

Hygienic Practices of Street Food Vendors in Zimbabwe: A Case of Harare

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Abstract: *This paper seeks to uncover hygienic practices of street food vendors in Harare, Zimbabwe. Questionnaires comprising of structured and unstructured questions were used for gathering data. Purposive sampling was used to select the sample size. Data was analyzed using simple graphs and pie charts. Amongst other findings, the study revealed that most street food vendors in Harare have not received any formal training in food preparation and handling and that the street food vending business is women dominated. Amongst other recommendations, we advise the government of Zimbabwe to provide low cost training to street food vendors in order to help them exercise standard food preparation and handling practices.*

Key Words: Food Handling, Food Preparation, Health, Hygiene, Street Food, Street Food Vendors, Vending, Zimbabwe.

JEL Codes: H51, H75, I12, I18, P36, P46.

I. Introduction

The mushrooming of vendors in the streets of major cities in Zimbabwe will not come to an end anytime soon unless the government focuses on opportunity-based entrepreneurship. All these vendors are scattered all over the city centres, especially in Harare, the capital city; just because they want to survive: they are there because they have no option; there are no jobs (Nyoni, 2018). However, this mushrooming of street vendors is arguably a necessary evil because the street food industry plays an important role in developing countries in meeting food demands of urban dwellers (Chukuenzi, 2010). This food industry provides a significant amount of employment, mainly to those with little education and training (FAO, 1997; Muinde & Kuria, 2005). Street food feed millions of people daily with a wide variety of food that are relatively cheap and easily accessible (Latham, 1997). Most of the time, many people prefer consuming foods from vendors to preparing food at home (Rahman, 2012). High demand for cheap, ready-to-eat food on the street, high unemployment and relatively cheap to operate mostly using local technology have compelled many people predominantly women in developing countries into street food business (Campbell-Lendrum & Corvalan, 2007).

Street food vendors are generally uninformed of good food hygiene practices (Mensah *et al*, 2002; Tambekar *et al*, 2009). In some communities ready-to-eat food is served with bare hands, increasing the risk of food contamination (Danikuu *et al*, 2015). Customers of street foods are much more concerned about convenience than the safety, quality and hygienic status of the food they buy (Nicholas *et al*, 2007). Food vendors may contaminate food by poor personal hygiene, cross-contaminating raw and processed food, as well as inadequate cooking and improper storage of food (Monney *et al*, 2013). Concerns over persistent and deadly cholera outbreaks in Zimbabwe give rise to the urgent need for improved food safety measures, especially in terms of encouraging street food vendors to adopt more hygienic practices.

Street foods are ready-to-eat foods and beverages prepared and/or sold by vendors, especially on streets and other public places (Muleta & Ashenafi, 2001). Street food vendors operate from such places as bus terminals, industrial sites, market places, school compounds, or around the gates, road sides and other street corners where there are ready and numerous clienteles (Bryan, 1988; Almeida *et al*, 1996; Umoh & Udoba, 1999). A street food vendor is broadly defined as a person who offers foods for sale to the public without a permanent built up structure but with a temporary static structure or mobile stall – head load/wheel-barrow/truck (Janie & Marie, 2010). A total of 2.5 billion people all over the world eat street foods everyday (FAO, 2007). Sale and consumption of street food are on the increase and this will continue to grow (WHO, 2008). Unlimited and unregulated growth of street vended foods has placed a severe strain on city resources, such as water sewage systems, and interference with the city plans

through congestion and littering adversely affecting daily life (Canet & Ndiaye, 1996). Therefore, these conditions of street food preparation and vending raise many concerns for consumers' health (Mosupye & von Holy, 1999). Lots of efforts have been made by health ministries of developing countries in the field of food safety and hygiene education amongst street vendors (Apanga *et al*, 2014). Although these efforts have led to an increase in awareness and knowledge levels of food safety and hygiene practices, this knowledge is however not always translated into actual practice (Subratty *et al*, 2004; Omemu & Aderoju, 2008).

1.1 Statement of the Problem

In spite of numerous advantages offered by street foods, there are also several hazards associated with this sector of the economy (Chukuenzi, 2010). Multiple lines of evidence reveal that foods exposed for sale on the roadsides may become contaminated either by spoilage or pathogenic micro-organisms (WHO, 1984; Bryan *et al*, 1992; Ashenafi, 1995; Mensah, 2002; Omemu & Aderoju, 2008). Food handlers play an important role in food safety and in the occurrence of food poisoning because they may introduce pathogens into food during preparation (Lindquist *et al*, 2000). There has been a marked morbidity of consumers of street foods and street food vendors are thought to be the source if not the cause of increase in food borne diseases outbreaks (Falkenstein, 2010). In fact, street vended foods have shown epidemiological links with illness (Saddik *et al*, 1985; Abdussan & Kafertein, 1993). In developing countries, up to an estimated 70% of cases of diarrheal diseases are associated with consumption of unwholesome food (Zeru & Kumie, 2007; Annor & Barden, 2011; Mukhopadhyay *et al*, 2012). Street foods raise concern with respect to their potential for serious food poisoning outbreaks (FAO, 1997). Food poisoning affects hundreds of thousands of people each year and cause deaths (Lindquist *et al*, 2000). Cholera outbreak has been an annual affair in Zimbabwe¹, especially in Harare and activities of street food vendors have an important role to play since the situation is enhanced by contamination of food with the pathogen which is of faecal origin. Mensah *et al* (2002) reiterates that the spread of faeco-oral pathogens in a community has been linked to the personal hygiene and sanitation in the community.

