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AN INVESTIGATION OF KNOWLEDGE AND PRACTICES ON FOOD SAFETY AMONGST STREET FOOD VENDORS IN THE DURBAN CENTRAL BUSINESS DISTRICT, SOUTH AFRICA

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Abstract: To safeguard human health food safety is indispensable. Food safety oversight, which is widespread in expanding informal food sector, causes concern. Hence, the overall objective of this study was to "investigate the level of knowledge and practices on food safety amongst street food vendors in the Durban Central Business District, South Africa". The investigation was conducted using a descriptive cross-sectional study design, with non-probability convenience sampling utilised to recruit respondents. Three hundred and sixty (360) street food vendors who were selling vendor-cooked foods constituted the research population. The data was collected using a structured questionnaire that was administered by an interviewer. The questionnaire was adapted from similar studies conducted previously. The gathered data was analysed using Statistical Package for Social Sciences version 29 software. In South Africa, hot foods must have a core temperature of ≥+60ºC while in storage, in transit, or exhibition for sale. Only 23.9% (86) of respondents knew this. Likewise, chilled foods must have a core temperature of ≤+5ºC while in storage, in transit, or shown for sale. However, only 14.7% (53) of respondents knew this requirement. In reference to water safety, only 42.2% (152) of respondents were aware that water which is safe for use cannot be identified by its appearance. Approximately 14.7% (53) of respondents agreed that alteration in appearance, scent, and flavour does not always have to occur in food that has been contaminated. Concerning practices, only 8.9% (32) of respondents washed their hands with soap and running water. Approximately 51.5% (185) of respondents do not engage in handling food whilst handling cash. A minority of respondents (11.1%, 40) used warmers to keep cooked food. Regarding water safety, distinctive attributes of contaminated food, and storage temperatures street food vendors still lack essential knowledge. It is therefore necessary that street food vendors receive training.

Keywords: street food vendors, food safety, informal food sector, food safety practices

1. Introduction

Food safety pertains to the procedures and requirements that must be followed throughout the manufacturing, processing, preparation, distribution, and storage of food in order to guarantee that it is hygienic, safe, and fit for human consumption (Food and Agriculture Organisation, 2023). To safeguard human health food safety is crucial. Due to poor food safety, a rise in foodborne-related diseases has been reported over the years, and this rise has adversely affected the health of many developed and developing countries (Admasu and Kelbessa, 2018). Grace (2015) adds that the rise is more pronounced in least developed nations due to the increasing evidence of food safety oversight. People get sick with foodborne diseases when they eat food that is contaminated with microorganisms, and transmission of microorganisms is often through unhygienic practices during handling, preparation, and storage (Oladoyinbo, Akinbule and Awosika, 2015). It is reported that globally, one in ten individuals become

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sick following the eating of unsafe food (Bisholo, Ghuman and Haffejee, 2018). Furthermore, foodborne diseases are said to be the cause of 420 000 annual deaths (Huynh-Van *et al*., 2022). It is estimated that 92 million people in Africa get sick from eating contaminated food, and that 137 000 of them die each year as a result (Bisholo, Ghuman and Haffejee, 2018). According to Grace (2015), food safety oversight mentioned above has been more common within the rapidly growing informal food sector. In South Africa, for example, the street food sector is expanding rapidly in magnitude and proportion (Kok and Balkaran, 2014). Despite the concerns raised regarding microbial and chemical safety of street food, and the fact that selling of food on the streets was outlawed in many countries, the sector expanded rapidly in the past few decades and continues to do so as a consequence of prevailing socio-economic challenges in many developing countries, including South Africa (Loukieh *et al*., 2018). It is estimated that in South Africa there are one million street vendors, and more than 70 % of them are engaged in street food trading (Mahopo *et al*., 2022). This makes it evident that the sale of street food is a significant part of South Africa's unorganized economy.

