

***PARTICIPATORY ACTION RESEARCH TO IMPROVE SAFETY AND  
HYGIENE PRACTICES AMONG STREET FOOD VENDERS IN LUSAKA  
CENTRAL BUSINESS DISTRICT***

**BY**

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**A dissertation submitted to the University of Zambia in partial fulfillment of the  
requirements for the Masters of Public Health (MPH)**

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## **DECLARATION**

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## **DEDICATION**

I dedicate this study to my mother Jackeline K. Nkandu, my dad Mr. A. Bwalya Musa for their total understanding whenever I told them I could not chat longer periods with them like the usual because I had to do the report and to Mrs. Violet Muchemwa (Mum Muche) for always being there, checking on how far I had gone with the report and whenever she saw me online chatting she could ask me to get offline and focus on report writing.

## ABSTRACT

Zambia's urban growth and unemployment have made street vending of food an important, viable informal sector industry in the country. However, despite being that important, it has developed into a serious public health concern due to the poor hygiene practices surrounding it.

Several attempts to control the vendors through the enforcement of food laws have been made by the local authority without much success. Lusaka City Council (LCC) has continued to record increase in the street food complaints received from the public while diarrheal diseases continue to rank among the top five causes of morbidity in the city of Lusaka. Further, food borne disease outbreaks such as cholera and typhoid have become a norm every rain season.

Using participatory action research (PAR) approach with the aid of the theory of planned behavior, study aimed to improve safety and hygiene practices among street food vendors through the development of a PAR framework based on the vendors and local authority perceptions and beliefs. The specific objectives were; - 1. To explore the perceptions and beliefs of the community (street vendors, consumers and local authority) about street vended foods in Lusaka. 2. To ascertain the perceived best action to take in order to improve safety and hygiene practices among street food vendors in Lusaka. 3. To develop a PAR framework to improve safety and hygiene practices among street food vendors in Lusaka CBD. The period of the study was from February, 2016 to June, 2017.

The study findings indicated that; - Registration of street food vendors, training them in safety and hygiene practices, sensitization of consumers on street food safety and hygiene issues, relocation of street food vendors to places with basic facilities needed to deal in food business, enforcement of food laws, collaborative action among all stakeholders and political will were the best perceived actions to improve safety and hygiene practices among street food vendors in Lusaka.

From the findings, collaborative action among all stakeholders, and engagement in more PAR activities by all stakeholders should be prioritized to quickly see the substantial change and sustain it. The framework developed can bring about the change we require if policy makers can use it as a benchmark. This framework is collaborative in nature. It will enable key stakeholders (LCC, street food vendors, political leaders and consumers) to work collectively together and

improve safety and hygiene practices among street food vendors. It also serves as a reminder for policy makers and local authority to embrace street food vendors and include them in their actions and plans to ensure effective prevention and control of foodborne diseases and out breaks.

Key Words: Participatory Acton Research (PAR), Food Safety, Hygiene Practices, Street food, Vendor

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Table of Contents

<b>DEDICATION</b> .....	<b>v</b>
<b>ABSTRACT</b> .....	<b>vi</b>
<b>ACKNOWLEDGEMENTS</b> .....	<b>viii</b>
<b>ACRONYMYS</b> .....	<b>xii</b>
<b>LIST OF TABLES</b> .....	<b>xiii</b>
<b>LIST OF FIGURES</b> .....	<b>xiv</b>
<b>LIST OF APPENDIXES</b> .....	<b>xv</b>
<b>DEFINITION OF TERMS</b> .....	<b>xvi</b>

**CHAPTER ONE: INTRODUCTION** ..... **1**

**INTRODUCTION** ..... **1**

1.1	Background.....	1
1.2	Statement of the Problem.....	2
1.3	Research Question .....	3
1.4	Purpose/ Aim of the Study.....	3
1.5	Specific Objectives .....	3
1.6	Justification of the study .....	4
1.7	Theoretical Approach.....	4

**CHAPTER TWO: LITERATURE REVIEW** ..... **6**

**INTRODUCTION** ..... **6**

2.1	The meaning of Participatory Action Research .....	6
2.2	Why Participatory Action Research to improve safety and hygiene in the street vended foods. .	6
2.3	How PAR has performed in other projects .....	7
2.4	Photo voice.....	8
2.5	Socio-Economic Importance of Street Vended Foods in Africa.....	8
2.6	Factors affecting Safety of Street Vended Foods.....	8
2.7	Reviewers Comments/ identified gap .....	9

**CHAPTER THREE: METHODOLOGY** ..... **10**

**METHODOLOGY** ..... **10**

3.1	Study Design.....	10
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3.2	Study Site and population .....	10
3.3	Sampling technique and Sample Size Consideration.....	10
3.4	Data collection Methods .....	11
3.4.1	Transect walk .....	11
3.4.2	Photo voice.....	11
3.4.3	Focus group discussion .....	11
3.4.4	In-depth interviews .....	12
3.5	Data Management and Analysis .....	12
3.5.1	Familiarization with data .....	12
3.5.2	Generating the initial codes.....	12
3.5.3	Searching of themes among codes .....	13
3.5.4	Review themes .....	13
3.5.5	Define and naming themes.....	13
3.5.6	Produce a final report.....	13
3.6	Ethical Considerations .....	14
<b>CHAPTER FOUR: FINDINGS .....</b>		<b>16</b>
<b>FINDINGS AND INTERPRETATIONS .....</b>		<b>16</b>
4.1	Introduction.....	16
4.2	Participants characteristics .....	16
4.3	Perceptions and beliefs of the community about street vended foods in Lusaka.....	16
4.4	Perceived best action to take in order to improve safety and hygiene practices among street food vendors in Lusaka. ....	22
4.4.1	Training in hygiene and food safety practices:.....	24
4.4.2	Change of business or relocation to places with facilities .....	25
4.4.3	Consumer sensitization .....	26
4.4.4	Organized street vending .....	27
4.4.5	Enforcement of food laws and Political will.....	28
4.5	Change in attitude and behavior: .....	29
4.6	Improved hygiene practices .....	30
4.7	Sense of ownership and empowerment:.....	30
4.8	Participatory action approach framework to improve safety and hygiene practices among street food vendors in Lusaka.....	31

<b>CHAPTER FIVE: DISCUSSION .....</b>	<b>33</b>
<b>DISCUSSION .....</b>	<b>33</b>
<b>CHAPTER SIX: CONCLUSION.....</b>	<b>37</b>
<b>CONCLUSION.....</b>	<b>37</b>
6.1 Implication of the study .....	37
6.2 Recommendations.....	38
<b>REFERENCES.....</b>	<b>39</b>
<b>APPENDIXES .....</b>	<b>43</b>

## ACRONYMYS

DFID	:	Department for International Development
FCR	:	Food Complaint Register
FSMF	:	Food Safety Management File
LCC	:	Lusaka City Council
MOH	:	Ministry of Health
PAR	:	Participatory Action Research
SVAZ	:	Street Vendors Association of Zambia
UNICEF	:	United National Child Education Fund
WHO	:	World Health Organization

## **LIST OF TABLES**

Table 1: Major themes and sub-themes on perceptions and beliefs on street vended foods

Table 2: Major themes and sub-themes on perceived best action to take in order to improve  
Safety and hygiene practices among street food vendors

## LIST OF FIGURES

Figure 1: Theory of planned behavior .....	5
Figure 2: Poor hygiene practice by street food vendor and very dirty water used for cleaning ...	18
Figure 3: Indiscriminate waste disposal and dirty surrounding food preparation areas .....	19
Figure 4: Poorly drained wash-up area also used as storage for solid waste and utensil and is also a serving area .....	20
Figure 5: questionable sources of meat, poor storage and poor handling by meat traders .....	21
Figure 6: Theory of planned behavior in practice.....	24
Figure 7: Before and after improvement in hygiene practices by street vendor.....	30

## LIST OF APPENDIXES

Appendix 1: Informed Consent Document (Information Sheet) .....	43
Appendix 2: Consent Form.....	46
Appendix 3: Interviews Guide for Focused Group Discussion and guided interviews .....	47
Appendix 4: Guide for In-depth Interviews for the Key Informants- stakeholders (LCC, MOH).....	48
Appendix 5: Photo Release for Use of Images .....	49

## DEFINITION OF TERMS

**Food Hygiene:** Conditions and measures necessary to ensure the **safety** of **food** from production to consumption

**Food Safety:** This is a scientific discipline describing handling, preparation and storage of food in ways that prevent food borne illness. It includes a number of routines that should be followed to prevent contamination of food.

**Insanitary Conditions:** Unclean enough to endanger health

**Local Authority:** For the purpose of this study, local authority means Lusaka City Council

**Sanitation:** Control of all those factors in man's physical environment that could cause harmful or deleterious effect on human health.

**Street Food Vendor:** Any person that sales food along/ on the street and includes those that sale food in the boots of their cars.

**Community:** For the purpose of this study the word community means all study participants i.e street food vendors, the consumers, street vendors association executive members, health inspectors and councilors working together to improve safety and hygiene practices among street food vendors in Lusaka Central Business District .



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background

The unprecedented urban growth, globalization and increase in unemployment have made street vending of food an important, viable informal sector industry especially in developing countries (Rane, 2011 and Zengran et al., 2014). Besides being appreciated for their convenience, street vended foods have become an important source of nutrition for the population (Ekanem. E., 1998 and FAO, 1997). The World Health Organization (WHO) recognizes street vended foods to have an essential role in maintaining the nutritional status of urban population (FAO, 2001). Further, street vended foods can play great contribution towards the economic development of countries (Bhowmik, 2005) and according to WHO survey on street vended foods findings in 1996, 74% of countries reported street vended foods to have played a significant role in urban food supply.

Despite being an important source of income and nutrition, street vended foods are of major public health risk that has industrialized into a very important public health concern (Ghosh, et al, 2007; Desousa, 2008 and Rane, 2011). This is because most street food vendors lack basic infrastructure, equipment and services, knowledge in food safety and hygiene practices, and are difficult to control because of their diversity, mobility and temporal in nature. (Ibid).The public is also inadequately aware of hazards associated with street vended food (WHO, 1996 and Rane, 2011). In addition, epidemiological studies to suggest that street vended foods contribute significantly to food poisoning and food borne diseases are inadequate (Mosupe and Von Holy, 2000 and Rane, 2011).However, some records show that street vended foods were responsible for 691 food poisoning and 49 deaths in China (Lianghui, et al, 1993). Several studies have revealed that *Bacillus cereus*, *Clostridium perfringens*, *Staphylococcus aureus* and *Salmonella* spp. are the common contaminants of street vended foods (Bryan, et al, 1997) and have also shown that people who like buying and eating street vended food suffer more from diseases such as Cholera, Typhoid and food poisoning than others (Bean, 1983-1987 and Desendos, et al, 1991).This is a clear indication that street food vendors lack good safety and hygiene practices.

Being a worldwide phenomenon, street food vending affects both the developed and developing countries and different countries have come up with different strategies to control and manage it. For example, Malaysia, Philippines and India came up with regulations to protect street vendors while Malaysia went an extra mile to license them and provided them with facilities for conducting their trade (Natural Resources institute (NRI), 2004). Similarly, in Durban, South Africa, authorities came up with a policy that allocated street vendors specific areas to operate. They were also given a certificate to operate at acceptable standard after receiving training on essential food hygiene practices (Holy and Makhon, 2006). In India, cost inflation index (CII) Institute of Food Safety and Quality (FSQ), came up with an initiative to create awareness among the consumers and street food vendors and it issued a simple informative checklist on hygienic practices, which gave emphasis to implement good hygiene standards by the street vendors(CII, 2008).

