kiel. 47pp.
- Korir, L., Rizov, M., & Ruto, E. (2020). Food Insecurity in Kenya: Insights from a Household Food Demand Model. *Economic Modelling*, 92: 99-108.
- Kosic, A., & Anna, T. (2023). Albanian immigrants in Italy: migration plans, coping strategies and identity issues. *Journal of Ethnic and Migration Studies*, 29(6):997-1014.

- Lee, J.S., Edward, A., & Frongillo, J. (2001). Nutritional and Health Consequences Are Associated with Food Insecurity among U.S. Elderly Persons. *Journal of Nutrition*, 131(5):1503–1509.
- Leive, A.& Xu, K. (2008). Coping with out-of-pocket health payments: empirical evidence from 15 African countries. *Bulletin of the World Health Organisation*, 86: 849–856.
- Mc Dowell, C. & De Haan, A. (1997). *Migration and Sustainable Livelihoods: a Critical Review of the Literature*. Working Paper No. 65. Institute of Development Studies, University of Sussex Brighton. 20pp.
- MoFP (Ministry of Finance and Planning), NBS (National Bureau of Statistics) and W.B. (2020). Tanzania Mainland Household Budget Survey 2017-18, Final Report. Washington DC, USA. 194pp.
- Morduch, J. (1995). Income smoothing and consumption smoothing. *Journal of Economic Perspectives*, 9(3): 103 – 114.
- Moser, C. (1998). The Asset Vulnerability Framework. Reassessing urban poverty reduction strategies. *World Development*, 26(1): 1 – 19.
- Mpia, R. A. P. C. (2004). Remittances as a strategy to cope with systemic risk: Panel results from rural households in El Salvador. Dissertation for Award of PhD at the Graduate School of the Ohio State University, USA, 124pp.
- Murphy, A., McGowan, C., McKee, M., Suhrcke, M., & Hanson, K. (2019). Coping with healthcare costs for chronic illness in low-income and middle-income countries: a systematic literature review. *BMJ Global Health*, 4(4):35-48.
- Nabarro, D., Cassels, C., & Pant, M. (2021). Coping Strategies of Households in the Hills of Nepal: Can Development Initiatives Help 1. *IDS Bulletin*, 20(2): 68-74.

- Ngidi, M., S. & Hendriks, S., L. C. (2014). Coping with food insecurity in rural South Africa: the Case of Jozini. *KwaZulu-Natal Mediterranean Journal of Social Sciences*, 5(25):278–89.
- Pajaron, C. (2017). The role of remittances as a risk-coping mechanism: Evidence from agricultural households in rural Philippines. *Asian and Pacific Migration Journal*, 26(1): 3 – 30.
- Pan, L., Sherry, B., Njai, R., Blanck, H.M.& Metrics, P. (2012). Food insecurity is associated with obesity among U.S. adults in 12 states. *Journal of Academy of Nutrition and Diet*. 112(9):1403–1409.
- Paul Jr, M., Boakye, J. A., & Muliro, M. (2020). Mitigating the impacts of floods using adaptive and resilient coping strategies: The role of the emergency Livelihood Empowerment Against Poverty program (LEAP) in Ghana. *Journal of Environmental Management*, 270, 110809.
- Piaseu, N., & Mitchell, P. (2022). Household food insecurity among urban poor in Thailand. *Journal of Nursing Scholarship*, 36(2): 115-121.
- Pingali, P., Stamoulis, K., & Stringer, R. (2006). Eradicating Extreme Poverty and Hunger: Towards a Coherent Policy Agenda, ESA Working Paper No. 06-01, FAO: Rome.
- Psaki, S., Bhutta, Z.A., Ahmed, T., Ahmed, S., Bessong, P. & Islam M. (2012). Household food access and child malnutrition: results from the eight-country MAL-ED study. *Population Health Metrics*.10 (24):1–11.
- Ramsey, R., Giskes, K., Turrell, G., & Gallegos, D. (2012). Food insecurity among adults in disadvantaged urban areas: potential health and dietary consequences. *Public*

Health Nutrition, 15(2):227–37.

