SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA

PERCEPTION AND STIGMITIZATION ASSOCIATED WITH OVERWEIGHT AND OBESITY AMONG WOMEN AT KANESHIE MARKET

BY

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

JULY, 2017
DECLARATION

I, Mildred Arday, do hereby declare that, with the exception of cited literature, this dissertation is the result of my own original research under the supervision of Dr. Richmond N.O. Aryeetey, and that this work, either in whole or in part has not been presented elsewhere for any other purpose.

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Date

Dr. Richmond N. O. Aryeetey
(Supervisor)

Date
DEDICATION

I dedicate this work to all those on whose shoulders I stood to make it this far in my education. Special dedication to my husband Mr. Samuel Abaka-Jackson who has motivated and supported me in my education ever since we got married.
ACKNOWLEDGEMENTS

My sincere gratitude first of all goes to God Almighty for his grace, strength and wisdom granted me throughout the entire period of this work. My heartfelt appreciation goes to my supervisor; Dr. Richmond N.O Aryeetey for his guidance, inputs and support throughout my study. I particularly want to thank him for the patience he had throughout this work. To my very supportive colleagues and field assistants; Miss Virtue De-Gaulle, Mr. Kofi Agyabeng and Mr. Richard Boahene, thanks so much for your support during the period of my data collection. Indeed, your encouragements during those discouraging moments really urged me on. My profound gratitude goes to the entire staffs of Department of population, family and reproductive health for their guidance through writing this dissertation. To the queen mother and elders of Kaneshie Market I say thank you for the support and help offered me when I came to use the market women at the market as my research participants. My appreciation will be incomplete without commending my mate Micheal Mireku for his support during the analysis of my work. Finally, I say a big thank you to all the lecturers, supporting staffs and colleagues of the School of Public Health, University of Ghana, Legon for helping me in diverse ways towards the completion of this thesis.
ABSTRACT

Introduction: Overweight and obesity, which can be described as the accumulation of excessive body fat has become a major public health problem. Overweight and obese individuals also attract a lot of stigma which results in discrimination. This study was designed to determine perceptions and stigmatization in relation to overweight and obesity among women of reproductive age in the Ghanaian setting.

Method: The study employed a descriptive cross sectional study design and used a mixed methods approach; that is quantitative and qualitative method. Questionnaires and in-depth interviews were used for data collection. Descriptive statistics including frequencies were used to describe the socio-demographic characteristics. Pearson Chi-square and fishers’ exact test for categorical variables was done to test for association between perceived bodyweight description (outcome variable) and socio-demographic characteristics. Multiple ordered logistic regression model was further done to test for the strength of association between perceived body weight and significant socio-demographic characteristics. In-depth interviews were used to explore individual perceptions and live experiences of stigma among obese and normal weight research participants. All interviews were audio taped, transcribed and used to identify relevant themes.

Results: Two hundred and sixty-six respondents were included in quantitative analysis; 10 participants were included in the in-depth interviews. Majority (56.4%) of the respondents from the survey were obese. Respondents reported misperceptions about their body; 56.5% obese persons classified themselves to be overweight while 28.6% and 14.3% of respondents who perceived themselves to have normal weight were overweight and obese respectively. From the in-depth interview, perceived causes of obesity were excessive eating and physical inactivity. Obese and overweight persons felt they were blamed for their weight
status. Derogatory name callings, perceived barriers to use of public space and denial of jobs were stigmatizing attitudes experienced by obese and overweight persons.

**Conclusion:** Obese and overweight persons feels stigmatized because they are blamed for their weight status. They experience a range of stigmatizing behaviour from friends, family neighbours and the public. There is a need to protect overweight and obese persons from stigmatizing and discriminatory attitudes by others.
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<td>BMI</td>
<td>Body Mass Index</td>
</tr>
<tr>
<td>BW</td>
<td>Bodyweight</td>
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<tr>
<td>CDC</td>
<td>Centre for disease control and prevention</td>
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<td>DHS</td>
<td>Demographic and health survey</td>
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<td>GDHS</td>
<td>Ghana Demographic and Health Survey</td>
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<tr>
<td>GSS</td>
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CHAPTER ONE
INTRODUCTION

