

CONTEXTUALIZED INTERPRETATION OF FOOD (IN) SECURITY BY RURAL YOUTH IN KWAZULU-NATAL

Thembi Kheswa*, Unathi Kolanisi & Muthulisi Siwela

ABSTRACT

Understanding food security in a localized context is often overlooked when diagnosing and developing food security interventions. The aim of this exploratory study was to establish how young adults defined food security. For this study, a purposive sampling strategy was utilised to select 49 young adults, aged 21 to 40 years of age, from two rural communities in KwaZulu-Natal, South Africa. Data on how participants defined and interpreted food security and food insecurity along with related issues, were collected through focus group discussions. The thematic content analysis generated a pattern of categories, concepts and themes. The themes were compared to the Food Agriculture Organization's (FAO) comprehensive definition and framework for Food Security. Interpretations were based on observable descriptions, experiences and lived realities. Child health and care practices were equally important for defining food security, strengths that future policies and programmes could build on. Social ills and mental problems contributed to observable psycho-social aspects of severe food insecurity. Coping strategies included agriculture, social networks, and natural food resources to enhance food security. Lack of irrigation support services, underutilization of indigenous food resources, and normative experiences on transitory food insecurity posed barriers to achieving food security. This exploratory study provides insight into beneficial practices that programs can build on. Given the centrality of traditional food practices to cultural health, policies must consider both market and traditional food systems when conceptualizing food security in multicultural South Africa.

— **Ms T Kheswa ***

ORCHID ID 0000-0003-0391-461X
Department of Consumer Sciences

University of Zululand,
P/Bag x1001
KwaDlangezwa 3886
Tel: +27 (0) 35 902 6376
Cell: + 27 (0) 82 875 8831
E mail: KheswaT@unizulu.ac.za
*Corresponding author

— **Prof U Kolanisi**

ORCHID ID 0000-0002-4593-9519
Department of Consumer Sciences
University of Zululand
P/Bag x1001
KwaDlangezwa 3886
South Africa
Cell: +27 (0) 79 084 8782
Tel: +27 (0) 35 902 6003
E mail: kolanisiu@unizulu.ac.za

— **Prof M Siwela**

ORCHID ID 0000-0001-8703-9431
School of Agricultural, Earth and Environmental
Sciences
University of KwaZulu-Natal
Pietermaritzburg.
South Africa 3200
Cell: +27 (0) 72 415 9652
Tel+ +27 (0) 33 260 5459
E mail: siwelam@ukzn.ac.za

ARTICLE INFO

Submitted September 2019
Revision June 2020
Accepted May 2021

KEYWORDS

KwaZulu-Natal, food security, local definition, context, rural, young adults

BACKGROUND

The World Bank predicts that by 2050, the global population will have increased to approximately nine billion people, implying a rising demand for food (World Bank, 2016). Unfortunately, the state of food security worldwide, especially among young people, does not seem to be improving. The concern is that they will have to carry the responsibility of feeding future generations. Food security is achieved when “all people, at all times have physical and economic access to sufficient, safe and nutritious foods that meet their dietary needs and preferences for an active and healthy life” (FAO, 1996).

South Africa has made international commitments towards the achievement of food security through interventions such as fortification, mechanization and “One- Home-One- Garden” for its population (Siwawa, 2015). Yet, the problem of food insecurity persists (Ngema et al., 2018, Ntwenya et al., 2015). Food insecurity refers to the lack a lack access to adequate nutritious food to maintain an active and healthy lifestyle of all household members throughout the year (Hendriks, 2014). The findings from SANHANES-1 (Shisana et al., 2013) and Statistics South Africa General Household Survey (Stats, 2015), indicate little improvement in food security since 2008. (Stats, 2015) further reports that approximately 26% of South African households, or 13-15 million people, have either inadequate or severely inadequate access to food. Food insecurity was found to be highest in northern KwaZulu-Natal, with 91 out of 140 households (65.5%) struggling to access food (D'Haese et al., 2013). The district involved in this study was also rated the second most socio-economically deprived in South Africa (Department of Health, 2018/19-2020/21).

Young adult participation in food security dialogues is encouraged to ensure that future generations are food secure (Manyamba and Molokomme, 2014). Therefore, youth-focused research is needed to determine their perceptions and experiences of food security. Furthermore, the local context of food security data and information is often lacking in diagnostic work (Misselhorn and Hendriks, 2017). Reports recommend that food and

nutrition security strategies in South Africa need to be more inclusive and participatory, with local communities being key stakeholders (McIntyre and Hendriks, 2018). Although food availability is an important pillar of food security, (Njeru, 2017) reported a lack of interest in agriculture among rural young adults across Sub-Saharan Africa. Young adults have not the subject of recent food security studies in rural and urban areas (Chakona and Shackleton, 2017, Grobler, 2016, Matebeni, 2018, Ngidi and Hendriks, 2014). However, a study conducted in Limpopo, (Owen and Goldin, 2015) reported that young adults had confidence in engaging in food and water security projects.

South Africa's policies on food and nutrition security are based on evidence obtained largely from quantitative national surveys (Altman et al., 2009, Grobler, 2016, Shisana et al., 2013, Stats, 2015). However, there is a dearth of literature from qualitative research on the young adult's contextual experiences and conceptualizations of food security. This is problematic since they will be responsible for carrying the food security agenda forward.

