

## ASSESSMENT OF DIETARY CHALLENGES FACED BY SUB-SAHARAN IMMIGRANTS RESIDING IN THE GAUTENG PROVINCE: A PILOT STUDY

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### ABSTRACT

Migration poses a unique food challenge that has led to immigrant households failing to maintain their traditional food diets. Despite the growing number of Sub-Saharan immigrants living in South Africa, information regarding their dietary challenges and habits upon settlement in South Africa is limited. A descriptive study involving immigrant households (n=34) was primarily used to pre-test a questionnaire that was undertaken by immigrants to assess the challenges they face with regard to their ability to continue with and maintain their traditional diets. Data relating to socio-demographic characteristics, such as continuity with ethnic food culture and the problems faced by Sub-Saharan immigrants with regard to them retaining their traditional food culture was collected. All the respondents indicated that they treasured and maintained their traditional food culture, albeit to varying degrees. Overall, high prices (64,6%), limited variety (64,5%), the quality of food (71%), the unavailability of traditional foods (58,7%) and a lack of shops selling traditional food (76,5%) were identified as major barriers to them retaining their traditional food culture. This is the first study to assess the challenges faced by immigrants living in South Africa with regard to them accessing their traditional foods and maintaining their traditional diets. The findings of the study suggest that Sub-Saharan immigrants living in South Africa find it difficult to access their traditional foods and that this lack of access could predispose them to adopt poor eating habits, however, there is still a need for a larger study with more respondents to test these findings. The findings of the study also revealed that there were lot of similarities between the eating patterns of South Africans and those of immigrants from Southern African countries.

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### INTRODUCTION AND BACKGROUND

The number of immigrants in South Africa has increased dramatically since 1994 (Statistics South Africa 2014b). For example, the 2011 census revealed that 5,7% of the South African population are foreign born (Statistics South Africa 2013). This figure is corroborated by the

fact that 6 801 permanent residence permits were approved in 2013, compared with 1 283 in 2012. Although the number of immigrants settling in South Africa fluctuates, overall, a large number of people immigrate to South Africa, as confirmed by the 100 000 plus temporary residence permits that were approved in the years 2011, 2012 and 2013, in addition to the approximate 18 095 permanent residence permits that were awarded during the same period (Statistics South Africa 2014a).

Two-thirds of South African immigrants are from Africa (Statistics South Africa 2014a). In 2013, the largest numbers of recipients of permanent residence permits were from Zimbabwe (42, 6%), the Democratic Republic of Congo (12, 9%), Nigeria (10, 3%) and Lesotho (4,7%) (South African Press Association, 2014), while the largest numbers of recipients of temporary residence permits were from Zimbabwe (33,8%) Nigeria (18, 3%), the Democratic Republic of Congo (5, 0%) and Lesotho (4,6%) (Statistics South Africa 2014a).

Research shows that access to food that is culturally appropriate is among the most significant difficulties that immigrants face upon settlement in host countries (Jacobus & Jalali 2011; Kiptinness & Dharod 2011; Terragni *et al.* 2014). This is because familiar and culturally appropriate food is either not easily accessible, or is unavailable (Garnweidner *et al.* 2012; Njomo 2012, 2013). The situation is made worse by the inability, on the part of the immigrants, to prepare new food items that they encounter in their host country (Mannion *et al.* 2014; Sanou *et al.* 2014; Terragni *et al.* 2014). The importance of culturally appropriate food is embedded in the fact that food is an embodiment of cultural and religious identity (Jacobus & Jalali 2011; Garnweidner *et al.* 2012). Culture and religion play a significant role in determining what is considered edible, and these are the main reasons why certain foods are forbidden (den Hartog *et al.* 2006:19). Thus culture and religious beliefs can become a barrier to accessing sufficient food among immigrants, especially when the culture and religious beliefs of the host country differ vastly from those of the country of origin.

The 1996 World Food Summit defined food security as “*a condition that exists when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life,*” (FAO, 2006).

Some authors have suggested that apart from limited financial resources (Vahabi & Damba 2013), the availability and accessibility of culturally appropriate food is an essential component of food security (Jacobus & Jalali 2011; Vahabi & Damba 2013).