1.2 Objectives

- i. To analyze vendors' adherence to hygienic practices and sanitary conditions.
- ii. To assess personal and environmental hygienic practices amongst street food vendors in Harare.
- iii. To determine the protective clothes used by street food vendors in Harare.
- iv. To investigate the main characteristics of street food vendors in Harare.

II. Literature Review

Abdalla *et al* (2009) looked at food safety knowledge and practices of street food vendors in Atbana city in Sudan and generally found out that: street food vending is women dominated (72%) and that 48% of street food vendors had primary school education while 42% were illiterates. Chukuenzi (2010), in Nigeria; looked at food safety and hygienic practices of street food vendors in Owerri and basically found out that: street food vending was women dominated (66.7%); 23.8% of the vendors prepared food in unhygienic conditions, 42.86% did not use aprons while 61.9% handled money while serving food. Muyanja *et al* (2011) investigated practices, knowledge and risk factors of street food vendors in Uganda; their main findings indicate that street vending was women dominated (87.6%) and that these vendors had low education level.

Monney *et al* (2013) analyzed hygienic practices among food vendors in educational institutions in Ghana and basically discovered that: all vendors (100%) served food properly, 63% had good hygiene while 52% of vendors used personal protective clothing. Apanga *et al* (2014) studied food safety knowledge and practice of street food vendors in rural Northern Ghana and found out that: knowledge level amongst vendors concerning food safety practices was 100%; although 96% of vendors washed their hands after some major activities, about 13% of them did not use soap while 71% of the vendors had undergone medical screening despite a high knowledge level (100%) of its importance. In Cameroon, Blaise (2014) carried out an assessment of hygienic practices and health status of street food vendors in Yaounde and basically found out that personal hygiene of street food vendors was low. Muhonja & Kimathi (2014) carried out an assessment of hygienic and food handling practices among street food vendors in Nakuru town in Kenya and basically found out that 83% of the vendors had a clean workplace, 54% of the vendors handled money and food indiscriminately, 44% had dust bins while 73% of the vendors seldom had their hair covered.

¹ Harare is experiencing a Cholera outbreak since Wednesday, 5 September 2018. The outbreak started in Glenview and Budiriro. It is spreading to other suburbs as a result of movement of people (City of Harare, 2018).

Danikuu (2015), in Ghana, studied the hygienic practices among street food vendors in Tamale Metropolis and found out that: street food business in Tamale Metropolis was women dominated, majority of vendors were aged 20 – 39 years, public toilets (pit latrines) were accessible to all vending sites and that there was low participation in medical examination amongst other findings. Afolaranmi *et al* (2015) looked at knowledge and practice of food safety and hygiene among food vendors in primary schools in Jos, Plateau State, North Central Nigeria, and generally discovered that: 60.9% of street food vendors had good knowledge of food safety. Pokhrel & Sharma (2016), in India, studied food safety knowledge and practices among the street food vendors of urban and semi urban areas of Guwahati and basically found out that: 82% of the vendors had garbage bins, 62% of the vendors use tap water, while 75% of the vendors did not cover the food items.

Aluh & Aluh (2017) analyzed knowledge, attitudes and practices of food hygiene among mobile food vendors in Nigerian rural settlement and discovered that: vending business was women dominated (94.1%), and that there was a strong evidence of association between knowledge of food hygiene and attitudes towards food hygiene. In Philippines, Alamo-Tonelada *et al* (2018) studied sanitary conditions of food vending sites and food handling practices of street food vendors and basically found out that: street food vending is women dominated (60%), 80% of vendors did not have any training in food safety while 50% of the street food vendors had attained secondary education.

III. Methodology

This study was conducted in Harare Central Business District (CBD), Market Square Omnibus Terminus, Copacabana Market, Charge Office Omnibus Terminus and 4th Street Bus Terminus where street food vendors are increasingly mushrooming. The research used the purposive sampling technique to select the sample size of 264 street food vendors. Questionnaires were used to collect data. Validity of the questionnaire was enhanced through a pilot study in which the clarity and appropriateness of the questions was cross-checked.

IV. Results

Characteristics of food vendors in Harare, Zimbabwe

Age

Figure 1: Age of Respondents

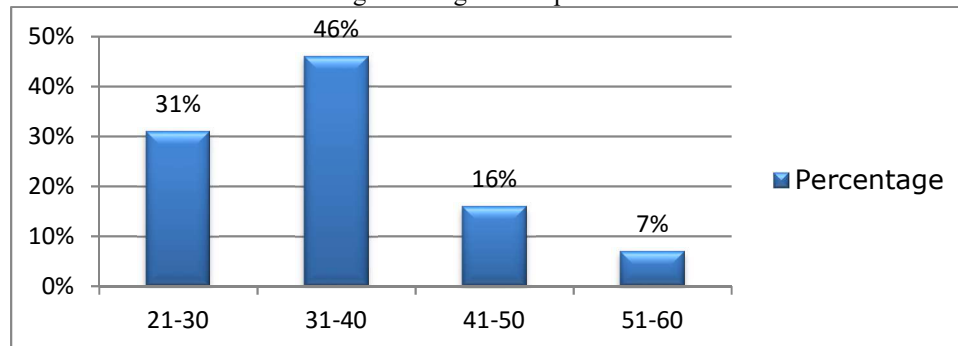
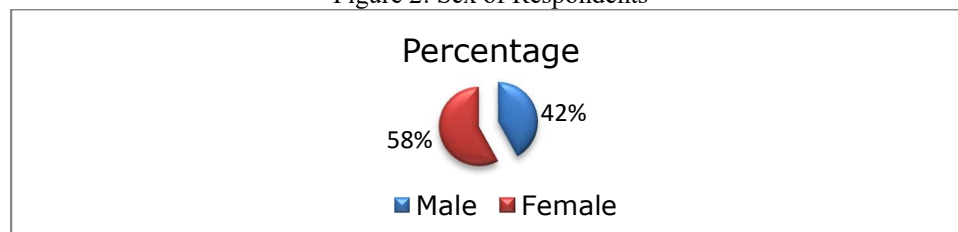


Figure 1 above clearly indicates that most respondents were young people aged 31-40. Only 7% of the respondents were aged between 51 – 60 years.