Significance of the study

Understanding food security from the perspective of young adults in a localized and contextualized rural setting, could contribute to the design and implementation of policies and strategies for future food and nutrition security. Results from the study would alert decision-makers to the local capabilities and constraints often overlooked by food and nutrition security policies. Unique local experiences of food security and insecurity influence nutrition outcomes, and this may not be captured in conventional quantitative studies. Experiences by marginal communities call for participatory approaches towards establishing the convergence of professional definitions and young adults' emic definitions of what constitutes food security as a concept.

In this context, the present small-scale study aimed to explore food security perceptions, views, conceptualization, and experiences of rural young adults, with a focus on how they define food security and food insecurity and to extract suggestions as to what can be done about this issue in their local and contextualized

setting.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

The concept of food insecurity has undergone intensive global debate since its introduction in 1974. Later, scholars emphasized a multi-dimensional understanding of food insecurity and poverty. There was also a simultaneous shift from national or regional, to household-level access to food (Niehof, 2001).

Food security has been defined as the condition in which “all people, at all times have physical and economic access to sufficient, safe and nutritious foods that meet their dietary needs and preferences for an active and healthy life” (FAO, 1996). The key dimensions of household food security constructs are: physical availability of food; economic and physical access to food; adequate food utilization as a function of the body’s ability to process and use nutrients, as well as the dietary quality and safety of the food consumed; and stability in that food supply (Pérez-Escamilla, 2017). Disruption of any one of these food security pillars may be a catalyst for food insecurity.

Studies assert that changes in political, economic and social environments have knock-on effects on the pillars of food security (Butcher et al., 2018). For food security to become a reality, households need unrestricted access to a healthy and nutritious diet. Access to such diets, in turn, relies on having economic resources for food to be readily available.

Household food insecurity is a result of poverty, poor health, and sub-optimal livelihoods and household food management strategies (Pérez-Escamilla, 2017). Food insecurity varies in degrees of severity, ranging from anxiety about whether there will be enough food, through to compromising on the quality and quantity of food. Gartaula and Niehof (2018) argue that current work on food security tends to conceptualize food security in terms of material access to food, and largely ignores the socio-cultural, relational and political nature of food access and consumption. Reports recommend that food and nutrition security strategies in South Africa need to be more inclusive,

participatory, and accountable. Local communities, small producers and civil society groups should be included as key stakeholders (McIntyre and Hendriks, 2018). The above-mentioned pillars of food security have important subjective dimensions that include people’s perceptions and subjective experiences, attitudes towards agricultural land and other cultural and social factors that affect food choices. For development policies to contribute to sustainable food security in the long term, people’s emic conceptions of food security must be integrated into the analysis of social and cultural dynamics of local context (Niehof and Price, 2008).

Habicht et al. (2004), in their ethnographic work, found that participants did not label their situation with the single phrase ‘food insecurity’. Rather, these were descriptive narratives of their experiences, their responses to specific conditions, their feelings, emotions and interpretations. (Frongillo et al., 2017) and (Pérez-Escamilla, 2017) further enhanced the understanding of food insecurity experiences, by pointing out that not all of its effects are directly linked to food. They divided the consequences into two categories: a biological pathway characterized by poor dietary intake, nutritional status, and overall well-being, and a second pathway characterized by anxiety, feelings of exclusion, deprivation and adverse family and social interactions among individuals experiencing food insecurity.

Two distinct conceptualization approaches common in most food security definitions are highlighted by Gartaula and Niehof (2018). Firstly, food security is defined as an output or process and, secondly, it is conceptualized as an objective or subjective condition. The subjective aspect focusses on perceptions underpinning people’s food choices, in relation to the context in which such choices are made. Perception by definition is ‘an idea, a belief or an image you have as a result of how you see or understand something’ (Turnbull et al., 2010). Perceptions include knowledge, attitudes, opinions, values and beliefs that may motivate or hinder behavioural changes (Delores, 2004). Figure 1 summarizes conceptualization of food security as a product and as a process.