In Zambia, the Public Health Act Cap 295 and the Food and Drugs Act Cap 303, food safety and hygiene regulations of the laws of Zambia provide food safety and hygiene guidelines that every food vendor must follow. However, these laid down basic requirements are not followed by most street food vendors as the food they prepare and sell is under insanitary conditions (LCC, 2013). According to the census conducted in 2003 as referenced by FAO/WHO, 2005, there were 5 355 street food vendors with a further 16 000 people employed by the business owners in Lusaka district alone. In Zambia, food street vending has come to stay and become an integral part of the urban economy. Therefore, Participatory Action Research (PAR) which is based on reflection, data collection, and action and aims to improve health through the people who in turn take action to improve their own health (Baum, et al, 2006) is the best way to address food safety and hygiene practices among street food vendors in Lusaka. The study, therefore, used Participatory action research (PAR) as an innovative way to help improve safety and hygiene practices among food street vendors in the central business of Lusaka. The theory of planned behavior helped strengthen, support and guide the implementation of this research approach, through a deliberative and planned behavior change process which is a PAR aim to transform participant's practices using a spiral of circles of critical and self-critical action and reflection.

## **1.2 Statement of the Problem**

In Lusaka, street vending of food is a common feature everywhere and is intense in the central business district. Lusaka City Council (LCC) has continued to record an increase in the street food complaints received from the public; from 120 in 2013 to over 610 street food related

complaints in 2015. The complaints received vary from food poisoning, expired, spoilage and counterfeit products and are in most cases difficult to trace and control (LCC Food Complaint Register (FCR), 2013; 2014; 2015). Diarrheal diseases continue to rank among the top five causes of morbidity in the city of Lusaka (S. Bosomprah, et al, 2016) . In February, 2016, following the cholera outbreak in Lusaka city, swabs from the hands of some street food vendors and samples of street vended foods were collected and were all found contaminated with vibrio cholera. Some samples also had salmonella, Staphylococcal and campylobacter spp. which are all associated with poor safety and hygiene practices by food handlers (LCC Food Safety Management File (FSMF), 2016). In the quest to improve safety and hygiene practices among food handlers and reduce disease burden, Lusaka City Council Public Health Inspectors with the help of Council and state police, tried to remove street food vendors from the street through the enforcement of the Public Health Act, Cap 295 and the Food and Drugs Act Cap 303 of the laws of Zambia and was received with so much resistance. Further, LCC health education unit sometimes went to sensitize community on the dangers of selling, buying and eating street vended foods sold under insanitary conditions but the impact was very insignificant to reduce the complaints received from the public concerning street vended food from the street or improve their safety and hygiene practices (LCC, 2015). Therefore, since these methods failed, the principal investigator thought PAR approach could help develop a framework for improving safety and hygiene practices among street food vendors in Lusaka based on the perception and beliefs of the community. The approach being collaborative in nature, it was able to bring all the stake holders together for action.

### **1.3 Research Question**

How can food safety and hygiene practices be improved among the street food vendors in Lusaka?

### **1.4 Purpose/ Aim of the Study**

To develop a Participatory Action Research Framework for improving safety and hygiene practices among street food vendors in Lusaka based on the perceptions and beliefs of the community

### **1.5 Specific Objectives**

1. To explore the perceptions and beliefs of the community about the street vended foods in Lusaka.

2. To ascertain the perceived best action to take in order to improve safety and hygiene practices among street food vendors in Lusaka.
3. To develop a participatory action approach framework to improve safety and hygiene practices among food street vendors in Lusaka.

### **1.6 Justification of the study**

PAR emphasis on dialogue and participation and its commitment to education as argued by different scholars makes it suitable to use in this controversial issue of Street food vending because success is guaranteed. Because the approach emphasizes on action and dialogue, it is likely to increase understanding between street food vendors and local authority thereby bringing about collaborative action to improve safety and hygiene practices among street food vendors. This will in turn benefit the community and all stake holders because safer food would be sold on the street, littering and indiscriminate disposal of waste by street food vendors will be reduced and Lusaka CBD will be cleaner and orderly again. This unique process will help transform street vendors and empower them to act responsibly using their own lived experiences (Kolb, 1984 and Schon, 1983, 1987). Further, this study approach has the potential to change policy in the way the local authority handle the issue of street food vending that involves policing and chasing street food vendors around and bring about collective action and dialogue among street food vendors and Lusaka City Council.

### **1.7 Theoretical Approach**

We used the theory of planned behavior of Ice Ajzen (1988, 1991) which helps to understand how people's behavior can be changed. The theory links beliefs and behavior. Its concept was proposed by Ajzen to improve on predictive power of the theory of reasoned action of Ajzen and Fishbein (1975, 1980) by including perceived behavioral control. This was as a result of the discovery that behavior appeared not to be 100% voluntary and under control. Briefly, according to this theory, human action is guided by three (3) kinds of considerations. 1. Behavioral beliefs (beliefs about the likely consequences of the behavior). 2. Normative beliefs (beliefs about the normative expectations of others). 3. Control beliefs (beliefs about the presence of factors that may facilitate or impede performance of the behavior). This theory helped strengthen and support the research approach in that, it believes behavior can be deliberative and planned. In the same vein, participatory action approach is in particular, a deliberate process through which people aim to transform their practices using a spiral of circles of critical and self-critical action

and reflection. It aims to help people investigate reality in order to change it (Fals Borda, 1979). This is similarly what the theory of planned behavior does too. Theory of planned behavior focuses on our ability to achieve a specific goal. It helps investigate the three key things that according to this theory, guide human action namely, Attitude, subjective norms and perceived behavior control as shown in picture below. According to this theory's general rule, the more favorable the attitude, subjective norm, and the greater the perceived control, the stronger the persons intention to perform the behavior in question.

## Theory of planned behaviour (cog) – prevention:

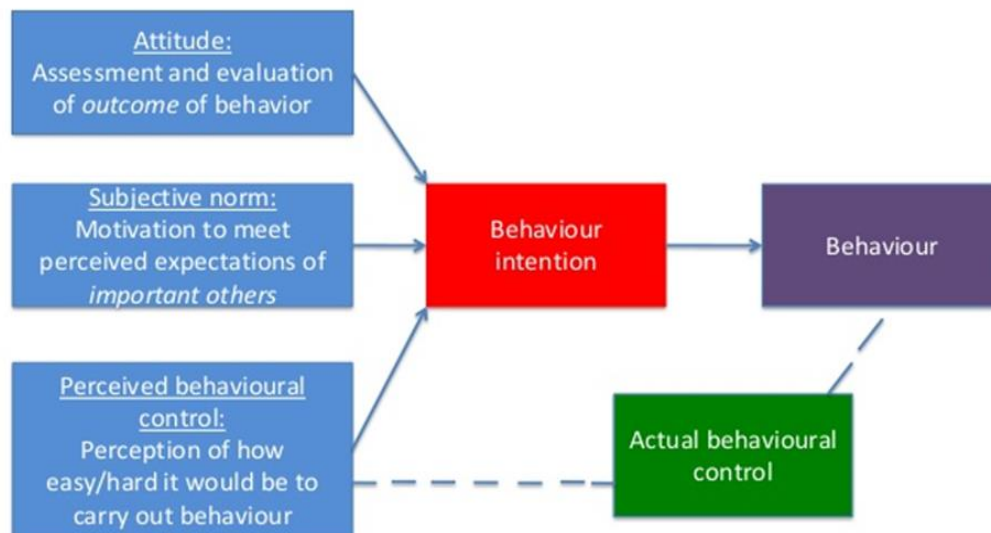


Figure 1: Theory of planned behavior

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

In this chapter, the paper tries to review literature from different sources, such as Google scholar, PubMed, www.Booksc .org and from references of some articles and reports read. The review is guided by two themes; Participatory action approach where different literature about the approach has been reviewed to shade more light about the method and why the researcher feels it is the best method to use if we were to improve safety and hygiene practices among food street vendors and some examples of projects where PAR has worked has also been reviewed to show how it works. The second theme is safety of street vended foods which begins with the challenges of Food Street vending globally, Africa and Zambia, Its social economic importance in Africa and factors affecting safety of street vended foods. The chapter concludes with the comments and gaps identified by the reviewer.

#### 2.2 The meaning of Participatory Action Research

PAR seeks to understand and improve the world by changing it. At its heart is collective, self-reflective inquiry that researchers and participants undertake, so they can understand and improve upon the practices in which they participate and the situations in which they find themselves. The reflective process is directly linked to action, influenced by understanding of history, culture, and local context and embedded in social relationships. The process of PAR should be empowering and lead to people having increased control over their lives (Minkler and Wallenstein, 2005 and Grbich, 2007).

#### 2.3 Why Participatory Action Research to improve safety and hygiene in the street vended foods.

Participatory action research (PAR) differs from most other approaches to public health research because it is based on reflection, data collection, and action that aims to improve health and reduce health inequities through involving the people who, in turn, take actions to improve their own health (Baum F., et al, 2006). PAR has a number of backgrounds (Tandon, 1996).It reflects questioning about the nature of knowledge and the extent to which knowledge can represent the interests of the powerful and serve to reinforce their positions in society. (Habermas, 1968).It

affirms that experience can be a basis of knowing and that experiential learning can lead to a legitimate form of knowledge that influences practice (Kolb, 1984). Freire, 1972 used PAR to encourage poor and deprived communities to examine and analyze the structural reasons for their oppression. From these roots PAR grew as a methodology empowering researchers to work together with communities in a way that leads to action for change (Baum F., et al, 2006)

#### **2.4 How PAR has performed in other projects**

One of the articles reviewed entitled, ‘How participatory action research supported improvements to the postnatal discharge summary system used for remote dwelling Aboriginal mothers and infants in the Top End of Australia’ by Cath Josif, 2006 and others used PAR to address fragmented and dangerous discontinuities in a postnatal health care discharge system. A baseline analysis of the patient journey from the remote health Centre to hospital for birth and back highlighted a number of discontinuities to care (Cath, et al. 2006). Risks to client safety were identified because of problems with the discharge process, particularly the accuracy of a patient’s discharge information and timeliness of dispatch (Ibid, 2006). PAR provided the participants; health service providers, service users and researchers, with opportunities to collaborate to resolve practical problems and construct action and knowledge in a united manner via a cyclical process (O’Leary, 2005 as referenced by Cath and others).

Another study entitled, “Photovoice as a Community-Based Participatory Research Method among Women Living with HIV/AIDS: Ethical Opportunities and Challenges” by Michelle Teti and others in 2012 showed that Photovoice provided participants with opportunities to express their health priorities and enabled participant empowerment. They implemented *Sharing Stories (SS)* and *Picturing New Possibilities (PNP)* projects to give participants a forum to outline their health priorities and needs by giving them a visual opportunity to define and redefine themselves. Participants were able to show others that they were beautiful, strong and healthy through sharing of self-portraits and documentation of healthy transitions from their past to present demonstrating that progress and transformation is possible. Further, SS and PNP empowered participants by giving them a forum to identify challenges and a medium through which they could affect personal and community action. For example, when one of the participants pictured and documented how she picked up a fridge from a trash which she believed could make her house better, some church members were moved by her story and offered to buy her a new fridge which she called a ‘victory’ and ‘triumph’

## **2.5 Photo voice**

This is a PAR data collection tool where collection of data is through the use of participatory documentary photography known as Photo voice. The essence of using this approach is of its participatory property and its potential to empower participants by giving them a voice (Wilson, Minkler, Dasho, Wallerstein, & Martin, 2006), (Hannay, Dudley, Milan, & Leibovitz, 2013), and (Castleton, Garvin, &Huu-ay-aht First Nation, 2008). Further, this approach balances power among participants, promote trust and research ownership (Castle den et al., 2008; Hannay et al., 2013). According to Wang and Buris, 1997, Photovoice provide the evidence and help an effective, participatory means of sharing expertise to create healthful public policy.