Furthermore, it has been argued that the unavailability and inaccessibility of foods traditionally eaten by immigrants in host countries results in the adoption of unhealthy eating habits and the subsequent decline in the nutritional health of these immigrants (Kiptinness & Dharod 2011; Okafor *et al.* 2014; Terragni *et al.* 2014).

Although some studies on the dietary patterns and food security status of immigrants have been conducted at global level (Vahabi *et al.* 2011; Anderson *et al.* 2014), few have examined the food preferences and difficulties relating to maintaining a traditional diet faced by African immigrants in host countries (Garnweidner *et al.* 2012; Okafor *et al.* 2014). This pilot study investigated, from the perspective of immigrant households, whether Sub-Saharan immigrants are able to continue with their traditional food culture upon settlement in South Africa, and challenges that they encounter with regard to accessing their traditional food.

## RESEARCH METHODOLOGY

### Ethical issues

Ethical clearance for the study was granted by the Ethics Committee of the College of Agriculture and Environmental Sciences at Unisa before the commencement of the study.

### Study area

The study was conducted in Johannesburg and Tshwane, the two biggest metropolises in Gauteng. The reason for the selection of the study area is that Gauteng hosts the largest number of Sub-Saharan immigrants in South Africa, with the majority residing in the two metropolises (Landau & Gindrey 2008; Njomo 2013).

### Research design and sampling procedure

A descriptive study design was adopted for this study. A questionnaire was used to collect quantitative data.

In this study, due to the lack of a sampling frame it was not possible to adopt random sampling, which is known to yield representative samples. Furthermore, since relatively little is known about the phenomenon under investigation, snowball sampling was considered to be the most appropriate sampling technique for the study. Thirty-four (n=34) female participants representing households from Southern, Central, East and West African regions were identified and invited to participate in the study.

### **Survey questionnaire development**

The development of the questionnaire used for the survey was informed by the objectives of the study, which were formulated from the literature reviewed in previous studies. Gaps in the literature pointed to the need to gain a greater understanding of the ability of Sub-Saharan immigrants to maintain their traditional food culture, and the difficulties (and reasons for the difficulties) experienced by these communities in maintaining their traditional food culture upon settlement in their host country.

The first draft of the questionnaire was reviewed by four Sub-Saharan immigrants (two women and two men); in order to ensure that the questionnaire was appropriate for the group it was going to be administered to. The four reviewers are academics who work in the field of food security and agricultural economics, who have resided in Gauteng, South Africa, for over 15 years. Each question was reviewed for clarity, relevance, use of language and cultural appropriateness. The review of the questionnaire was carried out independently by the reviewers, and feedback was given back to the authors. Suggestions were then discussed by all authors before changes were effected.

The following changes were introduced to the questionnaire based on the recommendations of the reviewers: an option for self-employment was added; categories of income levels were created as opposed to leaving the question open; possible reasons for wanting to continue with traditional food culture that respondents could choose from were added; the wording of some questions was revised to make them more relevant for the target community, (for instance, the term "food safety" was deemed to be too complicated and was therefore revised to read, "quality of the food"); and due to the diverse origin of immigrants, the question on the country of origin was changed to region of origin.

The final draft questionnaire was then circulated to a group of 20 academics for final review.

### **Administering questionnaires (data collection)**

In total, 34 out of the 40 women who were approached, agreed to participate in the pilot study and filled in the consent form to confirm their voluntary participation in the study. A structured questionnaire consisting of both closed and open-ended questions was used to gather data on their socio-demographic characteristics, consumption patterns, continuity with traditional food culture and the difficulties they experience with regard to maintaining their traditional food culture. In cases where the responses were deemed insufficient or unclear, probing questions were used to elicit more information. The data was collected during June 2015. Two university students of Sub-Saharan African descent were recruited and trained to administer the questionnaire. The questionnaire was administered in English.

The inclusion criterion was that the respondents should be women involved in the meal planning and preparation of food in their homes. This is because women are known to be the main custodians in upholding the traditional food culture of their families in host countries (Njomo 2013).

### **Data handling and analysis**

Quantitative data were coded and entered onto a Microsoft Excel® worksheet. The analysis was done using the statistical package IBM SPSS version 23 (2015) to obtain descriptive statistics.

