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The Influencing of Consumer Aspirations on Food Choice, Sourcing and Consumption Among Low-Income Households of eThekwini Municipality: A Pilot Study

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Abstract: Unhealthy foods, availed through food retail supermarkets, restaurant franchises, and the local street food market, have become everyday foods for the average South African. Reliance on unhealthy food results in high incidence of non-communicable diseases, which necessitate a transition towards healthy diets produced from sustainable healthy food systems. This study sought to understand factors influencing food choice, sourcing, and resultant food consumption behaviour among low-income households of eThekwini Municipality, South Africa. The study used the photovoice method to collect primary data and the inductive thematic approach to analyse the data. Results reveal that consumer food choice, sourcing, and consumption are influenced by deeply rooted aspirations for a superior lifestyle which drives perceptions about socially acceptable foods. These aspirations not only define and perpetuate an unhealthy diet but have the potential to suppress efforts towards development of sustainable healthy food systems. This study opens discourses on consumer aspirations in relation to food choice, sourcing, and consumption behaviour, which are critical to policy and programme development in promoting healthy diets among low-income households of South Africa.

Keywords:
1. Consumer aspirations
2. Consumption behaviour
3. Food choice
4. Sustainable healthy food systems
5. Low-income households

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1. Introduction

Literature (Otterbach et al., 2021; Bodirsky et al., 2020; Mbogori & Mucherah, 2019; Battersby, 2017) highlights a nutrition transition, driven by big multi-national corporations that sustain accessibility, availability, affordability, and convenience of food consumption. Food production processes feeding into these corporations are natural resource intensive and produce waste

that is toxic to the environment and humanity (Bodirsky et al., 2020; Willett et al., 2019; IPES-Food, 2017). Literature highlights alternative food systems which chart a way towards healthy diets produced from sustainable food systems (Cacau et al., 2021; Bodirsky et al., 2020; Willett et al., 2019).

In South Africa, policy responses have been directed at promoting nutrition and health outcomes using tax instruments such as zero-rating value added tax on staple and healthy foods; nutrient fortification; increasing sugar tax; and salt reduction regulation (Haggblade et al., 2016, p. 227; Republic of South Africa, 2016). Other policy measures include nutrition and food security through the Integrated Nutrition Programme implemented at an individual and household level; and in schools under the National School Nutrition Programme (Mbogori & Mucherah, 2019; Department of Basic Education, undated). Lastly, Social Assistance and Social Relief of Distress are among other policy measures aimed at reducing household food insecurity and hunger (Boatemaa et al., 2018).

Research has focused on nutrient fortification through bio-fortification (Zuma et al., 2018; Govender, 2018) and micro-food production (Khumalo & Sibanda, 2019; Roberts & Shackleton, 2018; Olivier & Heinecken, 2017; Mansfield et al., 2015). Other research has focused on food sourcing (Crush et al., 2018; Haysom et al., 2017); and commercialisation and consumption of underutilised foods (Mabhaudhi et al., 2017; Modi & Mabhaudhi, 2016). Recommendations for systematic and holistic approaches that address food and nutrition challenges are also evident. One such recommendation is to integrate behaviour change, education, and awareness into sustainable diet change strategies (Akinola et al., 2020; Siwela et al., 2020; Boatemaa et al., 2018; Govender, 2018). This paper delves into factors influencing food choice, sourcing, and resultant food consumption behaviour among low-income households of eThekwini Municipality, South Africa. The questions we ask are: 1) What is healthy food? 2) Where is healthy food sourced and how has food choice, sourcing, and consumption (FCSC) changed over time? 3) What factors influence FCSC?

2. Study Area and Methods

The study was conducted in the eThekwini Municipality of Durban, South Africa. eThekwini Municipality is home to 3.7 million people (eThekwini Municipality, 2019) living in 1,125,765 households (Department of Cooperative Governance and Traditional Affairs-CoGTA, 2020). It has high levels of poverty (41% living below South Africa's Lower Poverty Line), unemployment (18.7%) and informality (26% live in informal settlements) (CoGTA, 2020; eThekwini Municipality, 2017). The Municipality comprises an urban core and a large peri-urban and rural periphery. About 43% of the municipal area is under the dual governance system of the eThekwini Municipality and the Traditional Authority (Ingonyama Trust Board) governing Ingonyama Trust land (Sims et al., 2018).

