

SCHOOL OF PUBLIC HEALTH  
COLLEGE OF HEALTH SCIENCES  
UNIVERSITY OF GHANA

**SELF-REPORTED HEALTH STATUS AMONG STREET  
VENDORS IN ACCRA**



THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA,  
LEGON IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE  
AWARD OF MASTER OF PUBLIC HEALTH DEGREE.

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## **Declaration**

I, Monica Ayikai Owusu, declare that except for the other people's investigations which have been duly acknowledged, this work is the result of my own original research, and that this dissertation, either in whole or in part has not been presented elsewhere for another degree.

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## Dedication

I dedicate this work to the Lord Almighty, for providing me with all the resources I need to make a contribution to public health. I am very grateful for His goodness and mercies and the daily benefits He provides for me.



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## Abstract

The health and safety of vendors on the street is not assured. Provision of running water, place of convenience, adequate shelter and other amenities that are needed to promote and maintain health is not usually available for them.

This study aimed to; determine the common health conditions among street vendors, assess vending risk awareness among hawkers as well as assess protective strategies used by vendors to protect themselves from workplace hazards.

A descriptive cross-sectional study was conducted in which 400 street vendors were randomly selected at chosen traffic hot spots in the Accra Metropolis. Vendors were interviewed with a questionnaire, which asked questions on the duration of hawking, personal health experiences, risk awareness, health protection strategies and life style.

Out of the 400 participants 374, representing 93.5% have had an event of adverse health condition during vending. Musculoskeletal disease (82.7%) was the most frequent health condition reported followed by infectious diseases and headaches (73.9%), behavior problems (58.4%), respiratory disease (41.1%), cardiac and acute vascular events (34.3%) and finally skin disease (28.8%). Despite the event of an adverse health condition, 41.1% of the vendors assessed their health as good and 29.8% reported their health changed for the worse after engaged in street vending.

Sex, low weekly profit, and longer work duration seem to predispose vendors to ill health.

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### **List of acronyms**

**DFI:** Department of Factories Inspectorate

**ILO:** International Labour Organization

**PAH:** Polycyclic Aromatic Hydrocarbons

**SPSS:** Statistical Package for Social Scientists

**WHO:** World health Organization

**WIEGO:** Women in Informal Employment: Globalizing and Organizing

## Definition of terms

**Employment / Occupation:** Means of securing the necessities of life.

**Health condition:** A condition that impairs normal functioning of the body.

**Informal sector:** Economic activity which is not formally recognized by government, non-taxed, and has no employment benefit but has a flexible work schedule.

**Musculoskeletal diseases:** Describes a variety of conditions that affects the muscles, bones and joints. Pain and discomfort from this condition may interfere with everyday activities such as walking, sitting and bending.

**Protective Strategies:** Planned schemes of protecting one's self against adverse events.

**Risk:** The probability of an undesirable outcome, resulting from a given action, activity and or inaction.

**Risk awareness:** Knowledge of the possibility of something undesirable.

**Street vendor / hawker:** Someone who markets and sells goods along the street.

**Traffic hotspots:** Streets/ roads/ highways with high vehicular activity in comparison with others.

**Urban:** Relating to city / metropolitan.

## CHAPTER ONE

### 1.0 INTRODUCTION

Half of the world's populations now live in urban areas largely because of rural-urban migration and natural increase. Urbanization has led to an unmet demand for housing, transport and employment opportunities (McMichael, 2000). The unmet need for unemployment has initiated the creation of informal employment of which includes street vending.

Urbanization has also led to the alteration of the composition and the function of urban environment. The modified quality of urban environmental conditions has significant implication for health on urban inhabitants ( Fobil, 2010).

Urbanization although advantageous to some effect, comes along with increasing prevalence of diabetes, heart disease, obesity, mental health problems, misuse of alcohol and drugs, and violence, usually among the lower social class. Also road traffic injuries, vehicle-related air pollution, and traffic noise causes poor health and deaths each year in the urban setting (Friel et al 2008).

The activities of hawkers were not incorporated into the design and construction of streets. Neither is there work practices to regulate duration of exposure to work hazards. Protective equipment usage is not pronounced among these informal sector workers.

### 1.1 Background

The term street vendor, used interchangeably with street trader, hawker and peddler is a person who sells goods and services in the street and other public places such as pavements, corners,

sidewalks, neighborhood sidewalks, railways stations, bus stops, lorry terminals, construction sites and around sport complexes.

Street vending is found all across the world- in developed, transitional and developing countries, but is most rampant in developing countries (Bromley, 2000). It is more concentrated in urban areas.

Unavailability of gainful employment and poverty in rural areas has forced the workforce in rural areas to migrate to cities in search of greener pastures. Most migrants do not usually have the skills and education to be gainfully employed in the formal sector so they fall on the informal sector. Also some workers of the formal sector who have been laid off due to downsizing resulting from economic down turns also fall on the informal sector for survival (Bhowmik, 2005). That is to say that street vending entices the disadvantaged in the society; people who mostly have limited skills and capital primarily due to low education and poverty, and people who migrate into the city for jobs. (Cross, 2000)

Other reasons given for vending on the street include:

- a) The lack of finance for larger business
- b) It is a source of economic support for family members,
- c) The lack of space in the markets,
- d) Tax evasion and landlessness,
- e) Retrenchment from formal work, low level of education and poverty (Mitullah, 2006).

The ILO reports that the informal employment sector, which includes street vending accounts for almost 80 per cent of non-agricultural employment, and over 60 per cent of urban employment in Africa and in Ghana it constitutes 70 per cent or more of all employment. Street vending predominates much of the informal sector (ILO, 2002).

The government of Ghana official portal reports that more than half (51.8%) of the economically active people living in Accra are into informal employment (Government of Ghana, 2013).

Street vendors do not have the necessary awareness, technical means and resources to put into practice health and safety measures. They do not have occupational health and safety support and labour laws to neither regulate nor adequately provide for them (Lund & Marriott, 2011).

The streets are littered after vending activities. Street vendors who sell food are noted for unsafe food practices thus street vending in Accra has raised lots of eye brows from the government, city authorities and other stakeholders regarding cleanliness, slums, crime, health, human and vehicular congestion (Asiedu & Agyei-Mensah, 2008)

Despite these concerns, very little research has been conducted on the adverse health effects of vending on the vendor.

## **1.2 Statement of the problem**

Population trends suggest that urbanization is increasing. In view of recent economic downturns more people from rural areas will be forced to move into urban areas.

The ambience of urban environment is distorted of which street vendors are more likely to face adverse effects of these environments such as high concentration of air pollution; than other urban population because they have little or no protection against the harsh environmental conditions while on the street.

Street vendors face peculiar livelihood challenges and occupational hazards for instance many must lift and lug heavy loads of goods to and from their point of sale each day without assistance.

They stand to face road traffic accidents from improper regulation of traffic in commercial areas. The possibility of emotional stress is possible among vendors because they are seen as encroachers on the streets; so there are extensive attempts to take them off the streets

### **1.3 Conceptual Framework**

This framework acknowledges the fact that the health of vendors, is influenced by interconnecting factors. The model (Fig.1) groups the factors that could possibly affect the health of vendors under four subsets namely; Socio demographic and economic status, Protective strategies, Risk awareness of vending and Duration of vending.