Notwithstanding the benefits of street food businesses which include generating income and allowing traders to support themselves, there have also been reports of health risks associated with street food. According to Salamandane *et al*. (2021), evidence suggests that food sold on the streets and in other unsuitable locations may be contaminated by spoilage or microbes that cause sickness. Evidently, epidemiological research has connected diseases to meals sold on the streets (Aluko *et al*., 2014). Lack of adequate food safety knowledge and poor food safety practices among street food vendors have been linked to the foodborne illnesses that their patrons' contract. This indicates that the prevention of foodborne illnesses is mostly dependent on food handlers having the necessary knowledge and following proper food safety procedures. This is the reason this study investigated the degree of knowledge and practices on food safety amongst street food vendors in the Durban Central Business District (CBD).

2. Materials and Methods

2.1 Study Design and Study Setting

The study employed a descriptive cross-sectional design using a quantitative approach. Durban Central Business District was the study setting. Durban is in the Province of KwaZulu-Natal (KZN) on the east coast of South Africa (EThekwini Municipality, 2025). After Cape Town and Johannesburg, Durban is the third-largest city in South Africa, and it has an estimated population size of 3 987 648 million people (EThekwini Municipality, 2025). Durban is separated into four spatial regions (North, South, Central, and Outer West). The central spatial region is where the study setting is located. This is the region where economic activity is largely taking place with street food vending highly common.

2.2 Study Population and Sampling Strategy

Male and female street food vendors who were selling cooked food prepared by them in the central business district of Durban constituted the study population. Among these street food vendors were individuals who were preparing and selling in containers, caravans, trailers, improvised structures, and stalls. Vendors who did not sell cooked food and those who were not 18 years and above were excluded from participating in the study. According to eThekwini Municipality Health Unit data base there were approximately 1150 vendors who were engaging in street food trading in Duban CBD. A non-probability convenience sampling was utilised to recruit participants. The Centers for Disease Control and

Prevention's EPI INFO version 7.2.5.0 was used to calculate an appropriate sample size. The appropriate sample size was therefore calculated to be 360 with the inclusion of 25% (72) contingency.

2.3 Data Collection and Data Analysis

The data was collected using a structured questionnaire that was administered by an interviewer. The questionnaire was adapted from similar studies conducted previously (Azanza, Gatchalian and Ortega, 2000; Jevšnik, Hlebec and Raspor, 2008; Omemu and Aderoju, 2008; Chukuezi, 2010; Muyanja *et al*., 2011; Campbell, 2011; Okojie and Isah, 2014; Marutha, 2019; Hossen *et al*., 2020; Netshiomvani, 2021), and verified by the statistician at University of Johannesburg. To ensure validity, the questionnaire was first tested on 18 street food vendors. This translated to 5% of the calculated sample size. The data collection instrument gathered data on demographic factors, and food safety knowledge and practices of street food vendors. During business hours, respondents were visited at their trading locations to request permission to interview them. The respondents were subsequently provided with an informative letter regarding the study. Prior to gathering the data, informed consent from the respondents was sought. Data gathering was conducted by three research assistants who had undergone a training in interviewing skills. It took about thirty minutes to complete interviewing each respondent at the vending site. The study's data was collected over a period of three months. During data collection, a 100% response rate was achieved.

Upon completing the administration of the 360 questionnaires, the data from the collection instrument was directly input into Statistical Package for Social Sciences (SPSS) version 29 software for descriptive analysis. Data cleaning was done prior to data analysis. It included conducting frequency analysis on every data collection instrument variable to look for errors and strange figures. The demographic data was then subjected to a descriptive analysis with an emphasis on frequency distributions. The table was then used to present the results. To measure the degree of food safety knowledge possessed by the participants, frequency distributions were done. A frequency distribution table was then used to present the results. Similarly, to assess respondents' food safety practices, frequency distributions were conducted. A frequency distribution table and bar chart were used to present the results.

2.4 Ethical Considerations

The study proposal was submitted for review, approval, and ethical clearance to the University of Johannesburg's Department of Environment Health Research Committee, Faculty Higher Degrees and Research Ethics Committees. The study was approved by the Higher Degrees Committee (MPH HDC-01-10-2023) and received ethical clearance (REC-2041-2023) from the Research Ethics Committee. Additionally, the study received a letter of support from eThekwini Municipality.

3. Results and Discussion

3.1 Demographics

Respondents' demographic information is presented on Table 1. It was noted that women (68.6%, 247) made up the bulk of the street food vendors who participated in the study, while men made up just 31.4% (113). This finding is not uncommon, as it was also recorded in the following similar studies (Mahopo et al., 2022; Ma et al., 2019; Werkneh et al., 2023). In a study conducted by Mahopo et al.