This study presents two contexts of low-income urban living:

- Rural and peri-urban settlements include Maphephetha (Rural area M), Mzinyathi (Peri-urban M) and Ngcolosi (Peri-urban N) which are governed by the Ingonyama Trust Board but serviced by eThekwini Municipality.
- Informal and Reconstruction and Development Programme (RDP) Housing settlements include Quarry Road West (Informal settlement QRW) and Thandanani (Informal settlement T); and Hammonds Farm (RDP HF) and Congo (RDP C) are governed and serviced by eThekwini Municipality. Immigrants from rural areas settle in informal settlements and over time are relocated to formal Government-subsidised housing (so called RDP). (Appendix 1a).

2.1. Research Approach

The study took a social constructivist approach which regards knowledge as socially and culturally contextual (McMahon, 1997; Kim, 2001). The study used the photovoice method (Appendix 1b) which enabled participants to share their socially and culturally contextual knowledge about food choice sourcing, and consumption (FCSC) unveiled through focus group discussions.

The study leveraged on existing research relationships with community leadership structures to access participants. Participants (Table 1) were identified through snowball sampling starting with people involved in previous research projects, who referred residents willing to participate in the study. Participants recruited were low-income earners dependent on casual jobs or Social Grants and had access to a mobile phone with a camera.

Table 1. Participant Recruitment

Settlement Name	Participants	
	Recruited	Participated
Rural M	9	11*
Peri-urban N	10	10
Peri-urban M	10	6
Informal settlement QRW	16	15
Informal settlement T	10	6
RD HF	10	6
RDP C	6	6
Total	71	60

*Appendix 1c

2.2. Data Collection

Two participant workshops were held. The first workshop was held to obtain informed consent, explain the photovoice method, and start the first phase of data collection. Three questions were presented to guide participants in taking pictures over a period of one week:

- What is healthy food?
- What are your meals composed of?
- Where do you access food?

During the second workshop, participants submitted photographs which were labelled and saved on a storage disc. Semi-structured focus group discussions were held to understand participants' photographs and to discuss additional questions. Participants wrote photograph descriptions on sticky notes and stuck them on flip charts. All the responses and discussions were recorded on a voice recorder and major points during the discussions were captured on a flip chart. Both workshops were held in isiZulu.

2.3. Data Analysis

Each set of pictures was organised into collages for each site while narratives from focus group discussions were analysed using the inductive thematic approach. Audio recorded narratives from focus group discussions were transcribed verbatim into Microsoft Word document and translated from isiZulu to English. The researchers familiarised themselves with the data and created a coding sheet using the research questions. Using the codes, themes emerging from the data were generated and defined (Appendix 1d: Table 1). Researchers reviewed emerging themes to ensure that they represented the ideas in the data and were not overlapping. Resultant themes were used in the presentation and discussion of results.

3. Results and Discussion

During focus group discussions, participants used significant political phases in South Africa's political history as timeframe reference points (Appendix 2a). As such, wherever timeframes were necessary, results were presented and analysed according to the three categories: after 1990; 1980-1990; and before 1980 (Table 2).

Table 2. Demographic Characteristics

Demographics		Rural	Peri-Urban	Informal Settlement			RDP Housing		Total
		M	N	M	QRW	T	HF	C	
Participants	Participated	11	10	6	15	6	6	6	60
Gender	Male	4	4	1	5	3	0	1	17
	Female	7	6	5	10	3	6	5	37
Age Groups*	Range	50	49	33	32	43	15	47	-
	Mean	40	48	56	36	49	52	31	-
	After 1990**	3	0	0	4	1	0	1	8
	1980 - 1990	4	4	1	6	0	0	4	15
	Before 1980	4	6	5	5	5	6	1	31
Education Level	No education	0	0	0	0	1	1	0	2
	Primary	0	0	2	3	2	2	1	10
	Grades 8 - 12/Matric	0	0	4	7	3	3	4	21
	Tertiary	0	0	0	5	0	0	1	6
Income (R)	<1000	5	2	0	2	1	1	1	5
	1001 - 2000	4	5	1	8	4	1	1	15
	2001 - 3000	2	3	1	3	1	1	2	8
	3001 - 4000	0	0	4	2	0	3	2	10

*Appendix 2a; **All participants in this category were above 18 years old.