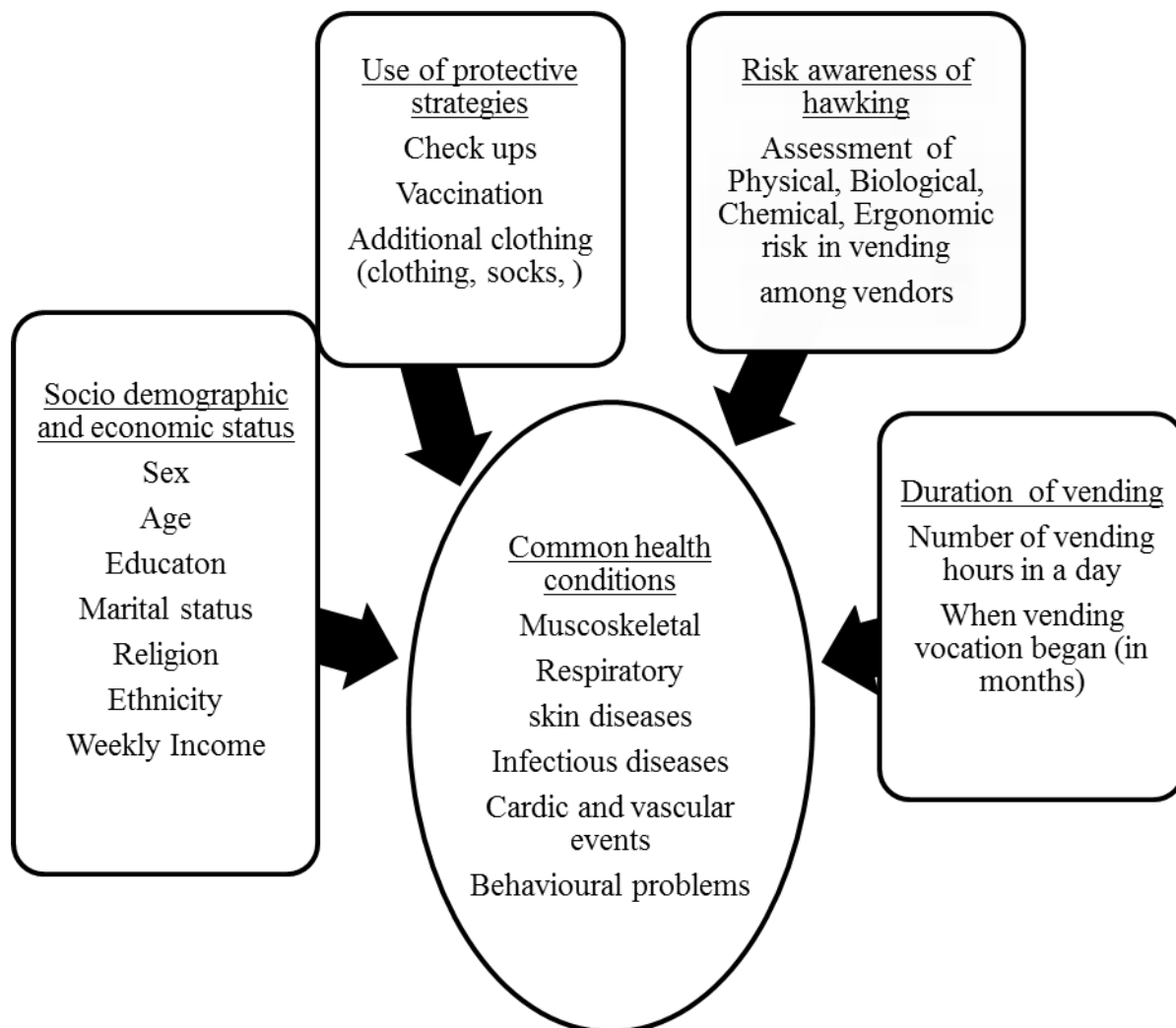
**Socio demographic and economic status:** These include age, sex, level of education, marital status, religion, ethnicity, and weekly earnings. These variables can influence the choice of occupation one engages in this case-street vending. Education particularly, trains individuals to evaluate and use health information. Religion and ethnicity shape behavior of individuals to conform to society.

**Protective strategies:** Protection is to primarily boost health. A protective strategy minimizes adverse health conditions to the user. It could be additional clothing, health insurance, vaccination, frequent intake of medication and even abstaining from vending during hot hours of the day. If strategy is performed religiously it will reduce the likelihood of ill health.

**Risk awareness among the vendors:** Danger alert informs health decisions such as the use of protective strategies and subsequently influences overall health. Investigation of risk awareness

raises questions such as; are vendors aware of health risks associated with their occupation and if they are which risks are they know of? How does risk awareness influence the use of protection strategies and vendors overall health?

**Duration of hawking:** This study sought to find out how long vendors were exposed to the street and its impacts on health; does longer exposure boosts or mar health? Exposure time was measured in hours, days and months.



**Figure 1: Conceptual Framework**

#### **1.4 Justification**

Health has been found to be directly proportional to wealth thus the health status of the workforce of every country has an effect on the productivity, national economy and the global economy at large. Hence every economic activity has to be investigated so that conditions that can be caused or exacerbated in the workplace can be controlled.

Street vending is becoming an important livelihood for some portion of urban dwellers therefore health outcomes from pursuing it has to be documented.

Results from this study would attempt to bring out the impact of occupational diseases and health related quality of life of street vending.

It will also educate the public including street vendors about probable health conditions that could be encountered when vending; so that adequate protection measures can be put in place.

The findings will inform city authorities on how to educate vendors on safety in their vocations and most importantly, regulate their activities with appropriate occupational health and safety policies.

The healthcare system could use results from this research to plan; preventive and curative therapies to treat work related diseases presented to health facilities.

It will also provide baseline information; for further research on health needs of vendors and national socio-economic planning.

## **1.5 Study Objectives**

### **1.5.1 Main Objectives**

To assess self-reported health status of vendors in selected traffic hot spots in the Accra

### **1.5.2 Specific Objectives**

1. To determine common health conditions among vendors
2. To assess vending risk awareness among vendors
3. To assess commonly used protective strategies

## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### 2.1 Characteristics of vendors

Street vendors sell virtually everything from food items, through pharmaceuticals to household appliances on the streets. They move by walking or cycling through the street selling their merchandise or they are stationary displaying their wares at a point.

Vendors choose their location based on several factors such as the type of goods sold, availability of customers, social fraternity and ethnic affiliations (Akers & Akers, 2003).

They are usually self-employed entrepreneurs or work for family or friends. There are some who work for formal enterprises either on commission or regular salary basis (WIEGO, 2013).

Their numbers vary depending on the time of day or season of the year. While some sell only during a particular season, others sell at weekends and some only in the morning or afternoon or evening. This makes estimating their numbers difficult (Brown, Lyons, & Dankoco, 2010).

This occupation is not sex biased, everyone engages in it but women dominate. This is because it offers flexibility to women in terms of working hours, and freedom mainly in terms of exercising their domestic duties and reproductive roles. Thus increased numbers of male vendors could be an indication of the changes in the urban labour markets (Agadjanian, 2002).

#### 2.2 Health risk associated with vending

The ambience of workplaces has been shown to contribute to the health of workers in that workspace. Features that makes a work environment comfortable includes but not limited to: availability of healthy, high quality and affordable food, gym and other facilities that encourage

fitness, comfortable shelter which is safe and appealing, clean portable water, place of convenience, rest and lunch breaks provision, personal protection equipment, attention to appearance and personal hygiene and sound mind that excludes change of behaviour. All these features are aimed at reducing physical, chemical, biological and psychosocial hazards at the workplace.

### **2.2.1 Physical risks**

The physical environment comprises of buildings, atmosphere, water quality, indoor and outdoor air, recreation and working spaces, geology and climate of the environment.

Altered natural environment of urban areas have been known to impinge on both physical and mental health. (Galea & Vlahov, 2005) Health conditions such as asthma, respiratory conditions, injuries and psychological distress have been associated with the built environment (Evans et al., 2000; Krieger & Higgins, 2002).

There is no confined space to vend, so vending is done in the open exposing the vendor to high concentrations of atmospheric pollution, the scorching sun and other harsh weather conditions. (Skinner, 2011)

Atmospheric pollution a characteristic of busy metropolises, results from incomplete fossil fuel combustion (Janssen et al., 2003; Oftedal et al., 2003). The greater the exposure to atmospheric pollution, the more likely a health-related problem might arise.

Vehicular exhaust emission, emissions from industrial source, open burning of waste and other material, road and wind-blown dust and dry harmattan winds were the major sources of ambient air pollution in Accra (Nerquaye- Tetteh, 2009)

In the study “Measurement of genotoxic air pollutant exposures in street vendors and school children in and near Bangkok”, air quality and vehicular movement were measured. Street vendors had higher levels of particles-associated with polycyclic aromatic hydrocarbons (PAH) and benzene (both air pollutants) than school children, monks and nuns nearby in the same community (Ruchirawat et al., 2005).

When street vendors in Baguio City in the Philippines were studied, it was discovered that colds, asthma, high blood pressure, intense headaches, and arthritis were health conditions street vendors reported at the traffic hot spots. Also streets with fast moving vehicles in the early morning hours have the highest levels of pollutants. This implies that vendors who work very early morning are exposed to this pollution. There was a correlation between the slope of the vending environment and type of health condition affecting the vendor (Akers & Akers, 2003).

According to Amegah & Jaakkola 2014, exposure of pregnant street vendor to traffic-related air pollution somewhat impaired foetal growth.