Sex

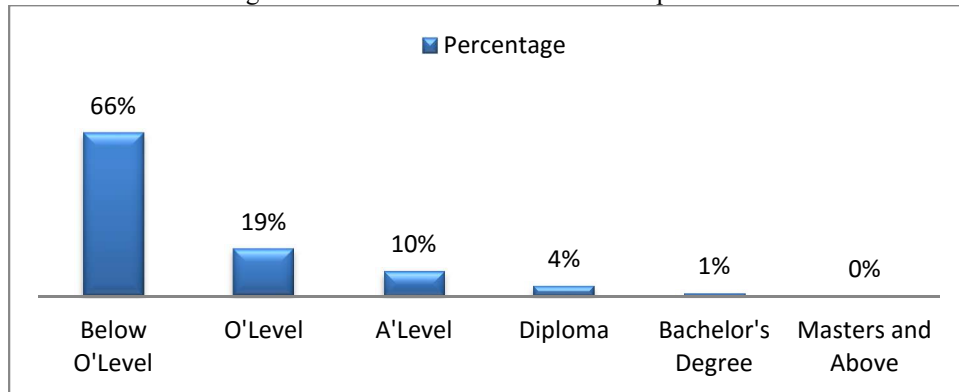
Figure 2: Sex of Respondents



Most of the respondents were female as shown in figure 2 above. This shows that the street food vending business in Harare is women dominated and this is consistent with many previous studies, for example; Abdalla *et al* (2009), Chukuenzi (2010), Muyanjanja *et al* (2011) and Danikuu (2015).

Educational Attainment

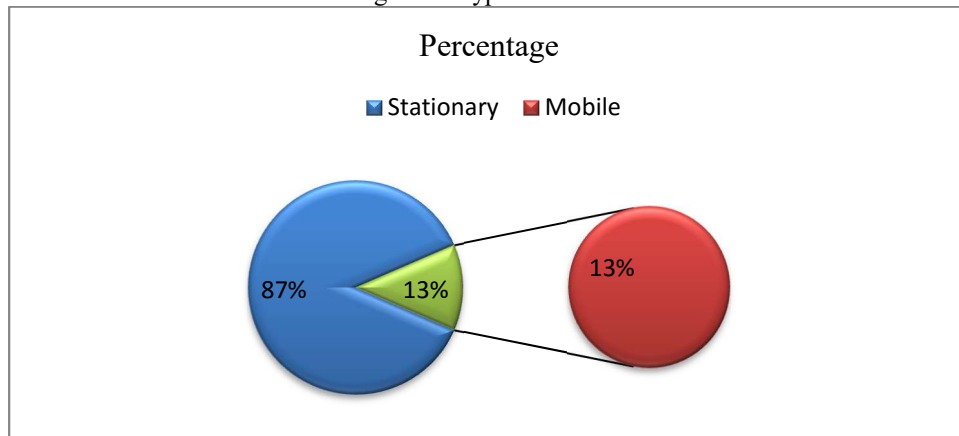
Figure 3: Educational Attainment of Respondents



Most (i.e 66%) street food vendors are not well educated as shown in figure 3 above. Only 1% of the respondents had a bachelor's degree while no respondent had any qualifications beyond that. These results are similar to the findings by Alamo-Tonelada *et al* (2018) who concluded that most street vendors belong to the socioeconomically disadvantaged group and may have lacked the opportunity to complete a higher education, probably due to social deprivation of poverty.

Type of vendor

Figure 4: Type of Vendor

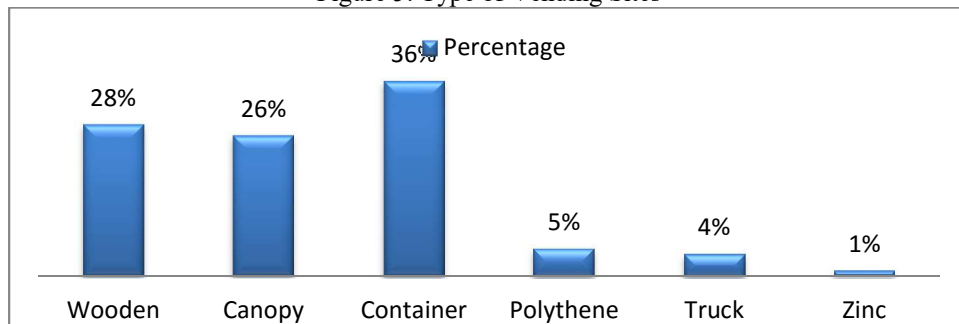


87% of the respondents were stationary street food vendors while only 13% of the respondents were mobile street food vendors.

