

Research Article

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The Knowledge and Practices of Handwashing Among Street Food Vendors in the Keetmanshoop Municipal Area

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INTRODUCTION

The rapid urbanisation and an alarming increase in urban lifestyle create a demand for fast food. In addition, individuals mainly without formal employment have realised the potential entrepreneurship in providing the market demand for readily cooked food. Thus, street food vending is mushrooming globally. From observation, many people are prepared and conformable to buy already prepared foods as opposed to preparing foods at home themselves. The other advantage of street foods is that they are convenient, inexpensive, and often nutritious. It is estimated that 2.5 billion people worldwide consume street

food each day (Singh, Singh & Chaturvedani 2018: 2341).

However, the activities of food vendors, including how they handle the food that they sell, lack several hygiene requirements, which increases the chances of food contamination with pathogenic microorganisms and mycotoxins (Danikuu, Bago & Azipala, 2015). Accordingly, 1.3 million of Namibia's population of about 2.6 million do not have access to proper toilet facilities (Kangoya, 2012). Additionally, open defecation has been noted to be prevalent in Namibia. Thus, the risk of faecal contamination of street food with human

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hands is apparent. This can culminate in infections leading to foodborne disease, potentially becoming outbreaks (Ghartey & Antwi, 2019).

Diarrhoea is one of the common illnesses resulting from food poisoning, such as clostridium, salmonella, and campylobacter bacteria, mainly caused by faecal contamination (Skalkos, D., Kosma, J.S.; Chasioti, E., Bintsis, T & Karantonis, 2017). It has been singled out to be the second-highest cause of paediatric admissions in Namibia. Diarrhoea is also responsible for more than 30 per cent of deaths in children under the age of five (Hussein, 2017).

Based on these arguments, street foods pose a significant public health risk to consumers due to safety concerns stemming from unsafe food handling. Sadly, it is not only a Namibian problem but poses a global health threat, as about 600 million (1 in 10 persons) in the world fall ill after eating contaminated food, and about 420 000 die every year.

There has been an increase in foodborne infections because foods exposed for sale in the street have been contaminated. The situation is attributed to various factors predominantly linked to no handwashing practices and poor handwashing knowledge by street food vendors (Nyoni & Bonga 2019:24). Despite economic benefits provided to people, street foods can also be a source of foodborne illness resulting from poor hygiene practices by vendors and consumers (Singh et al. 2018: 2341). These factors have prompted the researchers to study knowledge and practices of handwashing among street food vendors in the Keetmanshoop municipal area.

1. Research methodology

The study used a quantitative, non-experimental descriptive design to accomplish the research objectives. This design was more suitable for obtaining information from street food vendors about their views and practices on handwashing. It further enabled the researchers to assemble numerical data regarding the knowledge and practices of street food vendors in the Keetmanshoop municipal area. The study took

place in Keetmanshoop municipal area. The researcher identified Keetmanshoop municipal area since there are street food vendors. The research population included all the registered street food vendors in the Keetmanshoop municipal area; the estimated population size was twenty-two (22). Therefore, 22 street food vendors registered with the Keetmanshoop Municipal area obtained these numbers from the municipality office. There was no sampling done in this study; hence the researchers used the whole population of 22 street food vendors since the population size was small.

The Researchers used a structured- self-administered questionnaire to obtain the information from the respondents. The entire population has been invited to participate in this study and have agreed to participate. The structured questionnaire has enabled the participant to tick functional elements (Creswell et al., 2014). The questionnaire was developed in English, and the researchers used a forward translation for participants that do not understand English. The questionnaire consisted of three sections: Section A - Socio-demographic information (age, gender, and the duration of working as a vendor), Section B- Knowledge of hand hygiene and Section C- Practices regarding hand hygiene.

The researchers were responsible for data collection, explained the purpose of the study, procedures, possible risks and benefits, and ensured confidentiality to the respondents before they started answering the questionnaire. The data collection took about 15 –20 minutes.