1.1 Background

Overweight and obesity, which can be defined as the increase of extreme body fat has become a key public health problem (WHO, 2000). In fact, obesity is classified as a disease by the World health Organization (James, 2008) as well as associated with causing co-morbidities, like type II diabetes, heart diseases and various cancers (Gariepy, Wang et al., 2010; Van Cleave, Gortmaker et al., 2010; Wolin, Carson et al., 2010). In 2014, the World health Organization reported that more than 1.9 billion adults were overweight with over 600 million being obese (WHO, 2015). In view of the worldwide increase as well as the negative effects of obesity, it has been recognized as a global epidemic necessitating intensive efforts from various stakeholders (Swinburn, Sacks et al., 2011).

Though majority of research carried out underline overweight and obesity as problems of developed countries (Moon, Quarendon et al. 2007; Thomas, Hyde et al. 2008; Henderson 2009), recent studies indicate that third world countries are no exceptions of which Ghana is inclusive (Duda, Darko et al., 2007, Abubakari, Lauder et al., 2008, Chukwuonye, Chuku et al., 2013). According to the 2014 Ghana Demographic and Health Survey (GDHS), only 6% of Ghanaian women and 10% of men are thin (body mass index or BMI <18.5). It indicated that 4 in 10 women and 16% of men are overweight or obese (GDHS, 2015). This percentage of overweight among women is more concentrated in the urban capital of Ghana (GDHS, 2015).

Although obesity is generally known as a health hazard, it also characterises a lacking societal place (Schafer and Ferraro, 2011). Overweight and obese individuals attract stigma which results in discrimination (Puhl et al., 2009). Erving Goffman describes stigma as a characteristic that is intensely doubting (Goffman, 1963). Unfortunately, the psychosocial
aspect of overweight such as stigma, discrimination and bias against overweight and obese persons are often overlooked (Puhl et al., 2009). Overweight and obese persons are usually held responsible for their weight, with common insights that stigmatization may inspire them to adopt improved behaviors (Puhl & Heuer, 2010). The stigma and discrimination meted against these individuals have various consequences on their psychological and physical health (Schafer and Ferraro 2011; Puhl & Brownell, 2006). Depression, low self-esteem and stress are some of the psychological consequences they suffer due to the stigma they are subjected to (Schafer and Ferraro 2011). Additionally, this results in overweight and obese individuals being disadvantaged in numerous ways comprising work, health care situations as well as in interpersonal relations. (Puhl & Heuer, 2010).

1.2 Problem Statement

Obesity is one of the greatest troubling public health problems of today because of its association with non-communicable diseases like hypertension, type II diabetes and some cancers. However, it is not only the negative health implications of obesity that calls for urgent and adequate treatment and prevention but also the social aspect like stigma. Overweight and obese individuals are subjected to stigmatization which results in discrimination. Stigma and discrimination of overweight and obese individuals leads to adverse psychological and social outcomes like depression, low self-esteem, eating disorders and low work productivity (Puhl et al., 2009). Irrespective of the physical and the psychosocial effects, some weight gain is admired in the Ghanaian society, however, if it becomes excessive it is stigmatized (Aryeetey, 2016). Much is not known about the perception of the psychosocial aspects of overweight and obesity in Ghana.

With the Ghana demographic and health survey reporting about 40% of Ghanaian women to be overweight (GDHS, 2015), it is important to understand the general perceptions of
overweight and obesity in the general populace as these perceptions will have a bearing on stigmatizing attitudes. Additionally, there is a need to find out the lived experiences of stigma of overweight and obese persons in order to come up with educative interventions to enable the public desist from such behaviors.