Characteristics of vending sites

Type of vending sites

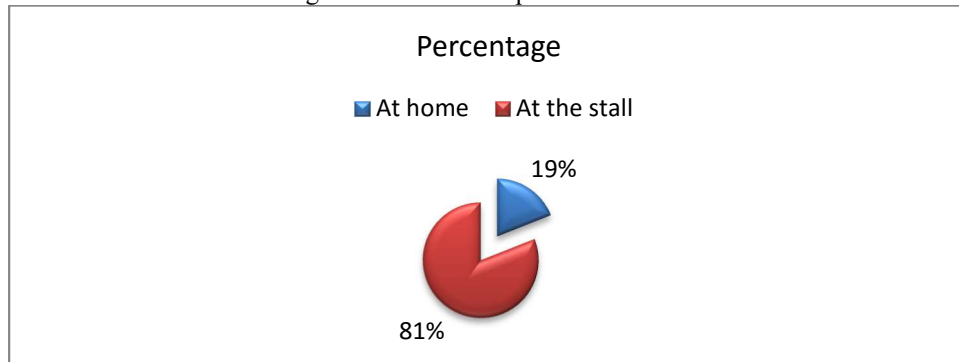
Figure 5: Type of Vending Sites



36% of the respondents use container as their vending site while only 1% make use of zinc.

Place of Preparation of Food

Figure 6: Place of Preparation of Food



Most of the respondents (81%) prepare food at their stalls while only 19% of the respondents confirmed that they prepared their food at home.

Food Vending Knowledge Acquisition

Figure 7: Food Vending Knowledge Acquisition

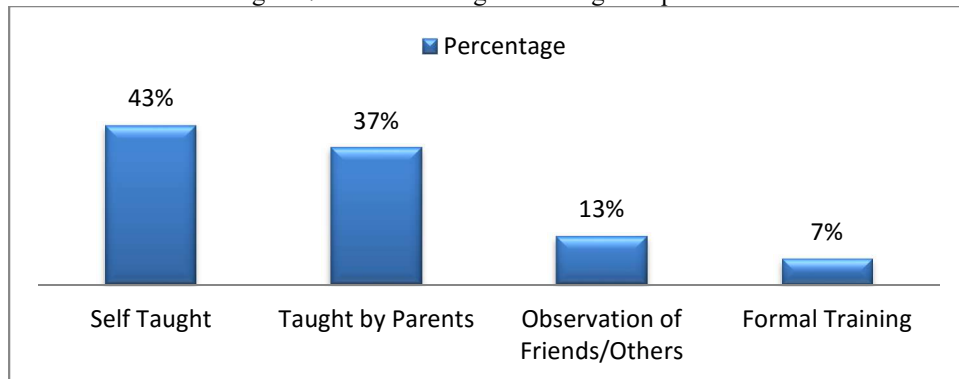
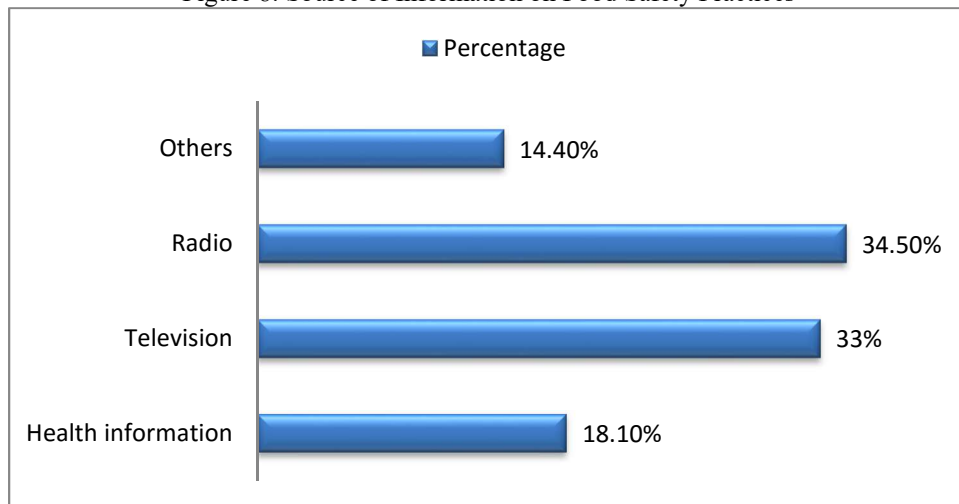


Figure 7 above indicates that most street food vendors are self-taught vendors. Only 7% of the street food vendors claimed to have received some formal training on food vending. Our results are consistent with Alamo-Tonelada *et al* (2018). These findings point to the fact that street food vendors in Harare are mainly concerned about the economic benefit derived from their business, the issues of health risk are treated as secondary issues.

Source of information on food safety practices

Figure 8: Source of Information on Food Safety Practices

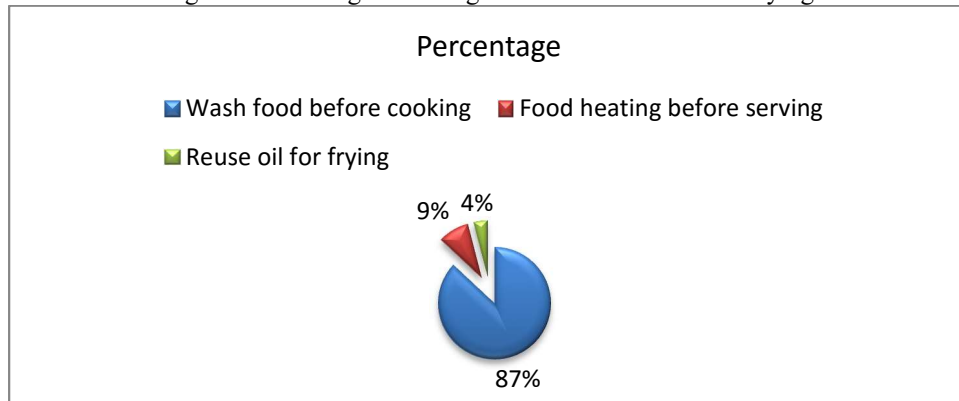


The most prevalent source of information (34.5%) on food safety practices is the radio. Most of the vendors easily access the radio through their cell phones.