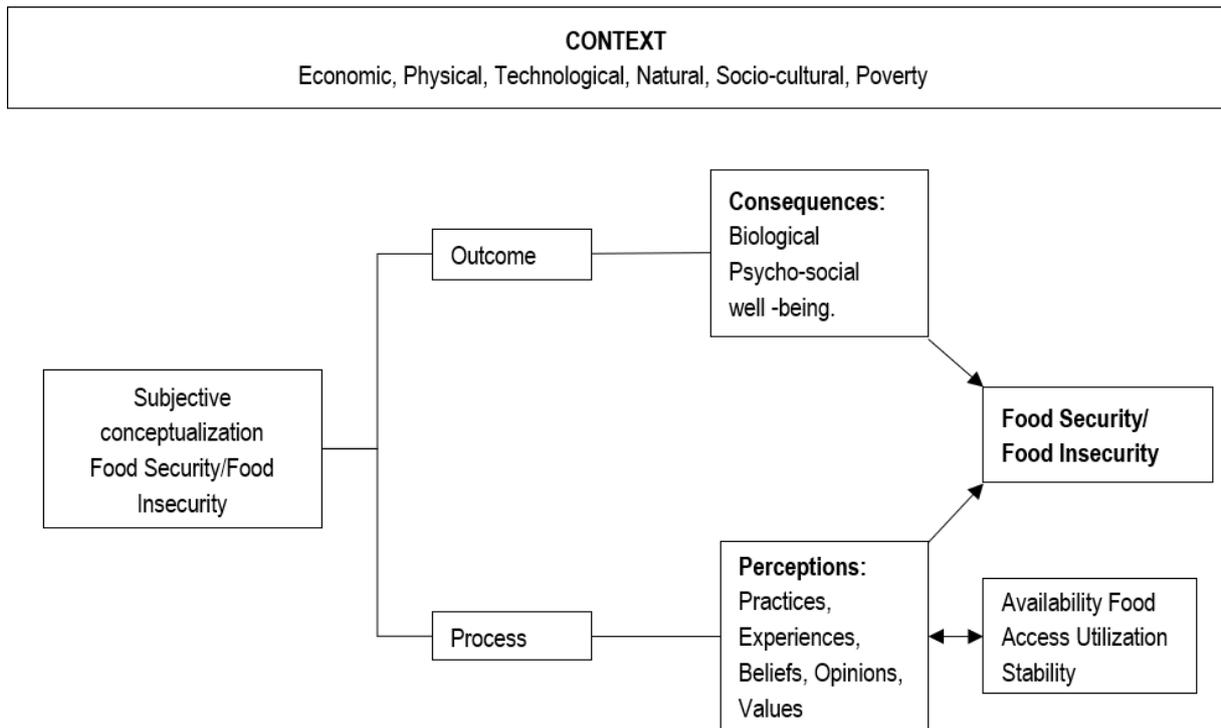


FIGURE 1: FRAMEWORK FOR THE CONCEPTUALIZATION OF FOOD SECURITY

The social well-being approach embraces both the objective and subjective aspects of well-being, including food security as a component. The three dimensions of well-being are accessibility, adequacy and perceptions. The social well-being approach offers a comprehensive framework that integrates material resources, social relationships, people's psychological states and the subjective meaning attached to these.

METHODOLOGY

This study was conducted in rural UMkhanyakude District (DC27), located in the north-eastern part of the province, extending from the Umfolozi River up to the Mozambique border, and bordered on the East by iSimangaliso Wetland Park. The Makhasa (MKS) Ward 1 and Mngobokazi (MNQK) Ward 4 are poverty stricken rural nodes, located within the Big 5 Hlabisa Municipality, along the Lubombo Spatial Development Initiative (LSDI) road (Department of Health, 2018/19-2020/21). Previous research has revealed that households in MNQK rely heavily on the wetland area for subsistence and sources of income generated from tourist markets and on a variety of natural resources such as reeds used for building

thatched roofs; papyrus for grass mats; *ilala* palm (*Hyphaeue coriacea*) for basketry and beer making and collecting fish and small game (Dahlberg, 2005). While agriculture is important for household food security and rural livelihoods for the poor, other means of accessing food and income have played an equally important role (De Klerk et al., 2015, Jacobs, 2015).

In this exploratory qualitative study, participants were recruited from a population of young adults with the help of clinic practitioners, the headman and community facilitators. Purposive sampling was employed where the selection was based on age, experience in caregiving, participation in community projects and availability for inclusion in the study. A total sample of forty-nine (49) young adults participated. Each focus group had a maximum of ten participants, and each participant attended one of the five focus group discussions conducted in the local isiZulu language and held in local community halls. Before data collection, fifteen undergraduate Consumer Science students from the University of Zululand underwent training on focus group facilitation and transcribing conversations verbatim from audio recordings into detailed notes.

The purpose of these discussions was to

establish the participants' definitions of food security and food insecurity, and to obtain views and experiences of these within their households. Each focus group had a moderator who initiated and facilitated discussions by asking open-ended questions about the participants' food situations. Emphasis was placed on learning what was important to participants, and to gaining their perceptions, including the terminology they used. During data collection, the discussions were audio-recorded using mobile phone devices with the prior consent of participants. All recordings were transcribed verbatim, and the fieldworkers took supplementary notes. Facilitators compared the transcripts with the original recordings to confirm accuracy. These transcriptions were then translated into English and were moderated for accuracy by the project leader. Investigator triangulation was achieved by the co-authors' attendance of one or more focus group discussions, and review of the transcripts and audio recordings.

Definitions obtained from the discussions were extracted from descriptions of what the participants had observed and experienced. Focus group discussion information was subjected to a thematic content analysis from which the pattern of categories, concepts and themes emerged. Statements from participants that belonged to the same category to describe food security and food insecurity were placed together. The themes were then compared to the Food Agriculture Organization's (FAO) comprehensive definition and the pillars of food security, namely 'food availability', 'accessibility', 'utilization' and 'stability'.

RESULTS

Most of the focus group participants were female and only three (3) males participated. Their age range was from 21 to 40 years and the household sizes ranged from 4 - 20 members.

Table 1 shows the number and age classification of participants.