- Rebecca, A., A. & Ige, A.,S. (2013). Determination of farmers' coping strategies to household food insecurity in Oyo State, Nigeria. *American Journal of Social and Management Sciences*. 4(1):1–7.
- Sassi, M. (2021). Coping strategies of food insecure households in conflict areas: the case of South Sudan. *Sustainability*, 13(15): 86-98.
- Sasson, A. (2012). Food insecurity for Africa: an urgent global challenge. *Agriculture and Food Insecurity*1(2) (<https://doi.org/10.1186/2048-7010-1-2>).
- Sen, A. (1981). *Poverty and Famines: An Essay on Entitlement and Deprivation*. Oxford: Clarendon Press. 257pp.
- Sibhatu, K.T., Krishna, V.V., Qaim, M. (2015). Production diversity and dietary diversity in smallholder farm households. *Proceedings of National Academy of Sciences of the United States of America*. 112(34):10657-62.
- Smith, L.C., El Obeid, A.E., & Jensen, H.H. (2000). The Geography And Causes Of Food Insecurity In Developing Countries. *Agricultural Economics*, 22:199-215.
- Snel, E., & Staring, R. (2021). Poverty, migration, and coping strategies: an introduction. *Focaal European journal of anthropology*, 38:7-22.
- Sultana, N., & Rayhan, M. I. (2022). Coping strategies with floods in Bangladesh: an empirical study. *Natural hazards*, 64: 1209-1218.
- Tam, B. Y., Findlay, L. & Kohen, D. (2014). Social networks as coping strategy for food insecurity and hunger for young Aboriginal and Canadian children. *Societies*, 4: 463 – 476.

- Tsegaye, A. T., Tariku, A., Worku, A. G., Abebe, S. M., Yitayal, M., Awoke, T., & Biks, G. A. (2018). We are reducing meal amounts and frequency as a primary coping strategy for food insecurity—*archives of Public Health*, 76:1-9.
- Ume, S.I. Ezeano, C.I. Gbughemobi, B.O. & Chukwuigwe, O. (2018). Food insecurity; Consequences and coping mechanism among rural farm households in Nigeria. *International Journal of Academic Research and Development*, 3(2), 886 – 896.
- UNDP (United Nations Development Programme). (2011). Definition and Types of Shocks and Coping Strategies to be Monitored. United Nations Development Programme, Manila. 30pp.
- URT (United Republic of Tanzania) .(2022). Labour Institutions Wage Order Government Notice No. 687.
- URT (United Republic of Tanzania) .(2014). *Household Budget Survey 2011/12*. National Bureau of Statistics, Dar es Salaam. 201pp.
- URT (United Republic of Tanzania) .(2021). *Tanzania Integrated Labour Force Survey*. National Bureau of Statistics, Dar es Salaam, Tanzania, 189pp.
- URT (United Republic of Tanzania) .(2017). *National Microfinance Policy*. Ministry of Finance, Dar es Salaam, Tanzania. 69pp.
- URT (United Republic of Tanzania). (2018). *Tanzania Human Development Report of 2017: Social Policy in the Context of Economic Transformation*. Ministry of Finance, Dar es Salaam, Tanzania. 138pp.
- URT (United Republic of Tanzania). (1978). The National Education Act, No.25 of 1978

- Wabwoba, M.S. Wakhungu, J.W., & Omuterema, S. (2015). Household food insecurity coping strategies in Bungoma County. *Kenya International Journal of Nutrition Food Science*, 4(6):713–726.
- WFP (World Food Programme). (2020). Hunger Could Double in East Africa and the Horn in Months as Coronavirus Spreads. (<https://www.wfp.org/news/hunger-could-double-east-africa-and-horn-months-coronavirus-spreads>).
- WFP (World Food Programme). (2020b). Food Insecurity Overview: Context of COVID-19. (<https://docs.wfp.org/api/documents/WFP-0000116172/download/>).
- WFP (World Food Programme). (2008). *Passage to India: Migration as Coping Strategy in Times of Crisis in Nepal*. World Food Programme, Nepal. 112pp.
- Yu, J. K., La Rota, M., Kantety, R. V., & Sorrells, M. E. (2004). EST-derived SSR markers for comparative mapping in wheat and rice. *Molecular Genetics and Genomics*. 271: 742-751.
- Yurdakul, D., & Atik, D. (2016). Coping with poverty through internalization and resistance: the role of religion. *Journal of Macromarketing*, 36(3), 321-336.
- Zvikomborero, E.M., & Chigora, P. (2010). An analysis of the coping strategies arising from food Shortages in Zimbabwe: A Case of Chitse and Kamutsedzere wards of Mt Darwin district from 2007-2008. *Journal of Sustainable Development in Africa*, 12(2):1–34.