Food handling practices

Washing & heating food and reuse oil for frying

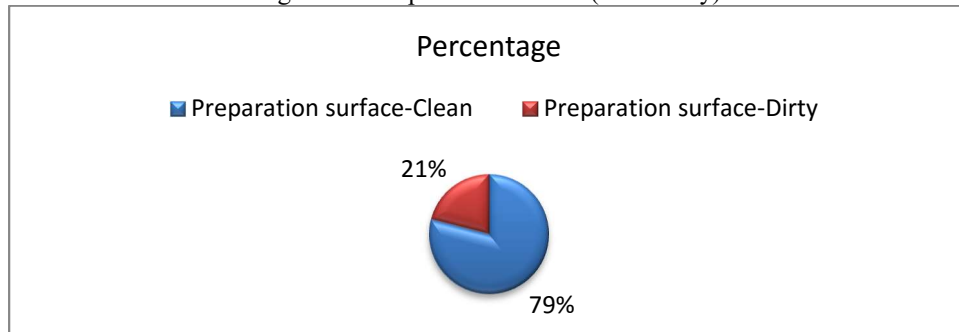
Figure 9: Washing & Heating Food and Reuse Oil for Frying



87% of the sampled street food vendors wash food before cooking, 9% of the street food vendors heat food before serving while 4% of the street food vendors reuse oil for frying. Reusing oil for cooking is a bad practice because it exposes consumers to a number of health related problems.

Preparation Surface (Clean / Dirty)

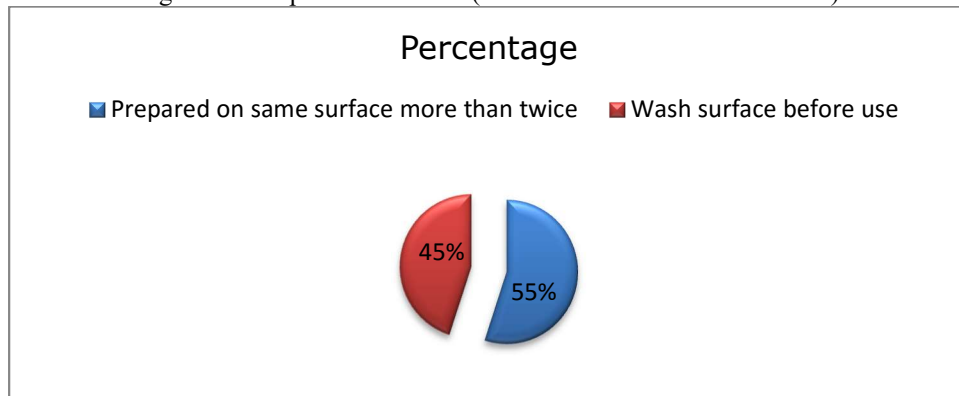
Figure 10: Preparation Surface (clean/dirty)



Most (79%) of the respondents prepared food on clean surface while 21% of the respondents claimed that they prepare food on dirty surfaces. Dirty surfaces expose both the vendors and consumers to health risks and such practices ought to be rectified.

Preparation surface (more than twice/ wash before use)

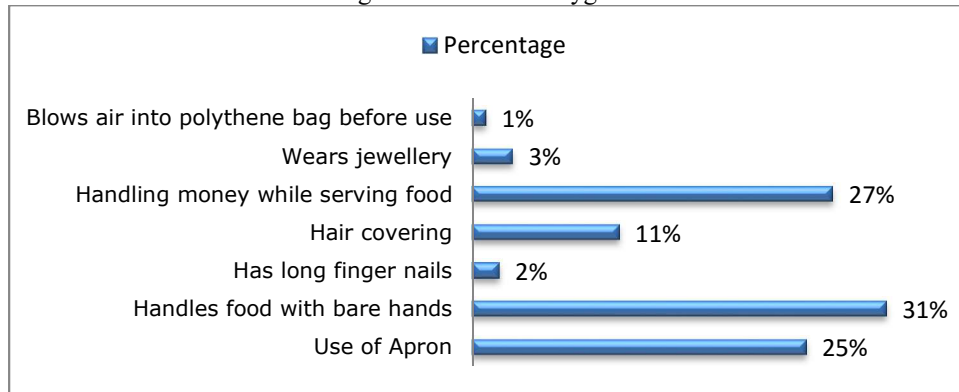
Figure 11: Preparation Surface (more than twice/wash before use)



55% of the street food vendors prepare food on same surface more than twice while 45% of the street food vendors wash surface before use.

Personal Hygiene

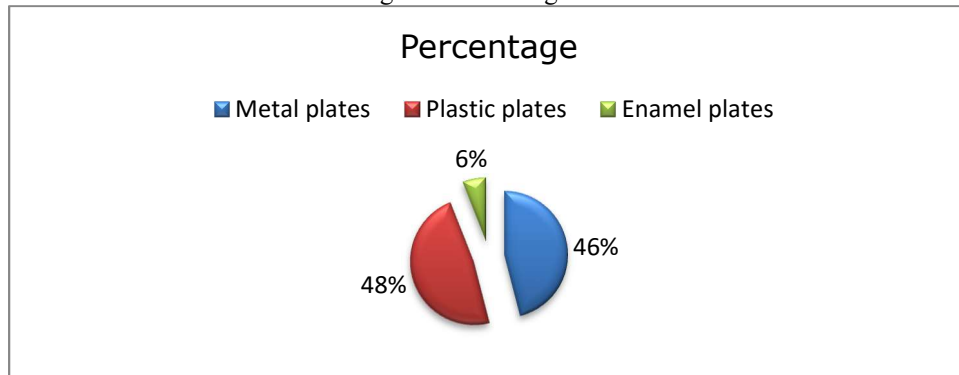
Figure 12: Personal Hygiene



Most (i.e 31%) of the respondents confirmed that they handle food with bare hands while 27% of the respondents handle money as they serve food. 25% of the respondents make use of apron when preparing food while 11% of the respondents have hair covering. 1% of the respondents blow air into polythene bags before use. 3% of the respondents wear jewellery while 2% of the street food vendors have long finger nails.

