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Socio-Economic Determinants of Food Preferences and Dietary Diversity among People Living with HIV in Zimbabwe

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Abstract

Pandemics, droughts, natural disasters, global economic recession, hyperinflation and political chaos have resulted in unprecedented waves of food insecurity globally. In Zimbabwe, vulnerable populations suffer the most. Experiences of the interactions between natural disasters, HIV/AIDS and food security provide a useful framework to resolve complex challenges associated with pandemics. Pandemics' impacts manifest in different ways in different contexts. The common factors of vulnerability are demographic and socioeconomic characteristics and these are closely associated with the degree of the impact of disasters and pandemics. Thus, a need for a thorough and deeper understanding of the nature of the vulnerable populations' socioeconomic aspect, particularly in the relation to persistent global pandemics and disasters. HIV/AIDS have strong interactions with malnutrition and food security. Consumption of a nutritious balanced diet improves the well-being of people living with HIV. Using people living with HIV in Zimbabwe as a case, this study seeks to determine the associates of food preferences and dietary diversity that have important implications for vulnerable people living with HIV. A cross-sectional survey through randomly sampling 150 adults living with HIV from clinic ART registers from two major HIV prevalent hotspot Districts of Zimbabwe namely Makonde and Chegutu. A pre-tested questionnaire was used to collect data on demographics, food consumption patterns, preferences, dietary diversity and other socio-economic issues of the interviewed households. Frequency summaries were used to explain the food preferred by the respondents. Multiple linear regression analysis was used to determine socio-economic factors that determine food preferences and dietary diversity. Sadza, a staple food prepared with ground maize meal emerged as the most preferred food item (80,40%) and is a carbohydrate and beef was the most preferred source of protein (18.20%). The respondents show a lower preference for goat and sheep meat, freshly processed milk, sour milk and wild fruits with only 0.7% of the respondents showing a high preference for these food items. Food preferences vary between rural and urban areas ($p<0.05$). Urban dwellers had a higher DDS of 6 and their rural counterparts had a score of 3. The most common reason for the food preferences of urban respondents was the nutrient value of food whereas, for the rural respondents, it was affordability. Household size significantly affects food preference at a 10% significant level. As household size increased, food preference increased ($p=0.099$). Programmes that target improving health outcomes among households with people living with HIV should put into consideration the household location and size with a bias towards larger households in rural areas.

Keywords: *Dietary diversity, food preferences, malnutrition, pandemics, people living with HIV*

1. Introduction

Food insecurity, pandemics, natural disasters and climate change discussions have been topical in recent years as malnutrition and shortages continue to ravage communities in developing countries unabated. Food security has remained a complex issue owing to its multi-dimensional facets and the different interpretation of the definition (FAO, 2006; van Meijl et al., 2020). FAO (2006) defines food security as a state where all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. HIV/AIDS and food insecurity are intertwined and this poses additional challenges to successful treatment (Anema et al., 2009; Tiyou et al., 2012). HIV has upstream and downstream effects on food and nutritional security. Piot et al., (2007) argue that the pandemic is at the centre of the vicious circle of poverty and food insecurity. HIV also have downstream impacts as it also has a devastating impact on the availability and stability of food and access to food and its use for good nutrition (FAO, 2006). Food insecurity and poor nutrition have been associated with impaired immunity and accelerated disease progression among people with HIV and this is seemingly the case with COVID-19 patients (Yasuoka et al., 2020 and Covid). Good nutrition cannot cure AIDS or prevent HIV infection but can help to maintain and improve the nutritional status of a person with HIV/AIDS and delay the progression from HIV to AIDS-related illnesses.