## **2.6 Socio-Economic Importance of Street Vended Foods in Africa.**

Street foods play an important socio-economic role in African economies in terms of employment potential and the majority was female heads of households (Graffham et al., 2005). Census conducted in Lusaka, Zambia in 2003 recorded 5 355 food vendors with a further 16 000 people employed by the business owners. It is estimated that the Lusaka food vendors sell about 81 million meals per annum, and make profits ranging from US\$ 0.20 to US\$31 per day (Ibid, 2005). Such income is significant considering that a large proportion of the African population survives on less than US\$1 per day.

## **2.7 Factors affecting Safety of Street Vended Foods**

The hygienic aspects of street food vending are a major concern for food control officers (Mensah et al., 2002.) According to the report done by FAO/WHO (2005), vending stands are often crude structures, and running water, washing facilities and toilets may not be available. The safety of street foods is affected by numerous factors starting from the quality of the raw materials, to food handling and storage practices and failure by street food venders to put into practice the hygiene practices they know (Charles, et al, 2011).Food safety knowledge and sanitation practices of Street Food vendors in many different countries have been studied (Grunert, 2005, von Holy and Makhoane, 2006, Kealesitse and Kabama, 2012, Omemu and Aderoju, 2008, Rane, 2011 and Zengranet al., 2014) and it has been revealed that the majority of street food vendors lack correct knowledge about food safety and hygiene practices, which contribute to their failure to ensure street food quality and safety.



## **2.8 Reviewers Comments/ identified gap**

From the literature reviewed, it is clear that street vending of food is critical and a very important public health concern and different countries globally have realized that fact and have derived different strategies to manage it. It is also clear that there are gaps in food safety knowledge and hygiene practices among Street Food vendors and this research aims to contribute to the closure of the identified gap. This requires careful and innovative way of addressing it. Therefore, PAR approach is the best action approach needed to help improve the poor safety and hygiene practices surrounding street vended foods.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Study Design**

The study used participatory action research (PAR) as an approach to develop a PAR framework that may help improve safety and hygiene practices among the street food vendors in Lusaka. Participatory Action Research draws on the paradigms of critical theory and constructivism. The researcher used PAR because practitioners (street food vendors and key stakeholders) were involved in the research process from data collection, analysis, final conclusions and development of the PAR framework.

#### **3.2 Study Site and population**

The study was conducted in Lusaka Central Business District (CBD). CBD was chosen because it is where most street food vendors were found.

The study population included street food vendors dealing in 'ready to eat' cooked and fresh foods, street vendors association of Zambia executive members, LCC Public health inspectors and the director of public health as a key informant, LCC councilors and ministry of health Environmental health officers involved in ensuring food safety

#### **3.3 Sampling technique and Sample Size Consideration**

Purposive sampling was used to select the participants and study areas strategically. The study had six (6) groups of eight (8) street vendors from the selected areas. One group was from Kamwala shopping area and the remaining five (5) groups were according to the streets in CBD; 1 group from Cairo Road, 1 group from Cha Cha Cha road, another from Freedom way, then two (2) groups from Lumumba Road because it had so many street food vendors. A minimum of six (6) street food vendors per group were sampled to include a variety of 'ready to eat' cooked and fresh foods to try to cover different viewpoints and experiences. Further, each group had a health inspector and a street vendor association committee member. This brought the sample size to 58 for photo voice and focused group discussions. The study had fifteen (15) key informants namely;- 4 health inspectors, 1 assistant director public health, 3 LCC councilors, 3 leaders of the street vendors association and four(4) members of the public (consumers).

### 3.4 Data collection Methods

Multiple data collection methods were employed to triangulate the findings. This involved the use of self-reflective cycles for all participants where, planning the change with the street vendors, acting and observing the process and consequences and then further cycles of planning, acting and reflection were employed. (Heron and reason, 2001). PAR does not follow a set of prescribed steps rather the cycles provide a space within which critical interaction discourse can be developed and meaningful change considered (a form of consciousness raising) (Friere, 1970). Theory of planned behavior was also used to help strengthen and guide the research.

#### 3.4.1 Transect walk

This was for interactions /familiarization and identifying major problems related to street vended foods during which pictures and field notes were taken by participants. The pictures and field notes were then compared and discussed during focused group discussions thereby helping to answer the three objectives.

#### 3.4.2 Photo voice

A method that was used to capture photographs from various points of street vending activities within the study areas on what the participants thought was the ideal or not ideal practice. The photos were then discussed during focused group discussion and helped answer three objectives. Each participant was given an opportunity to tell a story about a maximum of two (2) pictures they got during the transect walks using a variation of the SHOWeD technique. This is a well-established technique that guides Photovoice discussion (Wang & Redwood-jones, 2001 as referenced by Michelle Teti and others.): What do you do you **See** here? What is **H**appening? How does this relate to **O**ur lives? **W**hy does this problem or strength exist? What can we **D**o about it? The purpose of this 'root cause questioning' is to identify the problem. Critically discuss the root cause and develop strategies for changing it. (C.C. Wang et al, 1998). Other members were then given chance to comment on the picture with the aid of theory of planned behavior to come up with the perceived best action to improve safety and hygiene practices among street food vendors.

#### 3.4.3 Focus group discussion

This was done in 6 groups of eight (8). After the transect walks and capturing of the pictures, each group converged to discuss their photos and experiences in a collaborative manner using the SHOWeD technique. Further, each group was then subjected to another FGDs interview guide

8.3 to discuss their perceptions in terms of hygiene and safety of street vended foods. This FGDs interview guide was also used on selected consumers who participated in the study. The theory of planned behavior was also used to further analyze the problems and come up with best perceived options as illustrated in figure 6 until a common ground was reached. This helped answer the three objectives and explored the three concepts in the theoretical framework. The focus group discussions were all tape recorded

#### 3.4.4 In-depth interviews

This was for the key informants who were 4 LCC public health officers, 3 street vender's association leaders (SVA), 3 councilors and 4 members of the public (consumers). It helped get their perceptions and beliefs on the best action to improve safety and hygiene practices among street food vendors and also perception of street vended foods. All the in-depth interviews were tape recorded and the observation notes during the interviews were recorded in the note book for further analysis.

### **3.5 Data Management and Analysis**

Recorded FDGs and IDI were translated and transcribed verbatim and exported to Nvivo version 11. Thematic analysis was used to analyze data. Braun and Clarke (2006) define thematic analysis as: "A method for identifying, analyzing and reporting patterns within data." (p. 79). It is performed through the process of coding in six phases to create well-known, meaningful patterns. Nvivo, qualitative data analysis software helped organize and manage the data through the following steps;

#### 3.5.1 Familiarization with data

Prior to reading the interview transcripts, the researchers created a start list of potential codes. For example, during thematic analysis of perceptions and beliefs of the community about street vended foods in Lusaka, codes such as fresh, preservatives, expensive, GMOs, questionable came about. These start codes were included in a reflexivity journal with a description of representations of each code and the source of the code. This stage helped in identifying possible themes and patterns. Reading and re-reading the material until the researchers were comfortable and note-taking helped begin developing potential codes.

#### 3.5.2 Generating the initial codes

The initial codes were generated by documenting where and how patterns occur through data reduction. This was done by breaking down data into labels in order to create categories for more efficient analysis. Comprehensive codes of how data answers research question was developed and detailed information of how and why codes were combined, what questions the researchers were asking of the data, and how codes were related were provided and recorded in the reflexivity journal.

### 3.5.3 Searching of themes among codes

At this stage, the researchers combined codes into main themes that accurately depict the data. A description of what the themes mean, even if the theme does not seem to "fit." and also description of what was missing from the analysis was done. Lists of candidate themes for further analysis were developed and Reflexivity journals noted how the codes were interpreted and combined to form themes.

### 3.5.4 Review themes

At this stage, the researchers were looking at how the themes support the data and the main theoretical perspective. If the analysis seemed incomplete, they went back to find what was missing. This stage resulted in a coherent recognition of how themes are patterned to tell an accurate story about the data. The process of understanding themes and how they fit together with the given codes was noted in the Reflexivity note book.

### 3.5.5 Define and naming themes

A definition of what each theme was, which aspects of data were being captured, and what was interesting about the themes was done at this point. A comprehensive analysis of how the themes contribute to understanding of the data was provided and each theme was described within a few sentences in the reflexivity note book.

### 3.5.6 Produce a final report.

When writing the report, the principal researcher decided which themes made meaningful contributions to understanding what was going on within the data. She also conducted a "member check" This is where the researchers go back to the sample at hand to see if their description is an accurate representation. This resulted in a deep description of results. Documentation of why particular themes were more useful at making contributions and understanding what was going on within the data was done. The researcher also described the process of choosing the way in which the results would be reported.

### 3.6 Ethical Considerations

**Benefits:** The study had both direct and indirect benefits. The study helped transform street vendors and empowered them directly to learn & act responsibly using their own lived experiences and increased understanding between food street vendors and local authority thereby bringing about collaborative action. Indirectly, it is influencing behavior change at community level, improving safety and hygiene practices among street food vendors thereby reducing food borne disease burden and promoting health of the population.

**Risks:** Economic Risk: -Street food vendors who consented to participate were likely to lose on income during the time they participated in the research. However, they were encouraged to find someone to sell for them and further explained the benefits of being part of the study. However, no complaints of economic loss were received during the course of the study. A kwacha hundred (K100) transport refund per day was given to all participants during the training and during data collection of the study. The Study used Photo voice as one of the major data collection method. This involved getting of pictures of different scenarios by participants/ researchers which were then discussed collaboratively by the group. During the process, issues of privacy and autonomy arose. Some people refused to get their pictures for different reasons. Therefore, the purpose of getting pictures and how the pictures would be handled during and after the study was explained and consent sort before any pictures could be captured.

**Respect for persons;** - Participation was voluntary. Further, PAR entails a different understanding of what consent, welfare and justice entail. Since the people involved are not mere ‘subjects’ or ‘participants,’ but as key partners in the process, terms and conditions of the collaborative process were set out in a research agreement or protocol based on mutual understanding of the project goals and objectives between the parties, subject to preliminary discussions and negotiations. (TCPS, 2014). Unlike individual consent forms, these terms of reference acknowledged collective rights, interests and mutual commitments. The terms and conditions were that street food vendor participants be trained in food safety and hygiene practices so that they understand food safety and hygiene issues to empower them participate fully in the research and help sensitize other vendors during the PAR research. Further, it was agreed that the trained vendors should be the change models and should continue sensitizing and teaching other vendors even after the research report is compiled. Lusaka City Council with the help of UNICEF funds organized and trained the vendors who had willingly offered to

participate in the research. The training also included photovoice training where they were trained in taking quality pictures and building narratives around the pictures using a SHOWeD technique

Prior to data collection, approval was sought from UNZABREC. Permission was sought from Lusaka City council. Consent was given to health inspectors, councilors and SVA leaders and food street venders. Participants were free to withdraw at any time and confidentiality was strictly observed.