## **RESULTS**

### **Socio-demographic data**

The socio-demographic details of the study population are presented in Table 1. Of the respondents, 38% were between 20 and 29 years of age, while only 3% were above the age of 60. Half of the respondents had obtained education at tertiary level, and the other half had obtained education at high school level or below. Slightly more than half of the participants, 53% (n=18) were unmarried, and 38% (n=13) were married. Altogether 35% (n=12) of the respondents had lived in South Africa for more than seven years, and half, 50% (n=17) had lived in the country for less than 3 years, meaning that the participants were mostly

**TABLE 1: THE SOCIO-DEMOGRAPHIC DETAILS OF RESPONDENTS SHOWING THEIR AGE, EDUCATION, MARITAL STATUS AND DURATION OF RESIDENCE IN SOUTH AFRICA**

| Variable                                     | Number of respondents (n=34) | Percentage (%) |
|--|------------------------------|----------------|
| <b>Age</b>                                   |                              |                |
| Below 20                                     | 3                            | 9,0            |
| 20–29  | 13                           | 38,0           |
| 30–39  | 10                           | 29,0           |
| 40–49  | 5                            | 15,0           |
| 50–59  | 2                            | 6,0            |
| 60–69  | 1                            | 3,0            |
| <b>Education Level</b>                       |                              |                |
| No formal education                          | 1                            | 3,0            |
| Primary education                            | 1                            | 3,0            |
| Secondary education                          | 11                           | 32,0           |
| High school education                        | 4                            | 12,0           |
| Tertiary education diploma                   | 3                            | 9,0            |
| Tertiary education degree & above            | 14                           | 41,0           |
| <b>Marital Status</b>                        |                              |                |
| Unmarried                                    | 18                           | 53,0           |
| Married                                      | 13                           | 38,0           |
| Divorced                                     | 2                            | 6,0            |
| Refused to answer                            | 1                            | 3,0            |
| <b>Duration of Residence in South Africa</b> |                              |                |
| Less than a year                             | 5                            | 15,0           |
| 1–3 years                                    | 12                           | 35,0           |
| 4–6 years                                    | 5                            | 15,0           |
| 7 years and above                            | 12                           | 35,0           |
| <b>Region</b>                                |                              |                |
| Southern Africa                              | 16                           | 47,0           |
| West Africa                                  | 8                            | 23,5           |
| East Africa                                  | 9                            | 26,4           |
| Central Africa                               | 1                            | 2,9            |

first-generation immigrants. In terms of regional representation, the majority of respondents, 47% (n=16) came from Southern Africa (Zimbabwe, Lesotho, Mozambique, Malawi, and Namibia), followed by 27% (n=9) from East Africa (Ethiopia, Tanzania, Sudan, Kenya, Rwanda, Burundi, Somalia, Uganda, Djibouti and Eritrea). The rest indicated that they came from West and East Africa.

#### **Socio-economic status of the respondents**

The socio-economic status of the respondents is presented in Table 2. Of the sample studied, only 38% (n=13) were in full-time employment, while 12% (n=4) were self-employed. The rest of the respondents were employed part-time, temporarily employed or unemployed, which could suggest a lack of money to buy traditional food. Although the nature of their self-employment was not specifically asked about in

this study, personal observation during data collection suggested that the majority of the respondents who indicated that they were self-employed were hairstylists.

An assessment of the household incomes of the respondents indicated that slightly more than half of the respondents, 52,5% (n=18) earned ≤ R10 000 per month. Expenditure on food showed that half of the respondents, 50% (n=17) spent below R2000 on groceries per month, while 18% (n=6) spent ≥ R3000.

#### **Maintaining traditional food culture**

All of the respondents indicated that they still maintain their traditional food culture even after several years of being settled in South Africa. A large percentage of the respondents, 38% (n=13) consumed their traditional food every day; 20,5% (n=7) indicated that they consume