3.1. Results

3.1.1. Food Diaries

Participants food diaries (Figure 1; Appendix 2e: Table 5) consisted of local foods such as *phuthu,* steamed bread; and global foods such as bread, rice, and stews. In both study contexts (Informal settlements and RDP housing (urban); rural and peri-urban), at least one participant indicated that they consumed home-grown fresh produce such as pumpkins, taro, and fresh maize. They also consumed indigenous food such as green leafy vegetables (GLV), *isigwaqana*, *isigwamba,* and *isijingi* (see Appendix 2d(ii) for description of indigenous foods):

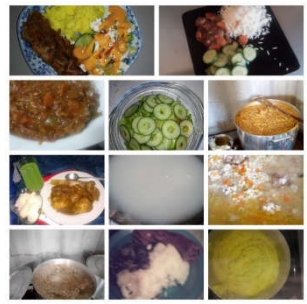
> 'I enjoy biryani because I do not eat curry and rice as I come from a township.' (Participant 1, Informal settlement QRW).

> 'We ate indigenous food while growing up, that is why we love to eat it. I feel strong when I eat indigenous food.' (Participant 4, Rural area M).

Peri-urban M

Peri-urban N

Rural area M



Informal settlement QRW

Informal settlement T

RDP HF

RDP C

Figure 1. Food Diaries of a Day's Meals

Participants born before 1990 consumed indigenous food as a staple before 1990. In both study contexts, participants recollected memories of home-grown fresh produce and indigenous food production, processing, and consumption which they seldom practice post-1990. However, participants born after 1990 depicted fewer or no similar memories, especially in informal and RDP housing where they identified older community members who consumed indigenous food daily. Overall, participants from rural and peri-urban settlements had more memories compared to the informal and RDP settlement participants born after 1990. The Peri-urban N and Rural area M participants consumed indigenous food though they preferred global foods.

3.1.2. Healthy Food

Home-grown fresh produce, GLV, and indigenous food were considered healthy in both study contexts and across all age groups. Home-grown fresh produce was considered healthier than storebought fresh produce because of freshness and knowledge of inputs used in food production. Some foods were considered healthy because of perceived medicinal value [Table 4; Figure 2; Appendix 2b(i)].

Table 4. Foods with Medicinal Properties

Study Site	Foods & Nutrients	Value
Rural M Informal settlement QRW	Indigenous foods - vitamins, minerals, carbohydrates, protein, fat, and oil.	Decrease body fat
Peri-urban M	Pork fat	Blood Purification
Peri-urban N	Boiled foods	Well-being
Informal settlement QRW	Beetroot	Blood production
	Carrots – vitamins	Eyesight
	Vegetables – vitamins	Health
	Beef liver	Blood production
	Cabbage – vitamins	Has vitamins
	Beef – protein	Well-being
	Rice – Carbohydrates	Body function
	Oranges - vitamin C	Well-being
	Apples – vitamins	Cleans teeth
	Milk – calcium	Makes you strong
	Cucumber – vitamins	Cleanses the eyes
Informal settlement T	Beans	Filling and gives energy
RDP HF	Balsam pear leaves	Blood pressure regulation

Figure 2. Healthy food - homegrown fresh produce, GLV & indigenous foods

Further, food was considered healthy depending on preparation method. Boiling, and steaming foods; and cooking with little use of additives or condiments made food healthy. Participants appreciated indigenous and home food production, processing, and preparation methods because home processing does not eliminate 'the healthy stuff' from food (Appendix 2c: 1c).

> '…the food we eat is not healthy compared to what we ate when we were young; food was healthy, and we did not get sick. Technology makes the situation worse because they use chemicals to produce food.' (Participant 6, Rural area M).