Defining Food Security

Participants' definitions came from their realities, perceptions, and experiences: they prioritised nutrition and healthiness as important elements of food security. With regards to a child's wellbeing, "healthiness" was a key indicator and included physical features ('healthy weight', 'good skin', 'active'), as well as emotional and mental capabilities ('happy', 'clever'). Adult wellbeing was associated with the use of phrases such as 'big body', 'well rounded' and 'being fit'. These explanations, across all focus groups, suggested that the assessment of a household's food security status could include the wellbeing of children and adults in a household.

In this study, participants' definitions of food security were related to some of the FAO's key attributes of food quality. Statements such as, 'healthy traditional foods' and 'freshness', indicate the FAO's 'utilization' food security pillar. Our synthesis of the participants' definitions, as derived from the focus group discussions, implied that good quality food should always be available, and within reach of the household, as explained by one participant:

'Have a garden to always get fresh vegetables, then you do not need to buy, as some bought vegetables are not fresh' (MKS).

Participants from both wards cited the importance of agriculture, through gardening, for accessing food products that can be grown, rather than relying on purchased food. In addition, specific reference was made to '*imifino* (traditional leafy vegetables), groundnuts, pumpkin, combined pumpkin, maize meal and meat as healthy foods. Ownership of assets such as land and livestock formed part of their definitions of food security and was associated

TABLE 1: PARTICIPANT AGE CATEGORIES (N= 49)

Age ranges	Makhasa	Mnqobokazi	Total
Less than 21 years	-	1 (2%)	1 (2%)
22-34	9 (18%)	8 (16%)	17 (35%)
35-40	10 (20%)	21(43%)	31 (63%)
Total	19 (39%)	30 (61%)	49 (100%)

TABLE 2: SUMMARY OF HOUSEHOLD FOOD SECURITY INDICATORS AND FAO CRITERIA

FAO Criteria	Participant's Indicators of food security
Food availability	1. Practice farming 2. Have garden for fresh vegetables
Access to food	1. Purchase food through markets, malls 2. Frequent shopping trips 3. Social welfare grants; pocket money 4. Bartering/sharing/credit 5. Generate income by selling 6. Have land; livestock
Food utilization	1. Food quality from own fresh produce 2. Eat healthy food (<i>imifino</i> , pumpkin, groundnuts) 3. Eat pumpkin with maize meal 4. Eat more <i>imifino</i> and less meat 5. Eat more meat 6. Eat cornflakes, oats 7. Balancing food (knowledge)
Child well-being	1. Healthy weight 2. Good skin 3. Activeness at school 4. Happy 5. Clever
Stability	-----

with wealth, as indicated by participants from both wards:

'Households use what is available from the fields and livestock. Therefore, they are not poor' (MNQK,) and

'People are not aware that they are not poor if they have a garden' (MKS)

Participants from both wards concurred on, and emphasized the association between ownership of assets and food security. Engaging in agricultural production (by planting a variety of traditional and exotic crops appropriate for that season), in their view, made it possible to escape poverty and food insecurity, as it gave households better control over access to food and less reliance on purchases.

An interesting debate arose when participants suggested that housing was not a reliable indicator of food insecurity, alternatively, the aspect of healthy eating was regularly mentioned:

'Most people link buildings to the food they eat or afford whereas buildings do not determine the health status of the family, but it is eating healthy food like *imifino* that matters;' (MKS)

'Sometimes the house looks modern and you think they have food, while they do not' (MNQK).

The understanding of healthy food was consistent among all groups. Food stability, however, defined by the FAO as '*having access to food all the time...*' (FAO, 1996), was not spontaneously identified as part of the participant's definition.

Table 2 shows a summary of food security indicators as mentioned by these young adults, and depicts how the indicators overlap with the FAO food security pillars. 'Child wellbeing' is an additional criterion that is important for these communities when assessing food security.

Defining food insecurity

Participants' definitions were combined to generate seven themes that explained the concept of food insecurity within the two communities: child ill-health; inadequate food quality; insufficient quantity of food; a lack of resources or income; social issues and mental problems.

Participants maintained that having a resource, such as a garden, was possible for the food

TABLE 3: PARTICIPANTS' INDICATORS OF FOOD INSECURITY AND FAO CRITERIA

Criteria	Indicators from focus groups
Inadequate food quality	1. Low quality – eat mainly starch – crumbly <i>phuthu</i> 2. Unbalanced meals (combined anyhow to prevent hunger)
Insufficient food quantity	1. Insufficient food intake (never full) 2. Low satiety (not eating enough)
Child disease	1. Susceptibility to illnesses 2. Kwashiorkor
Resources	1. Lack of money 2. Always expects food parcels 3. Always asks for food
Social issues	1. Alcohol abuse 2. Unsafe environment 3. Lack of parental care – dirty child, torn clothes
Mental problems	1. Low thinking ability 2. Worry 3. Depression
Instability	1. Expensive food (high prices) 2. Drought

insecure community members, and was likely to be the only resource at their disposal. Other households in the community may have more money to access food and additional household resources, such as a refrigerator, stove and radio, to mention a few. All focus groups agreed that cash income was important in the context of food security, as explained by one of the participants:

'Nowadays, money distinguishes between the rich and the poor. If one has no income, then it shows you are poor because food is expensive and one cannot afford it' (MKS).