(2022), for example, the females' who participated constituted 90.2%. The large proportion of women respondents in this survey may be because selling of food in the streets is a popular business for women than for men overall. Street vending normally produces more employment for females than for males, and females usually sell food while operating a street vending business (Women in Informal Employment Globalizing and Organizing, 2024). Looking at age distribution, respondents below the age of 32 years dominated the study as they constituted more than 50% (180). Respondents between the ages of 40 and 57 years accounted for just 14% (50). A similar finding was also observed in a study conducted by Werkneh et al. (2023) where street food vendors in the age range of 21 to 30 years were more than half of the study participants. Similarly, a study conducted by Azanaw et al. (2022) was dominated (60.8 %) by participants between the ages of 21 to 30 years. A youth dominance in this study may be attributed to limited employment opportunities within the formal sector of the economy.

A sizeable number of respondents (70.5%, 253) in this survey possessed secondary education. Similarly, a study conducted by Tuglo et al. (2021) revealed that most participants had secondary education. On the contrary, the possession of primary education by many participants in this study (Meher et al., 2022) was observed. In this study only 8.6% (31) of respondents had primary education but, in a study, conducted by Tuglo et al. (2021) a higher percentage of participants with a primary education was discovered. The results in this study reflect a higher literacy level amongst the study's participants, compared to the above studies.

Table 1: Demographic characteristics of street food vendors

Variables	n (%)
Age	
≤32 years	180 (50)
19 – 40 years	309 (86)
40 – 57 years	50 (14)
Gender	
Male	113 (31.4)
Female	247 (68.6)
Ethnicity	
Black	351 (97.5)
Coloured	5 (1.4)
Indian/Asian	4 (1.1)
Nationality	
South African	343 (95.3)
Swati	3 (0.8)
Zimbabwean	6 (1.7)
Mozambican	7 (1.9)
Other	1 (0.3)
Education	
Primary	31 (8.6)
Secondary	253 (70.5)
Tertiary	63 (17.5)
No Education	12 (3.3)

Registered with the municipality as a street food vendor	
Yes	230 (63.9)
No	130 (36.1)
Inspected by health inspectors from the municipality	
Yes	254 (70.6)
No	106 (29.4)

3.2 Street food vendors' food safety knowledge

Food safety knowledge by vendors is a fundamental factor in assuring the safety of street food (Huynh-Van et al., 2022). Table 2 illustrates the findings of street food vendors food safety knowledge. It indicates that most respondents (98.6%, 355) understood that consumers will be benefitted by street vendor food safety knowledge possession. Similar studies conducted by Marutha (2019) and Netshiomvani (2021) also reported that the majority of street food vendors in their studies knew that food safety training, which is the source of food safety knowledge, was necessary. A food handler that practices proper personal hygiene can protect food from the dangers of contamination. For example, a food handler that washes hands properly after using toilet can avert possibly food contamination. According to the study's findings, 99.4% (358) of the respondents understood that proper personal hygiene plays a crucial role in ensuring that food does not get contaminated. Additionally, approximately all the study respondents (98.6%, 355) agreed that one needed to wash hands all the time with safe running water and soap regardless of whether the hands appeared clean as that might minimise the risk of food contamination. This study is in conformity with the previous study conducted by Netshiomvani (2021), where 99.25% (132) of the participants reported to know that washing of hands during continuous food handling is necessary even when hands are not visibly dirty.

The following was identified in this study with reference to the cooking of food at the properly operated temperatures. Over two-thirds (67.8%, 244) of the respondents understood that to destroy almost all the pathogens food needed to be adequately cooked at a temperature of 70ºC. Similarly, in a study conducted by Azanaw et al. (2022), a majority of participants (77.7%, 307) knew that inadequate cooking of food like meat, chicken, and vegetables can cause the outbreak of foodborne diseases. Additionally, a study by Ezenwoko et al. (2017) showed a similar trend, as 88.2% (232) of participants knew that food should be cooked thoroughly. The fact that one-third of this study's respondents were unaware that food should be adequately cooked at a correct temperature of 70ºC is concerning. This might put the health of their unsuspecting customers at risk. Undercooked meat, for instance, has been reported to transmit disease-causing microorganisms such as E. coli, Salmonella serotypes, and Campylobacter jejuni from animals to humans (Al-Mohaithef et al., 2021). However, thoroughly cooking food at an appropriate temperature of 70ºC or more has been reported to be effective in killing virtually all the harmful microorganisms that may be present in the food (World Health Organization, 2006; Akuu, Danyi and Dapaah, 2017). The one-third of respondents who did not know that food should be adequately cooked at a correct temperature of 70ºC, their lack of knowledge could be ascribed to lack of food safety training.