Poor manual handling practices such as picking objects without bending the knee and awkward posturing; which predisposes one to musculoskeletal diseases is a common phenomenon during street vending. In the South African study on street vendors, more than half of 422 respondents reported some form of work related illness. Hawkers frequently experienced Burns, cuts, headaches, musculoskeletal, and visual disturbance. Different health problems were peculiar to different age groups. For instance, older women were more likely to get headaches than younger ones (Pick et al., 2002).

Street vendors are more prone to road traffic accident than the ordinary citizenry. Their advertisement (calling out for customers), bargaining of customers, noises of vehicles and

drivers' assistant calling their routes make traffic spots noisy. This description is typical of rush hours. The busy walkways are difficult to navigate, forcing pedestrians onto the street and this exposes both pedestrians and street vendors to motor accidents (Eden, 2010).

### **2.2.2 Biological Risk**

Accra is plagued with uninhibited solid waste burning, choked and stagnant open drains, and decrepit housing conditions. There has been a connection between neighborhood environmental conditions and malaria and diarrhea mortality. Mortality rates were found to be distributed disproportionately along socioeconomic lines with the poor being the most affected ( Fobil et al, 2010).

Human induced urban environmental alterations have been shown to alter dynamics of disease causation. Urban areas with higher waste build up offer better breeding sites for insect vectors than areas with frequent waste disposal regimen (Fobil, 2010).

In a study conducted in Takoradi and Accra to investigate occupational risk among street vendors; debris of sachet water, food and other solid waste at their job sites were risk identified by vendors. The traders also cited choked market drains with pungent smell emitting from them as risk. The choked gutters were breeding grounds for vectors of infectious diseases. The investigators of the study observed potholes on the streets on which vending took place. The potholes had collected rainwater, enhancing propagation for mosquitoes. Infectious disease agents could be harbored in such environments. (Alfers, 2009)

Toilet facilities were lacking and public toilets nearby were poorly maintained; making hawkers liable to urinary tract infections and kidney ailment.

Aside the risk of acquiring infectious disease from the street, street vendors are exposed to brutalities of street life such as rape, commercial sex work and crime, because they literally live in the street.

More than half of participants of study subjects on reproductive implications of vending testified that they knew of other vendors in relationships, although they considered it as morally wrong. Female vendors confirmed that they got sexual advances from customers, their fellow vendors and passers-by. Some participants also confirmed that poverty and lack of proper accommodation push female vendors into sexual relationships, some of which result in pregnancy or abortion. The knowledge of family planning was found to be lower among street vendors than the average Ghanaian (Kwankye, Nyarko, & Tagoe, 2007).

### **2.2.3 Psychosocial risks**

The WHO on occupation explains that psychosocial risks are in synchronization with work-related stress. Heart disease, depression and musculoskeletal disorders can be the aftermath of stress (WHO | Occupational health, 2013)

One of the top causes of stress among street vendors is eviction and /or confiscation of their wares by city authorities. Vending on the street is illegal in many countries. Vendors trade in perpetual fear of expulsion because they can be chased out of the street at any time. Eviction risk is intensified during street events, elections and city beautification exercises (Skinner, 2011).

Abuse and violence from their customers or colleagues is another challenge reported by hawkers. Pick et al accounts that 1 out of every 4 street vendors in Johannesburg has been abused verbally,

physically or sexually. These abuses are not reported to law enforcement agencies because the police and other authorities will usually not take any legal action (Pick et al., 2002).

Children who vend on the street are not spared of violence. Bullying disclosure to survive in the street revealed that; children equipped themselves with anti-verbalism as a defense mechanism to survive on the street. These children do not mind ascribing unpleasant attributes to their contenders. Others suffer from mental disorders from the brutalities on the streets. (Akbari et al., 2013)

Street traders in Accra and Takoradi admitted to being stressed from worry because they have no support. Credit facilities are difficult to access and they also have to pay for services in full with exorbitant tolls and taxes (Alfers, 2009).

Street vendors usually do not have a common voice. Neither do they have any social protection such as insurance and pensions. It is difficult for vendors to sustain their own initiative because of their job instability and other reasons (Skinner, 2011).

Section 24(1) of the 1992 constitution of Ghana states that “Every person has the right to work under safe and healthy conditions...” however the Department of factories Inspectorate (DFI), the Occupational Health and Safety agency of the Ministry of Employment and Labour Relations; function under the outdated Factories, offices and shops Act of 1970. The new labour Act- the Labour Act of 2003 does not cover all informal work. Also DFI does not have all the resources needed to carry out its mandate and extend to other duties. (Tettey, 2003)

There are other government machineries that indirectly impacts on occupational safety and health and these includes the Environment Protection Agency, the occupational and environmental unit of the Ghana Health Service and the National Road Safety Commission.

#### **2.2.4 Using a self-health assessment as a measurement of health**

There is no gold standard for measuring health status. Measurements could be clinical examination which rates health based on several observations; such as presence or absence of a chronic health condition, severity of a disease, and health in total. A laboratory test can be performed to diagnose a person and ascertain the severity of diseases.

Another measure of health is by self-health assessment. This can be based on general well-being and perception of health. The person, whose physical condition is of interest, can be asked to assess his/her health. (Krause & Jay, 1994).

A self-health assessment is the way a person feels about his or her health. It also relates to how a person seeks treatment, is satisfied with care and to an extent how he/she complies with treatment. To an extent self-health assessment can predict health actions such as use of medical and prevention services (Linn, et al 1980).

Self-health assessment is an important risk indicator and predictor of supplementary information of clinical assessment and physical performance status. Compared to other measures of health, it is equally reliable (Bjorner, Fayers, & Idler, 2005).

Therefore to be able to improve one's health and quality of life it is essential to be aware of an individual's health status.

However, people consider different issues when assessing their health. For instance people of different age and sex consider different concerns, so do people with or without a certain condition. People of different cultures and social class perceive health differently (Simon, De Boer, Joung, Bosma, & Mackenbach, 2005). For instance in some cultures putting on weight is a sign of good wellbeing, while in others, it is a precursor of an unhealthy lifestyle.

Research on street vendors has been focused on safety, food-borne disease, effect of physical environment on vendors and reproductive health. However there is scanty literature on the perception of health of hawkers.

## **CHAPTER THREE**

### **3.0 METHODS**

#### **3.1 Type of study**

A descriptive cross sectional study was conducted between May and June 2013. The study sought to determine the common health conditions prevalent among vendors. The study also assessed associations between duration of vending, protection strategies, and risk awareness of vendors in comparative analysis to the common health conditions of the vendors.

#### **3.2 Study location**

Accra is the capital city of Ghana and the most populous city. It holds the headquarters for many government and non-governmental institutions. It is a commercial, industrial and communication center and thus has lots of economic activities during the day. In view of growing urbanization, there is an influx of people migrating to Accra to seek greener pastures. During the rush hour large numbers of people are seen on the roads appearing to be moving to and from their source of livelihood. This sometimes creates lots of pedestrian and vehicular traffic. Usually heavy vehicular traffic accumulates near city centers and areas with huge numbers of people.

Although traffic situations are uncomfortable for road users, vendors find market haven in congested traffic spots. Vehicle owners, passengers and pedestrians are all potential customers and that is a guarantee of good sales. Hence their activities and advertisements are strategized to attract customers. It is therefore not uncommon to find vendors lined up on traffic hotspots to market their wares.

This study was conducted at selected heavy traffic hot spots in Accra; namely the Kwame Nkrumah Circle, Mallam-Odorkor, Dzorwulu Junction, Kaneshie and the 37 Military Hospital Highways.

### **3.3 Variables**

#### **3.3.1 Dependent variable**

Health conditions vendors are likely to encounter at work

#### **3.3.2 Independent variables**

Demographic and socio economic status of hawkers

Protective strategies used by vendors to prevent or minimize the impact of hazards

Knowledge or observed risk associated with hawking.

Duration of vending (Exposure time investigation in months and hours per day)

### **3.4 Study population**

Street vendors, at selected traffic hot spots in Accra such as the Kwame Nkrumah Circle, Mallam- Odorkor, Dzorwulu Junction, Kaneshie and the 37 Military Hospital Highways.

### **3.5 Sampling**

Based on the knowledge of the population to be studied and the purpose of the study, purposive sampling was used to recruit vendors at selected traffic hot spots. The vendors met the characteristic of interest and their recruitment will help to gain a better understanding of the patterns of behavior under investigation.