## **CHAPTER FOUR**

### **FINDINGS AND INTERPRETATIONS**

#### **4.1 Introduction**

This chapter presents the findings and interpretations of the study. The chapter begins with a brief description of the participants' characteristics followed by presentation of major themes, categories and explanations of each subtheme with verbatim quotes used to illustrate the findings clearly. Thematic analysis led to identification of major themes and sub-themes categories. The identification of themes were done and presented according to each objective as illustrated in table one (1) and two (2) below.

#### **4.2 Participants characteristics**

The majority of the participants were street food vendors aged between 21 and 65 years old sixty percent (60%) women. Most of them had reached grade 9 level of education. Others were grade twelve (12) school leavers and three (3) had attended college in catering. Most of these vendors had been on the street for over three (3) years selling different kinds of foods. The study also had health inspectors, councillors, and four (4) consumers who were a working class two (2) with university degrees, one (1) with a diploma while the other one had completed grade twelve level of education.

#### **4.3 Perceptions and beliefs of the community about street vended foods in Lusaka**

Using photovoice, focused group discussion and guided interviews, the study explored the perceptions and beliefs of the community about street vended foods in Lusaka. Different perceptions and beliefs of the participants about street vended foods in Lusaka were recorded as shown in table 1. The list of perceptions and beliefs included;- safe, unsafe, cheap, convenient and poor quality as major themes. Those that perceived street food as safe had reasons to believe that street vended food was mostly locally produced free from genetically modified organisms (GMOs) and harmful preservatives. The issue of street food being fresh compared to what they thought is sold in supermarkets also came out strong as another one of the reasons for it being safe. They argued that food sold on the street did not need preservatives and was fresh because it always finished fast the fact that it was cheaper and local compared to what they thought was being sold in well establishments like super markets. They were convinced food sold in those



establishments were very expensive for the majority of Zambians as a consequence, they stayed on shelves for long periods of time and that's why manufacturers added preservatives to enable the food to stay that long on the shelves and these preservatives they claimed were harmful to human health. On the other hand, the group that perceived food sold in supermarkets were mostly GMO and therefore not safe had reason to believe most food sold in supermarkets were imported food products from South Africa and other countries where they believed GMOs and food deception was common. They also gave examples of 'jigies', cornflakes and embalmed meat they saw the council destroy because of GMO and hazardous preservatives

*"Most of the foods we sell is locally produced, fresh and not GMO like what you buy from Shoprite and pick n pay..." (R4fgd1).*

*"Our food finishes fast...we buy and sell fresh food every day..." (R1fgd4).*

*"...It's convenient and cheap... If I buy from woodlands market which is just near home, it would cost me twice as much and I have to look for parking..." (G1r6)*

The majority of the participants' perception however, was that street vended food was not safe and usually of poor quality. They had several reasons for that as highlighted in table 1. Poor hygiene conditions surrounding the preparation, packaging, storage and distribution of most street vended food was the major reason they gave for it being unsafe. They had evidence of several pictures showing poor hygiene practices, indiscriminate disposal of waste near food preparation areas, dirty/ inadequate water used, uncleanness of the food handlers (vendors), dirty surroundings and lack of appropriate facilities such as running water, toilet facilities, shelter, storage and waste bins and more to illustrate the unsafe conditions surrounding street vended foods. The need to secure a central place as a market with adequate facilities as one of the best actions to take in order to improve safety and hygiene practices started developing at this point. The issues of poor quality of fruits and vegetables because of their exposure to the sun compared to what is sold inside the market also came up. It was one of the reasons they emphasised the need for a market to adequately accommodate all the street food vendors and only allow those able to shield their merchandise properly to sell on the street. Questionable sources were another sub-theme under 'unsafe' major theme. Almost all participants agreed that most of the meat and chickens sold on the street though cheap was questionable because it was never inspected and there was no evidence it came from reliable sources. Further, some vendors who used to sell meat before confessed they used to buy condemned meat for resale because it was cheaper.

*“ I used to sale condemned meat before and it used to sale fast because it was cheap and I ate some and never got sick... but when I went for agriculture show I visited LCC stand and I was told about the dangers of eating diseased meat that I can even get epilepsy so I stopped”(r3fgd6)*

A few of these pictures showing poor hygiene practices, indiscriminate disposal of waste near food preparation areas, dirty/ inadequate water used, uncleanliness of the food handlers (vendors), dirty surroundings and lack of appropriate facilities such as running water, toilet facilities, shelter, storage and waste bins and more to illustrate the unsafe conditions surrounding street vended food are as shown in figure 2, 3 and 4.



*Figure 2: poor hygiene practice by street food vendor and very dirty water used for cleaning*

The pictures in figure 2 show a vendor cutting vegetables for salads and texting at same time. The phone can be a source of contamination especially that the salads were meant to be served raw. The other woman is rinsing the plate in very dirty water which is the only water available then wipe with a dirty t-towel on top of the partially hidden red bucket. These are makeshift stands along Lumumba road without any running water, toilets and other basic needs. They buy water from co-boys at K5 per bucket and so they try by all means to ration to serve on cost. The source of water was not known and usually had a turbid appearance. The street food vendors acknowledged that water was the major problem and was needed to help them improve their safety and hygiene practices.

*“...the problem is water, we don't have water in the street...if the council can just provide water we can try to be clean”*



Figure 3: Indiscriminate waste disposal and dirty surrounding food preparation areas

Figure 3 has four (4) pictures showing indiscriminate waste disposal, poor hygiene practices, dirty surrounding food preparation areas and photovoice descriptions as follows; from top left,

*“What you see in this picture is a woman roasting maize for sale along the road. She has no water, no waste bin so she just throws her waste anyhow, her hands are dirty and the food is exposed to dust when the wind blows or a car passes by...”(R1fgd6);*



Top right;

*“What you see in this picture is nsima cooking on top of a blocked drainage; the surrounding is dirty and smells like fecal matter...” (R4fgd1)*

Bottom left;

*“what you see here is the back of a makeshift restaurants along the road it used to be a drainage but has been blocked by people throwing garbage, plastics, bottles and other things...you can't imagine the flies and smell...”*

Bottom right;

*“This is a backyard of makeshift bars and restaurants; it is a waste bin, a toilet people urinate from here ...” (R2fgd2)*



*Figure 4: poorly drained wash-up area also used as storage for solid waste and utensil and is also a serving area*

Figure 4 shows poorly drained wash-up area also used as storage for both utensils and solid waste and also a serving area. The issues of inadequate space, poor hygiene practices and thus unsafe street vended food is what the participant that captured these pictures was trying to emphasize.

*“what you see is a suck of cleaned plates on top of dirty ones next to a bucket full of dirt...the other one is a wash-up area for hands and also dirt pots and plates. It is also a passage; storage space ...next to the green bucket hidden is serving area. People step on bags of waste mixed with sand as they go in to eat to avoid stepping in water...this is serious confusion and how safe can the food prepared and served in this area be?...”*



Figure 5: questionable sources of meat, poor storage and poor handling by meat traders

The picture on the left shows meat displayed for sale and the other one on the right is showing women cutting meat into smaller pieces for sale

*“The meat you see in these pictures is very cheap from K5 even K1 is there but you can’t tell where they get such meat to sale that cheap and people are busy buying. Look at the handling, some are wrapped quiet alright but displayed in the sun, dust and flies are all over the other meat not covered.*

**Table 1: Major themes and Sub- themes for the perceptions and beliefs of the community about street vended foods in Lusaka**

MAJOR THEMES	SUB-THEMES
Safe	-Free from GMOs -free from harmful chemicals /preservatives
Unsafe	-Poor hygiene conditions -Dirty/inadequate water used -uncleanliness -dirty environments - Luck of appropriate facilities -dirty utensils -questionable sources
Cheap	cheaper than supper markets
Convenient	-easily accessible
Poor quality	-Expired or no expiry dates -exposure to the sun -counterfeit products, unknown sources

Most consumers talked to said they bought from the street vendors because it was convenient and cheap. The working class said they did not have to go to the market to buy food if what they needed was just by the road side because markets were congested a bit far from their working place and if you they were driving they needed to find parking which is very difficult to find. The other class said it was very affordable to buy certain food like meat, fish, and chicken from the street than butcheries and supermarkets and you can negotiate the price.

*“I buy from the street because it is cheap. Meat for k5 is enough for the family and I can negotiate for a discount” (GI3)*

#### **4.4 Perceived best action to take in order to improve safety and hygiene practices among street food vendors in Lusaka.**

The use of photovoice, theory of planned behaviour, focused group discussions and in-depth interviews helped us come up with perceived best action to take in order to improve safety and hygiene practices among street food vendors in Lusaka. The results are as shown in table 2 below.

**Table 2: Major themes and Sub-themes on the perceived best action to take in order to improve safety and hygiene practices among street food vendors in Lusaka.**

<b>MAJOR THEMES</b>	<b>SUB THEMES</b>
Training	Safety and Hygiene training of street food vendors by local authority -Hygiene training of vendors by fellow vendors
Provision of facilities or relocation to place with facilities	-Running water -toilets -waste bins -storage -shelter
Sensitizations	-Continuous hygiene sensitization of vendors using photo voice and other participatory methods -Sensitization of people on food safety using pictures on TV, bill boards-radios -teaching the vendors on the importance of cleaning and using of waste bins

	<ul style="list-style-type: none"> <li>-Sensitization by local authority</li> <li>-sensitization by fellow vendors</li> </ul>
Change of business	<ul style="list-style-type: none"> <li>-Change of business for those that can't manage to improve</li> <li>-Change of business if place is not conducive,</li> <li>- closure if no change after sensitization,</li> <li>-Soft loans to help change of business to those that are willing to change</li> </ul>
Organized street vending	<ul style="list-style-type: none"> <li>-Registration of all street food vendors</li> <li>-providing stalls/stands for food staffs</li> <li>- create sections for each category e.g. fruit and veg, restaurant/takeaway</li> <li>Separation of food vendors from other vendors</li> </ul>
Enforcement/political will	<ul style="list-style-type: none"> <li>-Support from government, to do enforcement of food laws</li> <li>-LCC enforcement of food laws with the help of street vendors association</li> <li>-warning and charging the culprits</li> <li>-Food safety monitoring of street vended foods</li> </ul>

The use of SHOWeD technique during photovoice and the application of the theory of planned behavior helped investigate thoroughly the best action to take in order to improve food safety and hygiene practices among street vendors. For example, when the problem of inadequate water supply was identified using SHOWeD technique, a theory of planned behavior was used to investigate further the best action as shown in figure 6.

The behavior section in the figure represents the best actions to deal with the inadequate water supply situation in street food vending. Perceived behavior control brings out the problem of inadequate water supply which makes vendors to fail washing utensils and hands before handling food in clean water as good hygiene practice. The combination of critical reflection, photovoice and the theory of planned behavior helped participants to come up with what they perceived best action so easily and naturally.