**TABLE 2: ECONOMIC DETAILS OF THE RESPONDENTS**

| Variable                    | Frequency (n=34) | Percentage (%) |
|-----------------------------|------------------|----------------|
| <b>Employment Status</b>    |                  |                |
| Full-time position          | 13               | 38,0           |
| Part-time position          | 8                | 23,5           |
| Self-employed               | 4                | 12,0           |
| Temporary assignment        | 2                | 6,0            |
| Unemployed                  | 7                | 20,5           |
| <b>Household Income</b>     |                  |                |
| Under R5000                 | 10               | 29,0           |
| R5000–R10 000               | 8                | 23,5           |
| R11 000–R15 000             | 3                | 9,0            |
| R16 000–R20 000             | 1                | 3,0            |
| R21 000–R25 000             | 0                | 0              |
| R26 000–R30 000             | 0                | 0              |
| Above R30 000               | 3                | 9,0            |
| Refused to answer           | 9                | 26,5           |
| <b>Amount spent on food</b> |                  |                |
| 0–R999                      | 4                | 11,7           |
| R1000–R1999                 | 13               | 38             |
| R2000–R2999                 | 6                | 17,8           |
| R3000–R3999                 | 5                | 14,8           |
| R4000–R4499                 | 4                | 11,8           |

**TABLE 3: CONTINUATION WITH TRADITIONAL FOOD CULTURE**

| Variable   | Frequency (n=34) | Percentage (%) |
|--|------------------|----------------|
| <b>Continuation with traditional food culture</b>                      |                  |                |
| Yes  | 34               | 100            |
| No   | 0                | 0              |
| <b>Number of times traditional food is consumed</b>                    |                  |                |
| Every day  | 13               | 38,0           |
| Three times a week   | 7                | 20,5           |
| Once a week  | 8                | 23,5           |
| During special occasions   | 6                | 18,0           |
| <b>Number of times you would like to consume your traditional food</b> |                  |                |
| Every day  | 28               | 82,4           |
| Three times a week   | 3                | 9,0            |
| Once a week  | 3                | 9,0            |

**TABLE 4: REASONS FOR CONTINUATION WITH TRADITIONAL FOOD CULTURE**

| Reason                                 | Frequency (n=34) | Percentage (%) |
|--|------------------|----------------|
| Traditional food is part of my culture | 14               | 41,2           |
| It reminds me of relatives back home   | 12               | 35,3           |
| It is healthy                          | 10               | 29,4           |
| It is tasty                            | 5                | 14,7           |

their traditional food three times a week; 23,5% (n=8) consume their traditional food at least once a week, while 18% (n=6) indicated that they consume their traditional food on special occasions only. As reflected in Table 3, the majority of the respondents, 82,4% (n=28)

would like to consume their traditional food daily.

**Reasons for continuing with traditional food culture**

The most common reasons for continuing with

**TABLE 5: CHALLENGES EXPERIENCED IN RETAINING TRADITIONAL FOOD CULTURE**

| Variable                                     | Responses  | Frequency (n=34) | Percentage (%) |
|--|--|------------------|----------------|
| <b>Affordability of the traditional food</b> | <i>Food is affordable</i>                            | 8                | 23,0           |
|  | <i>It is slightly unaffordable</i>                   | 20               | 59,0           |
|  | <i>It is very unaffordable</i>                       | 6                | 18,0           |
| <b>Variety of traditional food</b>           | <i>Wide variety</i>                                  | 11               | 32,4           |
|  | <i>Limited variety</i>                               | 14               | 41,2           |
|  | <i>Very limited variety</i>                          | 9                | 26,4           |
| <b>Quality of the food</b>                   | No answer  | 2                | 6,0            |
|  | <i>Excellent quality</i>                             | 8                | 23,5           |
|  | <i>Average quality</i>                               | 16               | 47,0           |
|  | <i>Poor</i>  | 7                | 20,6           |
|  | <i>Very poor</i>                                     | 1                | 2,9            |
| <b>Accessibility of the shops</b>            | <i>Very accessible</i>                               | 8                | 23,5           |
|  | <i>Slightly inaccessible</i>                         | 16               | 47,1           |
|  | <i>Very inaccessible</i>                             | 10               | 29,4           |
| <b>Traditional food availability</b>         | <i>I always find what I am looking for</i>           | 14               | 41,2           |
|  | <i>I sometimes do not find what I am looking for</i> | 12               | 35,3           |
|  | <i>I hardly find what I am looking for</i>           | 8                | 23,5           |

their traditional food culture as presented in Table 4 are as follows: traditional food is part of their culture (41,2%; n=14); it reminds them of their relatives back home (35,3%; n=12), it is healthy (29,4%; n=10) and their traditional food is tastier than locally available food in South Africa (14,7%, n=5).

