Coping Strategies, Covid-19 Impacts and Well-Being of Food Vendors around Bus Stands in Dar es Salaam, Tanzania

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Research Report 2023/17

Published for:

REPOA
157 Migombani/REPOA Streets, Regent Estate,
P.O. Box 33223
Dar es Salaam.

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Copy-editing & initial layout: Vincent Nalwendela | REPOA

Suggested citation:
Mwesiga, P. (2023). Coping Strategies, Covid-19 Impacts and Well-Being of Food Vendors around Bus Stands in Dar es Salaam, Tanzania. REPOA, Dar es Salaam.

Research Report 2023/17

Suggested Keywords:
Coping Strategies, Well-being, Tanzania.
JEL Classification: H23, H53

ISBN: 978-9987-753-00-0

@REPOA, 2023

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ACKNOWLEDGEMENT

The highest gratitude goes to Almighty God for His gift of life, sound health and divine help granted to us throughout the period of this study. Thanks to REPOA for collaborating on the study, and to the Mwalimu Nyerere Memorial Academy for revising the research proposal and offering research clearance, as well as granting permission for conducting data collection and report writing. The regional and district authorities for Dar es Salaam City, Kinondoni, Ubungo and Kigamboni Municipalities are acknowledged for granting research permits. Besides, the study is indebted to the food vendors and informants who offered quality time to respond to the questions posed.

ABBREVIATIONS AND ACRONYMS

COVID-19	Coronavirus Disease
ESRF	Economic and Social Research Foundation
FVs	Food Vendors
MNMA	The Mwalimu Nyerere Memorial Academy
OECD -	Organisation for Economic Co-operation and Development
REPOA	Research for Development
SPSS	Statistical Package for Social Science
WHO	World Food Organisation

ABSTRACT

The study presents the various ways through which food vendors around major bus stands in Dar es Salaam cope with stresses resulted from COVID-19 transmission preventive guidelines. Specifically, the study identifies the adopted coping strategies, analyses the effects of the coping strategies opted on the well-being of food vendors. It also determines existing government efforts to support meaningful implementation of the guidelines. Through a cross-sectional study design, qualitative and quantitative data was collected from 160 respondents and 16 key informants using a structured questionnaire and a checklist of items, respectively. Food vendors were selected randomly, while ensuring an appropriate proportion of women and men and diversity of the traded products. Local leaders, service providers and relevant government officials were consulted on issues related to public support and governance aspects relevant to food vending within bus stations. Quantitative data was analysed using SPSS, whereby, descriptive and inferential statistics were determined. Qualitative information was systematically aligned under the predetermined themes. It was found that, the majority of food vendors offset economic stress through reducing rations (90%) and or opting for lower quality raw materials (89%), hence threatening the health of consumers. Yet, they earned below the poverty line (68%), lacked official business premises (76%), and hence remained unwell. Inferential statistics revealed that the 'size of capital' and 'food prices' were statistically significant (p=.000) in predicting the increase of income. Though the government offers significant support, food vendors were not sufficiently organised to qualify for the same. To improve the well-being of food vendors and ensure safe food for customers, the study recommends a blend of the following actions: collaborative planning of official business premises involving planners and beneficiaries, aiming at balancing the interests and needs of each group; capacity building on entrepreneurship and business, focusing on enhancement of access to: rational and stable capital, cheap quality raw materials and marketing skills, as well as proper organisation.

1.0 INTRODUCTION

1.1 Background to the Problem

Food vending creates a significant livelihood for vendors and provides an invaluable service to many Tanzanians. In Dar es Salaam alone, the number of food vendors (FVs) was estimated to be between 14,000 and 10,000 in 2018 (Marrs, 2018). Naroble and Sabai (2016) estimated that, more than 80% of food vendors are women aged between 20 and 45 years. Additionally, a significant population of these women have dependants, mainly children, and employ 3 to 6 people. This implies that food vending contributes significantly to family economies and families' well-being. Besides, food vendors seem to feed a significant segment of urban low- and middle-income earners, mostly male workers, as well as 80% of school children and university students. The demand is elevated by: scarcity of home food services due to increase in number of women working in the formal sector, which has reached 88% in Tanzania; rapid rate of urbanization, which increases the distance between home and the workplaces - Dar es Salaam is the third fastest growing urban area in Africa; fast pace of urban life; cheap food, when compared to formal restaurants and even home cooking, as it saves time and energy. The last factor is the lack of canteens in schools and inadequate cafeteria facilities in institutions of higher learning (Marrs, 2018).

However, regardless of their significant contribution to the economy and people's well-being, food vendors operate informally. They lack necessary social protections and support mechanisms, hence depend on daily earnings (George, 2021). The average daily profit for a food vendor ranges between TZS 5,000 and TZS 20,000, depending on the location (Marrs, 2018). The majority of FVs in Tanzania cannot afford running water, liquid soap and social distancing measures, as they operate in congested premises (ESRF, 2020). Additionally, food vendors are vulnerable to unfavourable regulations, do not qualify for credit, lack relevant skills and face marketing constraints. REPOA (2020), argues that informal sector operators lack necessary social protections and support mechanisms, depend on daily earnings, hence are negatively impacted by COVID-19.

Between March 2019 and June 2022, the Government of Tanzania introduced a number of measures to limit the spread of COVID-19. Among the imposed measures were, closure of schools, colleges and universities as well as restriction of non-essential movement and public gatherings. The closure of schools and institutions of higher learning led to a drastic shift in students' and pupils' demand for food from vendors towards food consumed at home. This disrupted the food vending value chain, and Sulle et al. (2021) note that excessive COVID-19 measures greatly impaired the food vending business, and vendors consequently required direct relief measures.

Consequently, in March, 2021 the Government of Tanzania issued guidelines pursuant to WHO recommended measures to curb coronavirus. Among the conditions, food vendors were instructed to provide running water, liquid hand washing soap and adequate space for customers to maintain social distancing. How these low- and inconsistent-income earners can

afford the emerging costs amidst the decline in income, remains a conundrum. Since students and pupils form a significant proportion of consumers for vended foods, food vendors faced a serious economic recession, resulting from a sudden decline in customers, as noted by Sulle et al. (2021). This points to a need to improve the welfare of food vendors. Despite the markable consequences of COVID-19, scant information is available on the way FVs cope with socioeconomic effects in specific localities of Tanzania. Such knowledge is important to inform interventions that would enhance the well-being of FVs and other stakeholders of the food vending business. Hence, this study generates knowledge on the ways FVs have been coping with the socioeconomic effects of COVID-19 and the implications for their well-being. The knowledge is useful for the formulation of appropriate policy options, intending to promote the well-being of FVs and the associated stakeholders.