## Theory in Practice

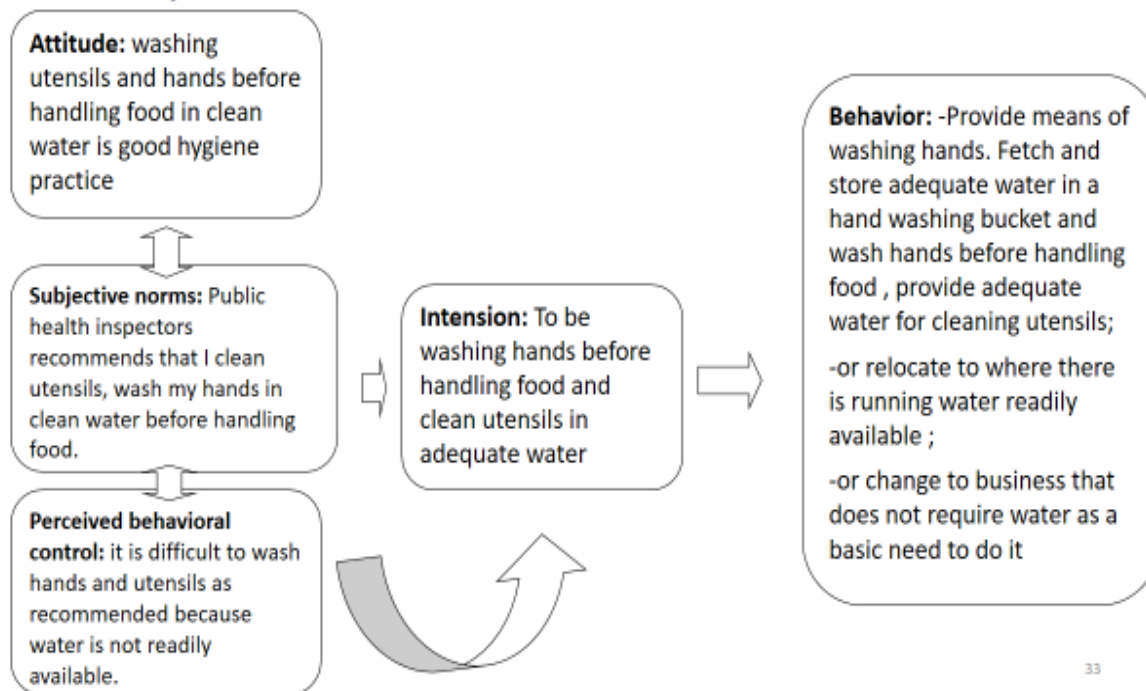


Figure 6: Theory of planned behavior in practice

Training, Provision of facilities or relocation to places with facilities, Sensitizations, Change of business, organized street vending, Enforcement and political will were the perceived best actions the study came up with to improve hygiene and safety practices among street food vendors

### 4.4.1 Training in hygiene and food safety practices:

The vendors perceived best action among other things was training and it topped the list. According to them, most of the street food vendors were ignorant about hygiene that's why they believed if there was a deliberate policy to train food vendors from time to time; their hygiene and safety practices could improve. The vendors complained that LCC abandoned them and never wanted to bring the street food vendors together to teach them hygiene like they did during the orientation for this research. They said some of the poor hygiene practices observed happening during the transect walks were because of ignorance. They claimed most of the things they knew about hygiene they learnt from the food safety training they got from LCC and the information they got helped them a great deal to improve their hygiene activities. Therefore, they thought if the local authority organised deliberate training activities so many people could learn and change. Others thought using television and radio to educate vendors can be the quickest and



convenient way to reach out to them and impart knowledge and they did not need to leave their stands to attend training.

*“You council have ignored us you just watch if you can be bringing us together and teach us ...the way we had learnt during orientation these people who were there have changed but we have some who were not there a lot of people are very ignorant about how to prepare food if they can make some work shop...” (R1fgd1). “... and this is government they can involve the world health and the same UNICEF to come up with money to train us more...” (R5Fgd2)*

Participants from the local authority acknowledged the importance of training but bemoaned lack of funds to conduct such training to all street food vendors because they were just too many. Further they denied the allegations that they neglected the street food vendors and blamed the vendors for gunging up against LCC inspectors and council police whenever they went to the street to conduct inspections. After serious deliberations and discussions, all participants agreed that the best way to go about training was to conduct registration of all food vendors who intend to be selling on the street and train them in food safety and hygiene practices before they can be allowed to do the business. However, this needed serious commitment and collaborative action among all stakeholders to organise for funds, implement the registration activity without any interference and ensure sustainability of the basic requirement that one should have at least one basic training in food safety and hygiene before they can be allowed to sale food on the street.

*“...We just have to work together like others have said as street vendors association, we are ready to work with the council and others to bring change...” (R4fgd4).*

#### 4.4.2 Change of business or relocation to places with facilities

Another perceived action was relocation or change of business if someone cannot manage to meet the basic requirement to deal in food business or if their location cannot allow them to apply adequate hygiene practices. This included those people cooking on top of drainages, areas with no space for improvements, cooking in places where there are no toilets, running water, near rubbish bins, areas too close to the road, cooking in open areas without structures, dirty areas and all those areas where by location or structure, even when the owner wants to practice good hygiene it is impossible unless they relocate to conducive place with basic facilities mentioned earlier. To control and manage this perceived best action, collective action among the key stakeholders (Local authority, street vendor association, street food vendors and political

cadres) to ensure that only those vendors registered and allowed to be in certain areas should be there and those in unacceptable areas co-operate when asked to move or change business if they refuse to move. In addition to change of business and relocation, others thought the council should increase the number of sanitary facilities and provide adequate water supply along the streets in town to avoid people urinate and defecate anyhow. This idea drove the need to have the general public sensitized in general hygiene and public conduct and ensure public nuisance statutory instrument and other related laws enforced to prevent /control such unruly behavior because it was not practical for the local authority to provide toilet facilities everywhere along the street because there were designated places for that.

*“...and that place Stanley is like place where you find people who know how to drink “tujiljili” and urinate anyhow... so it’s not a good place to cook and sell food.” (R1fgd1)*

*“...My only concern and worry is the drainage that is behind because people urinate and even defecate in the same while others are cooking on top ...its better you sale salaula than food and council should provide more toilets and water in the streets to avoid people urinating and defecating anyhow” (R3fgd5)*

#### 4.4.3 Consumer sensitization

When we were trying to explore why the problem of poor hygiene practices persists among street food vendors, most participants blamed the consumer for buying from dirty places and believed if the consumers can be sensitized, they can stop buying from dirty street vendors who could eventually lose business. Inadequate consumer awareness on the dangers of buying food from any street food vendor as long as it was convenient and cheap was also observed when the perceptions and beliefs about street vended foods were being explored. Out of the four (4) talked to, only one thought most of the street vended foods were not safe the rest did not care about safety but convenience and how cheap the food was. Taking all that into consideration, consumer sensitization became another one of the best actions to take to encourage street vendors to improve hygiene practices if consumers shunned buying from dirty vendors.

*“...and the other thing that is causing this is the people who are buying because if they were choosing to say this place looks too dirty I can’t buy here, the dirty vendors wouldn’t have been selling. (R3fgd1). “consumers should be sensitized on the dangers of buying from dirty street vendors and promote us clean ones.”(R1fgd3)*

In addition to consumer sensitization, sensitization of the general public in general hygiene and public conduct as well as enforcement of relevant laws was emphasized.

#### 4.4.4 Organized street vending

All the participants perceived organized street vending as one of the best action to take to improve safety and hygiene practices among street food vendors. Organized street vending in this case meant having a specific street or streets with basic facilities such as running water, waste bins and toilet facilities where street vendors could be selling after being registered as street food vendors. However, they had different ideas on how this should be conducted. Some thought having definite streets provided with basic facilities such as running water, toilets, storage and preparation facilities where all the street vendors should move so that street vending is not in every street was the best action to take.

*What we need is a central place where we can all be selling. if it's a street let us be in that one street with basic facilities ,running water ,waste bins, toilets and storage not all over.''(R3fgd3)*

Others thought the streets were not the best options to prepare food from because they had inadequate space to accommodate the basic facilities required. Their perceived best action was to find a central place like a market with basic facilities to do the storage, washing, cooking, preparations, and packaging before going to sell on the street. In addition, they said the streets should be definite and the vendors must be registered, allocated before trading for easy monitoring/ follow-ups and avoid unnecessary confusion. Registration, further gave them a sense of ownership, belonging and security they said. They further suggested that an assessment on whether a street food vendor is capable of handling the food they intend to sale properly without endangering the lives of the consumer should be done before they can be allowed to sale that food. For example, if a vendor wanted to be selling insima on the street but did not have a safer way of distribution to avoid cross contamination then they could be asked to choose a different type of food they can manage to handle. They also agreed to pay levies if the council was to provide them with the services they needed.

*"I agree with others that's why we need to be registered so that they manage us properly by training and monitoring us. What I am saying is if the council can come up with good*

*structures for the street vendors to sale from, train and monitor us also collect garbage, we can agree to pay some sort of levy for these services. (R6fgd6)*

#### 4.4.5 Enforcement of food laws and Political will

Food law enforcement and political will was another very important perceived best action the participants came up with to improve safety and hygiene practices. The street food vendors expressed concern and worry that the inspectors only inspected registered restaurants and takeaways and ignored the street vendors. Others blamed the local authority for not conducting inspections and enforcement of food laws when it came to street food. During in-depth interviews, health inspectors acknowledged that they stopped inspecting the food sold on the street because the vendors and cadres threw stones at them. They also acknowledged it was difficult to enforce anything because street vending was not organised. They agreed with what the vendors said during FGDs that the local authority and the SVAZ needed to work together and come up with a way to register the vendors dealing in food, provide them with a central preparation and storage area with basic facilities, train them, monitor their activities and prosecute, chase / suspend those that did not comply.

Strengthening food laws enforcement was emphasised to restore order back in the central business district (CBD) of Lusaka. Some participants lamented that as much as there were vendors who genuinely were ignorant about food laws and food safety and hygiene practices, there were those that were deliberately breaking the law to serve their own interests. One example of such people given was the meat traders that sold what they knew was unfit for human consumption and those cooking and trading in dirty places like the ones shown in figure 4 above. Political will was another issue emphasised was needed to prevent cadres from allocating stands for people anywhere with no regard for the law and also control the negative influence these cadres had on the vendors to turn it into positive influence. Food law enforcement required collaborative action among all stakeholders;- inspectors' commitment to conducting food safety/ hygiene monitoring and strengthen enforcement without fear nor favour, the vendors' co-operation and political cadres support if hygiene and safety practices among street food vendors was to improve. The Street Vendors Association of Zambia (SVAZ) committed themselves to be helping the council by suspending those street food vendors that would be failing to maintain safety and hygiene practices and also help assess the vendors before they can be registered and allocated. The vendors also expressed interest in knowing the condition of what they sold

whether it was good and safe for their customers. They said it gave them pride and confidence to market their products knowing they were to the required standard so that they could compete favourably with well establishments

*“The law enforcement of the council needs to be strong because if they are weak its confusion. Just like my friends have mentioned, some things have to be said these politicians should know that this is wrong where health is concerned....we the vendors don't refuse to follow what the council says it's the political cadres that bring confusion in these markets and streets...”(R7fgd5)*

*“Like he said we suspend them for one week they go and sit at home then come the following week and if they don't change they have to go back and stay because they can't listen to laws. (R4 Fgd3)*

*“It's not that we don't want to enforce the food laws and monitor the street food vendors. They are always gunging up against us. Even when we receive a complaint and decide to do a follow up without the police, our safety is not guaranteed and if we go with the police they think we go to fight and confiscate their merchandise so they gung up and start throwing stones”(IDI2)*

#### **4.5 Change in attitude and behavior:**

During the research process, the study recorded 17 out of the 48 street food vendors participants who decided to change the kind business to something they believed could no longer endanger the health of people and give them hygiene stress. This happened during and after the process of self-critical reflections, photovoice and exploration of the theory of planned behavior. Some of these participants felt condemned that they had been exposing themselves and other people to serious health risks and they never noticed or rather very ignorant about the things that were very obvious to them. Others wondered why they never tried to see other avenues to generate income rather than cooking along the street especially with all the stress of inadequate water, preparation areas, storage, cleaning and waste management.