**Challenges to continuing with traditional food culture**

The main challenges to accessing traditional foods by immigrants upon settlement in South Africa (see Table 5) were: accessibility of shops selling traditional foods (77%; n=26), the affordability of traditional foods (77%; n=26); and quality of traditional foods available (70,5%; n=24).

In terms of the affordability of traditional foods, 59% (n=20) of the respondents indicated that the food is slightly unaffordable, while 18% (n=6) felt that it is very unaffordable. In addition to this, 68% (n=23) of the respondents reported a lack of variety of their traditional foods at these shops. Of these, 41,2% reported that the variety is limited and 26,4% reported that variety is very limited. By saying that the variety of traditional foods is limited, the respondents meant that they were sometimes unable to find what they were looking for, while those who said that variety was very limited meant that they could hardly find what they were looking for when they shop for their foods.

The majority (approximately 70%; n=24) of the respondents reported varying degrees of dissatisfaction with the quality of traditional foods available in South Africa. For example, 47% (n=16) said that the food is of average quality, 20,6% (n=7) said the food is of poor quality, while 2,9% (n=1) reported that the foods at ethnic shops and restaurants is of very poor quality. The 47% (n=16) who indicated that the food sourced from ethnic shops is of an average quality, explained that the food was often not fresh, but was still edible when compared with the foods they source from markets in their country of origin. Upon further probing, respondents explained that poor quality meant that the food tastes bad, while very poor quality meant the food is rotten.

A lack of shops that sell traditional immigrant food was mentioned by 77% (n=26) of the respondents, with 47% (n=16) indicating that these shops are slightly inaccessible and 29,4% (n=10) indicating that the shops are very inaccessible. When probed further about accessibility, the respondents indicated that slightly inaccessible meant that they have to catch a taxi to get to the shops that sell their traditional food, while very inaccessible meant they have to catch at least two taxis to get to the shops.

The availability of traditional foods was identified as a challenge hindering immigrants from retaining their traditional food culture, with 35,3% (n=12) reporting that they sometimes do

not find what they were looking for, and 23,5% (n=8) reporting that they hardly ever found what they are looking for.

### **Traditional food items that immigrants find difficult to source in South African ethnic shops**

As indicated in Table 5, more than half of the participants (58.8%; n=20) indicated that they find it difficult to locate their traditional foods from ethnic shops in South Africa. The Southern African immigrants indicated that they have difficulty sourcing the following foods: dried meat, goat meat, dried cassava, *chambo* fish, ground nuts, fried dried maize, vegetables (rape, chamolia, okra, *munyemba*), indigenous edible insects (*mundere*, *harurwa*, *madzambakafutha*, *grasshopper*, *ishwa*) cerevita, *umxanxa*, *masau*, *mutakura*, *mabhumbe*, *nyii*, and *mangai*. West African immigrants on the other hand struggle to source roasted yam, plantain, rice balls, traditional *fufu*, bread fruit, snail, oil bean, cocoyam, and cassava. East African immigrants mentioned salted tilapia fish, fresh peas, fresh beans, *matooke*, plantain, and cassava as foods they have difficulty sourcing in South Africa. While immigrants from the Central region find it difficult to source traditional food items such as *kondre*, *macabo* râpé, bush rat meat, mudfish, and goat meat.

### **DISCUSSION**

The age distribution of the respondents in the present study is consistent with the Statistics South Africa (2014a) report that shows that the majority of the recipients of temporary and permanent residence permits are between the ages of 15 and 64 years. This signifies that the majority of immigrants belong to the economically active group. These findings confirm reports that suggest that most African immigrants come to South Africa in search of better economic conditions (Adepoju 2008). Given that the majority of immigrants fall within the economically active age group, it is possible to infer that they migrate to South Africa in search of a better life, and that it is their intention to settle in South Africa for a longer period of time. The question that subsequently arises is how their dietary habits will change over the years.