Since 2000, when Zimbabwe conducted a land redistribution exercise, the country has been plagued by many socio-economic ills that have a direct impact on the country's food and nutrition security. These range from recurrent droughts, hyperinflation, and declining economic situation punctuated by an escalated world food crisis of 2008 (Manatsa et al., 2010; Tawodzera, 201; Madimu, 2020). Despite notable achievements in the fight against HIV in the past two decades, the socio-economic challenges brought about by the disease continue to affect vulnerable households, especially in rural areas. In 2015, malnutrition constituted 69% of the estimated people living with HIV globally (UNAIDS, 2016). The first national survey to determine malnutrition status among people living with HIV in Zimbabwe was done in 2017 and indicated that there 35% of the concerned people suffer from some form of malnutrition (Takarinda. et al. 2017). High levels of malnutrition among HIV patients are a serious cause for concern both in Zimbabwe and at the global level. With the advent of anti-retroviral drugs to fight the disease, much of the effort has been towards the provision of clinical services given the benefits that the drugs have had in reducing bed-ridden incidences amongst those infected in Zimbabwe. The current national prevalence is at 13.3%, with an estimated 1.3 million people living with the disease (MOHCC, 2018). The figure continues to be high as compared to other countries in Sub-Saharan Africa. Zimbabwe is one of the few countries with an undesirable trend whereby at least 10% of HIV patients on ART have gone onto second-line treatment indicating huge treatment failure (MOHCC, 2018).

Improved nutrition is anticipated to greatly reduce the rate of immune deterioration when combined with ARVs (Ezzina et al., 2018). Literature by FAO has pointed to the need to balance the provision of clinical services e.g., ART for HIV patients with agricultural efforts to improve the nutrition of the affected (FAO, 2006). To achieve optimal nutrition among HIV patients and its population at large, non-governmental organisations in Zimbabwe and the government of Zimbabwe have adopted programmes that integrate food security and HIV/AIDS activities. In 2018, the government of Zimbabwe included vegetable packs as part of the traditional presidential input scheme, a deviation from the provision of grain seeds and fertilisers. The provision of vegetable packs improves dietary diversity and promote the availability and access to micronutrients among vulnerable population.

A lot has been shared about the prevalence of malnutrition amongst people living with HIV, how malnutrition could heighten the risk of exposure to HIV, and the upstream and downstream impacts of HIV and AIDS on individuals, households and communities, but very little studies have been done to understand issues of food choices, preferences and intake among people with HIV. Compromised immunity among people with HIV makes their dietary requirements special and different from non-positive individuals (Kayode, 2017). Food utilisation is a major concern among HIV/AIDS patients. In addition to poverty, Kayode (2017) noted that food preferences among HIV-positive patients are influenced by inadequate food intake, malabsorption associated with gastrointestinal tract) and loss of appetite as a result of mouth ulceration, nutrient and drug interaction side effects and opportunistic infections. In Zimbabwe, World Food Programme reported that HIV patients failed to consume part of their food packs as they do not meet patient food preferences, indicating the possibility of food and nutrition insecurity even when food availability, accessibility and stability aspects are met. The study is thus inspired by the very desire to understand the socio-economic conditions affecting food preferences and dietary diversity among individuals and families with HIV and AIDS individuals.

2. Methodology

2.1 Description of study sites

The study was conducted in two of the major HIV hotspot areas in Zimbabwe namely Makonde and Chegutu districts as shown in Figure 1. The districts are among the high HIV burdened districts in Zimbabwe (USAID Zimbabwe, 2018). Makonde district is located 118 km away from the capital city Harare, along the highway to the Chirundu border post. The district population is 150889, with an average household size of 4.6 (ZIMSTAT, 2016). There are 32597 households in Makonde of which 11585 (35.54%) households are food insecure (ZIMSTAT, 2016). The HIV prevalence rate for the district is 15.2%, which is higher than the national average of 13.3% (NAC, 2018). Thirty-six

thousand four hundred and ninety-three (36493) people are HIV positive of which 34348 are adults and 2145 are children (NAC, 2018). Makonde is a farming district. Crops grown here include cotton, maize, and tobacco. Cattle are also widely raised in the district for dairy products and beef on a commercial basis. Chegutu district is located 107 km away from the capital city Harare, along the highway to Bulawayo. The district population is 149375, with an average household size of 4.2 (ZIMSTAT, 2016). There are 35546 households in Chegutu of which 7600 (21.30%) households are food insecure (ZIMSTAT, 2016). The HIV prevalence rate for the district is 15.2%, which is higher than the national average of 13.3%. Twenty-four thousand eight hundred and thirty-six (24836) people are HIV positive of which 23008 are adults and 1828 are children (NAC, 2018). Having been established as a mining settlement by gold prospectors, mining for gold and nickel remains important in the area. Its agricultural economy centres on maize and cotton becoming major crops. Annual rainfall in Chegutu averages 775 millimetres (OCHA, 2017). The town's mean temperatures vary between 23 °C in the hottest month to 14 °C in the coldest (OCHA 2017).