*“this programme has changed me I no longer want to put peoples health at risk I don't want to cook and sell nsima along the street the way I do anymore I have ordered a bell of salaula for now until I find a conducive place...”(R5fgd3)*

*“I no longer want to stress about water and waste anymore. I have decided to try tomatoes and fruits” (R2fgd1)*

#### 4.6 Improved hygiene practices

One of them showed tremendous improvements in hygiene practices during photovoice activities. She could not show the picture of her stand to others the first time she took it before cleaning up because it was dirty and disorganized compared to others and so she was so embarrassed. She said they used to wash in the green dish shown in figure 7 as they served and also asked those that came to eat to wash in the same dish because water was very expensive and she never used to see the dirty until that time she got a picture of it. This forced her to clean-up, buy more containers to store enough water she drew from a distant place she identified as a cheaper and cleaner source, put her utensils in order and provided a portable wash hand basin like what she saw in other pictures. After she did all that, she got another picture of the new look of her stand and that's when she brought both of them for discussion. The pictures are as shown in figure 7



Figure 7: Before and after improvement in hygiene practices by street vendor

*“this is my stand before I cleaned. I never saw how dirty it was until I got a picture of it. It was embarrassing to see my own dirt on the picture like this so I decided to clean and replace a few things, provided a bin, means of washing hands and now I’m proud to show you how my stand is looking now.”(fgd2rpd7)*

#### 4.7 Sense of ownership and empowerment:

The approach process triggered a sense of ownership and empowerment in the vendors that participated. It was amazing to see vendors wanting to own the research and take it upon themselves to train and sensitize others in food safety and hygiene. They even requested for

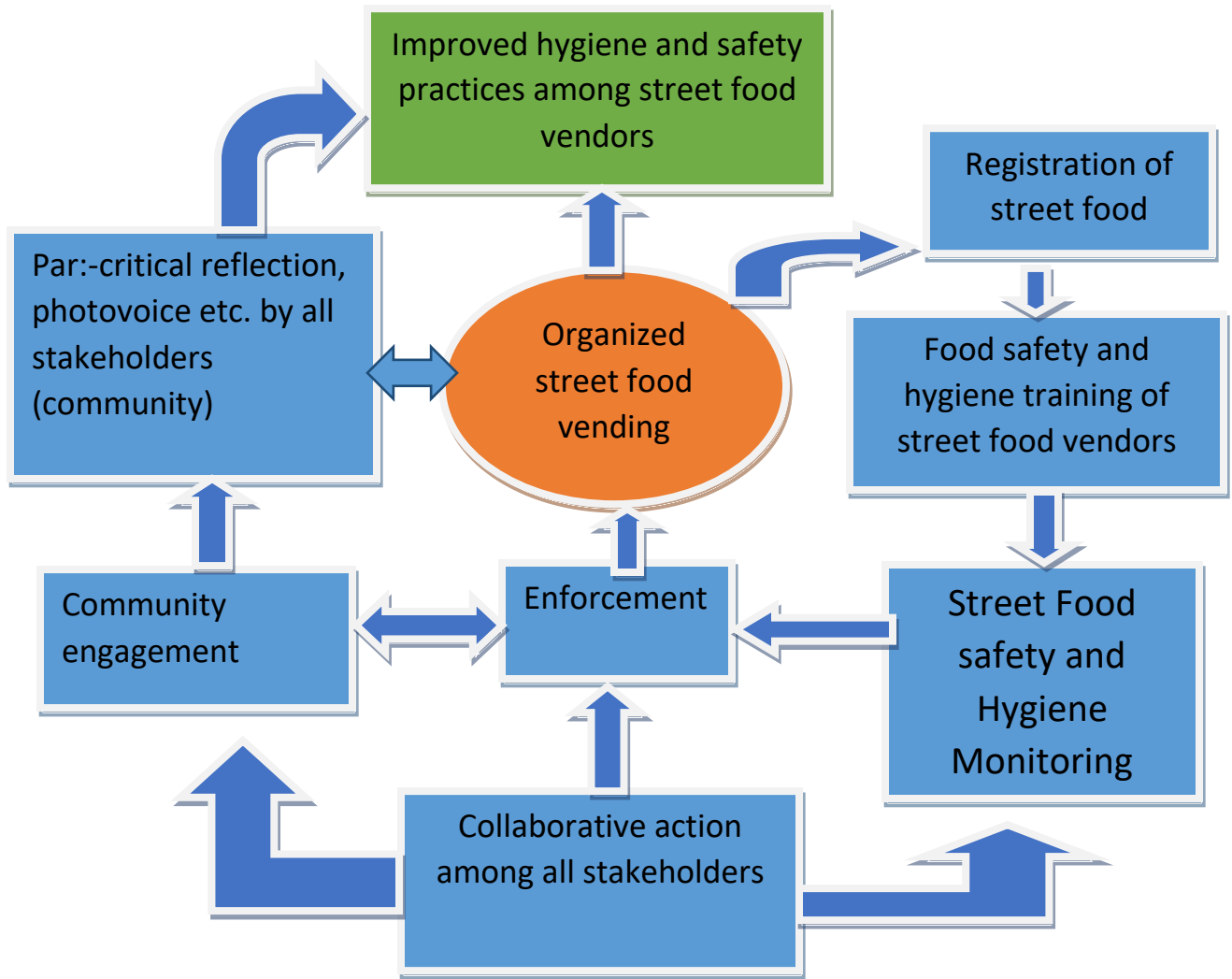
some way of identifying themselves as ‘Street Food Vendors Public Health Taskforce’ with a Lusaka City council emblem

*“I agree with what others have said, this is our program just give us some certificates to show we are trained in food hygiene then identity cards so that we can help sensitize our fellow vendors in good hygiene practices” (R1fgd 4)*

#### **4.8 Participatory action approach framework to improve safety and hygiene practices among street food vendors in Lusaka**

The participatory action framework as illustrated in figure 3 was developed based on the perceived best actions from the second objective. At the center of the framework is organized street food vending. This includes but not limited to securing preparation areas with basic facilities such as running water, toilets and storage for street food vendors without facilities, training and registration of vendors intending to sale food on the street, allocating the registered vendors in particular street so that they are not found everywhere and anywhere. This is expected to bring order in the central business district (CBD) and make it easy for monitoring, follow-ups and traceability when need arises. Those with their own preparation areas could also be allowed to go through the registration and assessment process subject to inspection and approval of their facility.

At the bottom of the framework is collaborative action among all stakeholders who are the political cadres, local authority, consumers, street food vendors and their association. It acts as a pillar that holds all the important components of the framework because that is what it is. Street vending of food is complex and requires collective action. If any of the key stakeholders decides to pull out of the pack or work in isolation then nothing in the framework will remain standing. Community engagement is another component in the framework that cannot be over emphasized to ensure Participatory Action approach by all stakeholders at all times throughout the process to sustain improved hygiene and safety practices. Participatory action research (PAR) which includes but not limited to critical reflections, photovoice and other PAR strategies like participatory theatre etc. Should be part be part of every stakeholder’s life. This would enable responsible actions and sustainability of the positive change required.



*Figure 3: Framework to improve safety and hygiene practices among street food vendors in Lusaka*



## CHAPTER FIVE

### DISCUSSION

The aim of the study was to develop a Participatory Action Research Framework for improving safety and hygiene practices among street food vendors in Lusaka based on their perceptions and beliefs. We used PAR because the approach is in particular a deliberative process through which people aim to transform their practices using a spiral of circles of critical and self-critical action and reflection. It aims to help people investigate reality in order to change it (Fals Borda, 1979). The principal investigator believed that the approach with the help of theory of planned behavior which believes behavior can be deliberative and planned can surely help improve safety and hygiene practices among street food vendors of Lusaka

The study findings indicated that;-training of street food vendors in safety and hygiene practices, sensitization of consumers on street food safety and hygiene issues, relocation of street food vendors to places with required facilities to deal in food business or change of business ,organized street food vending, enforcement of food laws with the help of street vendors association, collaborative action among all stake orders and political will are the best actions to improve safety and hygiene practices among street food vendors in Lusaka. The data collection tool used to get these findings has a participatory property and had potential to empower participants by giving them a voice (Wilson et al, 2006), (Hannay et al, 2013), and (Castleton et al, 2008) and that potential was realized. The vendors together with other participants voiced out what they perceived as best action based on their own experiences. Further, since this approach balances power among participants, promote trust and research ownership (Castle den et al., 2008 and Hannay et al., 2013), the participants voiced out freely without fear nor favor, each bringing out their own experiences making the findings viable and representative. Furthermore, the framework developed is evidence based which if followed to the later can help create a healthful public policy according to Wang and Buris, 1997.

Most of the study findings agree with several other findings on the subject area of street vended foods. For example, the hygienic aspects of street food vending are a major concern for food control officers according to Mensah et al., 2002 just as it is a major public health concern for LCC Public health inspectors. According to the report done by FAO/WHO (2005), vending stands are often crude structures, and running water, washing facilities and toilets may not be

available. The safety of street foods is affected by numerous factors starting from the quality of the raw materials, to food handling and storage practices and failure by street food vendors to put into practice the hygiene practices they know (Charles, et al, 2011). These are the similar issues that this study has found affecting the safety and hygiene practices among street food vendors in Lusaka. Food safety knowledge and sanitation practices of Street Food vendors in many different countries have been studied (Grunert, 2005, von Holy and Makhoane, 2006, Kealesitse and Kabama, 2012, Omemu and Aderoju, 2008, Rane, 2011 and Zengran et al., 2014) and it has been revealed that the majority of street food vendors lack correct knowledge about food safety and hygiene practices, which contribute to their failure to ensure street food quality and safety. This claim is also true according to the study findings. The issue of training of street food vendors in hygiene and safety practices because of lack of knowledge in the area was one the suggested best actions to take in order to improve safety and hygiene practices among the street food vendors in Lusaka.

Although the study area of street food vending in particular is the first of its kind to use PAR approach, there is enough evidence from other studies that used similar approach to bring about the appropriate change they required. For example, Freire, 1972 used PAR to encourage poor and deprived communities to examine and analyze the structural reasons for their oppression. From these roots PAR grew as a methodology enabling researchers to work in partnership with communities in a manner that leads to action for change. This is similarly what this study has done. It used PAR to develop a framework that can bring about the change we require if policy makers can use it as a benchmark. The framework is collaborative in nature. It will enable key stakeholders (LCC, street food vendors, political leaders and consumers) to work collectively together and improve safety and hygiene practices among street food vendors. Several other studies have shown how effective PAR is in coming up with solutions to deal with critical challenges. For example, in the study entitled, ‘How participatory action research supported improvements to the postnatal discharge summary system used for remote dwelling Aboriginal mothers and infants in the Top End of Australia’, Cath Josif, 2006 and others, used PAR to address fragmented and dangerous discontinuities in a postnatal health care discharge system. It provided the participants; health service providers, service users and researchers, with opportunities to collaborate to resolve practical problems and construct action and knowledge in a united manner via a cyclical process. This is similarly what the developed PAR framework is

suggesting should be done in order to improve safety and hygiene practices among street food vendors.