1.2 Problem Statement and Research Questions

It has been plausibly established that 71% of food vendors in Dar es Salaam use the income obtained from the business to meet daily household needs such as food, electricity and water bills, school fees and house rent (Karondo, 2020). Yet, Marras, (2018) and George (2021), note that regardless of their significant contribution to the economy and to people's well-being, food vendors were negatively impacted by coronavirus. It is important to note that in Dar es Salaam, numerous low and middle-income workers, including commuters and transporters, work beyond normal working hours, thus entirely rely on vended foods to meet their daily meal requirements. Consequently, it is normal to see food vendors selling food around bus stations and terminals. This food is either prepared on-site or at home and then brought to site. However, the bus stations and terminals lack conducive infrastructure facilities for running cooked food businesses. Although Sulle et al. (2021), recommend that food vendors should be given direct relief measures, little is known on specific aspects such as coping strategies and or relevant socio-demographic attributes that can be upgraded so as to enhance their resilience and ensure sustainable well-being of the actors along the value chain. The present study was undertaken to analyse food vendors' coping strategies against the pandemic and the consequences stakeholders' well-being.

1.3 Research Objectives

1.3.1 General Objective

Generally, the study examined the various tactics used by food vendors to manage the socio-economic effects of COVID-19 and the resulting well-being.

1.3.2 Specific Objectives

Specifically, the study

i. Identifies the types of coping strategies adopted by food vendors to manage the effects of COVID-19.

ii. Determines the effects of the adopted coping strategies on the well-being of stakeholders.
iii. Analyses existing government support to food vendors.

2.0 LITERATURE REVIEW

2.1 Definition and Operationalization of Key Terms

Coping:

Lazarus (1993), defines coping as 'individuals' efforts in thought and or action to manage specific demands.' According to Folkman and Lazarus (1980, p. 223), coping is 'the cognitive and behavioural efforts made to master, tolerate or reduce external and internal demands and conflicts among them.' This study adopts the definition by Folkman and Lazarus. The study sought to understand the various ways through which FVs master/tolerate/reduce demands of COVID-19 transmission prevention measures.

2.2 Well-being:

Chambers (1997) and Nega (2008), use the concept well-being to comprehend various indicators of poverty including lack of income, lack of monetary measures and lack of other essentials. Building on that, Urassa (2010), as well as Urassa and Lyatuu (2015), consider well-being as a concept that connects and covers various issues of poverty. This study merged the above definitions, hence considered food vendors' well-being as a combination of income and the measures that the vendors themselves consider to be so. In consideration to income, the study is based on two measures; the extreme poverty line of 1.90 US Dollars, equivalent to TZS 4391 at the exchange rate of $1 = TZS2324, and the threshold of moderate poverty, which ranges between $1.90 and $3.10 per day, as posed by the World Bank (2015).

2.3 Theoretical Framework

Theory of Stress and Coping Strategies

Roth and Cohen (1986), conceptualised coping techniques in terms of the direction of the coping responses in relation to the threat or stressor. They identified two mutually inclusive categories of coping strategies that are approach and avoidance. Approach coping is any behavioural, cognitive or emotional activity that is directed toward a threat (e.g., problem solving or seeking information). In view of the current study's context, approach coping techniques may include such responses as seeking support from government and or relatives; raising food prices; compromising food quality and reducing portions while maintaining price. Avoidance coping is any behavioural, cognitive or emotional activity directed away from a threat (e.g., denial, withdrawal). In relation to this study, avoidance might involve, but not be limited to, change of business, stopping doing business or change of business premises/site. The theorists further advance that generally, a combination of "more approach coping strategies'' and less of "avoidance coping techniques" has potential to bear positive results (Roth and Cohen1986). This study however, assumed that food vendors' approach and

avoidance strategies have significant trauma on their well-being and that of the actors in the food vending system.

2.4 Empirical Literature Review

2.4.1 Coping Strategies of Food Vendors During the COVID-19 Pandemic

FAO (2020) reports that the impacts of the COVID-19 pandemic on food value chains differ from previously occurred crises, touching all levels, including production, processing, distribution and consumption patterns. In a study using secondary information, FAO (ibid) highlights the impacts of the pandemic and the measures adopted by cooperatives to mitigate those impacts at different levels of the food value chain, that resulted to reduced food loss and waste in Japan and India. The findings revealed that as the spread of the pandemic extended, governments, stakeholders and other actors in value chains adopted and implemented a broad spectrum of measures to manage the spread of the virus and mitigated its impacts on food insecurity and poverty. In view of offering appropriate policy recommendations, the author highlights the importance of various options of government interventions that focus on food loss and waste reduction. The recommended policy options include financial support, such as lumpsum grants, price subsidies, processors, subsidies to working capital loans and even direct purchase of products. In this regard, the author recommended that financial interventions be tailored to the specific needs of each actor in the value chain, as some instruments may not be suitable for some actors. The analysis, though focused at national level, offers the basic information for situating rational coping strategies and the associated government roles. It also indicates a need for informed intervention options, focusing on experience and needs of specific actors in the food system. The FAO study contributes timely and relevant knowledge to FVs' coping strategies and the resultant well-being of food vendors in Dar es Salaam.

2.4.2 Impacts of COVID-19 on WB of Food Vending Systems' Stakeholders

Substantial literature is available on the impacts of COVID-19 and the associated responses at national, community, household and individual levels (Adom et al., 2020; Asmundson et al., 2020; Palm & Aros, 2020; Park et al. 2020). For example, Iddi et al. (2021), conducted a multi-nation, cross-sectional, online survey, examining personal and family coping strategies for COVID-19 in the global South. The study collected data from 10 countries, which were: Uganda, Bangladesh, Rwanda, Indonesia, Ghana, Brazil, Myanmar (Burma), Malaysia, Cameroon and Kenya. The author found that, among 805 Ghanaians who responded, 45.2% perceived their coping strategies to be well or better, 42.4% viewed their own coping strategies as neither worse nor better and 12.4% reported that the coping strategies they adopted were poor or not well, implying that not all coping strategies work well. This points to the importance of categorising specific coping strategies that work in a given setting. Aldwin (2007) and Park et al. (2020), suggest that the utility of coping strategies is context specific. This is very critical for planning related to the COVID-19 crisis. This study fills the following gaps; Iddi et al. (2021), did not capture the coping strategies of food vendors in Tanzania, they conducted an online survey that obviously excluded actors that have low

access to the internet including low, unpredictable and or unstable income earners, such as food vendors at the bus stands, who were targeted by this study.

Further, Palma and Araos (2021), examined the strategies employed by Chilean households to cope with the impacts of COVID-19, using secondary data. They found that 60.3 % of households experienced a drop in family income during the early months of the pandemic, implying that more than half of households depended on informal income sources. The authors report that 70.3% households had to opt for at least one income generating strategy, while 76.6% employed at least one expenditure minimising strategy. The authors further noted that most of the coping strategies that were opted for by households were characterised by indebtedness and decapitalization. Regardless of non-coverage of the Tanzanian context, this study points to the possibility that most of the strategies for coping with the impacts of COVID-19 could be devastating and impoverishing. However, since the study was not conducted in Tanzania, there was a need to understand the living reality of low earning income segments of the population, relative to the identified variables to inform the planning of meaningful interventions and policy options.