### 3.5.1 Sample size

400 participants were recruited. (This comprises of an actual calculated number of 379 from the formulae below with an added allowance of 5.5% (21 participants) to cater for questionnaire unresponsiveness and unforeseen withdrawals from the study)

*Estimated Sample Size (n)* =  $\frac{z^2 \times p(1-p)}{d^2}$ , where z is 1.96 (95%) confidence interval

*Final Sample size(s)* =  $\frac{n}{1+\frac{n}{N}}$  p (1-p),

using worst scenario of 50% prevalence =  $0.5(1-0.5) = 0.25$

d is 0.05(5%) margin of error

N is estimated population of study subjects = 379

### 3.6 Data collection

The questionnaires were administered to participants in person at their job sites. Participants were interviewed in English, Twi or Ga.

The questionnaire by way of design had a checklist of expected health conditions vendors were likely to experience; from which they selected those they frequently had. Questions; on duration of vending, risk involved in vending and protection strategies, and most importantly how they assessed their health in general were answered. However, questions on their reproductive health were omitted because of the sensitive nature of such questions and mode of data collection. The face-to-face interview employed is likely to make participants uneasy answering questions on their reproductive health.

### **3.7 Quality control**

Questionnaires were pre-tested; to identify errors and for consistency of the variable. Pre-testing was conducted at the Tema motorway roundabout.

Research assistants were trained and supervised to effectively administer the questionnaire. It was ensured that the research assistants interpreted questions well in the local dialects to bring out the answers sought without introducing interviewer bias.

Daily monitoring and evaluation was done to review each research assistant's work.

### **3.8 Data processing and Analysis**

The questionnaires were analyzed with Microsoft excel and SPSS version 20. Binomial regression was used to establish the degree of association between variables. Pearson chi square test of associations was done among variables to find out if associations were statistically significant. Results were presented in text, tables and graphs.

### **3.9 Ethical considerations**

Ethical clearance was obtained from the Ghana Health Service Ethical Review Board.

Informed consent was sought from participants before answering the questionnaires. Only subjects who gave consent were interviewed. Participants could withdraw from the research at any point during the interview.

There were no potential risks in the study; on the other hand information obtained from this study could serve, as a model for policy making that will be beneficial to the vendors.

Confidentiality and privacy of participants were assured in accordance with provisions in data protection legislations under the laws of Ghana; such that their identities were adequately protected.

After conducting the fieldwork, questionnaires were locked in a cabinet and only the principal investigator and supervisors have access to it. The data collected is password protected to prevent unauthorized people from accessing it.

## CHAPTER FOUR

### 4.0 RESULTS

#### 4.1 Demographic Characteristics.

**Table 1: Demographic characteristics of participants (cont. in table 2)**

	Characteristics	Frequency	Percent
<b>Gender</b>	Male	139	34.8
	Female	261	65.3
	Total	400	100.0
<b>Age in years</b>	≤19	66	16.5
	20 – 29	233	58.3
	30 – 39	70	17.5
	40 - 49	22	5.5
	50 - 59	8	2.0
	60 - 69	1	0.3
	Total	400	100.0
<b>Educational background</b>	No Education	83	20.8
	Primary	77	19.3
	JHS	172	43.0
	SHS	42	10.5
	Vocational	12	3.0
	No response	14	3.5
	Total	400	100.0
<b>Marital status</b>	Single	272	68.0
	Married/cohabiting	107	26.8
	Separated	8	2.0
	Divorced	5	1.3
	Widowed	7	1.8
	No response	1	0.3
	Total	400	100.0
<b>Religion</b>	Christianity	362	90.5
	Islamic	33	8.3
	None	1	.3
	No response	4	1.0

**Table 2: Demographic characteristics of participants (cont. from table 1)**

	<b>Characteristics</b>	<b>Frequency</b>	<b>Percent</b>
<b>Ethnic group</b>	Akan	278	69.5
	Ga	45	11.3
	Ewe	35	8.8
	Northern	39	9.8
	No response	3	0.8
	Total	400	100.0
<b>Profit (In USD)</b>	≤ 5	21	5.3
	6 – 15	99	24.8
	16 – 25	109	27.3
	26 – 35	64	16.0
	36 – 45	27	6.8
	46+	75	18.8
	No response	5	1.3
	Total	400	100.0

*\* 1 USD is equivalent to GH¢2.05750 as at 24/07/2013 from forex rating.com*

Tables 1 and 2 above exhibits the characteristics of vendors enrolled in this study.

A total of 400 participants were enrolled in this study. Female vendors contributed to 65.3%, while males contributed to 34.8% of total enrollment. Majority of the participants (92.3%) were under 40 years of age.

Results indicate that 79% of respondents have had some basic education. Single vendors were largely (68%) recruited than married, divorced and separated vendors. Less than half (41%) of the vendors earn more than \$25 a week.

When asked if a vendor had another job aside street vending only 33 vendors representing 8.3% responded in the affirmative.

## 4.2 Assessment of health status

When street vendors were asked to assess their health on a scale of 1-5 (where 1 was excellent and 5 was very poor); sex, weekly profit (in USD) and duration of hawking (in hours) had significance on the ratings. 250 participants said they work 7-12 hours a day for 6-7 days, marking it as the most common work duration. Table 3 illustrates the responses.

**Table 3: Self-assessment stratified along sex, weekly profits and duration of hawking in hours**

		Self-health assessment N (%)					$\chi^2$ statistic
		Excellent	Very Good	Good	Poor	Very Poor	
<b>Sex</b>	Male	18 (4.5)	43 (10.8)	52 (13.0)	20 (5.0)	6 (1.5)	16.67*
	Female	14 (3.5)	53 (13.3)	112 (28.1)	60 (15.0)	21 (5.3)	
	Total	32 (8.0)	96 (24.1)	164 (41.1)	80 (20.1)	27 (6.8)	
<b>Weekly profit in USD</b>	<= 5	3 (0.8)	1 (0.3)	9 (2.3)	7 (1.8)	1 (0.3)	36.56**
	6 – 15	7 (1.8)	17 (4.3)	44 (11.2)	22(5.6)	9 (2.3)	
	16 – 25	5 (1.3)	24 (6.1)	44 (11.2)	25 (6.3)	11 (2.8)	
	26 – 35	7 (1.8)	14 (3.6)	28 (7.1)	13 (3.3)	1 (0.3)	
	36 – 45	4 (1.0)	7 (1.8)	11 (2.8)	4 (1.0)	1 (0.3)	
	46+	6 (1.5)	33 (8.4)	24 (6.1)	8 (2.0)	4 (1.0)	
	Total	32 ( 8.1)	96 (24.4)	160 (40.6)	79 (20.1)	27 (6.9)	
<b>No. of hours hawked per day</b>	1 – 6	7(21.9)	20(21.1)	9(5.5)	10(12.8)	1(3.8)	30.60***
	7 – 12	18(56.3)	59(62.1)	136(83.4)	64(82.1)	23(88.5)	
	13 – 18	7(21.9)	16(16.8)	18(11.0)	4(5.1)	2(7.7)	
	Total	32(8.1)	95(24.1)	163(41.4)	78(19.8)	26(6.6)	

\*p =0.002

\*\*p =0.013

\*\*\*p<0.0001

Other demographic features; such as age ( $\chi^2=30.319$ ,  $p=0.065$ ), education ( $\chi^2=25.09$ ,  $p=0.068$ ), marital status, religion, ethnicity, and area of residence did not have any connotation on health assessments. Analysis also revealed that; having a chronic condition prior to vending ( $\chi^2=5.189$ ,  $p=0.268$ ) and another occupation aside vending ( $\chi^2=3.43$ ,  $p=0.904$ ) did not have any significance on assessing health.

Only 3 out of the 33 participants, who had other jobs aside hawking, reported health problems with the other occupation.

Almost 10% of participants had chronic health conditions prior to street vending.