1.3 Justification

Stigmatization of any health condition has negative effects on the persons being stigmatized. Therefore overweight and obese persons who attract a lot of stigma face the negative repercussions of these attitudes and behaviours. Understanding the existence of stigmatization as well as experiences in relation to overweight and obesity among women will provide information on how prevalent bodyweight stigma and misperception is among this group of people. This is important because neglect and failure to give the necessary recognition to this problem might render all the effort to curb the problem of overweight and obesity by health personnel’s effortless, since this will not only escalate the threat of acquiring physiological health complications but also compound to their psychological effects. It is therefore important to find out the perceptions and lived experiences of stigma among women as it will help policy makers find the need to make policies that will prevent obese persons from being stigmatized. Furthermore, it will inform the design of effective educational interventions that seek to educate the general populace on the negative effects of stigmatization of obese and overweight persons. Finally, this will also enhance existing body of knowledge, serving as a reference material for future research.

1.4 Objectives of the Study

The objectives of the study are broken down into the general objectives and specific objectives which are spelt out below.
1.4.1 General objective

- To describe the perception and experience of overweight related stigma among women

1.4.2 Specific objectives

- To describe perception of overweight among women
- To describe experiences relating to stigma among overweight women of reproductive age

1.5 Research questions

The research was driven by these specific research questions:

- How is overweight and obesity perceived among women?
- What experiences of stigma are related to overweight and obesity?

1.6 Conceptual framework

The conceptual framework for this study was based on the Attribution Theory by Fritz Heider (Kelley and Michela 1980). The theory fundamentally looks at how people try to know the behaviour or traits of others by assigning feelings, views, and intentions to them (Kelley and Michela 1980). Heider states that there is a solid necessity in individuals to appreciate transitory events by attributing them to the actor's character or to stable characteristics of the environment. However, inaccuracies of attribution theory are misplaced blame and blinding people to other causes.

Weight stigma based on the attribution theory suggests that attitudes towards obese individuals are dependent on how much control they are perceived to have over their weight (Crandall and Reser 2005). Obesity and overweight are ascribed to behavioral causes like
lack of will power, physical inactivity, overeating and consumption of fatty foods. Therefore stigma directed at overweight and obese persons are based on the ideology that overweight and obese persons are to be blamed for their condition.

It is conceptualized that an individual’s body weight (normal, overweight or obese), age, educational status and cultural beliefs will influence an individual’s perception on overweight and obesity. It is expected that these characteristics will determine the factors or causes (lack of will power, physical inactivity or consumption of fatty foods, heredity, and parity) attributed to obesity. And this will translate into stigmatizing attitudes exhibited towards obese and overweight persons. Similarly, an individual’s body weight (normal, overweight or obese), age, educational status and cultural beliefs will influence the stigmatizing and discriminatory attitude exhibited towards overweight and obese persons and this will result in overweight and obese persons feeling stigmatized.

Figure 1: Conceptual Framework

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CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This chapter therefore reviews relevant literature using the objectives and the problem statement as a guide. The focal points of the review are; the concept of overweight and obesity, causes, health implications of overweight and obesity, epidemiology overweight and obesity, perceptions of overweight and obesity and stigmatization of overweight and obesity.

2.1 Overweight and Obesity

Overweight and obesity can be classified as additional accumulation of fat in the body (Kopelman 2000). According to Puhl & Heuer (2010) the valuation is usually done by weighing a person and linking the weight to height. The World Health Organization also views obesity as a simple index of weight-for-height and this is used to classify overweight and obesity in adults (WHO, 2012). The weight (W) in kilograms over height (H) in meters squared (H$^2$) gives an outcome known as the body mass index (BMI) (WHO, 2012). The BMI calculation can enable one make a relatively accurate assumption of body fat percentage. Based on the calculations, an individual’s body weight can be classified as underweight, normal, overweight or obese. Therefore an underweight person is someone with a BMI of less than 18.5 (BMI < 18.5), whiles normal weight is someone with a BMI from 18.5 to 24.9 (BMI 18.5 < 25). A person is classified overweight if the BMI is from 25 to less than 30 (BMI 25 < 30) and obese if the BMI is 30 or more (BMI >30) (WHO, 2012). The Centre for Disease Control and prevention further identifies different classes of obesity in patient and these classes are I, II and III obesity (CDC, 2007). According to the report by the CDC these classes are identified with BMI of ≥30 but <35, ≥35 but<40, and ≥40,
respectively. However, abdominal fat mass also referred to as visceral obesity can vary considerably within a narrow range of total body fat and body mass index (BMI). Thus other means of assessing body fat was suggested by the World Health Organization to complement the measurement of BMI to aid in the identification of individuals at an increased risk of obesity related morbidity due to accumulation of abdominal fat (WHO, 2000). The waist to hip ratio (i.e. the Waist circumference divided by the hip circumference) was suggested as an additional measure of how body fat is distributed. Although BMI is used as an indicator to measure body size and composition, the waist to hip ratio is said to be superior to BMI in predicting cardio vascular disease (CVD) risk (WHO, 2011). Despite BMI being an estimated guide, it is nonetheless the most worthwhile population-level measure of overweight and obesity as it cut across for both sexes and for all ages of adults (WHO, 2012).