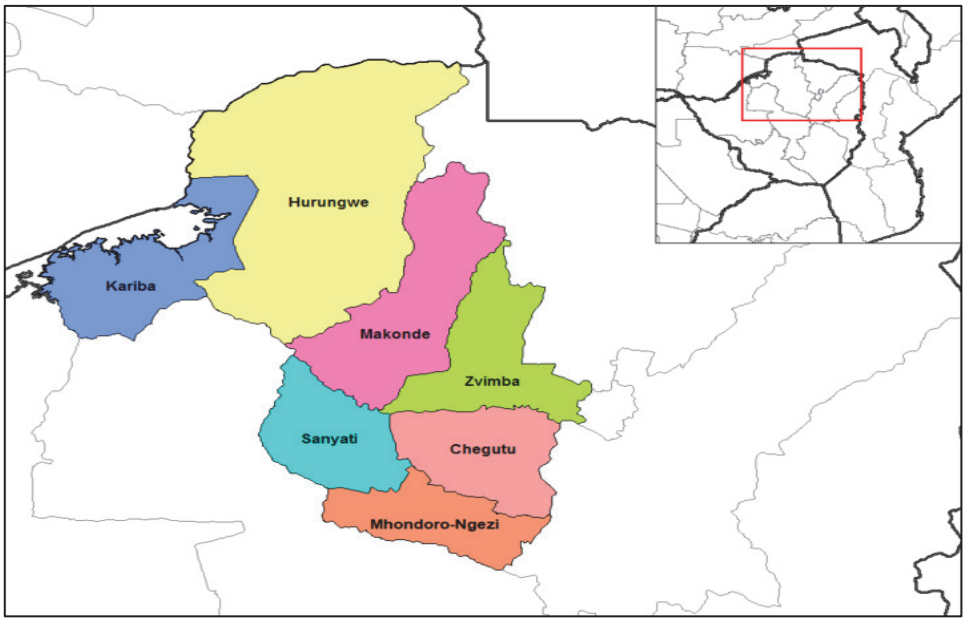

Figure 1: Map of the study area

2.2 Sampling procedure

Purposive sampling of three wards with the highest HIV prevalence in each district was done. A list of the adults living with HIV was generated from the information in the databases of development partners working in the two districts on HIV treatment care

and support which is derived from clinic ART registers. The list then formed the sampling frame. One hundred and fifty (150) households were randomly selected using the Yamane (1967) method to determine the sample size. The hat-pick method was used to select the 150 study participants presenting each element with an equal chance of being selected.

2.3 Data collection procedure

After getting clearance from the district stakeholders for health, the researchers used a pre-tested questionnaire as the main data collection instrument. The questionnaire collected information that include, demographic, food consumption patterns, preferences, dietary diversity and other socio-economic issues of the interviewed households. Interviews were conducted at participants' homesteads by trained enumerators comprising college students on attachment at the organisations implementing HIV interventions in the two districts. Additionally, the data collectors were oriented on research ethics. The questionnaire was pre-tested to check on its ability to draw the required information from respondents and for data collectors' familiarisation. The questionnaire was administered to adult caregivers who are persons living with HIV. In the absence of this person, another adult person who is responsible for food preparation and ate in the household the previous day was interviewed. Information on household food consumption was collected using the previous 24 hours as a reference period. Shorter reference period results in more accurate information due to perfect recall (Swindale & Bilinsky, 2006). The interviewer first determined whether the previous 24-hour period was "usual" or "normal" for the household. If it was a special occasion, such as a party, another day was selected for the interview. If it was not possible, another household was selected, rather than conduct the interview using an earlier day in the week. For dietary diversity-related questions, the respondent was instructed to include the food groups consumed by household members in the home, or prepared in the home for consumption by household members outside the home. Foods consumed outside the home that were not prepared in the home were not included. While this may result in an underestimation of the dietary diversity of individual family members (who may, for example, purchase food in the street), HDDS in this study was designed to reflect household dietary diversity, on average, among all members.