2.4.3 Existing Government Support to Food Vendors

Chapter 8 of the Constitution of The United Republic of Tanzania, section 146 (10), enlightens on the purpose of having the Local Government Authority to the people (URT, 1977). According to the section, the LGA is mandated to participate and to involve the people in the planning and implementing of the development programmes within their areas. Among others, the section clarifies the functions of LGAs, including to ensure safety of the people and to consolidate democracy within its area and to apply it to accelerate the development of the people. However, the relevant policy covers small and medium enterprises alone, leaving out semi and informal (mobile) vendors. This might contribute to limitations to government support to food vendors. For instance, exploring in that line, Magehema (2014); Mhando and Mramba (2021), assessed the support of the government to food vendors in Tanzania in varied perspectives and using diverse methods. Particularly, Magehema (2014), assessed the support of the Local Government Authority (LGA) to the food vendors in Songea Rural and Urban Districts of Tanzania. Through a cross-sectional research study, she used a sample of 120 men and women food vendors. The findings indicated that there was little government support to food vendors that catered for loans and grants, training, business premises, potable water and means of waste disposal. This study was conducted prior to the onset of COVID-19, where the demand for running water and soap for hand washing, wearing of face mask and provision of distance seating were not necessary conditions. It was therefore important to understand provisions of the government to support the implementation of COVID-19 prevention guidelines to food vendors and the awareness of the same to the beneficiaries.

Mhando and Mramba (2021), investigated the working conditions of young women working as assistants in the food vending system of Tanzania. Focusing on Nyamagana and Ilemela Municipalities in Mwanza Region, they collected qualitative and quantitative data using

interviews, focus group discussions and structured questionnaires. They also engaged officers working with the government and insurance fund organisations in Dodoma Region. They found that, the studied women worked in indecent working conditions, which was manifested through informality, low salaries, uncertainty of payment, long working hours, poor physical environment, lack of training, job insecurity, lack of legal recognition, unclear legal status as well as lack of social security and protections. The authors argue that the condition is fuelled by the actors in the food vending chain, including employers, as well as local and central government authorities. The findings from this study point to the need for reaffirmation of government support to the food vendors, particularly, understanding the way LGAs assist food vendors to cope meaningfully with the impacts of COVID-19, the awareness and capacity of food vendors to tap into the opportunities at their disposal, and the capacity of LGAs to meet the needs of food vendors in the midst of the pandemic crisis.

The distinctiveness of the current study from the previous is in the fact that the present study focused on food vendors in Dar es Salaam City's bus stands, which is a less studied segment of the population. This section of the Tanzanian population, as explained in the background, caters to a wider segment of the populations' food requirements. Apart from not covering Dar es Salaam, previous studies lacked a focus on the coping strategies and the capacity of respective LGAs to enhance appropriate coping strategies, which is the focus of the current study.

2.5 Conceptual Framework for Analysing Coping Strategies (CS) and Well-being (WB)

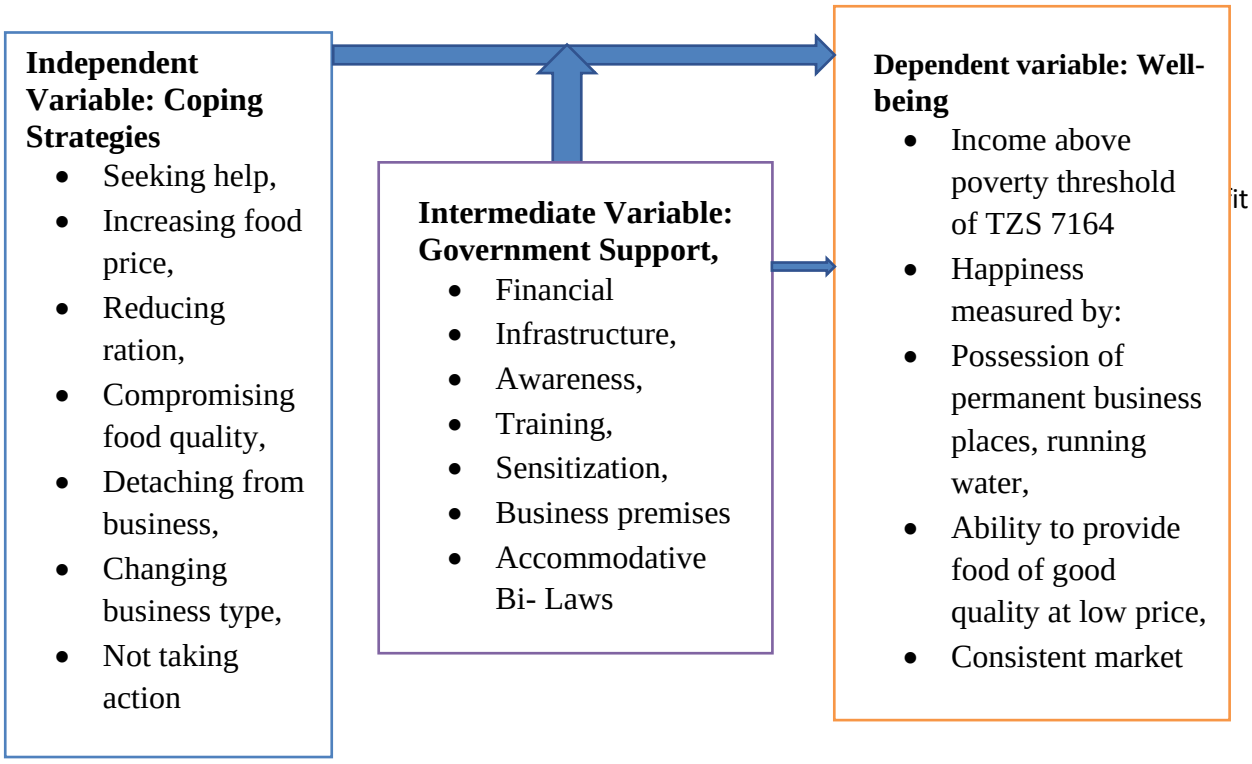
The independent variables of this study are "coping strategies" involving techniques to manage the socioeconomic effects of COVID-19. The coping theory categorises CSs into avoidance and approach strategies. Avoidance strategies denote responses such as: detaching from business and/or changing business type. Approach coping as per the theory, refers to various steps to implement guidelines, while maintaining reasonable business earnings. These include: increasing food prices, use of technology, seeking help, reducing portions and/or compromising food quality through the use of lower priced raw materials. The study assumed that the above-mentioned practices could have a negative or positive effect on the well-being of stakeholders.

Based on the above explanation, the dependent variable for this study is 'well-being.' Two measures are used to define well-being: income earned by food vendors during COVID-19 and the happiness lived and defined by FVs. The measures of happiness as per the food vendors are: possession of a permanent business premise that is furnished with water, light and sewage disposal infrastructure, ability to provide food of good quality at affordable prices and a consistent and sure market.