> 'I prefer village chicken because it feeds on sand to gain minerals, which are good for our bodies. Store-bought chickens are fed chemicals. We don't know where they're grown and how long they're kept in the fridge. The store-bought chicken is not healthy compared to the village chicken. Village chicken is nice and strong;

> If you want to slaughter it, you must run fast to catch it.' (Participant 1, Rural area M).

> 'All the food we buy is unhealthy: food like cooking oil, packet soups, stock cubes, and spices. There's also too much salt in the food. All these fake foods are very nice. Then there's chicken that grows from a chick into chicken within three weeks, and it is huge like a pig…that is why we have Corona Virus today.' (Participant 3, Peri-urban area N).

In both study contexts, participants born after 1990, appreciated good health outcomes of older family and community members, which they associated with consumption of home-grown fresh produce and indigenous food. Participants' perceptions of healthy food were influenced by memories of past food consumption behaviour and health outcomes. However, participants preferred to consume processed store-bought and convenience foods. Informal settlements and RDP housing pictures depicted fast-food, and focus group discussions revealed street-fast-food as everyday foods. Nevertheless, participants from all contexts were concerned about unhealthy food choices and about commercial food production, processing, and preparation habits.

3.1.3. Food Choice, Sourcing and Consumption

Before 1990, participants born before 1990 consumed mostly home-grown foods such as pumpkins, sweet potatoes, maize, beans, taro, GLV, wild fruits, fish, and meat. They consumed home-processed foods daily, while commercially processed foods were consumed occasionally (Appendix 2c). Commercially processed foods were not available then, in contrast to post-1990 (Figure 3). After 1990, participants from all study sites bought most of their food from supermarkets, spaza shops, and other sources identified [Appendix 2b(ii): Table 3a, b, c & 2c]. Particularly, participants from informal settlement and RDP housing relied on store-buying as they had little or no space for food production. Some RDP C participants occasionally bought fresh produce from individual or communal gardens.

> 'It is difficult to get fresh produce, we rely on shops in Emtshebheni, Bridge City, or Durban. We get small items from foreigners' shops around here. We got food parcels during lockdown; we still get cooked food every Wednesday.' (Participant 2, RDP C).

> '…we get some food from the gardens and most of it from the shops' (Participant 2, Peri-Urban N).

Figure 3. Store-bought foods

In both study contexts, participants correlated changes in food sourcing to major political changes in South Africa. Before 1990, household food production, food exchange, foraging, fishing, and hunting were the main means of accessing food, with occasional store-buying of processed foods. After 1990, food sources changed to mainly store-buying, food donations through feeding schemes and government assistance, minimal food production, foraging, and fishing. In both study contexts, participants depended on store-bought food which some households supplemented with home-grown or foraged food. Household food production, foraging, and fishing are still seen as the best ways to source healthy food as the consumer is aware or in control of the inputs into food production processes. In the rural and peri-urban context, food production is done on a smaller scale post-1990. However, most of the informal settlements and RDP participants do not practice food production, and participants born after 1990 see food production as a bygone food source.

Healthy FCSC and acceptability varied across age-groups. Participants born before 1990 consumed healthy food more than participants born after 1990, though they did not consume healthy food as often due to various reasons (Table 6; Appendix 2f).

Table 6. Factors influencing FCSC.

Factors influencing FCSC	Study Site	Profile of participants	Reasons for not consuming healthy food
Aspirations & Social Status	All	All	Inferior food sources & healthy food.
	Peri-urban area N Rural area M	1980 - 1990 Before 1980	Post-apartheid vs. food production.
	Rural area M Peri-urban area N	After 1990	Technology use vs. food production, processing, and consumption.
Cost of food	All	After 1990	Cost of Healthy food: Shrinkflation vs. growing families.
Education & employment	Rural area M Peri-urban area M & N	Before 1980	Inadequate labour for food production and processing.
Climate change	Rural area M Peri-urban area M & N	1980 - 1990 Before 1980	Changing weather patterns affect food harvests.
Land-use change	Peri-urban M	1980 - 1990 Before 1980	Conversion of agriculture land to housing.
Urbanisation	Informal settlements QRW & T RDP HF	1980 - 1990 Before 1980	Limited space for food production