2.4 Data analysis procedure

Data were entered into the Statistical Package for Social Sciences (version 22) and were cleaned before analysis using the frequency summaries to check the entry for all the variables entered. Furthermore, descriptive statistics for demographic, socio-economic, food preference and dietary diversity variables for the study were summarised using the

frequency and descriptive analysis approach. Multiple response questions were likewise analysed using the multiple response analysis routes. The USAID Food and Nutrition Technical Assistance (FANTA) standard tools for measuring the Household Dietary Diversity Score (HDDS) from the 12 different food groups was used to measure dietary diversity. To determine socio-economic factors that determine food preferences and dietary diversity among households with a person living with HIV, a multiple linear regression analysis model was used.

The model was specified as follows;

$Y= \beta_0 + \beta_1 age + \beta_2 hhsize + \beta_3 location + \beta_4 gender + \beta_5 educational\ level + \beta_6 marital\ status + \beta_7 income + e$

Where;

Y= the dependent variable is the food preferences score (total groups that the respondent have said they prefer from the list) for the food preference model

Y= the dependent variable is the HDDS (total groups that the respondent have said they prefer from the list) for the dietary diversity model

β_0 *= constant variable*

β_1*-----*β_7*= Coefficients of factors affecting food preference and dietary diversity*

Age= Age of household head

HH size= Total household size

Location of household= Where the household lives (urban or rural)

Gender= Sex of the HH head

Educational level= the highest education attained by the household head

Marital status= Marital status of the respondent

Household income= Average monthly income realised in the last 3 months

e= is the stochastic error term

3. Results and Discussion

3.1 Characteristics of interviewees

Both women and men participated in the study, however, men dominated with 81.3% while women only constituted the remaining 18.7%. Women have been reported to have a better tendency in searching for food to feed the family and providing care to family members living with HIV than their male counterparts. Most of the interviewees were married (81.3%) while a marginal number of the interviewees (9.3%) were divorcees as shown in Table 1. Widows and single-headed households constituted 4.7% of the interviewees. The number of households headed by widows looks quite small and can be attributed to improved access to medical facilities and drugs which include anti-retroviral drugs at the right place and time in Zimbabwe over the past two decades. In addition, most of the people in Zimbabwe have access to HIV testing facilities resulting in most knowing their status and taking drugs on time. Amongst the surveyed

households, the average household size was 5 and ranged from 1 to 14. Larger family size means more pressure on household food requirements and diversified food preferences. Interviewees aged between 30 and 50 years dominated (67.5%) and this may be attributed highly to the age category being composed of people who are energetic enough, and capable to undertake household activities which include food preparation as required by the HDDS guidelines for measuring household dietary diversity. In addition, HIV is highly prevalent in Zimbabwe among people in this age group. None of the participants was aged below 18 as the study targeted adults.

Only 28% of the respondents were in the age category 18 to 29 while the remaining 4.7% were in the 51 to 60 years old category. Age influences dietary diversity very much since most youths prefer diversified diets which are easy to prepare. In addition, activities associated with food sourcing through own production or purchasing require young and energetic people. The majority of the interviewed people living with HIV (75.3%) had secondary education while 18.7% had primary education, 15% had informal education, 1.3% had tertiary and 2.0% did not attend any form of education. Mwikila (1992) reported that education is a factor in growth and productivity. The implication of this is that the majority of people living with HIV in the study area have basic education enough for them to seek or receive better information on food sources and nutrition which may alter their food preferences. According to Schnepf (2012), the level of education has important implications on food choices, consumption patterns and food budgeting. Monthly household income for the interviewed households ranged from 0 to USD1000.00 and on average each household earns USD146.77. Household income is an important aspect in determining household food security status as it is a proxy normally used to measure access to food. Most of the interviewed households (52%) resided in an urban area while the remaining 48% were from rural areas. Location was hypothesised to influence food preferences and dietary diversity. Urban dwellers have access to a variety of food items than their rural counterparts. With 15.3% of the respondents having highlighted that they did not take their ART medication in some previous months to the survey due to lack of food, this trend is very worrying as it can result in treatment failure or worse. The results buttress findings by UNAIDS where it was noted that high food insecurity is a major cause for ART defaulting and treatment failure among people living with HIV in Zimbabwe (UNAIDS, 2019).