Heated food intended for sale should never be stored at ambient temperatures. However, in this study merely 51.9% (187) were aware of that. This study's majority is lower than the vast majority of participants (82.6%, 336) in a study conducted by Tuglo et al. (2021) that knew that cooked food should stay hot at a temperature above 60ºC before serving. This study's finding which reflect that just over half of the participants who knew food sold hot cannot be stored at ambient temperatures raises concerns, because storing heated food at ambient temperatures favours the growth and multiplication of pathogens in the food (Kwiri et al., 2014). This suggests that almost half (48%, 173) of this study's respondents are uninformed that heated food intended for sale should never be stored at ambient temperatures. This requires intervention from the relevant health authorities.

While in storage, in transit, or shown for sale, hot foods in South Africa must have a core temperature of ≥+60ºC. Only 23.9% (86) of respondents knew this. Likewise, while in storage, in transit, or shown for sale, chilled foods in South Africa must have a core temperature of ≤+5ºC. However, only 14.7% (53) of respondents were aware of this legal requirement. These troubling results demonstrate that a considerable number of street food vendors in this study did not know the nation's legally mandated temperatures for both chilled and hot foods. This reported lack of knowledge about core temperatures could be attributed to a lack of training on, "R638 of 2018- Regulations governing general hygiene requirements for food premises, the transport of food and related matters in South Africa", which prescribes legally mandated temperatures. It is thus imperative that street food vendors are trained about these South African regulations with emphasis put on core temperatures.

In reference to water safety, only 42.2% (152) of respondents who agreed that water which is safe for use cannot be identified by its appearance. Similarly, in a previous study conducted by Campbell (2011), a minority of participants knew that safe water cannot be seen by how it looks. The results of this study are concerning because they illustrate that most respondents were unaware of the requirements for safe water. The respondents might be using appearance to deem water to be safe for use, which is wrong. Despite the water's apparent clarity or cleanliness, it may be biochemically contaminated. According to the World Health Organization (2006), more than 2.5 billion bacteria are needed to turn 250 millilitres of water murky, however, in certain instances, as few as 15-20 disease-causing bacteria are enough to make a person ill. Using only appearance to deem water to be safe is risky because a biochemically contaminated water may end-up used for cleaning and cooking purposes. To respond to this, street food vendors should be trained on water quality monitoring.

Surprisingly, approximately 14.7% (53) of respondents agreed that alteration in appearance, scent, and flavour does not always have to occur in food that has been contaminated. This outcome shows that most respondents mistakenly believe that alteration in appearance, scent, and flavour should always occur in food that has been contaminated, which is not always the case. Food, when contaminated, does not always have to show the above characteristics (change in colour, smell, and taste), and a test for food contamination cannot be done through smelling, tasting, and visual checking (Tuglo et al., 2021). Given that a sizeable number of respondents in this study believed that contaminated food should always show a change in appearance, scent, and flavour, it is possible that these respondents might be unwittingly selling contaminated food to customers.