It was surprising to learn that some street food vendors had enough safety and hygiene practices knowledge but were not practicing because according to them it was not possible to practice hygiene where they were located. They could explain clearly why they thought most of the food sold on the street is unsafe and how it could affect people's lives. However, when asked what they were doing about it, they said they could not do anything because the only thing to do was to stop the business they were doing and that meant stopping their only livelihood. Nevertheless, they blamed Lusaka City Council for failure to provide them with adequate market facilities to enable them trade in a safe and hygienic way. It was also surprising to see how photovoice impacted on some of the street food vendors' perceptions and behavior within a short period of time. It empowered them to identify their own gaps and copy from other pictures they perceived were better than theirs. It was amazing to hear someone confess "*It was embarrassing to see my own dirt on the picture like this so I decided to clean and replace a few things,... and now I'm proud to show you how my stand is looking now.*" It was also unbelievable to experience how a single picture can totally change perceptions, behavior and people's lives. It was also interesting to note that contrary to popular belief that street vended foods is for the low income who cannot afford buying from super markets and good establishments, there were some high income class who believed street food is safe and convenient so they bought a lot of it. Their perception was that street vended food was mostly locally produced free from GMOs and hazardous substances and that it was convenient to buy through the car window because one did not have to look for car park. Another surprising finding was the willingness of the street food vendors to work together with the local authority to improve safety and hygiene practices amongst themselves centrally to common belief that street vendors and LCC cannot work together because they have different interests. Some of them were even willing to move out of the street and also pay levies if the local authority provided them with a market with adequate facilities and space.

Among the major findings as best actions were; - local authority to register and provide training to street food vendors in safety and hygiene practices, food safety sensitizations to consumers, providing adequate facilities for storage and preparation of food before they can be sold on the street, food safety monitoring and enforcement. The implication of these findings is that all the key stakeholders (Lusaka City council, street vendors association and political cadres) need to work together in securing and lobbying for a lot of funds to implement all these activities. Further,

there is need for serious commitment from all stakeholders during the implementation process to avoid political interference which has been recorded as the major cause of the problem, failure to prioritize food safety issues by relevant authorities, lack of co-operation from street vendors especially during enforcement.

## **CHAPTER SIX: CONCLUSION**

This chapter provides the conclusion, implications and recommendations of the study.

### **CONCLUSION**

Participatory Action Research (PAR) approach is well suited to addressing controversial issues like street food vending because of its emphasis on dialogue, participation, and its commitment to education. Although it requires more time to appreciate the change we need to see, it has demonstrated that it can for sure improve safety and hygiene practices among street food vendors. The ability of this approach to bring people together and enable them act together for the common interest, managed to bring street food vendors and the local authority together for collective action. Even when they have been like rivals for a long time, the approach was able to bring them together and develop a framework for a common goal.

We believe that if the developed framework is embraced and adopted by policy makers in the quest to improve safety and hygiene practices among street food vendors in Lusaka, it will yield tremendous results and change we require to see.

#### **6.1 Implication of the study**

The implication of the study is that it should help policy makers to come up with proper strategies as they deal with the issue of street food vending. The framework developed can serve as a benchmark and guide for policy makers to follow in their quest to improve safety and hygiene practices among street food vendors. It also serves as a reminder for policy makers and local authority to embrace street food vendors and include them in their actions and plans to ensure effective prevention and control of food safety and hygiene challenges related to street food vending.

The framework is collaborative in nature. It will enable key stakeholders (LCC, street food vendors, political leaders and consumers) to work collectively together and improve safety and hygiene practices among street food vendors. Several other studies have shown how effective PAR is in coming up with solutions to deal with critical challenges like street vending.

## **6.2 Recommendations**

The principal investigator recommends that collaborative action among all stakeholders namely:- the government, local authority, street vendors and their association, consumers and political cadres should be prioritized to quickly bring about the change we require.

Further, engagement in PAR, i.e. more photo voice, self-critical reflection and other PAR activities should be embraced as a life style by all stakeholders to enable them act responsibly and sustain the change.

### **Recommendation to the Local Authority:**

- Lusaka City Council should work together with the street vendor association of Zambia to ensure that only suitable street food vendors are registered and allowed to vend.
- LCC should ensure adequate safety and hygiene training is provided to all registered street food vendors
- Conduct street food safety and hygiene trainings and monitoring/ inspections of vendors to ensure compliance
- Secure a central place with basic infrastructure such as water supply, toilets, preparation areas, storage where street food vendors should be preparing food before they can go and sale on the street
- Prosecute those that fail to comply with the food and public health laws.

### **Recommendation to Political Cadres**

- Support the local authority in all activities aimed to improve safety and hygiene practices in street food vending.
- Refrain from allocating street vendors in undesignated areas or without authority from LCC

### **Recommendation to street food vendors**

- Ensure to adhere to basic safety and hygiene practices during their vending activities
- Engage in more PAR activities and food safety and hygiene trainings.

### **Recommendation to consumers**

- Ensure not to buy food sold under insanitary conditions no matter how cheap and convenient it is.

### **Recommendation to street vendors association**

- Support the local authority in all activities involving street vendors and assist in ensuring that the environment in which vendors are selling are clean and healthy at all times.

## REFERENCES

- Ajzen, I., 1991. The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), pp.179-211.
- Argenti, O., 2000. Feeding the cities: food supply and distribution, 2020 Focus 3 (Achieving Urban Food and Nutrition Security in the Developing World), August 2000, Brief 5(10). International Food Policy Research Institute, Washington, D. C, USA.
- Baum, F., MacDougall, C. and Smith, D., 2006. Participatory action research. *Journal of epidemiology and community health*, 60(10), pp.854-857.
- Bean NH, Griffin PM, Goulding JS, Ivey CB. Foodborne disease outbreak, a five-year summary 1983–1987. *J Food Prot.* 1990; 53:816–826.
- Bhowmik SK., 2005. Street vendors in Asia: a review. *Econ Political Wkly*, pp 2257–2264
- Borda, O.F., 1979. Investigating reality in order to transform it: The Colombian experience. *Dialectical anthropology*, 4(1), pp.33-55.
- Braun, Virginia; Victoria Clarke (2006). "Using thematic analysis in psychology". *Qualitative Research in Psychology* 3 (2): 93
- Cath J., Lesley B. Sarah B-Z., Sue K, Maureen B., 2006. How participatory action research supported improvements to the postnatal discharge summary system used for remote dwelling Aboriginal mothers and infants in the Top End of Australia
- CII, 2008. CII-14 point checklist on food safety for street vended food, version 1.0. [www.cii-iq.in](http://www.cii-iq.in)
- Collis, Jill; Hussey, Roger (2009). *Business research: a practical guide for undergraduate and postgraduate students*. London: Palgrave Macmillan. ISBN 9781403992475.
- Desenclos JCA, Klontz KC, Wolfe LE, Hoecheri S. The risk of *Vibrio* illness in the Florida raw oyster eating population 1981–1988. *Am J Epidemiol.* 1991;134:290–297. [PubMed]
- DeSousa CP. The impact of food manufacturing practices on food borne diseases. *Braz Arch Biol Technol.* 2008;51(4):815–823.
- Ekanem EO, 1998. The street food trade in Africa: safety and socio-environmental issues. *Food Control.* 1998; 9:211–215. doi: 10.1016/S0956-7135(97)00085-6. [Cross Ref]
- FAO, 1997. *Street foods*. Rome: pp. 1–4.
- FAO, 2000. *Street foods made safer*, FAO, <http://www.fao.org/news/2001/010803-e.htm>.
- Freire P., 1972. *Pedagogy of the oppressed*. Harmondsworth: Penguin.

- Ghosh M, Wahi S, Kumar M, Ganguli A., 2007. Prevalence of enterotoxigenic *Staphylococcus aureus* and *Shigella* spp. in some raw street vended Indian foods. *Int J Environ Health Res.*;17(2):151–157. doi: 10.1080/09603120701219204. [PubMed] [Cross Ref]
- Graffham, A., Zulu, R., & Chibanda, D. 2005. Improving the safety of street vended foods in Southern Africa. Final Report, CPHP project R8272.
- Grbich C.2007. Qualitative research in health. An introduction. St Leonards, NSW: Allen and Unwin.
- Grunert, K.G., 2005. Food quality and safety: consumer perception and demand. *European Review of Agricultural Economics*, 32(3), pp.369-391.
- Habermas J.1978. Knowledge and human Interests. (Translated by J Shapiro from original publication in Germany 1968). Boston: Beacon.
- Holy AV, Makhone FM, 2006. Improving street food vending in South Africa: achievements and lessons learned. *Int J Food Microbial*; 111:89–92. doi: 10.1016/j.ijfoodmicro.2006.06.012. [PubMed] [Cross Ref]
- International Journal of Nursing Practice Volume 4 issue 3 1998 [doi 10.1046\_j.1440-172x.1998.00063.x] Lynn Chenoweth\_ Kathleen Kilstoff -- Facilitating positive changes in community dementia manage.pdf>.
- Kealesitse, B. and Kabama, I.O., 2012. Exploring the influence of quality and safety on consumers' food purchase decisions in Botswana. *International Journal of Business Administration*, 3(2), p.90.
- Kolb D A.1984. Experiential learning. Englewood Cliffs, NJ: Prentice Hall.
- Lianghui X, Xingling SM, Yuju C, Zhang L, Haiyan W (1993) Analysis of street food safety in Shandong province, abstracts. In: Final programme street foods epidemiology, management and practical approaches, Beijing, Oct 19–21, p 15
- Lusaka City Council (LCC), 2013; 2014; 2015. Food Complaints Register. Lusaka, Zambia.
- Lusaka City Council (LCC), 2015.The annual public health report (unpublished).Lusaka, Zambia.
- Lusaka City Council (LCC), 2016.Food Safety Monitoring File. Lusaka, Zambia
- Lusaka City Council (LCC),Public Health Department,(2013). Unpublished annual report, Lusaka, Zambia.
- Lynne Ames (August 2, 1998). "The View From/Peekskill; Tending the Flame of a Motivator". *The New York Times*.