3.2 Food preferences

On aggregate, the most (80.40%) preferred food items by interviewed adults living with HIV include staple food from maize grain commonly known as *sadza* in Zimbabwe closely substituted with rice (38.50% of cases), non-traditional vegetables such as rape and covo (27% of cases), beef (18.20%), broiler chickens (17.60%) and pulses (17.60%) as shown in Table 1. However, as was observed from the regression analysis, the food preferences differ remarkably due to the location of the respondent. Of note, staple

grain (maize), remains the most preferred regardless of one's location, rural (87.10% of cases) and urban (74.40 % of cases). In urban areas, respondents mentioned a second highest preference for rice whereas in rural areas they preferred traditional vegetables which include pumpkin/ cowpea leaves, and okra (30%) of respondents. The third most preferred food type in an urban settings is broiler chickens and non-traditional vegetables joint at 24.40 % of cases whereas in the rural areas, they mentioned pulses mostly cowpeas, round nuts and sugar beans. It has been noted that the majority (88%) of rural respondents mentioned that the most eaten meal is sadza and vegetables whereas in urban areas it is sadza, meat and vegetables with 72 % of the urban respondents taking the meal frequently.

Table 1: Most preferred food item

Food item	Frequency		
	All respondents (%)	Urban (%)	Rural (%)
Preferred Grain Staple or Traditional	80.4%	74.40%	87.10%
Grain Rice Wheat	38.50%	53.80%	21.40%
Vegetables –Non Traditional	27.00%	24.40%	30.00%
Beef	18.20%	21.80%	14.30%
Vegetables-Traditional	18.20%	14.10%	22.90%
Broiler chickens	17.60%	24.40%	10.00%
Pulses	17.60%	10.30%	25.70%
Confectionery products	16.90%	23.10%	10.00%
Irish potatoes	11.50%	19.20%	2.90%
Fish Breams Bass	10.80%	7.70%	14.30%
Spaghetti Macaroni	5.40%	9.00%	1.40%
Fats Oils	4.10%	3.80%	4.30%
Fruits-Non Citrus	3.40%	6.40%	-
Tubers Sweet Potatoes_Cassava	2.70%	3.80%	1.40%
Pork	2.70%	5.10%	-
Fruits-Citrus	2.70%	5.10%	-
Eggs	2.70%	1.30%	4.30%
Drink Non-Fizzy	2.00%	3.80%	-
Offal	1.40%	2.60%	-
Indigenous Poultry	1.40%	1.30%	1.40%
Kapenta Mackerel Catfish	1.40%	-	2.90%
Fresh unprocessed milk	1.40%	2.60%	-
Sheep and goats	0.70%	1.30%	-
Fresh processed milk	0.70%	1.30%	-
Sour milk	0.70%	-	1.40%
Fruits Wild	0.70%	1.30%	-

Source: Survey data, 2021

3.3 Reason for food preferences

Table 2 shows an interesting trend in that the most common reasons for food preference in rural areas are affordability (35.20% of cases) and healthy reasons (32.40%) whereas, for the urban setting, respondents mentioned the healthy reason (56.60%) and taste preference (31.60%) as the drivers of their food preferences. Generally, prices of food items manufactured and processed in urban-based industries increase with the distance travelled. It is therefore not surpassing to see that prices of items such as cooking oil, Irish potatoes and packed sugar beans are much higher in rural areas than in towns and cities (FEWS NET, 2018).