Table 2: Street food vendors food safety knowledge

Food safety knowledge variables	No n (%)	Yes n (%)	I don't know n (%)
Customers will be benefitted by street vendor food safety knowledge	0 (0)	355 (98.6)	5 (1.4)
In your street food trading business handling of food safely is important	0 (0)	358 (99.4)	2 (0.6)
Proper personal hygiene plays a crucial role in ensuring that food does not get contaminated	2 (0.6)	358 (99.4)	0 (0)
It is more crucial to sell safe food than delicious food	13 (3.6)	331 (91.9)	16 (4.4)
Food contamination can be caused by sick food handler or food handler with wounded hands	2 (0.6)	356 (98.9)	2 (0.6)
Possibility of food contamination can be minimised by wearing personal protective equipment	3 (0.8)	351 (97.5)	6 (1.7)
To destroy almost all the pathogens, food need to be adequately cooked at a temperature of 70ºC	8 (2.2)	244 (67.8)	108 (30)
Cooked and uncooked foods should not be mixed when in storage so that the risk of food contamination can be minimised	4 (1.1)	341 (94.7)	15 (4.2)
One need to wash hands all the time with safe running water and soap regardless of whether the hands appeared clean as that might minimise the risk of food contamination	1 (0.3)	355 (98.6)	4 (1.1)
The risk of food contamination is lessened when food handling utensils are cleaned and handled properly	5 (1.4)	352 (97.8)	3 (0.8)
The risk of food contamination can be minimised by using heated water to wash utensils	4 (1.1)	294 (81.7)	62 (17.2)
Alteration in appearance, scent, and flavour must always occur in food that has been contaminated	53 (14.7)	302 (83.9)	5 (1.4)
Verifying the best before and expiration dates of food products is vital	0 (0)	360 (100)	0 (0)
A customer who eats contaminated food may acquire a foodborne illness	0 (0)	359 (99.7)	1 (0.3)
Street food traders are unable to handle food in a safe manner while handling cash	25 (6.9)	325 (90.3)	10 (2.8)
Frequently replacing the water you used to wash the utensils is crucial	4 (1.1)	354 (98.6)	1 (0.3)
Heated food intended for sale may be stored at ambient temperatures	187 (51.9)	111 (30.8)	62 (17.2)

Each street food vendor should have heating equipment so they can keep hot foods	5 (1.4)	342 (95)	13 (3.6)
To preserve food items that need to be chilled, it is crucial that all street food vendors have chilling equipment	3 (0.8)	339 (94.2)	18 (5.0)
While in storage, in transit, or shown for sale, hot foods in South Africa must have a core temperature of ≥+60ºC	9 (2.5)	86 (23.9)	265 (73.6)
While in storage, in transit, or shown for sale, chilled foods in South Africa must have a core temperature of ≤+5ºC	12 (3.3)	53 (14.7)	295 (81.9)
Water which is safe for use can be identified by its appearance	152 (42.2)	178 (49.4)	30 (8.3)
If not maintained clean, wiping cloths can contaminate preparation surfaces and utensils	11 (3.1)	346 (96.1)	3 (0.8)
As long as it appears clean, you can utilise the same cutting board for both raw and cooked food	266 (73.9)	84 (23.3)	10 (2.8)
To constantly check food's temperature, it is crucial that each street food vendor owns a thermometer	38 (10.6)	183 (51)	138 (38.4)

3.3 Food safety practices of street food vendors

Results of food safety practices are shown in Table 3 and Figure 1. As shown in the Table, a considerable number of respondents (98.4%, 354) stated that after using the toilet they always wash their hands, while only 1.6% (6) of respondents indicated that they occasionally perform handwashing. Similarly, in a study conducted by Sun, Wang and Huang (2012), a huge number of participants (93.2%, 110) indicated washing their hands after using toilets. Furthermore, in a study conducted by Meher et al. (2022), a majority of participants (70.68%, 188) reported washing their hands with soap after using the toilet. The reported results in this study are heartening because they demonstrate that the study's respondents are practicing good hand-hygiene which is necessary to prevent food contamination. Food-related morbidity and mortality could be reduced substantially when hands are washed properly (Akuu, Danyi and Dapaah, 2017).

Notwithstanding the above results, the fact that most respondents (85.8%, 309) stated that they wash their hands with soap and water in a vessel is concerning, and merely 8.9% (32) of respondents that said they washed their hands with soap and running water. The correct technique for handwashing by personnel handling ready-to-eat food is using running water and soap, thereafter, drying the hands (Sun, Wang and Huang, 2012). The inappropriate handwashing practice followed by the large number of respondents in this study could be due to inadequate access to water and sanitation facilities at the trading locations. According to Khuluse and Deen (2020), street food vendors often operate in places that lack basic infrastructure. As a result of limited access to basic infrastructure for water, for example, street food vendors would continuously use the small amount of water they had collected and not replace it. The vendors may be washing their hands in a receptacle for this reason. The incorrect practice of washing hands with soap and water in a container may also be influenced by a lack of training on proper

hand washing techniques. Training on food hygiene is essential amongst food-handlers (Has, Jaafar and Chilek, 2018).