This study enhanced reliability by conducting a pilot study to other street food vendors not part of the research to ask questions and pre-test the questionnaire. The two street food vendors that participated in the pilot study operated in the Tseiblaagte suburb. The data collected from them were not included in the central survey. There were no methodological errors identified during the pilot study, although minor spelling errors did emerge (Creswell et al., 2014).

Table 1. Demographic profiles of respondents

Gender	Frequency	Percentage
Female	14	64%
Male	8	36%

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Total	22	100%
Age ranges		
Less 25 years old	0	0%
26- 30 years old	10	46%
31-40 years old	8	36%
40 years and older	4	18%
Total	22	100%
Duration as street food vendor		
Less than 6 months	2	9%
6months – 11months	2	9%
1 year – 3 years	14	64%
More than 3 years	4	18%
Total	22	100%
Educational level		
Never attended school	0	0%
Pre-primary school	0	0%
Primary school (Grade 1-7)	6	27%
Secondary School (Grade 8- 12)	16	73 %
Tertiary education	0	0
Total	22	100%

2.1 Data analysis

The researchers used simple descriptive statistics to analyse the data in the study. First, the data collected from the research were entered on the spreadsheet for each question. Then, the number and percentage of correct responses were calculated for each section. Hence data were analysed manually since the population size was small. Finally, all the research findings were presented in frequency tables.

2.2 Ethical Approval

Ethical clearance was granted .Researchers adhered to the principles of ethics, namely confidentiality, anonymity, informed consent, and justice. The study did not reveal any personal data, for example, the respondents' names. In other words, their anonymity was respected. In addition, the anonymity and confidentiality of the information collected were ensured through codes. Furthermore, the participants were reminded of their rights regarding voluntary participation in the study and that they were free to withdraw from the

study at any stage without any repercussions. Lastly, the respondents were informed of the researcher's compulsory publication of an article on the research but were assured that they would not be identified in the report.

2. Findings

The findings below include demographic information of the respondents, handwashing and practices among street food vendors in Keetmanshoop municipal area.

Demographic information in Table 1 has shown that most participants were females compared to males. The age group of most 26-30 years with 46% followed by 31-40 which 36%, the duration of 1-3 years was 64% was longest among street food vendors, follow by those who have been operating for more than three years as street food vendors. Regarding educational level, most of the street food vendors' highest qualifications are secondary schools, 73% compared to primary schools. There were no street food vendors who had tertiary qualifications.

Table 2 knowledge on handwashing

Items	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
Hand washing is done with only water	64% (n=14)	18%(n=4)	9% (n=2)	9% (n=2)	0%
Handwashing is performed with soap under running water	91%(n=20)	9% (n=2)	0%	0%	0%

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Hand washing is done with soap and water in a bucket	27%(n=6)	27%(n=6)	0%	46% (n=10)	0%
Handwashing can prevent foodborne and waterborne diseases	82% (n=18)	18% (n=4)	0%	0%	0%
Handwashing interferes with food taste	0%	0%	91%(n=20)	9% (n=2)	0%

Table 2 illustrates handwashing knowledge among street food vendors in Keetmanshoop municipal area.

The study findings indicated that the majority of the street food vendors strongly agree that hand washing is done with water only 64% (n=14) whereas those who agree were 18% (n=4), while those who were uncertain, disagree and strongly disagree were 9% (n=2) respectively each.

Regarding the knowledge of street food vendors, if hand washing is performed with soap under running water, the majority of the street food vendors strongly agree, 91% (n=20) and 9% (n=2) agreed. Furthermore, none of the street food vendors has disagreed with the statement.

Most street food vendors disagreed with the statement that handwashing is performed with soap and water in a bucket 46% (n=10), while 27% (n=6) strongly agreed to the same number as those who agreed to the statement. Regarding the argument that handwashing can prevent foodborne and waterborne diseases, most food vendors affirmed the view as 82% (n=18) strongly agree while 18% (n=4) have agreed, none of the street food vendors disagreed or strongly disagreed with the statement. Majority of street food vendors were uncertain whether hand washing interferes with food taste 91% (n=20), while 9% (n=2) of street food vendors disagreed, none of the street food vendors strongly agreed or agreed to that statement.