This statement shows that poverty and low socioeconomic status were understood to be underlying causes of food insecurity. However, there was a striking recurrent consensus that an income-poor household with few resources can still access food through fresh and safe garden produce. Participants associated inadequate food quality with less varied and unbalanced diets, mainly high in starch ('eating crumbly *phuthu* with no relish like *imifino*'). Despite the inadequate quality and insufficient quantities, participants said that poor households never slept without food because they had other coping strategies for survival when less food was available.

Social ills and mental problems, such as alcohol abuse, were cited as observable psycho-social aspects of food insecurity, and were common in

some households. An unsafe environment that did not protect children, as well as a lack of parental care, also indicated food insecurity according to the participants from both sites. MNQK youth vocally and spontaneously described mental and behavioural aspects of food insecurity as 'slow thinking, worry and depression'. Habicht et al. (2004) confirmed that the psychological aspects of food insecurity resulting in social alienation and loss of self-esteem are regarded as a demonstration of severe forms of food insecurity. Table 3 shows how participants' indicators echoed the FS pillars based on the FAO criteria.

In defining food insecurity, insufficient quantities of food and poor food quality were common statements from participants, indicating inadequate food consumption linked to the 'utilization' pillar. Their statements regarding non-food related social ills indicated severe forms of food insecurity.

Patterns of food security experiences within the month

Focus group participants experienced seasonal food insecurity during certain weeks of the month. Table 4 shows the pattern reported which depended on the timing of grants or other income received by participants.

There was no anxiety in 'plenty food week', as the cash flow allowed the family a food basket containing diverse food items purchased in bulk

TABLE 4: PATTERN OF FOOD SECURITY OVER A MONTH AND COPING STRATEGIES

Week	Changing pattern of food security within a month
1	' Plenty food week ', most households get salaries from their jobs or the social grants. Households manage to purchase food they need.
2	' Top up week ', the food situation is still fine, if households run out of food items, purchases are made. Main top-up food items include maize meal, beans, oil. Vegetables are often planted.
3	' Anxiety week '. Food starts to dwindle, even the portion sizes are reduced. Households resort to garden produce and traditional crops.
4	' Tough week '. Maize meal is the most affordable staple eaten. Households practice creativity with whatever food items available by resorting to garden produce and uncultivated crops.

as well as agricultural produce including traditional crops. In the last quarter in 2019, the cost of a typical monthly commercial food basket for a six-member household was R2 506, 00 according to participants. They described their experiences during the 'plenty food week' in terms of their achievement in meeting family needs, as illustrated by two comments:

'I'm able to give five rand for the child to carry to school and I can buy food in bulk' (MNQK).

'I seldom shout at the children, and they are always happy' (MKS).

In the 'top-up week,' some food items were replenished, while in the 'anxiety week' the reduced food portion sizes were common and 'tough week' required further coping strategies. Coping mechanisms, which included getting help from neighbours or creative food preparation, were mentioned:

'I start asking for food from selected neighbours, only those who understand' (MNQK).

This practice of bartering without expecting anything in return was no longer common. A young adult from Makhasa commented that the practice was limited to not more than three times in a month, as neighbours would gossip about it.

Participants believed that creative food preparation was necessary so that nobody would go without food in the fourth 'tough' week of the month. This sentiment was emphasized in the MNQK focus groups:

'You have to come up with a plan to put food on the table, mix whatever is available for a relish. If there is flour, I

make fat cakes' (MKS).

'Sometimes I mix porridge or rice with salt and vegetable oil or mix crumbly *phuthu* with sugar solution' (MNQK).

Perceptions of food insecurity in the fourth week of a month was common. Both communities appeared to be accepting of their situation even though food quality was compromised because of consuming high-energy foods for satiety.

DISCUSSION

In defining food security, the four pillars namely 'availability', 'access', 'utilization' and 'stability' are important, as acknowledged by the literature. Factors enhancing and limiting food security are highlighted based on those FAO food security pillars.

Food availability

Engagement with agriculture and maintaining crop diversity, as well as access to farm-based resources such as land, communal gardens and livestock, were important strategies for overcoming food insecurity. Households that obtained food through their own farming efforts were considered 'food secure', giving such households a sense of control over their food situation to achieve not only survival but also a sense of self-reliance. Our findings are supported by reports from (Hamelin et al., 2002) in Canada and (Assefa, 2011) in Ethiopia where food security was characterized by agricultural production. In this rural context, production and consumption of traditional foods emerged as important elements of food security. In the present study, it was encouraging to discover a trend that young, rural South African adults

appreciate the importance of agriculture for food security. This is contrary to earlier studies reporting that agriculture is not valued by young people (Masuku et al., 2017, Njeru, 2017). While valuing agriculture may not guarantee achievement of food security, the positive perceptions serve as points of entry for sustainable interventions. Producing one's own crops gives the assurance of good quality, fresh produce that is free from chemicals and can be consumed immediately. This is supported by Limnirankul et al. (2015) who reported similar results in Thailand, as well as (Kasimba et al., 2018) stating that Botswana participants felt that traditional foods were natural while modern foods grown with chemicals grew faster and caused one to be sick. We can therefore be assured that there is value in prioritizing and involving young adults when planning agricultural and food security-based interventions.