Serving Food

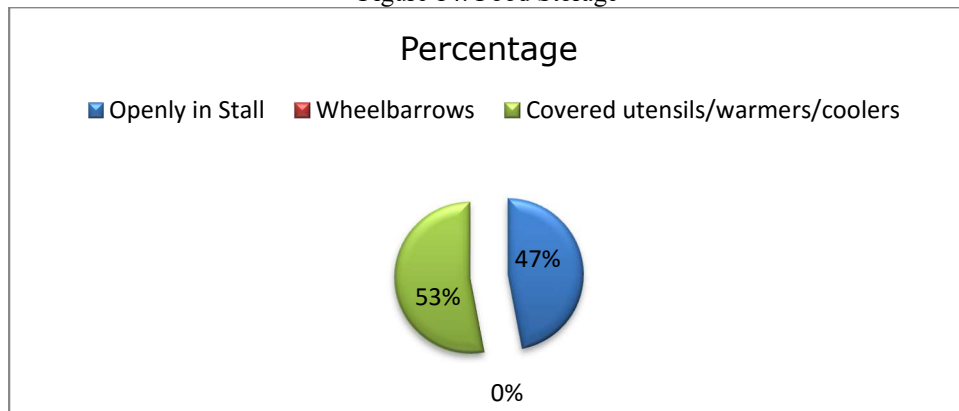
Figure 13: Serving Food



46% of the street food vendors serve food in metal plates while 48% of the street food vendors serve food in plastic plates. Only 6% of the street food vendors serve food in enamel plates.

Food storage

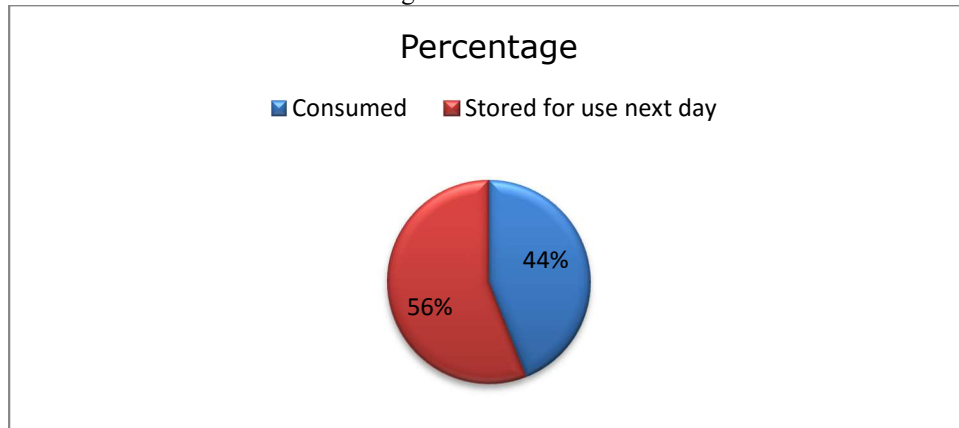
Figure 14: Food Storage



53% of the street food vendors in Harare store their food in warmers, coolers or other covered utensils while 47% of them just put their food openly in their stalls. No street food vendors use wheelbarrows in Harare.

Leftovers

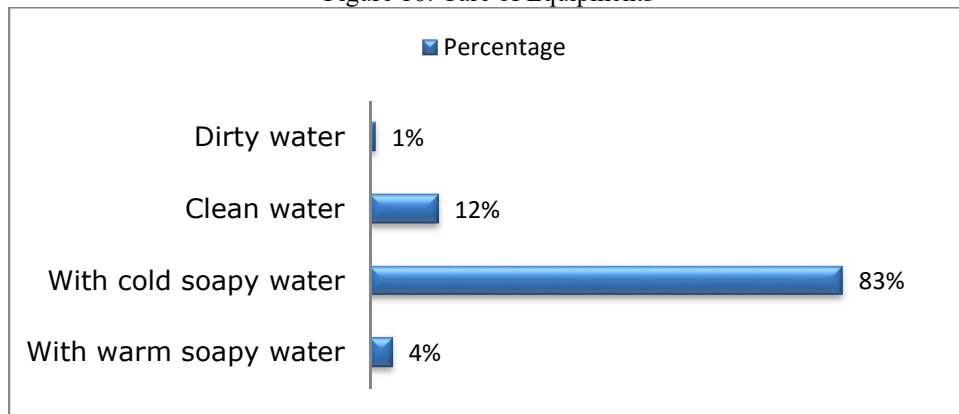
Figure 15: Leftovers



56% of street food vendors in Harare store leftovers for use the next day while 44% of the vendors decide to consume left overs. In contrast to our findings, Pokhrel & Sharma (2016) found out that consumption of leftovers is a common practice amongst street food vendors.