The independent and dependent variables were presumed to be influenced by socio-demographic backgrounds of FVs such as age, size of capital and education level. Another

assumed influence was external support, particularly training, financial and infrastructural equipment as well as awareness and access to the same, as illustrated by Figure 1.

Figure 1: Conceptual Framework for Analysing Coping Strategies and Well-being



Source: Conceptualised by the researcher.

3.0 RESEARCH METHODOLOGY

3.1 Study Area

Dar es Salaam was selected intentionally, due to its high COVID-19 transmission vulnerability features such as: the most congested and busiest local bus stands that attract multitudes from within the city, other regions and neighbouring countries who utilise the vended foods. It is also the largest and the fastest growing city (Marras, 2018). According to NBS (2021)'s projections, Dar es Salaam constituted the highest population number of 5,401,801, as compared to other regions in the country in the year 2020. Other regions that were estimated to have large population numbers after Dar es Salaam are Mwanza, with 3,826, 57; Kagera with 3,233,8347 and Tabora with 3,081,263 people.

The study adopted a participatory active learning approach, bringing stakeholders together to analyse the practices of FVs in response to the negative effects of implementing COVID-19 transmission prevention guidelines, and the resultant well-being. Through a cross-sectional study design, data were collected once within each bus stand from 160 food vendors and 16 public officials. The cross-sectional study design was the most appropriate design for managing the limited available funds and allocated time of six months, without compromising data quality (Kothari and Gaurav, 2019). Additionally, the design consents data collection at a single point at a time, while estimating the prevalence of outcome of interest (in this case well-being), as the sample was taken from the whole population (Kothari and Gaurav, 2019).

Multistage sampling procedure was adopted involving: (i) intentional selection of Kigamboni Ferry, Kinondoni Makumbusho, Ubungo Mbezi, and Gongolamboto bus stands, being the most congested areas hosting numerous food vendors in the city. Additionally, public officials including district health officers, community development officers, trade officers, planning and social welfare officers, were purposely included to respond to questions related to opportunities available at LGA for FVs. (ii) Randomly selected food vendors were involved to inform on the adopted approaches for implementation of COVID-19 transmission prevention guidelines and the associated well-being outcomes.

3.2 Data Collection Methods and Tools

Both qualitative and quantitative data collection methods were employed to gather the required data for this study, in order to compensate the unique weakness and strength of each method (Tashakkori and Teddlie, 2010). Quantitative data on the pre and post COVID-19 impacts on incomes, demographic characteristics and size of capital, were collected using structured questionnaires. Qualitative data was collected on the awareness of the FVs for the imposed measures to curb COVID-19, associated challenges and the related opportunities available at LGA level were obtained through a semi-structured interview. Though the study intended to gain insight on infrastructural issues from local leaders through focus group

discussions (Masadeh, 2012), no such leaders existed within the data collection sites. However, researchers managed to obtain valuable information through key informant interviews with public officials at municipal level.

3.3 Measurement of Variables

The dependent variable, for this study 'well-being,' was measured by two aspects which are: (1) The difference between income before and after implementing COVID-19 guidelines. Based on the poverty threshold of US$ 1.90 – 3.10 per person per day, the continuous values of income earned during COVID-19 were grouped into three categorical well-being variables: extreme unwell, unwell, slightly well (Table 3). Predictor variables involved a combination of continuous social demographic variables, dummies of coping strategies variables, and (2) the measures of food vendors' happiness which are; possession of meaningful business premises, certain market, reasonable capital, ability to offer food of good quality at affordable prices. The independent variable: coping strategies, was measured by: practices of FVs in response to the demands of implementing COVID-19 prevention guidelines: (raising price (1 = Yes, 0 = No), reducing ration (1 = Yes, 0 = No), selling online (Yes =1, No = 0), compromising quality of food (1 = N0, 0= Yes); receiving support (Yes = 1, No = 0) and reducing ration (1 = N0, 0= Yes).

3.4 Data Analysis

Descriptive statistics from quantitative data indicating demographic characteristics of food venders, trends of pre and post COVID-19 incomes, the adopted coping strategies, and volumes of sales were generated using SPSS and presented in a table. Inferential statistics from Paired-samples t-test were generated to assess the statistical significance of a change of the level of well-being for the periods before and during COVID-19. This was considered an appropriate method for assessing a mean change in a continuous measure (in this case income), after exposing the same group of people (food vendors) to some experimental manipulation, which is the effects of COVID-19 (Pallant, 2010).

Additionally, multinomial logistic regression was used to determine the influence of the adopted coping strategies and vendors' socio-demographic characteristics on income as a proxy of well-being. According to Pallant (2010) and Field (2013), multinomial logistic regression is the most appropriate model to predict categorical outcomes with two or more categories and a mixture of continuous and nominal predictors, such as the variables for the current study. The model used is shown below:

$$P(y) = e^{\alpha + \beta 1x1 + \ldots} \beta kxk \; 1 + e^{\alpha + \beta 1x1 + \ldots} \beta kxk$$ (Agresti and Finlay, 2009).

Where: P (y) = Food vendor's well-being, e= the natural log, α= the intercept of the equation, β1 to βk= coefficients of the predictor variables and x1-xk = predictor variables presented under the section on the measurement of variables. Prior to running logistic regression, the

data was checked for outliers and multicollinearity, whereby two predictors that had a score of less than 10, were not entered into the model.

Narratives on the measures of well-being as per FVs' perception, the types of coping strategies and the associated challenges, formed the qualitative information. The same were recorded in an excel workbook, under the predetermined themes and analysed through content analysis. The results of qualitative and quantitative data analyses were triangulated and used to answer the main research questions.

4.0 STUDY'S FINDINGS

4.1 Characteristics of Respondents

The survey managed to interview 160 food vendors; 40 from each bus station. This sample size was sufficient to eliminate sample error at 0.05 confidence interval (Pallant, 2010). The sample, therefore, was considered a representative of all food vendors around bus stands of Dar es Salaam (Field, 2013). The majority (71%), of the interviewed food vendors were female and more than half (68%), were below 39 years of age, meaning they were economically active. The socio-demographic characteristics of the study's respondents are presented in Table 1.

Table 1: Socio-Demographic Characteristics of Study's Respondents

S/N	Character	Count n = 160	Percent
1.	Respondents' District		25
	Dar es Salaam City Council	40	25
	Ubungo Municipal Council	40	25
	Kinondoni Municipal Council	40	25
	Kigamboni Municipal Council	40	
2.	Respondents' Sex		
	Female	114	71.2
	Male	46	28.8
3.	Respondents' age-groups		
	33 years and below	59	36.9
	34 – 38	49	30.6
	39 and above	52	32.5
4.	Number of schooling years		
	7 years and below	151	94.4
	8 years and above	9	5.6
5.	Condition of Business Premise		
	Stationed	10	6
	Temporary/Mobile/ Standby	150	94

Source: Field Data computation

According to Huang et al., (2019), a large percentage of the economically active population is an indication for thrusting economic growth and that policy options that increase the number of economically active workforce contributes to offset the negative impact caused by the ageing population on the national economic growth.