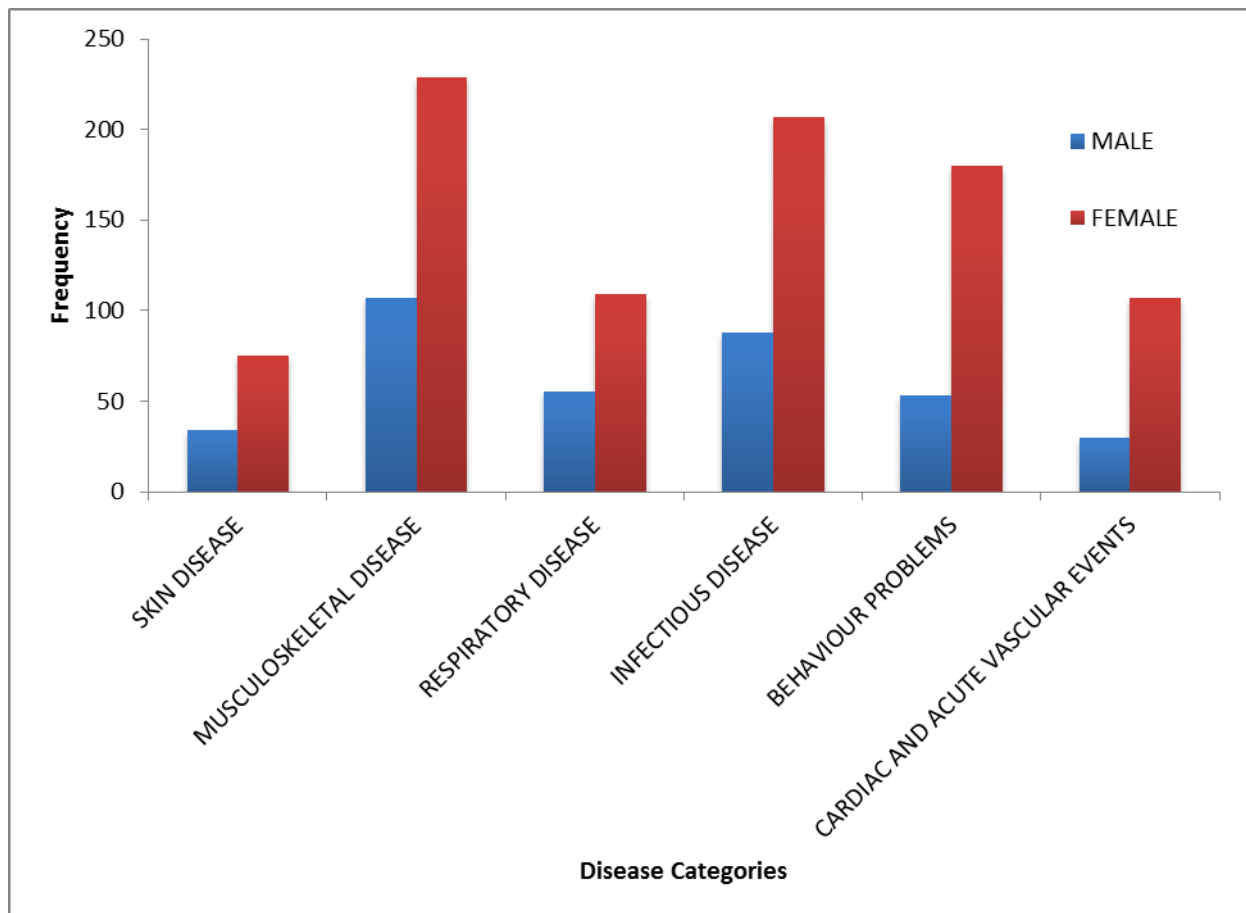
#### **4.3 Common health conditions**

More than three fourth (3/4) of participants had experienced an adverse health condition since they started to trade on the street. An event of ill health was not dependent on the location of vending ( $\chi^2=43.465$ ,  $p=0.183$ ).

The possibility of getting sick was tied to sex ( $\chi^2=4.472$ ,  $p=0.034$ ), duration of vending -in months ( $\chi^2=25.78$ ,  $p< 0.0001$ ). There was a correlation between hawkers' area of residence and going down with an adverse health event ( $\chi^2=190.60$ ,  $p=0.002$ ).

None of the lifestyle variables asked (smoking, drinking alcohol, exercising aside work and eating habits) had an impact on reporting ill- health.

The breakdown of health conditions with respect to sex is illustrated in figure 2 below.



**Figure 2: Distribution of health conditions with respect to sex.**

Musculoskeletal diseases accounted for 82.7% of all reported health conditions, followed by infectious diseases and headaches 73.9%, behavioral problems 58.4%, respiratory disease 41.1%, cardiac and acute vascular events and skin diseases 28.8%.

Each health category had subsets of diseases under it. Frequencies of the various diseases under each category are presented in table 4 below.

**Table 4: Frequency of health categories showing the breakdown of diseases with respect to all cases reported**

<b>Disease categories</b>	<b>Frequency</b>	<b>Proportion of case</b>
<b>Skin diseases</b>	<b>119</b>	<b>28.8</b>
Rashes	85	21.3
Boils	12	3
Foot rot	6	1.5
<b>Musculoskeletal diseases</b>	<b>622</b>	<b>82.7</b>
Pains and aches	319	51.3
Difficulty in lifting, standing, etc.	255	41.0
Hand and arm vibration	20	3.2
Injuries from falling	20	3.2
Injuries from motor accident	8	1.3
<b>Respiratory diseases</b>	<b>196</b>	<b>41.1</b>
Difficulty breathing	25	6.3
Catarrh	134	33.5
Sore throat	29	7.3
Cough	33	8.3
<b>Infectious diseases and headaches</b>	<b>407</b>	<b>73.9</b>
<b>Fevers and malaria</b>	<b>154</b>	<b>38.4</b>
Diarrhea	9	2.3
Frequent headaches	244	61.3
<b>Cardiac and acute vascular events</b>	<b>137</b>	<b>34.3</b>
Rapid heart beating	48	12
Frequent pins and needles	96	24
Hypertension	10	2.5
<b>Behavior problems</b>	<b>300</b>	<b>58.4</b>
Anxiety and easily startled	135	33.8
Easily angered	97	24.3
Depression	68	17

Reporting an event of skin disease was only significant with age ( $\chi^2=22.642$ ,  $p=0.012$ ) and weekly profit ( $\chi^2=19.29$ ,  $p=0.037$ ).

The possibility of a vendor acquiring musculoskeletal disease was dependent on sex ( $\chi^2=8.391$ ,  $p=0.004$ ). Females were more likely to encounter musculoskeletal diseases than males. Duration of vending in months also made participants more prone to musculoskeletal diseases ( $\chi^2=15.29$ ,  $p=0.002$ ). Those who worked 5 days and above a week and those who started the occupation more than a month ago (at the time of the study) were most probable to have musculoskeletal disease.

The sex of a participant made them liable to having an infectious disease ( $\chi^2=13.02$ ,  $p<0.0001$ ); Females were more prone to infectious diseases than males.