Table 3. Practices of handwashing among street food vendors

Statements	Always	Sometimes	Never
How often do you wash your hands	82% (n=18)	18% (n=4)	0%
How often do you have a soap for hand washing	63% (n=14)	37% (n=8)	0%
How often do your customers wash their hands if there is a handwashing facility?	18% (n= 4)	82% (n=18)	0%

Table 3 illustrate the practices of handwashing among street food vendors. Most street food vendors indicated that they constantly wash their hands 82% (n=18), whereas 18% (n=4). Furthermore, most street food vendors have stated that they always have soap for handwashing at their premises, 63% (n=14), while the rest

indicated that they sometimes have soap for handwashing, 37%(n=8). Regarding how often customers wash hands, most street food vendors indicated that they sometimes wash their hands in 82% (n=18) in a handwashing facility, while 18% (n=4).

Table 3b Availability hand washing equipment that street food vendors use

Hand washing equipment	
Hand sanitizer	64% (= 14)
Tap bucket with running water and soap	72% (n=16)
Tippy tap	36% (n=8)
Bucket water with soap	0%
Bucket with water only	0%

Table 3b shows the availability and type of handwashing equipment that street food vendors use. The study findings indicate that most of the street food vendors have a bucket with running water and soap, 72% (n=16), while 64% (n=14)

use a hand sanitiser to clean their hands, and only 36% (n=8) uses tippy tap. No street food vendors had used bucket water with soap or bucket with water only.

3. Discussions

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The study findings reveal that most street food vendors are women, which might be due to many being headed by women as single parents. The study findings correspond with Sing et al. (2018:2341), which revealed that women in developing countries dominate street food vending, which serves as their primary source of livelihood as it requires a low capital investment. The study also revealed that most street food vendors are aged between 26 – 30 years, which are productive age ranges in humans. Most street food vendors have also been in this business for one year to three years. Interest, majority of the street food vendors have only completed secondary school, and no one had a tertiary qualification. This could indicate that the street food vendors' education level is average and are trainable if they are afforded the opportunity.

Street food vendors' response to handwashing with water only indicated that most participants understood that they had cleaned their hands as long as they washed their hands with water. A response that symbolises that there is limited knowledge on proper hand hygiene. On the other hand, most street food vendors affirmed that hand washing is performed with soap under running water. Although this indicated that they have good knowledge of proper handwashing, the participants were confused when responding to the first statement. The study also revealed that most street food vendors disagree with the statement that hand washing is done in a bucket with soap as this practice promotes the breeding of microorganisms as all those who were their hands leave their dirt in the bucket leading to contaminations.

The street food vendors also stated that hand washing is vital in preventing food and waterborne diseases as hand washing is the essential hygienic practice that prevents pathogens from faecal contaminations and other sources of microorganisms to contaminate foods (World Health Organization, 2020). However, regarding the perception that hand washing interferes with food taste, most street food vendors were uncertain, with only a few disagreeing with the statement. This indicates that most street food vendors know and understand that hand washing is an essential foundation of food hygiene and safety.

Hand washing practices among street food vendors revealed that most street food vendors always wash their hands, with few indicating that they do it sometimes. However, more than half of street food vendors stated that they always have soap for handwashing, but some street food vendors indicated that they have soap for handwashing sometimes. In addition, the study disclosed that most customers wash their hands when they purchase foods from their establishment if there is a handwashing facility.

The study further revealed that most street food vendors have tap buckets with running water and soap, some have hand sanitisers, and a few have tippy taps.

4.1 Limitation of the study

This study was confined to street food vendors registered with Keetmanshoop municipality and fixed to a designated point. Therefore, mobile and unregistered street food vendors did not form part of this study.

4. Conclusion

The study concludes that most of the respondents have a pretty fair to good knowledge of hand hygiene as most street food vendors knew the effective way for hand hygiene is to wash hands with soap under running water. Therefore, hand washing could aid in preventing food and waterborne diseases among the population (WHO,2014). Although street food vendors stated that they have hand washing equipment always, some of them wash their hands sometimes, same with some of the customers.

Competing Interests Statement

The authors declare that there are no competing or potential conflicts of interest.

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