The findings (Table 1) indicate that the majority of respondents (94%), did not have permanent business premises. The findings indicate further that FVs prefer to conduct business within the bus stations because it is an area where they have easy access to their

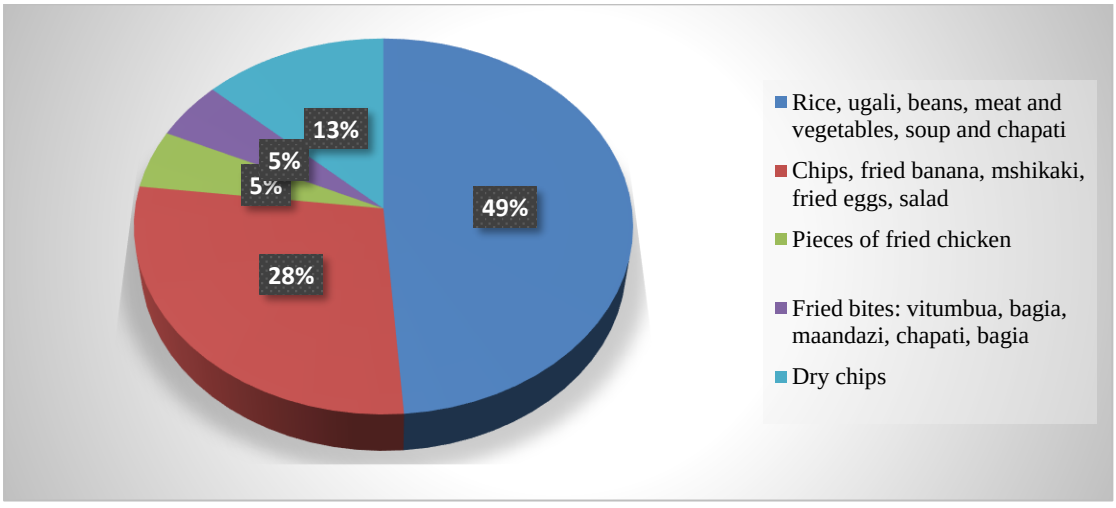
customers. However, according to the Planning and Health Officers for the respective districts, food vending within the bus station premises is illegal. It was reported that the respective district authorities have separated areas specifically for FVs to conduct business. Consequently, as they were not stationed, FVs in bus stands could not provide hand washing facilities.

The fact that FVs follow customers is supported by the business principle that a good marketing strategy is vital for any business to succeed. Vain (2021), defines marketing as 'the process that involves identification of customers and considering their convenience, in terms of location.' However, food vendors practise the strategy at the expense of contravening government rules and regulations for urban planning. According to the informants, only food vendors operating within the official premises are supported with necessary infrastructure, such as hand wash facilities (KII with Municipal Health Officers). Interviews with key informants revealed that food vendors were allocated plots for selling their products, but they could not afford the construction conditions attached to the plots. Since the plots were situated far from their customers, they sold them to those who can afford them. According to the respondents, the conditions required the owner to follow a common design and quality of materials that are far beyond the capital and income of the majority of FVs. In our view, a private public lease model could probably resolve this issue. According to Kyzylorda et al. (2019), leasing involves a relationship where state-owned property is transferred to the private partner for temporary use and for a certain fee, under conditions specified by the contract. It is assumed that food vendors could afford renting above constructed facilities and LGAs are better positioned to mobilise sufficient resources for constructing these business premises, with the required standards.

4.2 Types of the Traded Food Products

The study found that various types of foods were traded by the interviewed food vendors, as shown by Figure 2.

Figure 2: Types of Food Products Traded by Respondents



Around 49 percent of vendors were selling a mixture of solid and liquid foods, such as rice and beans or meat stew. As already reported, the majority of respondents (94%), were not stationed (Table 1); it was observed that respondents were cooking at home, carrying food in buckets and selling portions while at the standby locations. This points to vulnerability to food contamination, bearing in mind that the vending locations contain flies, are littered with waste and lack hand and dish washing facilities. Reporting in that line, Birgen et al., (2020), underscored that, vendors that operated in unhygienic conditions exhibited high contamination of food with microorganisms in Nairobi County, Kenya. This is supported by FAO et al., (2017) and Wagle, (2019), who recommended that, to prevent contamination, good hygiene practices (GHPs) must be applied to the entire food chain. According to Sreelekha et al., (undated), some of the GHPs include cleaning and sterilization of food preparation areas and equipment. These were completely vague in the study area. It is important to note that contaminated foods cause food borne diseases, such as intoxication or poisoning and infections (FAO et al., 2017). The implications for such health disorders include shortcomings such as: inflated health costs, incapacitation and/or deaths. It is therefore important to prevent such public health issues through proper management of food systems, including the food vending chain.

4.3 The Identified Coping Strategies

It was found that the main coping strategies used by food vendors were; reduction of portions and preparation of food using cheap raw materials. The types of cheap raw materials opted for, varied with the nature of the business. For example, those selling deep fried foods, such as chips and fried chicken, reported re-using cooking oil several times; those selling rice or ugali and accompaniments, reported opting for cheap rice and tomatoes, commonly known as *'masalo'* in Swahili. The practice, though, threatens the health of consumers by rendering them vulnerable to disease. One presumes that the behaviour is likely to inflate national spending for the health sector and reverse capacity for production. As enlightened by WHO (2022), unsafe foods are likely to contain bacteria, viruses, parasites or chemical substances, hence create potential to cause a range of diseases, including diarrhoea and cancer. Strategies adopted by food vendors to offset or manage the economic impacts of implementing COVID-19 transmission guidelines are presented in Table 2.

Table 2: Types Opted Coping Strategies - Multiple Response

S/N	Strategy	YES		NO	
		Count	Percent	Count	Percent
1	Borrowing raw materials	66	41.2	94	58.8
2.	Over dilution detergents	48	30	112	70
3.	Raising prices	00	00	160	100
4.	Opting cheap raw materials	143	89.4	17	10.6
5.	Reduce ration of food	144	90	16	10

Source: Field Data

Besides, compromising food quality seems to create a vicious circle of disease and malnutrition, particularly affecting infants, young children, the elderly and the sick. This calls for intervention to improve the work environment, knowledge and capital for food vendors. The intervention is required because most customers of food vending as per Marrs (2018) are pupils, students and travellers, who constitute a group of the economically active segment of the population and who are vital for consistent national economic growth (Huang et al., 2019). It is important to note that, food vendors who reported borrowing raw materials, clarified that on most occasions, they fail to repay the debt. Responding to the question on her capital, one woman at Gongolamboto bus station had the following to say:

> *I do not have capital; I borrow raw materials and usually I fail to raise sufficient money for repayment. Yet, I must work for my family's survival, as I do not have another alternative.*

However, the survey observed good hygienic practice from this woman, though she lacked permanent work premises and sure capital, she was keeping spoons in a saucepan with boiling water on a charcoal stove. This is an indication that some food vendors possess appropriate knowledge on food hygiene and safety. It is important to note that the majority of respondents pointed out that despite the sudden rise of running costs, they could not inflate food prices as doing so could lead to loss of customers.