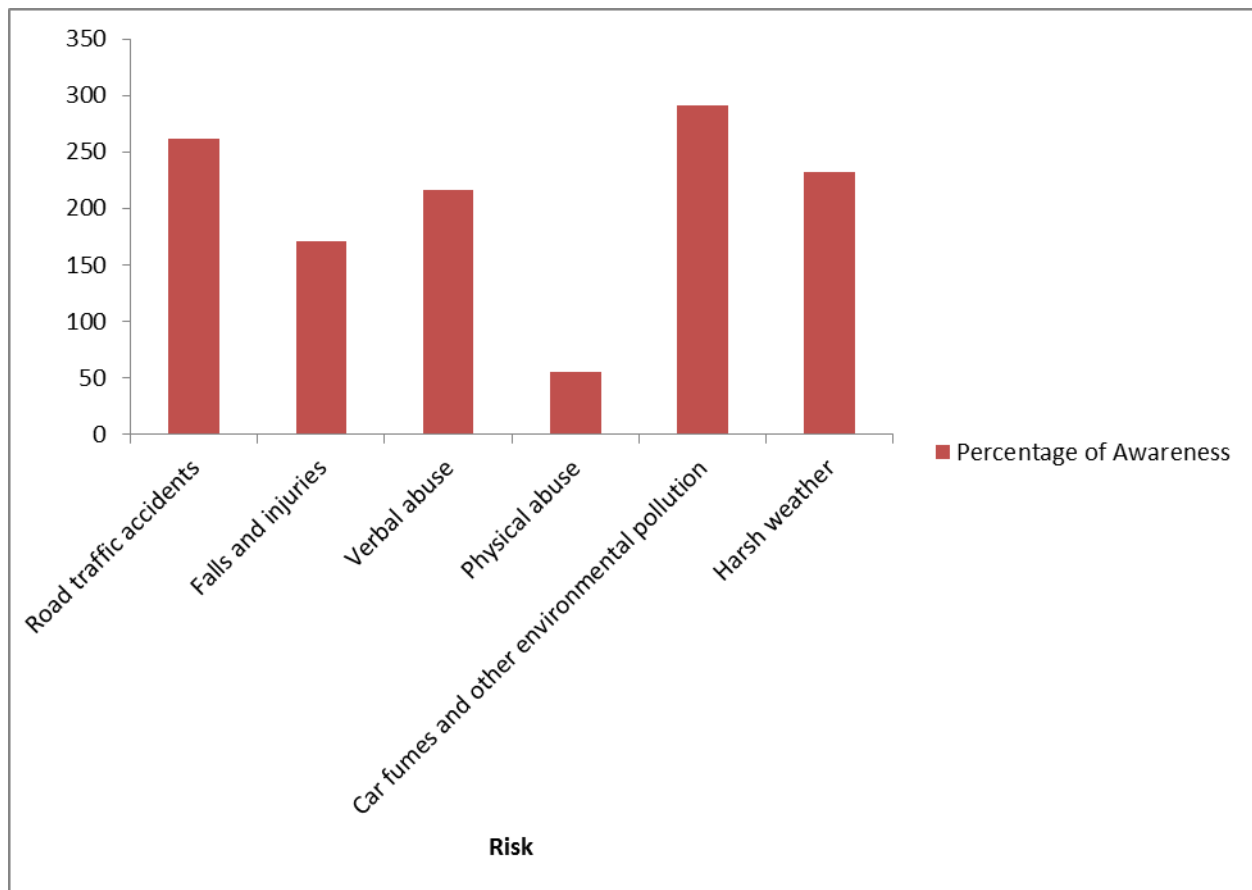
Age (30 years and above), sex ( $\chi^2=15.60$ ,  $p<0.0001$ ) and vending duration of 6-7days, 7-12 hours a day ( $\chi^2=16.96$ ,  $p=0.017$ ) influenced getting a cardiac and acute vascular event.

Marital status ( $\chi^2=16.15$ ,  $p=0.003$ ), and sex ( $\chi^2=36.67$ ,  $p<0.0001$ ) had an influence on experiencing behavior problems. Separated, divorced and widowed vendors were more likely to be affected by behavioral problems than their singles and married colleagues. Females were more predisposed to behavior problems than males.

The possibility of being affected by respiratory disease was independent of all variable.

#### **4.4 Risk awareness**

Only 6 out of 400 participants reported that they did not know of any risk associated with street vending. Figure 3 illustrates the frequency of risk knowledge among hawkers.



**Figure 3: Frequency of risk awareness**

Almost all of them knew of dangers of street vending irrespective of their age, sex, education, ethnicity, marital status, and religion. Risk awareness was not dependent on any variable.

#### **4.5 Protection strategies**

Caution (being careful) came out the most commonly used protective strategy, followed by taking medication, then wearing additional clothing, nothing, being vaccinated and lastly going for check-ups. Table 5 shows the strategies of protection employed by participants.

**Table 5: Protections strategies usage among street vendors**

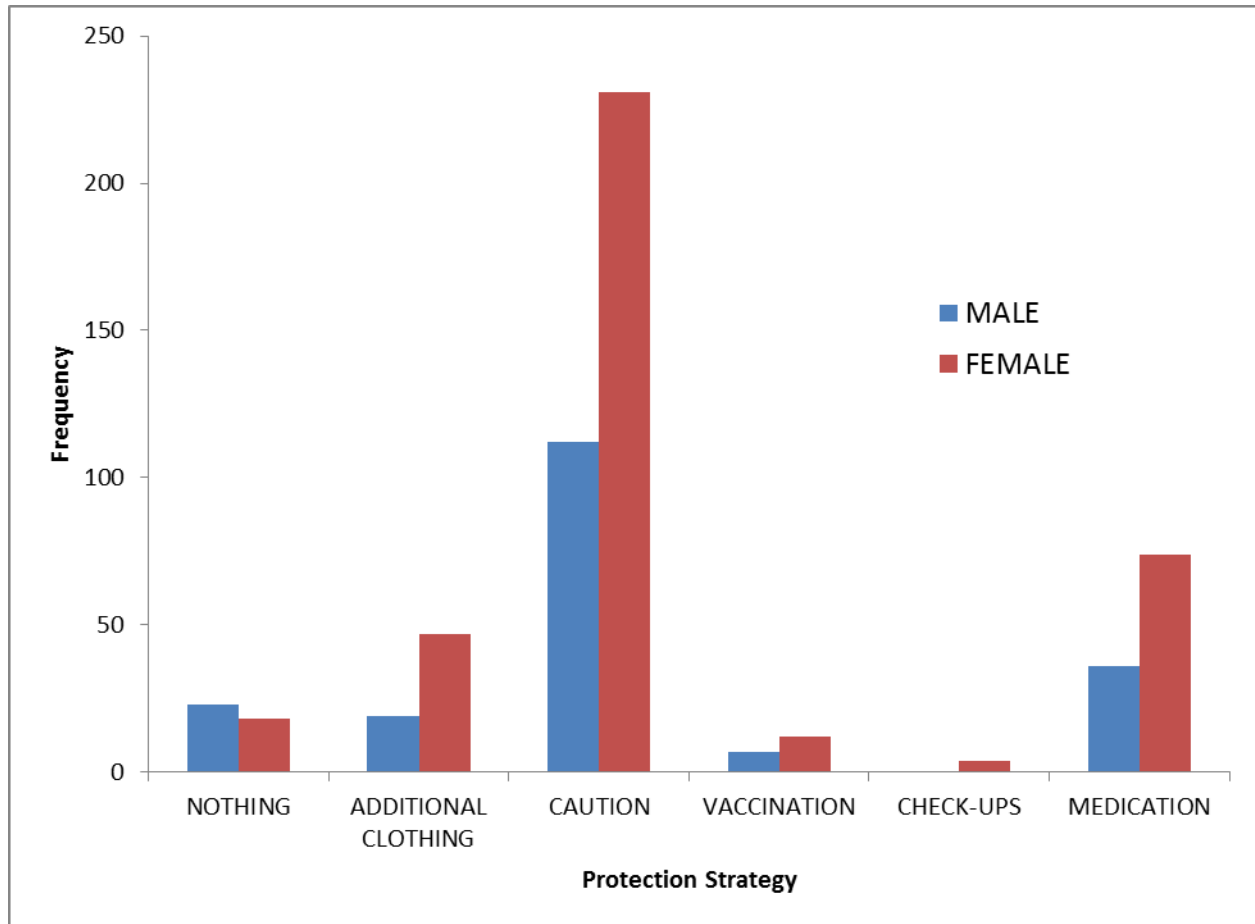
	Frequency	Percentage
<b>Protection strategy</b>	<b>N=621</b>	
<b>Nothing</b>	41	6.6
<b>Additional clothing</b>	66	10.6
<b>Caution</b>	343	55.2
<b>Vaccination</b>	35	5.6
Tetanus	7	20.0
Flu (H1N1)	4	11.4
Yellow fever	24	68.6
<b>Check up</b>	4	0.6
<b>Medication</b>	132	21.3
Herb	24	17.9
Pain killers	98	73.1
Food supplements	12	17.9

Medication which is the second most used form of protection was usually taken; occasionally (51.2%), weekly (21.2%), daily (20.3%), and monthly (7.4%).

Most of the participants (82.5%) obtain the medication from the pharmacy; the rest prepared the medicines themselves (8.1%), received medication from family (5.2%), got herbs from the herbal stores (2.4%), or got medications from friends (1.9%).

Using a protective strategy was not dependent on educational background ( $\chi^2=7.63$ ,  $p=0.81$ ), neither was it dependent on religion ( $\chi^2=11.53$ ,  $p=0.073$ ), ethnicity nor the awareness of risk

( $\chi^2=13.77$ ,  $p=0.13$ ). However protection usage was dependent on sex ( $\chi^2=13.82$ ,  $p=0.003$ ) (figure 4). Women used protection more than their male colleagues.



**Figure 4: Frequency of use of protection strategies among males and females.**

## CHAPTER FIVE

### 5.0 DISCUSSION

The Ghana Demographic and Health Survey 2008 reported that the Ghanaian population has females, ages 20-29 dominating sex and age ranges respectively. With regards to education, attainment of junior high school and below abounds in the Ghanaian population.