It is not recommended for food-handlers to handle money and food at the same time. In this study 51.5% (185) of respondents stated that they did not handle money and food at the same time. This is despite the fact that in the very same study a high number of respondents (90.3%, 325) had reported to know that one cannot safely handle food and money simultaneously. The remaining respondents (48.5%, 174) reported handling food and money either regularly or occasionally. These findings prove that possession of food safety knowledge does not always translate to acceptable food safety practices. As explained by Has, Jaafar and Chilek (2018), training, which is usually the source of knowledge, does not guarantee change in the practices of food-handlers.

Table 3: Street food vendors' food safety practices

Food safety practice variables	Category	n (%)
After using the toilet do you wash your hands	Yes	354 (98.4)
	Sometimes	6 (1.6)
After washing your hands, do you dry them	No	19 (5.3)
	Yes	285 (79.2)
	Sometimes	56 (15.6)
Do you dress-up in a personal protective equipment whenever you are handling food	No	7 (1.9)
	Yes	318 (88.3)
	Sometimes	35 (9.7)
Do you handle food and money simultaneously	No	185 (51.5)
	Yes	37 (10.3)
	Sometimes	137 (38.2)
When you have a diarrhoeal illness, do you handle food at this vending location	No	313 (86.9)
	Yes	20 (5.6)
	Sometimes	27 (7.5)
When handling food, do you rub your hands on the nose, arms, face, and hair	No	224 (62.2)
	Yes	26 (7.2)
	Sometimes	110 (30.6)

When handling food do you wear jewellery and keep your nails trimmed	No	11 (3.1)
	Yes	330 (91.7)
	Sometimes	19 (5.3)
After chopping raw meat, poultry, or other foods, do you clean the knife and cutting board	No	1 (0.3)
	Yes	357 (99.2)
	Sometimes	2 (0.6)
Do you wash your utensils with detergent	Yes	354 (98.3)
	Sometimes	6 (1.7)
Do you keep cooked and raw food in separate storage	No	2 (0.6)
	Yes	353 (98.1)
	Sometimes	5 (1.4)
Do you hand-wash all the time before touching food	Yes	355 (98.6)
	Sometimes	5 (1.4)
What do you wash your hands with	Soap and running water	32 (8.9)
	With only running water	9 (2.5)
	Water in a receptacle	10 (2.78)
	Water in a container and soap	309 (85.8)
Do you repeatedly wash your utensils in the same water	No	307 (85.3)
	Yes	28 (7.8)
	Sometimes	25 (6.9)

As reflected in Figure 1, during business hours a bulk of respondents (70%, 252) stated that they keep cooked food in pots at room temperature. Another 18.9% (68) street food vendors said they kept their cooked food in receptacles at room temperature. Merely, 11.1% (40) of respondents indicated to be using warmers to keep food. The findings of this study are similar to a study conducted by Netshiomvani (2021), where a majority of respondents (73.7%, 98) pointed out to storing prepared food during business hours in pots, containers and bowls. The results of this study are concerning because they show that most participants keep their hot food at dangerous temperatures below 60°C which favour the growth and multiplication of microorganisms. Storage of food intended for human consumption at inappropriate temperatures can cause foodborne illnesses (Al-Mohaithef et al., 2021). Foodborne pathogens such as E-coli, Salmonella Enteritidis, and Campylobacter thrive under inappropriate storage temperatures (Al-Mohaithef et al., 2021). To hinder the growth of some of these microorganisms, it is essential to continuously maintain the appropriate storage temperatures for hot food.