Half (50%) of the immigrants surveyed indicated that they have only attained high school level education and below. This suggests that low education levels among immigrants is

associated with difficulty in finding decent jobs, which leads to limited financial resources and an increased risk of food insecurity (Kiptinness & Dharod 2011; Vahabi & Damba 2013; Anderson *et al.* 2014). This correlates with the findings of this study which show that many immigrants could be vulnerable to unemployment (Statistics South Africa 2015). However, the low education levels reported in this study are in contrast with the findings by Vahabi and Damba (2013) in a study conducted in Toronto among Latin American immigrants. The Toronto study reported that the majority of respondents either had apprenticeship training or were college graduates (43,5%), or had university education (53,1%). This difference could be because immigrants in the Canadian study are from countries such as Brazil, Colombia and Mexico, where enrolment into higher education is higher than the countries mentioned in this survey. In Africa, enrolment into higher education very low, at 6% compared with the global average of 26% (Hoel & Bank 2015).

Most respondents in this study (59%) were single women. According to Oldewage-Theron *et al.* (2012), unmarried women are more vulnerable to unstable economic conditions and hunger due to low incomes and limited employment compared with their male counterparts (Oxfam 2014). Furthermore, the household income for the majority (61,5%) of respondents was  $\leq$  R16 000 per month (see Table 2). This is below the average monthly gross income in South Africa of R17 517 (Statistics South Africa 2016). These findings support previous reports that indicate a high prevalence of low incomes among immigrants (Kiptinness & Dharod 2011; Vahabi & Damba 2013; Anderson *et al.* 2014). Low incomes have been positively linked to the inability of immigrants to access adequate, nutritious and culturally appropriate food (Vahabi & Damba 2013).

Only 38% of the participants in the study held full-time positions, even though 50% had a tertiary level qualification. This situation was anticipated because previous studies have reported that as a result of language barriers, immigrants struggle to find employment despite having higher education qualifications (Shackelford 2010; Vahabi & Damba 2013). Previous research indicates that most immigrants and refugees have difficulty in finding decent jobs (Njomo 2012; Vahabi & Damba 2013; Anderson *et al.* 2014). For example, in a study conducted in Canada

among Latin immigrants, 8,5% of them were unemployed as compared to 6,7% of the general population (Vahabi & Damba 2013). Similarly, in a study by Njomo (2012) in Cape Town, South Africa, among Sub-Saharan immigrants, 48% of the immigrants were unemployed or hold low-paying jobs. The observed discrepancies in the unemployment rates between the studies in Canada and South Africa can be attributable to the difference in location and the high rate of unemployment (26,7%) that exists in South Africa (Statistics South Africa 2015). Additionally, Anderson *et al.* (2014) and Vahabi and Damba (2013) argue that high unemployment rates among immigrants continues to be an issue despite their higher education levels, language barriers and the employment restrictions imposed on foreign nationals. High unemployment rates could mean a lack of money to buy food and this in turn could predispose immigrants to food insecurity or lead them to acculturate and adopt poor eating habits in the process.

Despite low incomes and difficulties in accessing employment as discussed above, the study provides evidence which suggests that the immigrants surveyed try to preserve their traditional food culture upon settlement in South Africa. Approximately 50% of the respondents interviewed have lived in South Africa for more than four years. According to Njomo (2012), living in a host country for more than four years signifies some level of familiarity with local foods. However, the findings of the study indicate the immigrants have not completely adopted a South African food culture. This confirms the findings of previous studies that have been conducted on this subject by Garnweidner *et al.* (2012) in Norway among Asian and African immigrants. In their study, they found that none of the immigrants had completely adopted the food culture of their host country. A similar argument was offered in a study conducted by Lindsay *et al.* (2014) among African women residing in Ireland, which found that the women had not fully adopted their host country's food culture.

In the United States, a similar conclusion was reached by Vue *et al.* (2011) in their study of Hmong immigrants, which revealed that although a considerable dietary acculturation had taken place, especially among children, the study's participants believed in preserving their own food culture. It is therefore not surprising that high levels of poverty and food insecurity have been reported among refugees and

immigrants despite their settlement in developed countries that have abundant food supplies (Jacobus & Jalali 2011; Vahabi *et al.* 2011).

Despite having stayed in South Africa for a long time, all the respondents in this study felt that the consumption of their traditional food is important. This is consistent with the findings of other studies which have concluded that dietary acculturation is not associated with the length of an immigrant's residence (Garnweidner *et al.* 2012; House *et al.* 2014). In fact, House *et al.* (2014) argue that it is the cultural differences, and not the length of residence, that make some immigrants less likely to accept new food than others, while Vue *et al.* (2011) and Dharod *et al.* (2013) are of the view that it is the generational differences that determine dietary acculturation. In view of the findings of this study, dietary patterns of immigrants surveyed could not be generalised.