The report went on to say that married people were more than unmarried ones, Akans and Christians dominate the ethnic and religious groups respectively. (GSS & Macro, 2009)

All demographic features reported in this study except marital status are in tune with the Ghana Demographic and Health Survey 2008.

Reasons why married or cohabiting individuals do not seem to sell on the street could be that: revenue from street vending may not be enough to fend for themselves and their immediate family in an urban setting. Especially if they have to sponsor their children to school ( Kwankye et al., 2007).

Higher numbers of female participants also confirms results from Agadjanian, 2002 which stated that street vending is dominated by women because it flexible for them to play their reproductive and domestic roles.

More than half of the vendors made less than GH¢ 50 weekly profit. A person with skills to gain formal employment or other profitable informal employment would not readily settle for street vending. This suggests that street vending is lucrative for the urban poor who are not educated enough or do not have the right skills to get formal employment.( Mitullah, 2003)

## 5.1 Assessment of health status

Health assessment analysis showed that reporting good health was dependent on gender, weekly profit margin, and duration of time for vending (in hours and days).

Women reported poorer health than man. Ironically observations of mortality trends have shown that women have lower mortality than their male counterparts. Women are known to be better at disclosing how they feel. Even though women may report poor health they are less likely to die. Men were less responsive of health problems and even if they are aware are unwilling to admit weakness and seek care (Ashley, 2010). In the Ghanaian culture a man is not permitted to show signs of weakness. The Akan adage “Barima nso” literally means a man does not cry. Men are expected to show brevity even when they are sick, so it is expected male vendor will conceal ill health.

Where hawkers lived, was found to have an effect on the occurrence of a health condition. Area of residence of respondents was scattered all over the city; this proposes that Accra has sanitation challenges as suggested by Fobil et al., 2010.

Participants earning GH¢ 50 and above: stated better health than those who earned lower profits. This accentuates the fact that the rich are healthier than the poor. People from lower socio economic status have been shown to have higher morbidity and mortality than those from a higher class. This is mainly because rich people can afford better; health care and medication, housing, and good food and socialize better than their poor counterparts (Mirowsky & Ross, 2003). People with higher incomes tend to have more control of their health and are less likely to be subjected to sickness and health setbacks than those with lower financial resources. They can afford medications and supplements. Hence it is expected that vendors who earn GH¢ 50 and

above will report better health than their lower earning counterparts. They will be able to afford good food on the streets and preventive medications that will sustain health.

Results of the analysis illustrated a dose-response effect in which the number of hours worked per week (7-12 hours for 6-7 days) directed affected health. Longer duration assures workers more time for occurrence for injuries. Longer working hours also induces stress and fatigue (Dembe et al., 2005) which are known to weaken the immune system and thereby increasing the risk for opportunistic disease. Longer working hours imply that the hawker has longer exposure to harsh weather conditions, mosquito bites and other biological hazards, and less opportunity to eat properly cooked homemade food.

Almost 94% of study participants had suffered one or more of the health conditions inquired about, but when asked to assess their health, most of them considered their health to be good. The only participant above 60 years of age reported her health has been good since she started hawking. Vendors could possibly attribute being healthy not necessary to the absence or presence of a disease condition, severity of disease condition, restrictions imposed by the health condition to perform basic functions, but to the extent and the ability to perform basic physical demands like walking and sitting; although there might be a bit of difficulty in performing basic functions.

Personal health experience, better health compared to people with similar characteristics and life circumstance in totality may influence health rating (Manderbacka, 1998).

## **5.2 Common health condition**

Almost 83% of participants recounted having difficulty in sitting, carrying objects, pains and aches in waist, shoulder, or elbow and other joints problems; making this study consistent with a

study by (Pick et al., 2002) on street vendors in Johannesburg. The former study informed that musculoskeletal problems were the most common adverse health condition among the street vendors

This finding is expected because job demands of street vending require lifting, stretching, walking, running, and standing most of the time. Street vendors recruited in this study were spotted either carrying their wares on the heads, shoulders or in their hands. Others hanged their wares on their cloths. Some of those carrying their merchandise on their heads had a small piece of cloth wrapped on their heads to support the trays while had nothing. Carrying objects especially on the head exerts pressure on the musculoskeletal system. Usually vendors have to carry their wares (which could be heavy) for 5 hours a day on average predisposing them to musculoskeletal diseases.

Marriage has been suggested to reduce risk of depression in both men and women. Getting divorced or separated on the other hand has been shown to increase depression risk (Wood et al., 2009). Married people have been shown to be more emotionally stable than unmarried ones. Hawkers not having any social support coupled with being unmarried could explain why divorced, widowed and separated participants were more likely to report behavior problems. Some of the divorced, widowed and separated participants could be single parents, so they could be stressed from financially supporting their families.

Water, pH, oils, collagen, and other skin maintaining hormones decrease with age. Reduction of these skin essentials facilitates the risk of getting a skin disease (Castelo-Branco, Duran, & Gonzalez-Merlo, 1992). Aging in conjunction with exposure to harsh weather could accelerate skins diseases among older vendors, accounting for high numbers of skin infection among older

hawkers. High earning vendors may be able to afford skin care products or meals that would nourish and enhance a healthy skin, thereby reducing the likelihood of skin diseases.

Age is the main factor that predisposes individuals to cardiac and vascular events, however socio economic status, poor social support, psychosocial factors and lifestyle influences the risk of experiencing a vascular events (Rozanski, Blumenthal, Davidson, Saab, & Kubzansky, 2005). An older person with good social support is not likely to be found hawking. The demands of vending could facilitate the risk of cardiac events among poor older street vendors.

## **5.2 Risk awareness**

Risks enlisted by participants in this study were similar to those mentioned by Alferts, 2009. Risk awareness motivates attendance to healthcare providers, promotes behavioral and lifestyle changes and influences treatment decisions (Rosenstock, 1966).

Almost all (394 of 400) participants knew about risk associated with their occupation. They had either experienced or observed the risk they reported. Some participants (30.5%) recall they had to stay away from work because of work related disease. Yet neither the knowledge of risk nor the occurrence of ill-health persuaded vendors to use protection. Street vendors will rather “be careful” than go for check-ups. Although this could imply that street vendors are not health conscious, poverty could make them take this stance.

## **5.3 Protection strategies**

Studies have estimated that it takes averagely four hours to see the doctor, which is eight times more expensive than self-medication. One trip to the doctor will deplete 1/3 of an average family’s monthly income, plus the sick individual having to forgo work (Russel, 2008). This

could account for reasons why only 4 participants reported going for a medical check-up as a protection strategy.

The study also revealed that females are more likely to use protection strategies than males. These reaffirms the observation that; women know more about health than men, are more likely to talk about health concerns, are more likely to seek treatment and make greater use of prevention services. (Worell, 2001)

#### **5.4 Limitations of study**

This study is not devoid of limitations.

Study participants had to recall occurrence of health conditions, its duration and whether health events happened before or after vending, thereby subjecting the study to recall bias.

There was no confirmatory test to complement self-reported health assessment.

The participant's self reported health was analyzed objectively although there could be culture and social ramifications affecting the individual's decision.

Answers from participants were analyzed without regard to individual human thoughts or choice to predict behavior.

## CHAPTER SIX

### 6.0 CONCLUSION

The results from this study suggests that sex, duration of vending, location of vending and weekly profit margin influence health outcomes of street vendors in Accra.

The most common work related diseases among street vendors were musculoskeletal diseases, headaches and infectious diseases. Older female vendors were more prone to behavioral problems than younger vendors.

Generally, vendors assessed their health as good although almost all of them reported ever experiencing work related diseases. Vendor's perception of health could be a reflection of social aspects of health rather than just the presence or absence of health conditions.

Despite substantial prevalence of work related diseases and risk awareness; street vendors hardly use preventive services.

Current trends of accelerated urbanization and economic down turns might push more people unto the street to sell. The quest to survive could make vendors to overlook certain health conditions and work despite ill health.

Street vending may look lucrative but it could be detrimental to health.

## 6.1 RECOMMENDATION

A qualitative study must be conducted to have a full dimension of health status of street vendors with regard to the cultural and social ramifications.

This study recognized some health risks from street vending; a follow up study must be conducted to assess the magnitude of the risks, so that efficient and effective control measures can be put in place.