2.2 Causes of obesity

Obesity is a condition which is caused by several factors and some possible causes of obesity and over weight as over-eating with less physical activity, change in dietary habits, socio-economic class and in a minority of patients to a physical condition or metabolic disturbance (PH Wilding 2001, Gao, Holloway et al., 2005, Wright and Aronne 2012). A systematic analysis by Ng, Fleming and colleagues from 1980 to 2013 revealed that the huge increases in obesity over the past three decades can be attributed to a number of potential contributors like increases in calorie intake, changes in the composition of diet, declining levels of physical activity, and changes in the gut microbiome (Ng, Fleming et al., 2014). Similarly, Lakuruka (2013) explains that the high calorie intake, high consumption of fatty meats and oily foods and high alcohol consumption combined with low physical activity are likely to lead to obesity. From the explanation of Lakuruka (2013) the condition is not only related
to diet but certain behavioural factors such as habitual indulgences which contributes to energy in excess of physiological requirements which may result in visceral fat deposition. This draws attention that regular exercising and limited intake of diets which increases the chances of fat accumulation is essential in preventing obesity (Bruun, Helge et al. 2006).

Cultural factors, pollution due to chemicals within the environment, inadequate sleep and genetics are other factors identified as causes of obesity (Centre for Disease Control and Prevention, 2007; Lokuruka, 2013). Culture is defined as the way of life of a particular group of people which includes their belief system, norms, values, food and among others. The culture of any group people can influence their decision to undertake certain activities which might have certain negative consequences on their health and physical appearance. For instance, a study conducted by the Centre for Disease Control and Prevention (2007) within South Africa revealed that, moderate obesity in African women made them admirable to the men folk whereas the Sumo wrestler in Japan requires some degree of overweight. This perception associated with being obese or over weight within this cultural perspective will lead to adoption of certain negative eating habit and unhealthy life style (CDC, 2007). Thus, it is evident that culture has the tendency of causing obesity amongst people.

Another factor which leads to obesity amongst people is genetics, individuals who have obesity running through their family are likely to be obese irrespective of the kind of healthy lifestyle they adopt (Cheung, Tso et al. 2010). Nonetheless, Price & Gottesman (1991) has observed that it may be difficult to separate genetic from environmental factors. Though according to them there are rare genetic disorders such as Prader-Willi Syndrome in which obesity is a clinical feature (Price and Gottesman, 1991). Cassidy & Driscoll (2009) also indicated that this syndrome is characterized by muscle hypotonic, mental retardation, diabetes and obesity.
2.3 Health implications of overweight and obesity

Obesity is a multifactorial disease which has been identified to have diverse health challenges on an individual (Van Cleave, Gortmaker et al. 2010). This has made the condition a global health issue (Swinburn, Sacks et al. 2011). The World Health Organization (2010) has indicated that obesity affects the health of infants, adolescents and the elderly. Being overweight has been documented as predisposing one to type 2 diabetes, hypertension, stroke, heart attack, congestive heart failure and several cancers (mainly colorectal and prostate) (Wang et al., 2011; Rtveladze et al., 2014). High abdominal fat is associated with a range of metabolic abnormalities, including decreased glucose tolerance, reduced insulin sensitivity and adverse lipid profiles, which are risk factors for type 2 diabetes and CVD (WHO, 2008). Also, a considerable number of obese patients are observed to have decreased production of ketone bodies during starvation, and decreased sensitivity to growth hormones, while showing increased plasma insulin, plasma free fatty acids, plasma triglycerides, plasma cholesterol, plasma uric acid, and urinary 17-hydroxycorticoids (Cassidy & Driscoll, 2009). Other health challenges posed by this condition among women in reproductive age are the risk of delivery complications and the incidence of non-communicable disease in their offspring (Black et al., 2013). Obesity during pregnancy puts a woman at the risk of developing health conditions like gestational diabetes; a condition that can increase the risk of having a caesarean delivery and preeclampsia a high blood pressure disorder that can occur during or after pregnancy (Mighty and Fahey 2007). Overweight and obesity in middle age truncates life expectancy by an estimated four to seven years (Peeters, Barendregt et al. 2003).
2.4 Trends in the epidemiology of obesity