Participants born after 1990 preferred: store-bought and convenience food to home-grown fresh produce; to spend their time using technology and media over food production, processing, and preparation. Overall, store buying was perceived as depicting a higher social status than food production or foraging which are linked to the poverty of the past. Participants aspired for a life depicted on media as a life lived by '*abelungu* - the white people'; a life that does not include household food production, fishing, foraging, and consumption of GLV or indigenous food. These aspirations define an ideal diet for a financially stable household. In this study, foods defined as 'healthy' fall outside of socially acceptable foods because they signify poverty or hardships of the apartheid era. The post-apartheid era is regarded as a period of freedom from the food poverty of the past. Thus, participants sought freedom from their rural lifestyle of food sourcing, processing, preparation, and communal sharing of food.

Food sourcing through household food production, foraging, fishing, and hunting on a scale large enough to sustain household food needs is not possible in both contexts for several reasons. Firstly, recurring droughts and floods have impeded household food production over the years. Though some households still produce food, the harvests cannot sustain household food needs. Secondly, rural-urban migration, politics, employment, and education changed the family structure and functioning during the period 1980-1990 and post-1990. Households lacked labour to support food production because family members took up jobs or went to school. This is evident by the high number of participants born before 1980 that participated in this study most of whom were female. Working women perceived food production and processing as labour intensive and time consuming, hence their preference for convenience foods. Thirdly, the size of agricultural land in peri-urban settlements has been shrinking due to urban sprawl.

In the urban context, there is no land allocated for food production. Lastly, rising food prices since the 2008/9 global recession made it difficult to make healthy food choices.

4. Discussion

GLV, indigenous food and home-grown fresh produce are healthy foods. Boiling food is the best way to prepare healthy food. WHO and FAO recommend eating locally sourced fruit, nuts, pulses, and vegetables; boiling foods; and, eating less processed foods as part of a healthy diet (see Fischer & Garnett, 2016; WHO, 2020). Nevertheless, nuts were absent from the meals while diversity was beyond the scope of this study.

South African consumers consider GLV and indigenous food healthy (Makweya & Oluwatayo, 2019; Sedibe et al., 2014; Molebatsi et al., 2010). Nevertheless, the length of time between harvesting and food preparation, food preparation methods, and additives used in food determine whether food is considered healthy. Despite a wealth of knowledge displayed about healthy food consumption and consequences of unhealthy food consumption, consumption was undesirable, especially amongst the younger generations in both study contexts. Unhealthy food choice, production, processing, and preparation methods remain a concern, given the high incidence of NCDs. Government has responded through regulations such as a zero-rating value added tax on healthy food, salt reduction, nutrient fortification, responsible advertising, and a sugar tax (Boatemaa et al., 2018, p. 273; Republic of South Africa, 2016; Haggblade et al., 2016, p. 227; South African Department of Health and UNICEF, 2008).

Food sourcing changed from predominantly home-growing to store buying. Home-grown fresh produce from fields, individual or community gardens supplemented storebought food. More rural and peri-urban meals were composed of home-grown fresh produce compared to the informal settlement and RDP housing meals; this corresponded to the accessibility of healthy food and intensity of food production (Ramkisoon, 2018). Household food production in peri-urban areas has been decreasing due to reduction in agriculture land (Roberts & Shackleton, 2018), which is converted to housing developments (Dlamini, 2015). However, in informal settlements and RDP housing, lack of agriculture land is attributed to population density (Ramkisoon, 2018; McConnachie & Shackleton, 2010).

The underlying factor affecting healthy FCSC is consumer aspirations for a better life. Stereotypes influenced perceptions of socially acceptable foods and food sourcing especially amongst the younger generation. Research shows that youths look down on indigenous food and food production because it is associated with poverty (Nepfumbada et al., 2021; Akinola et al., 2020; Trefry et al., 2014). By contrast, consumption of processed store-bought and convenience foods is seen as a sign of economic prosperity (Akinola et al., 2020; Sedibe et al., 2014).