Health promotion campaigns must be staged among street vendors; to raise awareness of work related diseases, risk behaviors and the need to use prevention services.

Provisions can be made under agencies such as the Ghana Youth Employment and Entrepreneurial Development Agency (GYEEDA) to either equip vendors with vocational skills or find them alternative employment.

Recent forceful eviction of street vending has led to vendors returning to the street in more numbers. I suggest city authorities should be diplomatic with the vendors. Authorities can call for the formation of hawkers' association like other informal sector associations; and then they can regulate their activities through these associations. For instance hawkers can be registered through an association, and then asked to sign a bond to relinquish their spots should government need them.

Alternatively vendors should be involved in planning their relocation venues, so they will not pour back onto the street after a relocation exercise.

Creative but tactful methods should be employed by the Accra Metropolitan Assembly to make hawkers adhere to no hawking and restricted hawking zones.

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## APPENDICES

### Appendix I: QUESTIONNAIRE

#### **SELF REPORTED HEALTH STATUS AMONG STREET VENDORS IN ACCRA**

I am a student from the school of public health, doing a study on the above topic. I would like you to answer questions on from questionnaire. I have no connection with any external bodies what so ever, I assured you that information I am collecting will be limited to research purposes and you will not be identified with it.

Please do you agree to answer the questionnaire?  Yes  No

Participant no. .... Vending Location.....

1. Age .....
2. Gender:  Male  Female
3. What is the highest level of education you have attained?  
 No education  Primary  JHS  SHS  
 Vocational  Tertiary  Other.....
4. Marital status  
 Single  Married/co-habiting  Separated  Divorced  Widowed
5. What religious group do you belong to  
 Christian  Muslim  Traditional  Others.....
6. Which ethnic group do you belong to?  
 Akan  Ga  Ewe  Northern  Other  
.....
7. How much profit do you earn weekly? .....
8. Which part of Accra do you live? .....
9. Do you have another job/vocation aside hawking?  
 Yes  No If yes please state.....

#### **DURATION OF HAWKING**

10. How long have you been hawking? In months .....

11. How many days in a week do you hawk? .....
12. How many hours do you hawk in a day? .....

### HEALTH STATUS

13. **Since you started hawking**, how will you assess your health?

- Excellent     Very good     Good     Poor     Very Poor

14. **Since you started vending** has your health status changed?

- For the better     For the worse     No change

15. **Since you started hawking**, have you experienced any of the following health conditions?

Please tick as many as applicable.

#### Skin disease

- None
- Rashes
- Boils
- Foot rot
- Cracked heels
- Other.....

#### Musculoskeletal diseases

- None
- Pains & aches     Waist     Shoulder     Elbow

#### Difficulty

- Walking     standing     sitting     climbing     running     lifting / carrying  
objects     stooping / bending     kneeling.....

- Hand and arm vibration

Frequent injuries     Falling     Motor accidents

- Other.....

#### Respiratory

- None
- Difficulty breathing
- Catarrh
- Sore throats
- Cough
- Other.....

#### Infectious diseases and fevers

- None
- Fevers and malaria
- Diarrhoea
- Frequent headaches
- Other.....

#### Cardiac and acute vascular events

- None
- Rapid heart beating
- Frequent pins and needles (Ananse)
- Hypertension (Bp)
- Other.....

#### Behaviour problems

- None
- Anxiety and easily startled at the least noise.
- Easily angered
- Depression
- Other.....

16. When did you start experiencing these signs and symptoms? In months

.....

17. Have you had to stay away from vending for a period of time because of any of the above disease?  Yes  No

18. If yes how long did you stay away from work because of the diseases? In months

.....

19. Which of the mentioned health conditions you mentioned kept you from hawking?

.....

20. Do you have any health problems before hawking?

Yes  No If yes please state the

disease.....

\*\*\*for those who answered yes for question 9.

21. Did you have other health problems with your other job?

Yes  No If yes please state the disease.....

### **RISK AWARENESS AND PROTECTION STRATEGIES**

22. What do you think are health risk associated with this job?

Road traffic accidents

Falls and injuries

Verbal abuse from  customers  colleagues  authorities

Physical abuse-Violence from  customers  colleagues  authorities

Car fumes and other environmental pollution

Harsh weather

Others.....

23. How are you preventing these risks? Tick as many as applicable

Nothing

I wear additional clothing such as socks, long sleeves shirts, nose mask, etc. for protection

I am always careful

I have been vaccinated against diseases. **Go to Q24**

I go for regular check up. **Go to Q25&26**

I take  herbs  painkillers  food supplement for prevention. **Go to Q27-29**

Other.....

\*\*\*Follow up questions for risk prevention strategies.

24. Which vaccine did you receive?

Tetanus       Flu (H1N1)       Yellow fever       Other.....

25. How often do you go for check-ups?

Daily    Weekly    Monthly    Yearly    Occasionally    Other.....

26. What do you usually check?

Blood pressure    Cholesterol    Weight    Other.....

27. How often do you take medicines (herbs, painkillers, supplements, etc) for prevention?

Daily    Weekly    Monthly    Yearly    Occasionally    Other.....

28. Which medication are you taking? .....

29. Where do you get the medicine from?

Pharmacy    Friends    Family    Herbal store    Self preparation

Other.....

### **LIFE STYLE**

30. Do you take in alcohol?    Yes    No

31. If yes, how often do you take alcohol?

Daily    Weekly    Monthly    Occasionally    Other.....

32. How many drinks/tots do you consume per sitting?

.....

33. Do you smoke?    Yes    No

34. If yes, how often do you smoke? .....

35. Do you have any form of exercise aside work?    Yes    No

36. How often do you exercise aside work?

Daily    Weekly    Monthly    Yearly    Occasionally  

Other.....

37. How many times do you eat in a day?

Once a day    2 times a day    3 times a day    Other.....

38. How many times do you drink water in a day? .....

39. Where do you obtain your food and water from? Tick as many as applicable.

I cook and bring it from home     Buy it from the streets     Exchange my  
wares for food with a colleague vendors     Other.....

\*\*\*Any other health issues that we did not ask that you can tell us about?

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Thanks for your time.

## Appendix II: INFORMED CONSENT FORM

**Respondent number:** .....

**Project Title:**

**Self- reported health status of hawkers in Accra.**

### **Background**

Dear Participant, my name is Monica Ayikai Owusu. I am a student from the Department of Biological, Environmental and Occupational Health of the School of Public Health, University of Ghana. I am conducting a study on Self- reported health status of hawkers in Accra.

The aim of this study to investigate the common health conditions among hawkers in Accra.

### **Procedures**

The study will involve answering questions from a questionnaire on individual common health problems faced as well as knowledge on risk and protection practices. This is purely an academic research and this forms part of my work for the award of a Masters Degree.

### **Risks and Benefits**

The results of the study would help advice policy makers on the formulation of policies to improve the health status of hawkers.

**CONSENT**

I,.....declare

that the purpose, procedures as well as risks and benefits of the study have been thoroughly explained to me in English language and/or Twi and/or Ga and I have understood.

I hereby agree to answer the questionnaire

Signature of participant ..... Date..... /  
..... / .....

**Interviewer's statement:**

I, the undersigned, have explained this consent form to the subject in the English language (Twi or Ga language) that he understands the purpose of the study, procedures to be followed as well as the risks and benefits involved. The subject has freely agreed to participate in the study.

Signature of interviewer: .....

Date: ..... / ..... / .....

Address .....

**Right to refuse**

Participation in this study is voluntary and you can choose not to answer any individual question or all the questions. You are at liberty to withdraw from the study at any time. However, I will encourage you to fully participate since your opinions are important to help identify common health conditions among hawker.

**Anonymity and Confidentiality**

I would like to assure you that whatever information you will provide will be handled with strict confidentiality and will be used purely for research purposes. Your responses will not be shared with anybody who is not part of the study team. Data analysis will be done at the aggregate level to ensure anonymity.

**Dissemination of Results**

The results of this study will be mailed to you, if you provide your address below.

.....  
.....  
.....

**Costs and/or Payments to Subject for Participation in Research**

There will be no costs for participating in the research. Also, you will not be paid to participate in this research project.

Any questions concerning the research project should be directed to Prof Isabella Quakyi (0284631575), Prof. Julius Fobil, (0243462514), Monica Ayikai Owusu (0244474264), all of the School of Public Health and Hannah Frimpong, Administrator Ghana Health Service Ethical Review Committee (0244516482).