Food access

Cash is an indicator of wealth, which can lead to people relying on purchased vegetables instead of growing them in a garden. However, high food prices will reduce access to good quality food. This problem is illustrated by reports that while South Africa is food secure nationally, 20% of households in the country have inadequate access to food (Department of Social Development and Department of Agriculture Forestry and Fisheries, 2013). Our study participants viewed the role of social grants as linked to responsible spending towards their intended function for purchasing food and other necessities. In this way, grants made a difference in helping households access food. While social grants serve as an important contributor to reducing poverty and food insecurity in South Africa, (Chakona and Shackleton, 2019) found no significant influence of social grants in reducing food insecurity. Thus, the role of gardening in helping the very poor escape food poverty and become more self-reliant needs to be encouraged.

Food utilization

Study participants highlighted both the importance of, and the desire to eat, a healthy diet. There was a preference for prioritizing healthy traditional foods and acknowledgement

of fresh quality crops that were considered healthy. Participants also linked food security to food variety and balanced meals, a common practice in the first and second weeks of the month. These data are supported by (Kasimba et al., 2018) where food quality was found to be a key component in defining food security, and was linked to 'fresh produce' for immediate consumption. This short value chain from the garden to the plate is good practice for accessing optimal nutrients. The participants' concept of a balanced meal was mainly 'starch and *imifino*' or 'starch and meat' and was limited in dietary diversity.

Moreover, participants did not refer to any fruits including wild fruits. The intake of traditional foods, such as *Amaranthus sp.*, is a beneficial practice and should be encouraged to prevent micronutrient deficiencies (Department of Social Development and Department of Agriculture Forestry and Fisheries, 2013). Our findings are supported by Powell et al. (2015) who advocates for the inclusion of traditional food systems in conceptualizing and measuring food security. Traditional foods in the study were used to define the concept of food security. Previous studies reinforce the message that diversifying the household food basket by incorporating underutilized crops and traditional crops could improve locally available alternatives and should be encouraged (Faber and Wenhold, 2007, Govender et al., 2017).

The utilization of food was different during periods of food shortages, especially in the fourth week of the month when low quality, starchy, monotonous meals were consumed. The purpose of this was to postpone hunger for as long as possible, and to achieve the sensation of fullness. Food insecurity without hunger is a dietary compromise that typically results in overconsumption of high-energy foods and less nutritious diets. This can contribute to malnutrition and does not improve wellbeing. Participants were aware that their actions were incompatible with recommended nutrition guidelines. However, they were consuming whatever food was available to allay starvation. Our findings are supported by (Butcher et al., 2018) in an Australian study where respondents prioritized feelings of fullness over nutritional quality.

Stable food access during periods of food shortages was a challenge but surprisingly, the food insecurity experienced was not viewed as a threat. Instead, it was seen as a short-lived norm within the community. The perceptions of these study participants' reveal potential areas of action that can be considered when designing food security interventions.

Food stability

As stated earlier, the participants viewed monthly patterns of food insecurity as a norm. This signals transitional food insecurity which denies communities the right to food '...all the time for a productive and healthy lifestyle' (FAO, 1996). Furthermore, drought, limited food production and fluctuating food prices were found to be barriers in accessing food. However, this also yielded a possible infrastructural solution from our participants: '...we are not lazy, it's the drought that prevents us from planting, we hope the municipality can help us with irrigation system' MNQK). Maziya et al. (2017) conducted a study on the determinants of food security, and recommended that access to reliable irrigation technology can allow farmers to improve their productivity and income. This would reduce some vulnerability caused by the inevitable challenges of seasonal weather patterns on agricultural production.

Among the reported challenges facing South Africa and other countries in the region such as Kenya, is the notion that young adults look down on agriculture as 'the dirty hand's job' (Masuku et al., 2017, Njeru, 2017). However, our sample in this rural locality clearly expressed an acknowledgement of and knowledge about their food-producing environments. South Africa's challenge is to bring appropriate resources to rural communities that appreciate the role of agriculture in food security. Although the findings of our small-scale exploratory study are not generalizable, they do reveal the potential for locally relevant interventions that are aligned to new technological developments.

Opportunities for development, education and training, and capacity building for young rural adults can be enhanced through business enterprises, for instance. Future research in the form of larger, nation-wide studies can investigate and compare local contexts to

determine under what conditions future programmes could achieve maximum success.

CONCLUSIONS AND RECOMMENDATIONS

The definition of food security by participants was aligned to some key elements of the FAO framework. (Pérez-Escamilla, 2017) definition, that household food insecurity is a result of poverty, poor health, and sub-optimal livelihoods and household management strategies support the findings of this study. Participants viewed child health, care practices, and well-being, as equally important indicators of food security; strengths which future policies and programmes can build on.

Similarities between local perceptions and scientific knowledge have been identified and documented here, but our study showed that two FAO components of food security, namely 'food utilisation' and 'stability' were not well understood or viewed as directly affecting food security. We recommend that the Department of Agriculture and Rural Development (DARD) promote the consumption of traditional vegetables in communities, as recommended by the South African Food Based Dietary Guidelines (SAFBDG), to improve food and nutrition security. Heeding the aspirations and constraining factors, as perceived by participants, can offer useful insights into formulating food and nutrition messages on food safety and balanced diets, incorporating traditional foods. This could take the form of agro-processing and nutrition, as well as extension education at the household level.