This study reveals an evolution in food consumption habits. Older generations appreciated healthy FCSC because of previous experiences of food which younger generations did not have. Studies show that decision-making is biased towards present options in memory and therefore, remembered feelings associated with food drive food choice and consumption (Gluth et al., 2015; University of Basel, 2015; Higgs, 2011). Nevertheless, older generations perpetuate stereotypes that discourage healthy FCSC by relating current food choices to past lived experiences of food. In turn, the younger household members learn and perpetuate unhealthy food consumption behaviour by pressuring their guardians to provide unhealthy food.

The cost of healthy food was perceived to affect FCSC. Food prices are too high for the majority of South Africans (Statistics South Africa, 2018) which can be attributed to rising food prices since the 2008/9 global recession (Temple & Steyn, 2009) and more recently the COVID-

19 pandemic and looting (Jafri et al., 2021). Consequently, consumers prioritise quantity over quality, safety, or food production processes (Koen et al., 2018; Vermeulen et al., 2015).

Lastly, climate change, rural-urban migration, urbanisation, and modernisation affect FCSC. Further, socio-economic, and technological advancement have made food preparation easier due to availability of convenience foods. However, more time spent using technology and every-day socio-economic activities leaves little time for food preparation and hence intensify the need for convenience food.

FCSC is deeply rooted in the past. Current FCSC behaviours were perceived to have evolved because of the past, that is, firstly, food consumption behaviour developed during the struggle for independence from the apartheid era. Secondly, consumption behaviour developed post-apartheid which is largely an interpretation of what freedom means in relation to FCSC. Though transformation in FCSC is a global phenomenon, the characteristics are unique to local contexts (Herrero et al., 2021) as demonstrated in this study. Interventions aimed at changing the *status quo* for sustainability need to understand the culture and values within the relevant area (Herrero et al., 2021; Von Braun et al., 2021).

5. Recommendations and Implications for Policy

We would like to highlight the following issues, which have implications for policy advancement:

- Healthy food is associated with poverty and therefore is not aligned with consumer aspirations, especially the younger generations. Advancing healthy FCSC requires redefining healthy FCSC narratives using popular approaches that appeal to the younger generations. Behaviour change campaigns and awareness should consider consumers' construction of acceptable food within the context of South Africa. Such campaigns can highlight new trends in the Western countries where consumers are willing to pay more for healthy food.
- The study depicts a dependency on storebought foods and the high cost of fresh produce. This presents an opportunity for producing and supplying fresh produce for low-income earners by low-income earners. It also has the potential for co-benefits in meeting various mandates and government priorities such as job creation in the agriculture and food retail sectors. However, since food production is undesirable by younger generations, behaviour change campaigns should deconstruct negative perceptions and narratives surrounding food production.
- A lack of food production space within urban low-income settlements hinders food production. Planning, designing, and construction of low-income housing should make provision for green spaces for food production, among other uses.

6. Conclusion

Daily food choices are deeply rooted in consumer aspirations for a superior lifestyle evident in the food consumed. These aspirations define and perpetuate unhealthy FCSC behaviour and can have negative ramifications on efforts towards development of sustainable healthy food systems. Nonetheless, this study shows that consumers possess a wealth of knowledge about healthy FCSC based on positive first-hand lived experiences and outcomes of consuming healthy foods. The knowledge and attitude towards healthy FCSC can provide leverage for development of sustainable healthy food systems. Since knowledge and experience are intergenerational, and in the case of this study, the knowledge is not transmitted to the next generation, it brings

urgency to efforts that would leverage on the identified knowledge and attitudes whilst they last.

This study opens discourses on consumer aspirations and impact on FCSC behaviour in South Africa. Understanding aspirations in relation to food consumption behaviour is important in deliberations about developing sustainable healthy food systems' policy in South Africa and elsewhere.

7. Limitations of the Study

This study took a qualitative approach, which limits opportunities for replication. Though the researchers planned to replicate each study site, the last stage of data collection was impeded by the COVID-19 lockdowns in 2020. Consequently, the rural settlement site was not replicated. Further studies in large and small cities in KwaZulu-Natal and other provinces can provide more insights into consumer aspirations in relation to FCSC behaviour in South Africa.

Disclaimer

The views expressed in this paper do not necessarily reflect those of the University of KwaZulu-Natal.

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Conflict of Interest

The authors (Chinzila CB, Buthelezi S, Khumalo D and Sutherland C) declare no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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