Various studies have documented the increasing trend in the number of overweight and obesity globally (De Onis, Blössner et al. 2010; Ng, Fleming et al. 2014). A systematic analysis on global, regional and national prevalence of overweight and obesity in children and adults 1980-2013 showed that the number of overweight and obese individuals increased from 921 million in 1980 to 2.1 billion in 2013 (Ng, Fleming et al. 2014). According to De Onis, Blössner et al. (2010), in 2010, about 43 million children globally with 35 million of them from developing countries were overweight and obese and 92 million were at risk of being overweight (De Onis, Blössner et al. 2010). They further estimated that the worldwide prevalence of childhood overweight and obesity will be approximately 60 million in the 2020 (De Onis, Blössner et al. 2010). The estimated prevalence of childhood overweight and obesity in Africa in 2010 was 8.5% and is expected to reach 12.7% (95% CI: 10.6%, 14.8%) in 2020 (De Onis, Blössner et al. 2010).

According to WHO, over 1.9 billion adults aged 18 years and older were overweight out of which more than 600 million adults were obese (WHO, 2016). In totality, about 13% of the world’s adult population were obese in 2014 (WHO, 2016). Studies have shown that the rate of obesity is about 10% within West African countries (WHO, 2015). The rate of obesity is also estimated as being 3 times higher among women than men (Lokuruka, 2013). In South Africa one in three men and one in two women are either overweight or obese (Geodedcke, 2005). In Nigeria, it is estimated that about 6-8% of the population is obese (Luke et al., 2009). The prevalence rate is 15, 10 and 9% in Ghana, Senegal and Niger respectively and 13, 12 and 14%, respectively, in Kenya, Uganda and Tanzania (US Census Bereau, 2010). 
Many researchers have therefore tried to explain why more women, particularly in Africa and especially West Africa, tend to be overweight or obese (Lindsay et al., 2010; Steyn et al., 2011). They have cited the influence of westernization, urbanization and cultural or social approval of weight status as a major reason why women within this part of the world are obese (Lindsay et al., 2010; Steyn et al., 2011).

2.5 Perception of overweight and obesity

Some women deliberately desire to gain weight because some societies perceive that being overweight or obese is an indication of high standing of living (Benkeser et al., 2012). A study by Lindsay et al., (2010) identified that an individual’s perception of weight status or attitude toward body weight is influenced by socio demographic characteristics such as ethnicity, age and education; and to a large extent the existing social and cultural factors. For instance, it has been proved that North Americans hold negative perceptions and prejudicial views of obese individuals (Wang et al., 2011). Also socio-cultural perception in Tanzania was that, the HIV pandemic has to a great extent impacted on peoples’ perception about thin body weight in which most people prefer looking overweight or obese in order to shun the suspicions of having HIV/AIDS (Ezekiel et al., 2009). According to Aryeetey (2016) some amount of weight was is admirable if it symbolizes a presentable body image in some Ghanaian societies. Having some weight is especially admired if it results in a proportional body frame (Aryeetey, 2016). However, in Ghana a study by Duda et al., (2006) indicated that obese Ghanaian women were more dissatisfied with their weight than normal weight women. Hence, these women expressed their desire to lose weight and for others they expressed willingness to keep healthy weight despite the existing norms if only there is a very good reason to do so, such as reduction in disease risk or complications (Duda et al., 2006). A study by Nowrouzi et al., (2015) observed that employees who are
overweight are viewed by their peers and superiors as lacking self-discipline, lazy, less conscientious, less competent, less healthy, more likely to be absent, disagreeable and less likely to be accepted by others. Moreover, it was also believed that persons who are overweight or heavy are slow and physically inactive, it was also thought that their excess body weight makes them tire easily (Aryeetey, 2016). Another common perception is that overweight individuals always sit at one place, making it difficult for them to get up and perform usual activities (Aryeetey, 2016).