This small, localized study reflects patterns specific to these communities, but offers lessons for decision-makers. Given the centrality of traditional food practices to cultural health, policies and programmes must consider both market food systems and traditional food systems in conceptualizing food security within South Africa. Participants' views here offer a basis for future rural development and encourage agro-entrepreneurship skills targeting young adults. This action will increase the long-term investment in targeting young adults and improving the quality of rural livelihoods.

ACKNOWLEDGEMENTS

This study was supported by the University of KwaZulu-Natal, Centre for Indigenous Knowledge Systems, Pietermaritzburg. The authors thank the Hluhluwe communities and University of Zululand Consumer Science students for their participation.

REFERENCES

- Altman, M., Hart, T. G. & Jacobs, P. T., 2009, 'Household food security status in South Africa', *Agrekon* 48(4), 345-361.
- Assefa, S., 2011, 'Farm Households' Food Insecurity and their Coping Strategies in Arsi Negelle District, Oromia Region', *Ethiopian Journal of the Social Sciences and Humanities* 7 (1-2), 27-54.
- Butcher, L., Ryan, M., O'Sullivan, T., Lo, J. & Devine, A., 2018, 'What drives food insecurity in Western Australia? How the perceptions of people at risk differ to those of stakeholders', *Nutrients* 10(8), 1059.
- Chakona, G. & Shackleton, C. M., 2017, 'Voices of the hungry: a qualitative measure of household food access and food insecurity in South Africa', *Agriculture & Food security* 6(66), 2-17.
- Chakona, G. & Shackleton, C. M., 2019, 'Food insecurity in South Africa: To what extent can social grants and consumption of wild foods eradicate hunger?', *World Development Perspectives* 13, 87-94.
- D'Haese, M., Vink, N., Nkuzimana, T., Van Damme, E., Van Rooyen, J., Remaut, A.-M., Staelens, L. & D'Haese, L., 2013, 'Improving food security in the rural areas of KwaZulu-Natal province, South Africa: Too little, too slow', *Development Southern Africa* 30(4-5), 468-490.
- Dahlberg, A., 2005, 'Local resource use, nature conservation and tourism in Mkuze wetlands, South Africa: A complex weave of dependence and conflict', *Geografisk Tidsskrift-Danish Journal of Geography* 105(1), 43-55.
- De Klerk, M., Drimie, S., Aliber, M., Mini, S., Mokoena, R., Randela, R., Modiselle, S., Vogel, C., De Swardt, C. & Kirsten, J., 2015, 'Food security in South Africa: key policy issues for the mediumterm. http://repository.hsra.ac.za/bitstream/handle/20.500.11910/8217/2394_DeKlerkMidTermReviewFinalReportRevised.pdf
- Delores, J., 2004, 'Factors influencing food choices, dietary intake, and nutrition-related attitudes among African Americans: application of a culturally sensitive model', *Ethnicity and Health* 9(4), 349-367.
- Department of Health., 2018/19-2020/21, 'UMKhanyakude District Health Plan KwaZulu Natal: Department of Health KwaZulu Natal'. https://www.spotlightnsp.co.za/wp-content/uploads/2020/12/Umkhanyakude_DHP_2018.19.pdf
- Department of Social Development & Department of Agriculture Forestry and Fisheries., 2013, 'National Policy for Food and Nutrition Security'. Pretoria. https://www.gov.za/sites/default/files/gcis_document/201409/37915gon637.pdf
- Faber, M. & WENHOLD, F., 2007, 'Nutrition in contemporary South Africa', *Water SA* 33(3), 393-400
- FAO., 1996, 'Rome Declaration on World Food Security and World Food Summit Plan of Action: World Food Summit 13-17 November 1996', Rome, Italy.
- Frongillo, E. A., Nguyen, H. T., Smith, M. D. & Coleman-Jensen, A., 2017, 'Food insecurity is associated with subjective well-being among individuals from 138 countries in the 2014 Gallup World Poll', *The Journal of Nutrition* 147 (4), 680-687.
- Gartaula, H. & Niehof, A., 2018, 'Changing value of food and perception of food security in the context of male out-migration in Nepal', *Diversity and change in food wellbeing: Cases from Southeast Asia and Nepal*. Wageningen Academic Publishers, 510-531.
- Govender, L., Pillay, K., Siwela, M., Modi, A. & Mabhaudhi, T., 2017, 'Food and nutrition insecurity in selected rural communities of KwaZulu-Natal, South Africa—Linking human nutrition and agriculture', *International Journal of Environmental Research and Public Health* 14 (1), 17.
- Grobler, W. C., 2016, 'Perceptions of poverty: a study of food secure and food insecure households in an urban area in South Africa', *Procedia Economics and Finance* 35, 224-231.
- Habicht, J.-P., Pelto, G., Frongillo, E. & Rose, D., 2004, 'Conceptualization and instrumentation of food insecurity', *Workshop on the Measurement of Food Insecurity and Hunger* (Vol 15).
- Hamelin, A.-M., Beaudry, M. & Habicht, J.-P., 2002, 'Characterization of household food insecurity in Quebec: food and feelings', *Social Science & Medicine* 54(1), 119-132.
- Hendriks, S. J. A., 2014, 'Food security in South Africa: Status quo and policy imperatives'

Agrekon 53(2), 1-24.