4.4 Endowed Opportunities and Challenges Encountered

The study interviewed government officials to understand the link between the government and food vendors and the associated opportunities. It also probed on the challenges encountered by food vendors. Respondents identified several challenges associated with governance. A summary of responses on the same is presented in Table 3. According to the Table, most (71%) respondents identified lack of permanent business premises and water as the major challenges encountered. As explained in previous sections, food vendors within the studied bus stations operate within spaces that are prohibited by the government. This practice created conflict between food vendors and the relevant authorities, whereby there is consistent eviction of the former by the latter. In the process of being driven away, food vendors reported losing products, work tools and sometimes are even physically harmed. By operating within unofficial business premises, they disqualify themselves from accessing the support that is offered by the government. They also remain exposed to consistent loss due to constant eviction.

Table 3: Multiple Response: Challenges Encountered, Proposed Solutions and Income Trends

Challenges	Count	Percent
lack of business premises	57	35.6
lack of running water	57	35.6

Challenges	Count	Percent
lack of business premises	57	35.6
inconsistent market	15	9.4
lack of water and premises	114	71.2
Income Before COVID-19		
5000 or less	69	43.1
5001 – 20000	63	39.4
20001 or above	28	17.5
Income After COVID-19		
4000 or less (extreme unwell)	68	42.5
4001 – 15000 (unwell)	39	24.4
15001 or above (slightly well)	53	33.1
Reasons for not organising		
Do not belong to group	87	54,4
Do not have time	23	14.4
Income is uncertain	70	43

Source: Field Data

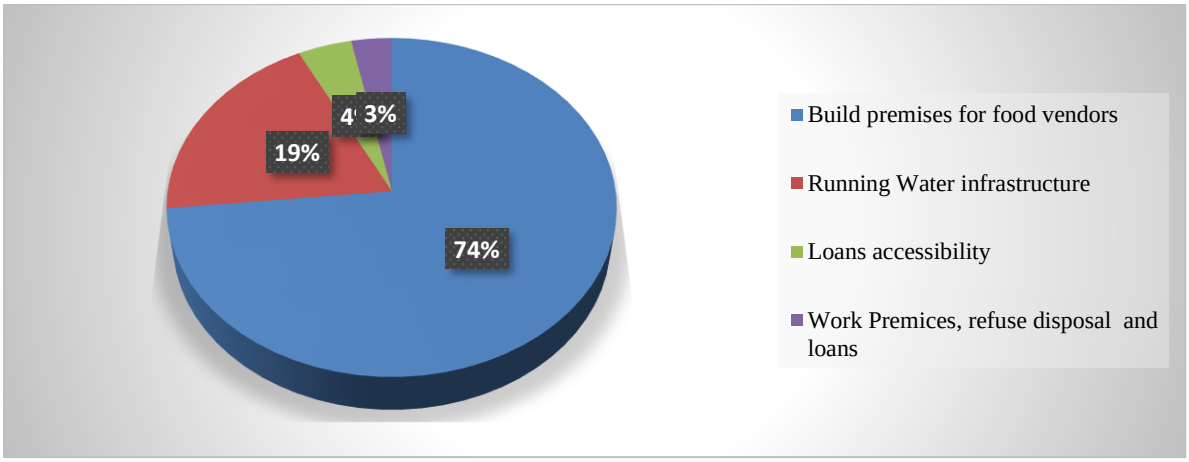
According to Community Development and Health Officers, the government provides loans to the organised women and youth groups, and not otherwise. The public sector also partnered with private health development stakeholders to provide hand washing facilities, sanitizers and masks, solely for vendors operating within official business premises. Each respective district masterplan allocates marketplaces, which include business premises for food vendors. Unfortunately, the offered premises do not assure a certain market for FVs, as per their views. In addition, the attached construction conditions were unaffordable to FVs. Consequently, the majority are not organized, hence do not qualify for the available loans. It is important to note that, the relevant policy in Tanzania does not cover semi and informal vendors, hence, their voice remain unheard. The policy embraces Small and Medium Enterprise alone (URT-MoT, 2003). It is however, important to embrace the contribution of food vendors on livelihoods in Tanzania, through policy coverage. As indicated in Table 3, responding to the challenges encountered through implementing COVID-19 transmission guidelines, the majority of non-stationed food vendors (67%), underscored that they did not implement the preventive measures as they worked in uncertain places. The study observed

that 30 percent of interviewed food vendors who also possessed permanent business premises, were providing hand washing facilities, but with highly diluted detergents in place of hand soap.

4.5 Proposed Ways to Overcome the Identified Challenges

The study received opinions of the vendors on the various ways through which their well-being and that of their customers could be enhanced. The offered opinions are presented by Figure 3.

Figure 3: Voices of Food Vendors on Ways to Improve Their Work Conditions



Source: Field data computation

As Figure (3) shows, the majority of respondents (60%), proposed that the government should build business spaces within bus stations, because that is where the targeted customers are found. The aspects of installation of running water, provision of loans and refuse disposal services were also strongly proposed.

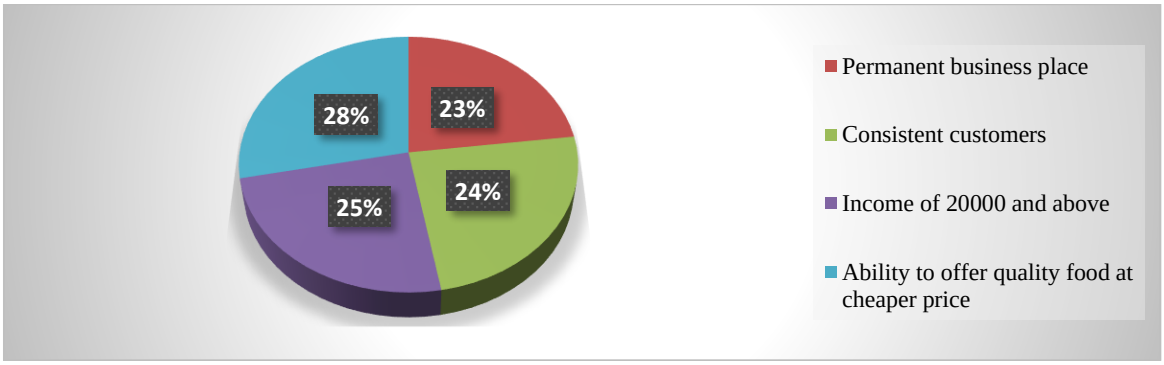
4.6 Status of Food Vendors' Well-being

The study estimated the status of the well-being of food vendors based on their daily income, which is shown in Table 3. It was found that about 43 percent of respondents were earning 4000 Tanzania Shillings, equivalent to1.7 US Dollars or less, per day. This was below the threshold of the extreme poverty line of 1.90 US dollars per person a day (Faria, 2022, World Bank 2016). The findings in Table 3 further indicate a drop of 1000 Tanzania Shillings from the income earned by food vendors before the onset of COVID-19. That means the majority were significantly and negatively impacted during the pandemic. The drop in income was attributed to reduction of customers due to the imposed partial lockdown, closure of schools and sudden rise of prices of raw materials. It had nothing to do with COVID-19 prevention guidelines, as the majority reported to have employed avoidance coping strategies. That means they did not incur extra costs due to implementation of the guidelines. Instead, they lowered production costs to maximise profits. Most food vendors emphasised that they neither inflated food prices nor reduced portions, for fear of losing customers.