In contrast with previous research by Njomo (2013) that indicated that the majority of Sub-Saharan immigrants residing in Cape Town, (79,2%) consume their traditional food three times a week, the majority of participants in this study, 38% (n=13) indicated that they consume their traditional food daily. This variation could be due to the fact that in his study Njomo (2013) included both men and women, while this study only included women. The study by Njomo (2013) revealed that owing to their busy schedules, single men relied mainly on restaurants for food, and might not have always had a choice in what they ate.

Jacobus and Jalali (2011) argue that food has cultural significance and plays a significant role in reinforcing connections to one's culture, traditions and country of origin. Njomo (2013) supports this view by stating that in his study, culture was a determining factor when it came to the choice of foods among African immigrants. Although multiple reasons why immigrants continue with their traditional diets were given, in this study, a cultural and virtual connection to their country of origin was reported more frequently than other reasons. Therefore it was not surprising that many immigrants indicated that they try to retain their traditional food culture despite the reported high prices of their traditional food, a situation which when combined with low income, is likely to make immigrants more vulnerable to food insecurity.

Contrary to the qualitative study that was conducted by Garnweidner *et al.* (2012), where



taste was mentioned as the major determinant in preserving traditional food culture, this study found that only a few respondents (14,7%) cited it as a reason. This difference could be attributed to the fact that the study by Garnweidner *et al.* (2012) was qualitative in nature and included both Asians and Africans.

Among the number of obstacles encountered in efforts to maintain their traditional food culture, the study established the affordability of traditional food as the most significant barrier to retaining traditional food culture by Sub-Saharan immigrants. Although low income is undoubtedly an important factor, the high prices of traditional food in host countries is also an important factor. Studies show that food prices are a major predictor of food insecurity among immigrants (Deng *et al.* 2013; Njomo 2013; Popovic-Lipovac & Strasser 2013). High prices of traditional foods eaten by immigrants has been attributed to the unavailability of these traditional food ingredients in major supermarket groups (Njomo 2013; Vahabi & Damba 2013) as well as high export prices (Jacobus & Jalali 2011; Njomo 2012). This is a serious problem when one considers that the income level of the majority of immigrants is low due to low employment levels among immigrants. While Njomo (2012) advocates for the introduction of the traditional foods by major supermarket groups to increase their affordability, the authors of this study are of the view that this could jeopardise job opportunities for entrepreneurs who operate ethnic shops and markets. Furthermore, literature suggests that most immigrants prefer to buy their traditional food from the small ethnic shops due to cultural familiarity (Jacobus & Jalali 2011; Dharod *et al.* 2013). Therefore, strategies to facilitate cooperative buying in order to assist entrepreneurs who sell traditional foods should be investigated to improve the availability, affordability and variety of culturally appropriate food for immigrants (Jacobus & Jalali 2011).

The lack of variety of traditional food is another factor that was identified as a barrier to maintaining the traditional food culture. In addition to this being a barrier to the maintenance of traditional food culture, a limited variety of traditional food has been reported to lead to low dietary diversity and subsequently an inadequate intake of micronutrients (Oldewage-Theron *et al.* 2012; FAO 2013:11). Oldewage-Theron *et al.* (2012) argue that micronutrient deficiency may result in an increase in health care costs over time.

The majority of respondents in this study, to varying degrees, indicated that they are not satisfied with the quality of the traditional foods sold in South African ethnic shops. This was also observed in previous studies that describe the quality of traditional food as being poor (Rudder 2006; Njomo 2012, 2013). Njomo (2013) went as far as suggesting that food sourced from ethnic shops is sometimes rotten, smelly and tastes bad. This could be due to the fact that ethnic food retailers in South Africa lack the resources and skills to preserve food (Njomo 2013), and are thus unable to comply with acceptable food safety standards (Rudder 2006; Harris *et al.* 2015). Poor quality food is linked to food-borne illnesses and is reportedly responsible for 2.2 million deaths annually (WHO 2013). Furthermore, the effects of food-borne illnesses not only threaten the life of the individuals concerned, but can have adverse economic consequences on communities, businesses and countries by negatively affecting healthcare systems, tourism, productivity and livelihood (WHO 2013; Grace *et al.* 2015:31-32).