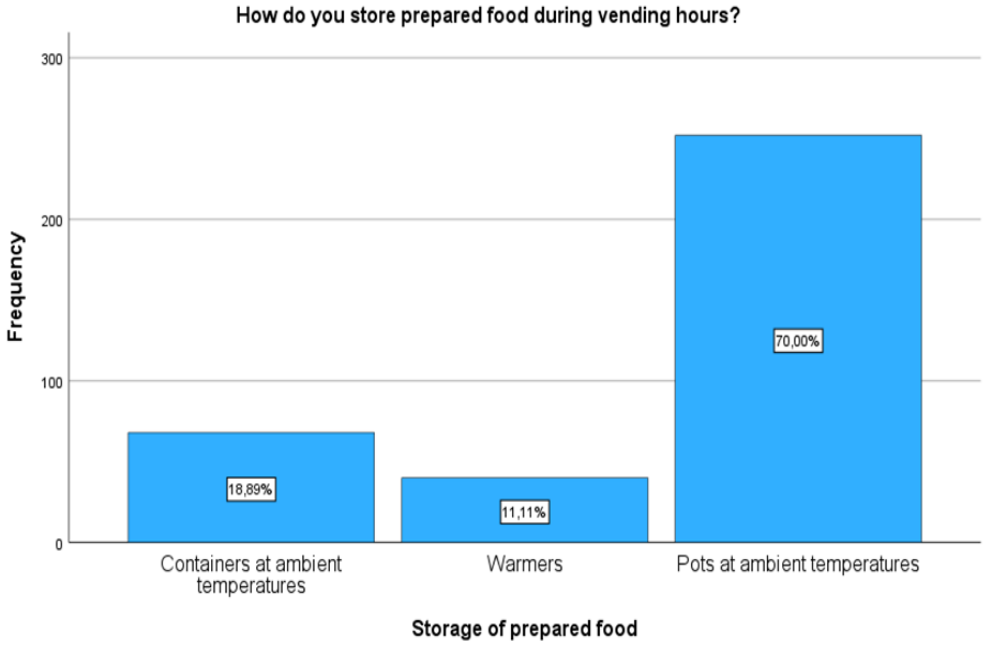

Figure 1: How food is stored during business hours

4. Conclusion

The bulk of street food vendors who participated in this study were women. The study was also dominated by youths. Most respondents in the study have acquired secondary education. Concerning the respondents' knowledge of food safety, the findings indicated that most of them had good knowledge of food safety. Nonetheless, there were still some problematic areas that need attention. These include, among other variables, water quality, storage and cooking temperatures, and signs of food that has been contaminated. In reference to temperatures, a vast majority of respondents were unaware of the South Africa's regulated minimum core temperatures for chilled and hot foods that are in storage, in transit, or shown for sale. Therefore, it is advised that the street food vendors receive training on "R638 of 2018- Regulations governing general hygiene requirements for food premises, the transport of food and related matters in South Africa" which prescribes core temperatures.

When it came to food safety practices, the findings showed that most survey respondents followed safe procedures when handling food at their vending locations. Nevertheless, there were still some concerning practices that need intervention. These include handling cash while handling food, improperly storing food that has been prepared, and using improper handwashing methods. To address food safety knowledge concerns and undesirable food safety practices the eThekwini municipality should implement food safety awareness campaigns among other things. Street food vendors should undergo an intensive food safety training programme before permitted to operate. Relevant health authorities should conduct frequent food safety inspections to all street food vendors vending sites. A street food safety programme which promotes public health should be developed and implemented by eThekwini Municipality. Because in this survey an observation of street food vendors food safety practices was not done, it is recommended that to be carried out in future similar investigations. The future similar studies should also assess street food vendors level of knowledge regarding microorganisms associated with foodborne infections. Additionally, biochemical safety of food sold on the streets should be investigated in future similar research.

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Declaration of Interest Statement

The authors declare that they have no conflict of interests.

Author Disclosure

This article includes content that overlaps with research originally conducted as part of Jongikhaya Mbambe's master's thesis titled "an investigation of knowledge and practices on food safety amongst street food vendors in the Durban central business district, South Africa", submitted to the Department of Environmental Health, University of Johannesburg in 2024. The thesis was supervised by Tshegofatso Nhabe and Charlotte Mokoatle. Portions of the data, analysis, and/or discussion have been revised, updated, and adapted for conference publication. The original thesis is publicly available at: https://hdl.handle.net/10210/511939. The author affirms that this submission complies with ethical standards for secondary publication, and appropriate acknowledgement has been made of the original work.

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