Furthermore, subjective measures of well-being, as per opinions of the interviewed food vendors, were considered in understanding the link between coping strategies opted for and WB. The adoption of respondent's feelings was based on the depiction by Hicks et al. (2013) and OECD (2013), that the concept of 'well-being' is used to describe peoples' welfare, including their entire achievements, as per their own opinions and the established objective measures. Clarifying this aspect, Rojas (2008), distinguished experienced poverty as a condition of low life satisfaction and experienced economic poverty as low-income satisfaction. It is important to note that though the two have a high correlation, being human, people's feelings better explain well-being, and conversely sufficient income does not automatically translate into meaningful well-being.

This study examined food vendor's feelings on life satisfaction in support to Rojas (2008),' assertion that public policy should focus on both removing people from income poverty and help them attain an overall more satisfying life. The identified abstract measures of well-being are shown in Figure 4.

Figure 4: Measures of Well-being Based on the Happiness of Food Vendors



The detailed description of well-being indicators as conceptualised in the study areas are illustrated by Figure 4. According to the sentiments of food vendors, a food vendor is considered well-off when she or he possesses a permanent business premise, can consistently attract customers, earns a reasonable income of at least TZS 20000 per day, can satisfy customers by offering food service within their proximity, offers adequate quality and quantity of food portions at reasonable prices, (Figure 4). The identified abstract measures of well-being reveal that although most food vendors opted for cheaper raw materials of lower quality and reduction of portions, as well as operating within unofficial business premises, they were not happy with that status quo, hence unwell. Since food vending in Tanzania contributes significantly to the national economy (Mars, 2018 and Sulle et. Al., 2021), the findings on well-being status, call for urgent measure to improve their situation and income poverty. The feelings of food vendors translate into appeals for the need to support them in acquiring meaningful business premises within the vicinities of their target customers, and the skills necessary for retaining those customers, including the ability to locate and/or link with proper supplier of good quality raw materials at reasonable prices.

Further assessment on the statistical significance of income changes between the pre and post COVID-19 periods was conducted, with the aim of increasing clarity and establishing a baseline for future interventions. The findings of the assessment are presented in the following section.

4.7 Change in FVS' Well-being Between Pre and Post COVID-19 Periods

Food vendors were asked to mention the income per day earned before and after the pandemic. The two sets of food vendors' incomes obtained were used as a proxy measure for their well-being in assessing the statistical significance of WB change. A paired sample t-test was conducted to assess a change of income per day, between the time before and the time after the onset of COVID-19. The result was associated with shut down of schools and institutions of higher learning, as well as banning of meetings and seminars. The obtained results are presented in Table 4.

Table 4: T-Test Results on Change of Income for the Periods Before and After COVID-19

Paired Samples Statistics

Pair 1	Mean	N	Std. Deviation	Std. Error Mean
Income per day before covid	13887.5000	160	11497.32673	908.94349
Income per day during covid	11246.8750	160	9023.20504	713.34699

Paired Samples Correlations

Pair 1	N	Correlation	Sig.
Income per day before covid & Income per day during covid	160	.874	.000

Paired Samples T- Test

	Paired Differences							
				95% Confidence Interval of the Difference				
Pair 1	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	**t**	**df**	**Sig. (2-tailed)**

Paired Samples Statistics

Pair 1	Mean	N	Std. Deviation	Std. Error Mean				
Income per day before covid	13887.5000	160	11497.32673	908.94349				
Income per day before covid - Income per day during covid	2640.6250	5677.15600	448.81859	1754.20999	3527.04001	5.884	159	.000

Based on the results presented in Table 4, there was a statistically significant decrease in income from the period before COVID-19 (M = 13887.5, SD = 11497.3) to the stretch of the pandemic (M=11246.8750, SD = 9023.2), t (159) = 5.88, p < 0.0005 (two-tailed). The mean decrease in income per day was TZS 2640.63, with a 95% confidence interval ranging from TZS 1754.2 to TZS 3527.0. The Eta squared statistic (0.18) indicated a large effect size.
The Eta value was calculated as follows:

$$\text{Eta squared} = \frac{t^2}{t^2+N-1}$$

$$\text{Eta squared} = \frac{5.88^2}{5.88^2+160-1}; = 0.18$$

The interpretation of Eta squared value is based on the guidelines proposed by Cohen (1988, pp. 284 – 7) which are: .01 small effect, .06 moderate effect, .14 large effect. Given the obtained Eta squared value of 0.18, it can be asserted that there was a significant effect on the statistical difference in income earned before and after the implementation of COVID-19 prevention guidelines.

Linking the findings obtained from a paired-samples t-test and the concept of international extreme poverty line, it can be argued that, 67 percent of respondents (Table 3), were pushed below the poverty threshold. This argument is backed by the fact that the Tanzanian population is composed of 48 % dependents, involving 43.9% children and 3.9% people aged 65 years and above (TNBS, 2012). Logically, at least each of the participating food vendors had one dependent, hence, the individual daily living was the function of the reported income distributed to at least two persons (a food vendor and a dependent). In that construct, the average income per person per day among the identified segment of the population (67%), vacillated between Tanzania Shillings 2000 (US$ 0.9) and 7500 (US$ 3.2) at the exchange rate of TZS 2324 to US$1. This income is far below the international extreme poverty threshold of US$1.9 per person per day, as outlined by the UN and World Bank (Faria, 2022; World Bank 2016). That means COVID-19 devastated two thirds of the studied community. This might have contributed to the 2022 statistical ranking that placed Tanzania among the African nations having a large segment of the world poor (Saleh, 2022). Synchronously, Faria (2022),

points out that in 2022, about four percent of the world's extreme poor population, lived in Tanzania.

Sulle et. Al., (2021) attributed the sudden drop of food vendors' incomes during COVID-19 to the disruption in the food services market that resulted from the shutdown of schools, institutions of higher learning, as well as the banning of meetings and seminars. The authors proposed a direct relief measure. Building on Sulle et al.,' (2021)'s light and considering income as a proxy measure for WB, this study recommends possible measures to be considered in redeeming the situation of food vendors within the studies' areas and those located in areas with similar contexts. This was done by assessing the factors that influenced the income of the studied food vendors as presented in the subsequent sections.