Care of Equipments

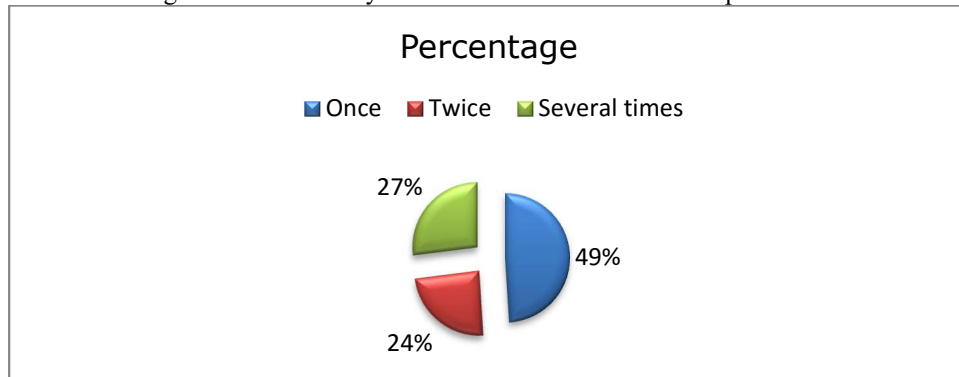
Figure 16: Care of Equipments



Most (i.e 83%) of the respondents wash their equipments using cold soapy water while 12% of the vendors make use of clean water. 4% of vendors use warm soapy water while 1% of the vendors use dirty water.

How many times water is used before replacement

Figure 17: How Many Times Water is Used Before Replacement

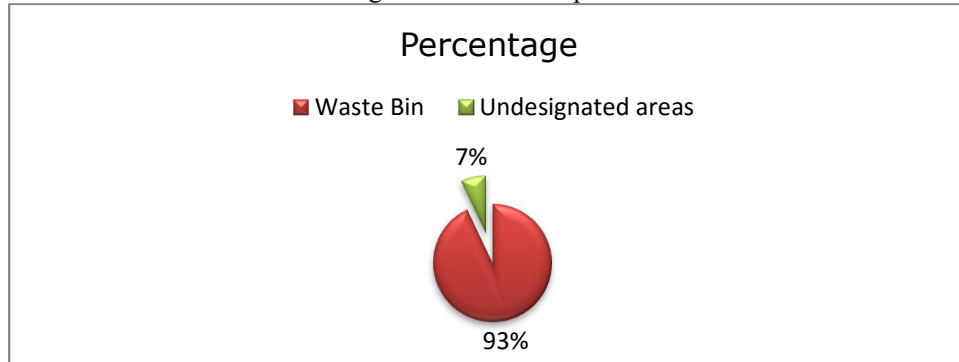


49% of the vendors make use of water once before replacement while 27% of the street food vendors use water several times before replacement. 24% of the respondents use water twice before replacement.

Waste Disposal, Water Supply and Water Shortage

Waste Disposal

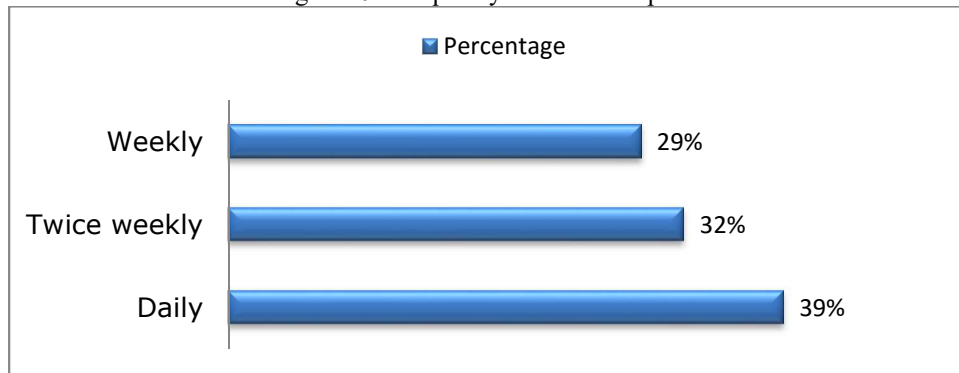
Figure 18: Waste Disposal



93% of the street food vendors dispose of their waste in waste bins while 7% of the street food vendors dispose their waste in undesignated sites.

When?

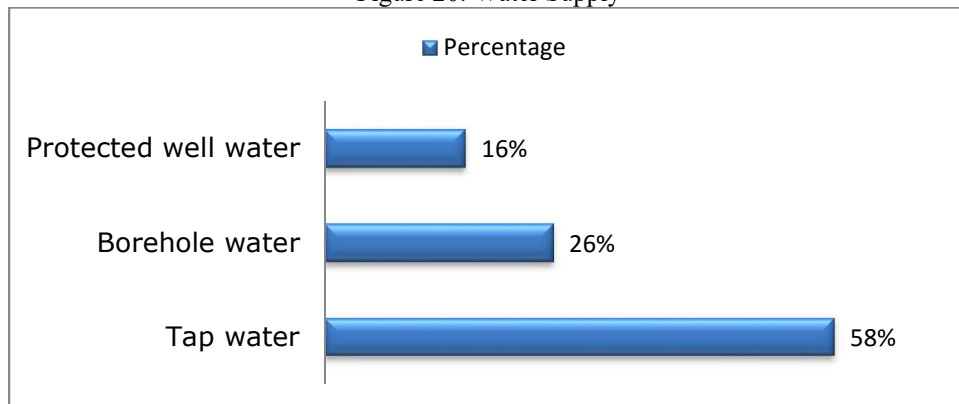
Figure 19: Frequency of Waste Disposal



39% of the respondents dispose their waste on a daily basis while 32% of the respondents dispose their waste twice weekly. 29% of the respondents dispose their waste on a weekly basis.