- Martins, J.H. & Anelich, L.E. 2000. Improving street foods in South Africa. Funded by the FAO, MFPOI, 2009. Up gradation of the quality of street food. <http://mofpi.nic.in>
- Michael T. Kaufman (February 24, 2003). "Robert K. Merton, Versatile Sociologist and Father of the Focus Group, Dies at 92". The New York Times.
- Michelle T, Cynthia M, Lashaune J (July 29, 2012). Photovoice as a Community-Based Participatory Research Method among Women Living with HIV/AIDS: Ethical Opportunities and Challenges. San Francisco
- Minkler M, Wallerstein N. eds. 2005. Community-based participatory research for health. San Francisco: Jossey-Bass.
- Minkler, M. & Wallerstein, N., Eds., 2008. Community-Based Participatory Research for Health: From Process to Outcomes, 2nd Ed. Jossey-Bass Publishers, New York.
- Minkler, M. & Wallerstein, N., Eds., 2008. Community-Based Participatory Research for Health: From Process to Outcomes, 2nd Ed. Jossey-Bass Publishers, New York.
- Mosupye, F.M. and Von Holy, A., 2000. Microbiological hazard identification and exposure assessment of street food vending in Johannesburg, South Africa. International Journal of Food Microbiology, 61(2), pp.137-145.
- Natural Resources Institute (NRI) UK, 2004. Developing food safety strategies and procedures through reduction of food hazards in street-vended foods to improve food security for consumers, street food vendors and input suppliers. <http://www.nri.org/projects/streetfoods/projects2>
- Omemu, A.M. and Aderoju, S.T., 2008. Food safety knowledge and practices of street food vendors in the city of Abeokuta, Nigeria. Food control, 19(4), pp.396-402.
- RANE, S. 2011. Street vended food in Developing World: Hazard Analysis. Indian Journal, 51(1), 100-106.
- Rome, TCP/SAF/8924(A)
- Tandon R. 1996. The historical roots and contemporary tendencies in participatory research: implications for practice. In: de Koning K, Martin M, eds. Participatory research in health: issues and experiences. London: Zed Books, 19–26.26
- TCPS 2 (2014) — the latest edition of Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans. Panel on Research Ethics.
- Tomlins, K. & Johnson, P.N. 2004. Developing food safety strategies and procedures through reduction of food hazards in street-vended foods to improve food security for consumers,

- street food vendors and Input suppliers. Crop Post Harvest Programme (CPHP) Project R8270. Funded by the DFID.
- Tortoe .C,P-N. T. Johnson, M. Ottah-Atikpo, K. I. Tomlins, 2012. Systematic Approach for the Management and Control of Food Safety for the Street/Informal Food Sector in Ghana.
- Wang, C. & Baker, TA. (2006). Photo voice: Use of a Participatory Action Research Method to Explore the Chronic Pain in Older Adults. *Qualitative Health Research*, 16(10), 1405-1413.
- Wang, C. & Burris, M. (1994). Empowerment through photo novella: Portraits of participation. *Health Education Quarterly*, 21(2), 171-186.
- Wang, C. & Burris, MA. (1997). Photovoice: Concept, Methodology, and Use for Participatory Needs Assessment. *Health Education & Behavior*, 24(3), 369-387.

## APPENDIXES

### APPENDIX 1: Informed Consent Document (Information Sheet)

Reading level 9.9

#### University of Zambia, School of Medicine, Department of Public Health

**Study Title:** Participatory Action Research to improve safety and hygiene practices among street food venders of Lusaka.

I. Principal Investigator: Elizabeth N. Musa

UNZABREC NO:

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#### **Purpose of research project**

This study is part of my practicum for my training in Public Health Masters, which I am doing with the University of Zambia. The purpose of the study is to come up with a participatory action approach basis/ framework to improve safety and hygiene practices in the street vended foods. To do so, I first want to describe the perceptions and beliefs of the community (venders and customers) on the best action to take to improve safety and hygiene in the street vended foods. I also intend to learn what the local authority and stakeholders perceive as the best actions to take to improve safety and hygiene practices in street vended foods of Lusaka

#### **Why you are being asked to participate?**

Potential participants for the study are food street venders, members of the street venders associated of Zambia, public health inspectors, Lusaka City Council Councilors, members of parliament and other stake holders. I have asked you to be part of the study because you suit these descriptions. I expect about 48 street food venders, 4 health inspectors, 2 councilors, 1 Member of Parliament and the director of public health to be part of this study.

#### **Procedures**

If you agree to participate in the study

- I will ask you to take part in a self- reflective cycle. During the reflection, I expect you to plan the change, act and observe the process and penalties repetitively until the desired action is achieved. I expect you to take part in photo voice session where you will be expected to take pictures of what you think or believe are the best or worst practice of food safety and hygiene in street vended food. These photos will then be discussed during focus group discussion. If you are Health inspector, councilor or commit member of the street venders association of Zambia, you will also be expected to participate in an in-depth interview. If you permit me, I will tape record the interview and discussions to help pick all you will say. If not, I will ask you if it will be ok for me to write notes. The information from tape or notes will be typed in full, to help me fully understand what you will say. Your name will not be included in the tape and the typed documents.

## **Risks/discomforts**

There are no physical risks to participating in this study. However, there is a possibility of economic risks for street vendors. This is because if you are a street vendor, you are likely to lose a bit of income during the time you will be required in the project. But, I would like to assure you that the risk will be minimal and you will be advised to ask someone to sell for you while you are participating in the study.

## **Benefits**

Participatory Action Research is a unique process that will help transform you as a street vendor and empower you to act responsibly using your own lived experiences. By participating in this research study, you will increase understanding in the issues of food safety and hygiene and will bring about change and learning. Your beliefs/ perceptions, attitudes and behavior in relation to food safety and hygiene practices will improve. Further, you will be part of the team that will develop a participatory action approach framework to improve safety and hygiene practices in the street vended foods. This framework will be a very important reference point in the future and will help the development of future interventions and policies.

## **Payment**

There is no payment for participating in the study. However, a sum of K100 per day for the two days we will meet to conduct the orientation and focused group discussions will be given to you as transport refund. Further, an additional K 50 per day for 7 days transport refund will be given to those who will participate in transect walks and photo voice during the study.

## **Protecting data confidentiality**

I have put up steps to protect the information I will get from you. First, only my assistants and I will have access to the information. The collected data will be locked in a secure place. I will destroy all data within one year after typing the information.

## **What happens if you do not want to participate in the study?**

You are free to decide whether you want to participate or not. This will not bring any problem to you.

## **Who do you call if you have questions or problems?**

- Call me, <<Ms. Elizabeth N. Musa >>, at <<+260-967987563 or 0976968619>> if you have questions and complaints about the study.
  
- Call or contact the University of Zambia Bio-ethics Committee office for any ethical queries. The Ethics Committee contact information is:  
Address: University of Zambia, Ridgeway Campus, P.O. Box 50110, Lusaka, Zambia.

Telephone: 260-1-256067

Fax: 260-1-250753

E-mail:unzarec@unza.zm

**What does your signature (or thumbprint/mark) on this consent form mean?**

Your signature (or thumbprint/mark) on this form means:

- You have been informed about the program’s purpose, procedures, possible benefits and risks.
- You have been given the chance to ask questions before you sign.
- You have voluntarily agreed to be in this program

\_\_\_\_\_

Print name of Adult Participant	Signature of Adult Participant	Date
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\_\_\_\_\_

Print name of Person Obtaining Consent	Signature of Person Obtaining Consent	Date
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Ask the participant to mark a “left thumb impression” in this box if the participant (or participant’s parent) is unable to provide a signature above.

**APPENDIX 2: Consent Form**

**Reading level: 8.1**

**CONSENT FORM FOR PARTICIPATION IN RESEARCH**

**(By interview,)**

Study on Participatory action Research to improve safety and hygiene practices among the street food venders of Lusaka

I .....

being over the age of 18 years hereby consent to participate as requested in the research project of Study on Participatory action Research to improve safety and hygiene practices among the street food venders of Lusaka

1. I have read the information provided.
2. The details of procedures and any risks have been explained to my satisfaction.
3. I agree to participate fully as required according to the scope of this particular participatory action approach during my participation
4. I am aware that I should retain a copy of the Information Sheet and Consent Form for future reference.
5. I understand that:
  - ✓ I may not directly benefit from taking part in this research.
  - ✓ While the information gained in this study will be published as explained, I will not be identified, and individual information will remain confidential.

**Participant’s signature.....Date.....**

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

**Researcher’s name .....**

**Researcher’s signature.....Date.....**

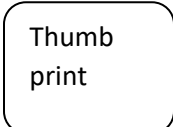
*NB: Two signed copies should be obtained. The copy retained by the researcher may then be used for authorization of Items 6 and 7, as appropriate.*

6. I the participant, whose signature appears below, have read a transcript of my participation and agree to its use by the researcher as explained.

**Participant’s signature.....Date.....**

7. I, the participant whose signature appears below, have read the researcher’s report and agree to the publication of my information as reported.

**Participant’s signature.....**



**Date.....**

### APPENDIX 3: Interviews Guide for Focused Group Discussion and guided interviews

Name of interviewer: .....

1. What are some of your thoughts about what's going on now in street foods vending?
2. Would you say you are satisfied with the current situation, or with the way food is being sold in streets?
3. If so what are you satisfied about? Why is that? (Or, what's going well...?)
4. Are there things you are dissatisfied with about the street vended foods that you would like to see changed? (Or, What's not going well...?)
5. If so what are they? Why is that? How should they change? What kinds of things would you like to see happen?"
6. How about the aspect of safety and hygiene practices of street vended foods? What do you think about that?"
7. How about the issue of training of Food street venders in safety and hygiene practices by local authority? What do you think about that?
8. How about the issue of monitoring safety of street vended foods and hygiene practices of street venders? What can you say about that?
9. How about the aspect of licensing street venders? What do you think about that?
10. Some people have said that one way to improve safety and hygiene practices in street vended foods is to simply remove them from the street and encourage them to have or rent establishment that have adequate facilities.?
11. Do you agree with this?' (Or, how do you feel about that?)
12. "Are there other recommendations that you have, or suggestions you would like to make?"
13. "Are there other things you would like to say before we wind up?"
14. Some "probes" or follow-ups" designed to get more information on a given question:
  - a. Can you say more about that?
  - b. Can you give an example?
  - c. Mr. Phiri says X. How about others of you. What do you think?"
  - d. How about you, Ketty. [Or, "you folks in the corner over there...."] Do you have some thoughts on this?"
  - e. Does anyone else have some thoughts on that?

*I wish to thank you for your time!*

**APPENDIX 4: Guide for In-depth Interviews for the Key Informants- stakeholders (LCC, MOH,)**

**Name of interviewer:**

Date: ..... Place.....Interviewee.....Time.....

**Introduction**

My names are ..... and am principal investigator in this study.

**Purpose:** The purpose of this study is to improve safety and hygiene practices among the street food vendors in Lusaka City central business district using participatory action research approach. I'm here to listen to your views about the street vended foods' safety and hygiene practices. I have a number of questions to ask you. Feel free to tell me about this issue.

**Demographic data**

1. From your data base, can you quantify how many food borne and food poisoning cases/complaints related to street vended foods you have received in the last ;
2. Six months..... One year .....Two years.....
3. Do you have any programs/activities put in place to improve safety and hygiene practices of street vended foods in Lusaka district?
4. Please tell me what you know about safety and hygiene practices among street food venders?
5. From your explanation what do you think can improve safety and hygiene practices of street vended foods in Lusaka?
6. Do you inspect food sold from the street?
7. If the answer to question 6 is YES, how often?
8. If the answer to question 6 is NO, then give reasons why you do not inspect?
9. How much technical support do you give to street venders?
10. Who are the major stakeholders of food safety and hygiene in Lusaka?
11. How would you want to mobilize the opportunities to promote safety and hygiene practices of street vended foods?
12. Who do you think should be involved in the activities to improve safety and hygiene practices of the street vended foods in Lusaka?
13. What are the challenges to improving safety and hygiene practices of street vended foods?

*I wish to thank you for your time!*



**APPENDIX 5: Photo Release for Use of Images**

I hereby give my consent to [photographer's name] to photograph, publish said images of my food safety and hygiene practices.

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*(Please print name)*

---

*(Please print street vender's name)*

I agree that photographs/negatives, thereof shall constitute the sole property of [photographer's name], with full right of disposition in any manner whatsoever, including the right to publish the image in the journal.

I hereby release [photographer's name] and his/her legal representatives and assigns from any and all claims whatsoever in connection with the use, and publication of the images thereof.

---

Signature of owner restaurant (where applicable)

Date

---

Signature of witness

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Name of premises (where applicable)

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Address

Phone

Source: Powers and Pitner, 2012