4.8 Influence Coping Strategies Opted for and Socio-Demographic Characteristics on Well-being

Multinomial logistic regression was used to test the hypotheses whether the independent variables and socio-demographic traits influenced the well-being of food vendors:

H_0: The odds of attaining well-being were the same among FVs opting for varied coping strategies under different socio-demographic features.

The researchers inspected the data to ensure independence of observations, absence of multicollinearity and outliers, as recommended by Statistics (2018). Based on the results of the sample size inspection, two predictors: 'selling online' and 'inflating food prices' were not included in the model, due to having extremely low cases of relevance in some of their categories. Such data could cause problems with the analysis, such as failure of solution to converge (Pallant, 2010). The outcome variable was in three categories: (1) slightly well (2) unwell (3) extremely unwell, (Table 3). The results of multinomial logistic regression analysis are presented in Table 5 and Table 6.

Table 5: Results of Logistic Regression on the Ability of the Model to Fit the Data

Model Fitness				
	Model Fitting Criteria	Likelihood Ratio Tests		
Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	194.813			
Final	163.210	31.602	14	.005
Goodness-of-Fit				
	Chi-Square	df	Sig.	
Pearson	146.574	142	.379	
Deviance	155.808	142	.202	

The “Final Statistics” presented in Table 5 indicate that the model managed to distinguish the extremely unwell, unwell and slightly well food vendors (p = .005). Additionally, Pearson Chi-square statistic was statistically insignificant (p = .379) indicating that the model fitted the data well. This interpretation is according to Statistics (2018), who depicts that a statistically significant Pearson Chi-square result (that is p = .05), designates that the model does not fit the data well, hence, in the case of the current results, the model was a good fit. The model as a whole explained 42% (Nagelkerke R squared), of the variance in probability for attainment of slightly well level.

Unlike the hypothesis, the results in Table 6 show that two variables, which are ‘capital size’ and ‘reduction of portions,’ demonstrated a statistically significant influence (p < .05) on the likelihood for the food vendors to fall in the slightly well category. Specific influences for each variable are clarified in the subsequent paragraphs. The ‘size of capital’ was statistically significant (p=.000) in predicting the change of income.

Table 6: Results of Logistic Regression on the Influence of CSs and Demographic Variables on the Well-being of FVs

Parameter Estimates

Income per day during covid (Binned)[a]			B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B) Lower Bound	Upper Bound
Extreme Unwell Slightly off	Vs Well	Intercept	19.287	2.843	46.038	1	.000			
		Age	.001	.004	.078	1	.780	1.001	.993	1.009
		Years in school	-.189	.271	.489	1	.484	.828	.487	1.406
		Capital	.000	.000	3.056	1	.010	1.000	1.000	1.000
		Reduce ration	-17.323	.907	364.792	1	.000	2.997E8	5.067E-9	1.773E-7
		Sex	-1.459	.804	3.289	1	.070	.233	.048	1.125
		Organised	-.125	1.237	.010	1	.919	.882	.078	9.960
		Cheaper materials	1.654	1.201	1.897	1	.168	5.230	.497	55.079
Unwell Slightly off	Vs Well	Intercept	18.956	3.612	27.546	1	.000			
		Age	.001	.004	.071	1	.790	1.001	.993	1.009
		Years in school	-.240	.383	.392	1	.531	.787	.372	1.666
		Capital	.000	.000	2.451	1	.117	1.000	1.000	1.000
		Reduce ration	-17.116	.000	.	1	.001	1.356E-8	1.356E-8	1.356E-8
		Sex	-1.327	.881	2.266	1	.132	.265	.047	1.493
		Organised	2.319	1.762	1.734	1	.188	10.169	.322	321.174
		Cheaper materials	.175	1.054	.028	1	.868	1.192	.151	9.403

The B coefficient has a positive sign, meaning that an increase of one unit of income has the potential to increase income by one unit. This suggests that the efforts to increase and stabilise the capital of food vendors are more likely to enhance their income than the betterment of other predictors that were included in the model. The aspect of high capital influence on income was not eccentric, as the majority of respondents noted that those who possess stable business capital amounting to TZS 500,000 and above, were able to rent meaningful business premises and escape frequent eviction from unofficial spaces.

Respondents underscored the aspect of a lack of permanent business premises as the main challenge that exposes food vendors to lose as a result of dislodgement.

The variable 'reduction of portions' also demonstrated a statistical significance (p = .000) in predicting the probability for FVs to become slightly well. The negative coefficient of B value suggests that the reduction of portions has the potential to pull FVs from the slightly well category down to an unwell category (below the income poverty line). In support of that, food vendors emphasised that although reduction of portions has the potential to offset the negative impacts of rising costs, the practice was more likely to push customers away.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings

The study examined the coping strategies to the effects of COVID-19 and the resultant well-being of food vendors under the varied socio-demographic attributes. Specifically, it identified the opted coping strategies, analysed the effects of those coping strategies on well-being and finally determined government support to food vendors.

The results indicated that food vendors strategically opted to use raw materials of low quality, reduced portions and diluted detergents in place of hand washing soap. These practices, apart from threatening the health of consumers, did not enhance life and/or income satisfaction to food vendors. Multinomial logistic regression revealed that, while the size of capital exhibited a positive influence (p-.000) on income, reduction of portions affected it negatively (p=.000). Furthermore, the study noted a conflicting interaction between food vendors and respective LGAs, whereby the presence of FVs at bus stands and terminals was considered illegal and disqualified them from relevant public support services such as loans, infrastructure and training.

5.2 Conclusions

Based on the study's findings, it was concluded that the coping strategies opted for by food vendors had no influence on their well-being but threaten the health of customers. Nevertheless, variables such as stability and level of capital, as well as proper linkage with relevant LGAs, exhibited a potential to enhance WB. Additionally, both of the mentioned influencing attributes (capital and LGA support), were trivial within the studied areas, leading to unsatisfied life experience of food vendors, who in turn threatened the health of consumers through inadvertent unhygienic practices.

5.3 Recommendations

i. To address the issue of conflict between the studied LGAs and FVs, Ubungo, Kinondoni, Kigamboni and Ilala LGAs are advised to consider a balance of interests and needs of users and those of the authorities, through collaborative planning and allocation of business premises. Parallel to this, the Government may consider revising its Small and Medium Enterprise Development Policy of 2003, with the aim of including semi and informal vendors.

ii. To mitigate the practices that threaten consumers' health, the studied LGAs are advised to collaborate with private health sector stakeholders to plan and implement programmes that enhance entrepreneurial, business skills especially the ability to access stable capital, quality, affordable raw materials and the ability to organize, as well as food safety knowledge and skills for food vendors, regardless of their legal

standing. This will be effective if blended with allocation of convenient and affordable business premises for FVs, possibly, readily constructed premises for rent.

iii. To ensure stable and sufficient capital, food vendors are advised to organise and ensure they adhere to legitimate business procedures.

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