Water Supply

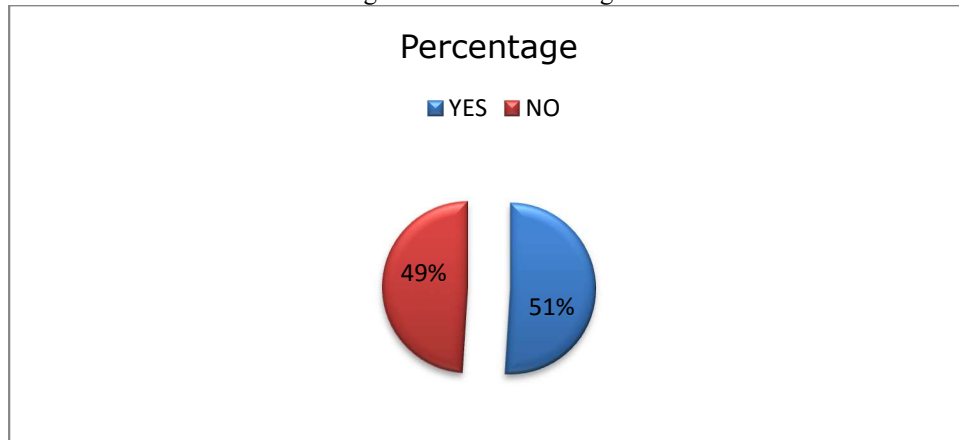
Figure 20: Water Supply



58% of the street food vendors rely on tap water supplied by the Harare city council, 26% of the street food vendors use borehole water while 16% of the street food vendors rely on protected well water. Tap water supplied by the City of Harare continues to be accused of containing dirt of fecal nature. The recent cholera outbreaks in Zimbabwe, particularly the one which started in the suburbs of Budiriro and Glenview on 5 September 2018 have been attributed to contaminated tap water. At least 50 people lost their lives during this outbreak.

Any water shortages

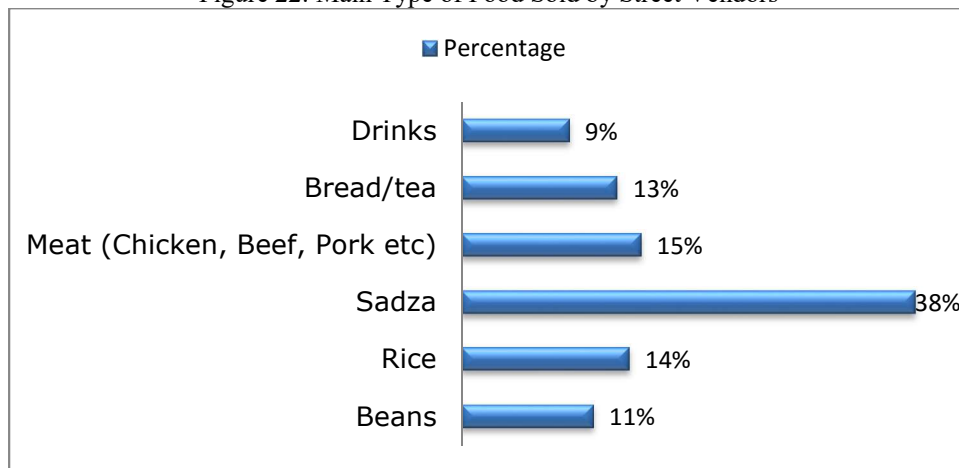
Figure 21: Water Shortages



51% of the street food vendors face water shortages while 49% of the street food vendors claim that water shortage is not a problem to them. Water shortage is a perennial problem in Harare and this exposes people to a number of health hazards, especially cholera outbreaks.

Main type of food sold by street vendors

Figure 22: Main Type of Food Sold by Street Vendors



Most (i.e 38%) of the street food vendors in Harare sell sadza, 15% sell meat, 14% sell rice, 13% sell bread/tea, 11% sell beans while 9% sell drinks.

V. Recommendations

- i. The government of Zimbabwe must provide low cost training to street food handlers in order to help them exercise standard food handling practices. In this regard, the government of Zimbabwe, can come up with short-courses on food preparation and handling tailor-fit to fully equip street food vendors with adequate knowledge on sanitary conditions of food vending.
- ii. A clean foodstand or premise can attract more consumers based on aesthetic appeal (Alamo-Tonelada *et al*, 2018). Therefore, street food vendors are encouraged to exercise serious hygiene in order to boost their sales.
- iii. Street food vendors in Zimbabwe are encouraged to stick to a high level of personal hygiene all the time.
- iv. The City of Harare, through its department of health; is encouraged to come up with a simple informative checklist of hygienic practices to evaluate food safety practices of street food vendors in order to ensure that good hygiene standards are strictly followed.
- v. The City of Harare is encouraged to perform its water treatment duty with utmost faith; otherwise the health of the people of Zimbabwe may continue to be compromised.

VI. Conclusion

Food borne diseases remains a major public health problem globally (WHO, 2004; Zeru & Kurie, 2007). Food-borne illnesses are a growing public health concern worldwide and results from food contaminated pathogenic micro-organisms, mycotoxins or chemical hazards (FAO, 2013). This concern is heightened by the fact that, worldwide, there seems to be a change in life-style and food consumption patterns as frequency of “eating out” is increasing and commitment to food preparation at home is decreasing (WHO, 2013). The current study analyzed hygienic practices of street food vendors in Zimbabwe. The findings of the research, among other things; will go a long way in promoting better food preparation and handling practices amongst street food vendors in Zimbabwe. The study results and recommendations are applicable globally for cities, towns, and areas where food vending is in existence.

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