Table 2: Reason for food preferences

	Frequency		
Reason	**All respondents (%)**	**Urban (%)**	**Rural (%)**
Health	44.90%	56.60%	32.40%
Taste	29.90%	31.60%	28.20%
Affordability	25.20%	15.80%	35.20%
Availability	15.60%	15.80%	15.50%
Easy to prepare	2.00%	2.60%	1.40%

Source: Survey data, 2021

3.4 Factors affecting food preferences

The research looked into issues of food preference among adults living with HIV. It was assumed that the number of different foods preferred by an individual increases with an improvement in socio-economic status. To test this statistically, a multiple regression test was used in explaining the socio-economic factors that contribute to this improvement in having a variety of preferred foods. Of the predictor variables that include age, household education level, household size, marital status, income and household location, only household location and size statistically affected food preferences at 5 and 10% significance levels respectively as shown in Table 3. The difference in preference among rural and urban people living with HIV subscribes to the notion of market systems development that multi-national companies such as chain stores have largely contributed to a change in food preferences and diets for the urban population (FAO, 2016). Household size significantly affects food preference at a 10% significant level. As household size increase, food preference also increases (p=0.099). This may be a result of diversified food choices by household members. The R-Square value of 0.81 meant that 81 percent of changes in food preferences are accounted for by the difference in location and household size. Multicollinearity of predictor variables was tested and the VIF value of less than 10 was obtained, showing the absents of

multicollinearity.

Table 3: Multiple regression analysis for determinants of food preferences

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
Model	**B**	**Std. Error**	**Beta**			**Lower Bound**	**Upper Bound**
(Constant)	1.979	.504		3.928	.000	.983	2.975
Household location	.863	.253	.317	3.412	.001	.363	1.363
Marital Status	-.094	.280	-.027	-.336	.737	-.648	.460
Age	-.082	.267	-.027	-.307	.759	-.610	.446
Education level	-.088	.288	-.026	-.305	.761	-.656	.481
HH size	.105	.063	.155	1.661	.099	-.020	.231
Income	.001	.001	.062	.740	.460	-.001	.002
R-Square	0.81						
Adjusted R-Square	0.77						

a. Dependent variable: Food Preference Score [Source: Survey data, 2021]

3.5 Dietary diversity

Of the twelve food groups constituting the dietary diversity tool, high consumption of starchy food was observed among all the respondents (100% of cases), followed by consumption of vegetables (86.7% of cases), oils/fat/butter (70% of cases) as shown in Table 4. Of note is also the reasonably fair consumption of protein food such as pulses (30% of cases), and meats (26.7% of cases). Respondents indicated that they had received nutrition education on the types of foods to eat. The analysis of dietary diversity by percentiles indicates that 25% of the respondents consumed 3 food groups or less in the previous 24 hours before the interview period which is low dietary diversity according to FAO (2011). Fifty percent of the interviewed households had consumed 5 food groups or less and 75% consumed 7 food groups or less, leaving only 25 % to have consumed more than 7 food groups which is generally good dietary diversity using the FAO thresholds.

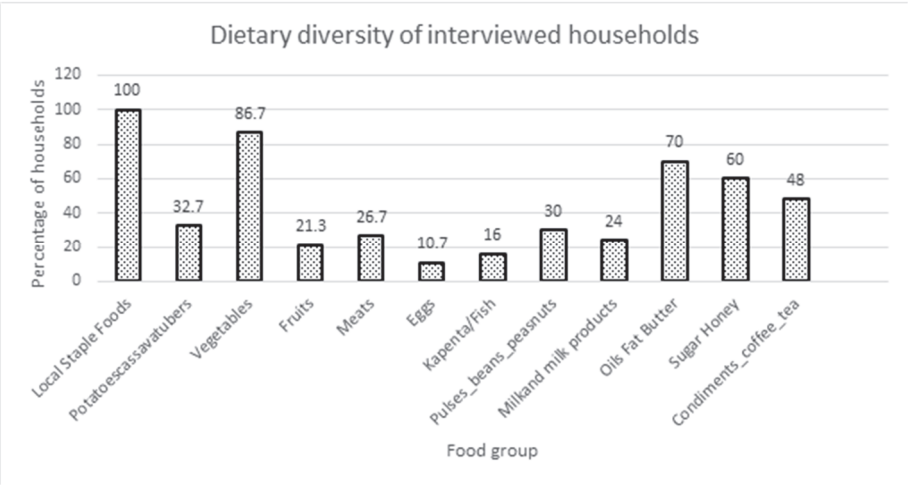

Figure 2: Dietary diversity consumption of food groups frequencies
Source: Survey data, 2021