The findings reported in this study suggest that immigrants have to travel long distances to access shops that sell their traditional foods. Studies done elsewhere have also indicated that the accessibility of shops that sell culturally appropriate food is often a problem when viewed in conjunction with the high prevalence of unemployment and high transportation costs, these factors negatively affect the food security and nutritional status of immigrants (Jacobus & Jalali 2011).

As in previous studies of immigrant populations (Renzaho & Burns 2006; Jacobus & Jalali 2011; Holmboe-Ottesen & Wandel 2012); respondents in this study struggled to locate familiar traditional food items. Southern African immigrants mainly struggle to access vegetables and protein products such as edible indigenous insects, fish, and goat meat. Edible indigenous insects provide vital alternative sources of protein especially when considering rising food demands and prices associated with rapid urbanisation (Kelemu *et al.* 2015). Although results of this study reveal that there are differences in immigrant and host country diets, (as indicated in the previous section), there are many similarities between South African and Southern African eating patterns, particularly those of Zimbabwean immigrants. These similarities can be attributed to the geographical proximity of the two countries (den Hartog *et al.* 2006:31-33). The study also found that

immigrants from West and East Africa struggle the most to source food items considered as staple foods.

The unavailability of traditional food items often leads to menu and recipe adaptations (Renzaho & Burns 2006; Garnweidner *et al.* 2012), which could have negative nutritional implications on the diets of immigrants (Renzaho & Burns 2006; Jacobus & Jalali 2011). For example in a study by Renzaho and Burns (2006), the replacement of camel and goat meat with lamb, and fish with pork, increased dietary fat intake of Sub-Saharan immigrants living in Australia. While according to Jacobus and Jalali (2011) the replacement of homemade stews with highly processed calorie-dense food was observed among African immigrants living in Lewiston, Maine in the United States of America, here, staple foods were replaced with highly processed foods (Renzaho & Burns 2006; Holmboe-Ottesen & Wandel 2012) such as pizza, French fries and burgers, resulting in a decreased intake of whole grains (Holmboe-Ottesen & Wandel 2012). A typical example of recipe adaptation is the replacement of Atta flour with white flour among South Asians living in Europe (Holmboe-Ottesen & Wandel 2012).

#### LIMITATIONS OF THE STUDY

The study encountered several challenges. The first being that due to the small sample size and convenience sampling, the findings of this study cannot be generalised to include all immigrants living in South Africa. Furthermore, immigrants are not a homogenous group, so they are likely to have differentiated food experiences depending on their country of origin, their location within South Africa, their employment status in the host society and the degree of dietary variety available to them.

Secondly, it was not possible to determine associations between the variables found, due to the small sample size used. Thirdly, all socio-economic data was self-reported, which could have led to over reporting or underreporting. Lastly, the study was conducted at a single point in time, therefore it cannot capture changes that take place over time within the immigrant communities.

#### CONCLUSION

This is the first study to assess factors that hinder access to ethnic food amongst Sub-Saharan immigrants residing in South Africa.

These factors include: affordability, lack of variety and the poor quality of traditional food. While immigrants value the preservation of their traditional food culture, preservation is not always possible, and in the circumstances noted by the study, dietary acculturation becomes inevitable. When combined with low income and barriers to accessing culturally appropriate food, as identified in this study, dietary acculturation can result in an immigrant's susceptibility to poor quality replacements and the adoption of highly processed foods. However, given the limited scope of this study, there is a need for further studies to take place in order to better understand the extent of dietary acculturation among Sub-Saharan immigrants to inform policy and programme design for integrating immigrants into their new home. For instance, tailor-made nutrition education programmes could be developed to assist immigrants in making healthier food choices when dietary acculturation occurs. This study reveals that the quality of ethnic foods sold at the ethnic shops is questionable, and as alluded to above, the consequences could be detrimental for consumers and could place an enormous burden on the South African health system. Therefore, there is a need for further studies to take place, to investigate the microbial quality of food sold in the ethnic shops and restaurants to help better understand their contribution to the burden of food-borne diseases in the studied population.

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