Jacobs, P., 2015, 'Protecting food insecure households against rapid food price inflation'. <http://repository.hsrc.ac.za/bitstream/handle/20.500.11910/3473/7207%281%29.pdf>

Kasimba, S. N., Motswagole, B. S., Covic, N. M. & Claasen, N., 2018, 'Household access to traditional and indigenous foods positively associated with food security and dietary diversity in Botswana', *Public Health Nutrition* 21 (6), 1200-1208.

Limnirankul, B., Promburom, P. & Thongngam, K., 2015, 'Community participation in developing and assessing household food security in the highlands of northern Thailand', *Agriculture and Agricultural Science Procedia* 5, 52-59.

Manyamba, C. & Molokomme, M., 2014, 'Understanding the youth, agriculture and food security nexus in Malawi: from an agricultural policy perspective', *In Proc. 2014 conference on Land Policy in Africa*, November 2014, pp.11-14.

Masuku, M., Selepe, M. & Ngcobo, N., 2017, 'Status of Household Food Security in Rural Areas at uThungulu District, Kwa-Zulu Natal, South Africa'. *African Journal of Hospitality, Tourism and Leisure* 6(2), 1-11.

Matebeni, F., 2018, 'Measuring rural household food security in the Nkonkobe local municipality, Eastern Cape Province of South Africa', PhD thesis, Dept. of Agricultural Economics, Stellenbosch University.

Maziya, M., Mudhara, M. & Chitja, J., 2017, 'What factors determine household food security among smallholder farmers?', Insights from Msinga, KwaZulu-Natal, South Africa. *Agrekon* 56(1), 40-52.

McIntyre, A. M. & Hendriks, S. L., 2018, 'Interpreting food security research findings with rural South African communities'. https://repository.up.ac.za/bitstream/handle/2263/71419/McIntyre_Interpreting_2018.pdf.

Misselhorn, A. & Hendriks, S. L., 2017, 'A systematic review of sub-national food insecurity research in South Africa: Missed opportunities for policy insights', *PLoS one* 12(8), e0182399.

Ngema, P., Sibanda, M. & Musemwa, L., 2018, 'Household food security status and its determinants in Maphumulo local municipality, South Africa', *Sustainability* 10(9), 3307.

Ngidi, M. S. & Hendriks, S. L., 2014, 'Coping with food insecurity in rural South Africa: the case of Jozini', KwaZulu-Natal. *Mediterranean Journal of Social Sciences* 5(25), 278.

Niehof, A., 2001, 'Rural livelihood systems:

Conceptual framework', (No. 5), International Potato Center. <https://edepot.wur.nl/379081>

Niehof, A. & Price, L. L., 2008, 'Etic and emic perspectives on HIV/AIDS impacts on rural livelihoods and agricultural practice in Sub-Saharan Africa', *NJAS-Wageningen Journal of Life Sciences* 56(3), 139-153.

Njeru, L. K., 2017, 'Youth in Agriculture; Perceptions and Challenges for Enhanced Participation in Kajiado North Sub-County, Kenya', *Greener Journal of Agricultural Sciences* 7(8), 203-209.

Ntwenya, J., Kinabo, J., Msuya, J., Mamiro, P., Mamiro, D. & Katalambula, L., 2015, 'Household food insecurity and associated factors in rural communities: A case of Kilosa District, Tanzania'. <http://www.suaire.sua.ac.tz/bitstream/handle/123456789/1336/Mamiro1.pdf>

Owen, G. & Goldin, J., 2015, 'Assessing the relationship between youth capabilities and food security: a case study of a rainwater harvesting project in South Africa', *Water SA* 41(4), 541-548.

Pérez-Escamilla, R., 2017, 'Food security and the 2015–2030 Sustainable Development Goals: From human to planetary health: Perspectives and opinions', *Current Developments in Nutrition* 1(7), e000513.

Powell, B., Thilsted, S. H., Ickowitz, A., Termote, C., Sunderland, T. & Herforth, A., 2015, 'Improving diets with wild and cultivated biodiversity from across the landscape', *Food Security* 7(3), 535-554.

Shisana, O., Labadarios, D., Rehle, T., Simbayi, L., Zuma, K., Dhansay, A., Reddy, P., Parker, W., Hoosain, E. & Naidoo, P., 2013, 'The South African National Health and Nutrition Examination Survey', 2012: SANHANES-1: The Health and Nutritional Status of the Nation.

Siwawa, S., 2015, 'Promotion of local foods to end hunger, malnutrition in Africa', *Zambia Daily Mail Limited*, 1 April 2015. <https://www.daily-mail.co.zm/promotion-local-foods-end-hunger-malnutrition-africa/>

Stats, S. A., 2015, 'General household survey 2014', *Statistics South Africa, Pretoria, South Africa*.

Turnbull, J., LEA, D., Parkinson, D., Phillips, P., Francis, B., Webb, S., Bull, V. & Ashby, M., 2010, Oxford advanced learner's dictionary. *International Student's Edition*.

World Bank., 2016, 'World Development Report 2016: Digital Dividends', *World Bank Publications*.