3.6 Factors affecting Household Dietary Diversity among households with people living with HIV

Household head level of education and income are the two determinants of dietary diversity among households living with HIV ($p<0.05$). Both the education level of the household head and income have a positive relationship with dietary diversity as shown in Table 4. As education level and household income increase, a corresponding increase in the number of food groups consumed in the household was observed. This aligns with the notable trend in which the affluent and educated population of Zimbabwe have been observed to consume more food groups, some of which are foreign e.g. pizzas as a result of food globalization (FAO, 2016). The R-Square value of 0.63 meant that 63 percent of changes in dietary diversity is accounted for by education level and household income predictor variables. Multicollinearity was not present in the predictor variables since the average VIF value was below 10.

Table 4: Multiple regression analysis for dietary diversity

Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	4.483	0.756		5.932	0.000	2.989	5.977
HH location	0.132	0.379	0.031	0.348	0.728	-0.618	0.882
Marital Status	-0.347	0.421	-0.063	-0.825	0.411	-1.18	0.484
Age of HHH	0.059	0.401	0.012	0.148	0.882	-0.733	0.852

Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Education level	1.442	0.431	0.270	3.343	0.001	0.589	2.295
HH size	-0.132	0.095	-0.122	-1.391	0.166	-0.320	0.056
Income	0.003	0.001	0.254	3.198	0.002	0.001	0.005
R-Square	0.63						
Adjusted R-Sq.	0.59						

a. Dependent variable: Dietary Diversity Score [Source: Survey data: 2021]

4. Strategies for Enhancing Food Preference and Dietary Diversity of Households with People Living with HIV

Programmes to improve the household dietary diversity or the quality of food consumption should target households with less educated members especially the household heads as these were found to have a low preference and do not appreciate the consumption of quality food or different food groups despite the greater need due to their condition. The programmes should design interventions on the dietary intake that considers the low conceptualisation of nutritional issues among the less educated beneficiaries. Efforts should be directed towards increasing the income generation capabilities of households with adults living with HIV as this will directly and positively impact household income thus positively affecting dietary diversity. More need to be done to ensure the implementation of policies such as the Food and Nutrition Security policies aimed at enhancing food and nutrition among vulnerable populations including people living with HIV.

Ensuring food security is an integral component in enhancing the nutrition, health and well-being of people living with HIV and other populations in general. From the results above, the food preferences and reason for preference act as an important guides for government and development programmes to consider. This will address the underlying causes of the observed 35% of adults living with HIV in Zimbabwe being malnourishment (Takarinda, et al. 2017). Since food preferences have been observed as being determined by affordability mostly in rural areas, programmes to improve income flows among people living with HIV in rural areas are strongly recommended. Efforts should be made to address issues such as financial inclusion of marginalised rural populations for example through Internal Savings and Lending (ISAL) Groups among people living with HIV, and promote rural livelihoods such as micro-enterprises. The global model by WHO on holistic treatment care and support for people living with HIV through palliative care encourages socio-economic support for the families of people living with HIV.

5. Conclusion

Dietary diversity or the quality of food among people living with HIV can be addressed through efforts to increase household income. Food security interventions targeting people living with HIV can help improve their dietary diversity and such efforts should put more effort into targeting and assisting families with caregivers with low educational status as they have been found to have a lesser appreciation of dietary diversity. In the treatment, care and support of people living with HIV programmes to ensure the food security of the affected people should consider their food preferences to realise the desirable impacts. The programmes should consider the variations in geographical location for rural and urban livelihoods, as their preferences vary according to these locations in addition to household size. Urban locations have presented food types different to the urban setting thus affecting their preferences. In taking care of people living with HIV, it is also important to note their food preferences as these may also determine the success of food aid programmes by the government or NGOs. Knowing food preferences among people living with HIV is fundamental since this determines food intake and therefore food security of the concerned persons.

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