Adolescents are no exception when it comes to perceptions in relation to overweight and obesity. Conley and Boardman, (2007) indicated that there was a strong correlation between body weight perception and nutritional habit and weight gain. They further clarified that adolescents who are of normal weight or underweight but have perception that they are overweight are at a higher risk of disordered eating behavior such as binge eating. This will in turn increase their risk of unsuitable weight gain and obesity (Conley and Boardman, 2007).

An additional motivation for desiring some amount of body weight was the fear of being stigmatized by others as a woman who is slim (Aryeetey, 2016). In extreme cases, slim women can become a target of name-calling in her house or community. Names such as “Nchanga” (name of an extremely thin character in elementary school books), “praye” (meaning broom stick in the Akan language), or “Chingilingi” (no known meaning found), in the event of a domestic quarrel or in gossips were identified as names used for slim persons (Aryeetey, 2016). It was, therefore, suggested that the fear of being stigmatized or labeled as slim may explain why some women seek to gain weight (Aryeetey, 2016).
2.6 Stigmatization of obesity

Stigma refers to attitudes and beliefs that lead people to reject, avoid or fear those they perceive as being different (Dovidio, Major et al. 2000) and discrimination is behavioural and occurs when individuals and institutions unjustly deprive others of their rights and life opportunities due to stigma (Hellman 2008). According to Nowrouzi et al., (2015) weight bias refers to the tendency to make unreasonable judgments based on a person’s weight. Washington (2011) also views stigmatization as a generalized devaluation and social exclusion of individuals as a result of deviance in particular attributes, like being overweight.

A major challenge faced by individuals with obesity is stigmatization by individuals within their locality. Puhl & Brownell (2003) observed that individuals with obesity frequently experience bias, stigmatization and discrimination due to their weight. These act poses serious psychological and emotional stress on individuals with obesity. The stigma and prejudice associated with overweight and obesity leads to adverse social and economic outcomes, including low self-esteem, depression, poor school achievement and employment prospects as well as suboptimal productivity (Wang et al., 2011). Nonetheless, Black et al., (2013) and Abdullah (2015) agree that on personal level, there are numerous accounts of public ridicule and discrimination of obese people in social settings, schools, in interactions with healthcare professionals and in the workplace. A study conducted by Aryeeetey (2016) found out that stigmatizing language and behaviour is used to characterize overweight and overweight persons when the person is considered extremely large or heavy.
CHAPTER THREE

3.0 METHODS

3.1 Introduction
This chapter describes the research design and methodology used to assess the perception and stigmatization associated with overweight and obesity among women of reproductive age at the Kaneshie Market. The research design and methodology includes the study design, study area, research population, sample and sampling technique, data collection, analysis and ethical considerations.

3.2 Study design
The study employed a descriptive cross sectional study design and used mixed methods such as quantitative and qualitative for data collection. The quantitative aspect involved the use of open and close ended questionnaire for data collection whiles in-depth interview guide was used to collect qualitative data from the study population. The questionnaire was administered to both normal, overweight and obese women and the in-depth interview was used to explore details of perception and stigma of normal, overweight and obese individuals.

3.3 Study area
The study was carried out at the Kaneshie Market, a suburb of Accra. Kaneshie is one of the largest and well known markets in Accra and it is made up of different ethnic groups. The main market is a three story building with three floors and well demarcated stalls. There are 1115 stalls on the ground floor, 534 on the first floor and 696 on the second floor. Apart from these well-arranged and demarcated stalls other market men and women with women in the majority sell around the building including hawkers. The market has an estimated
population of about 7000 women including those inside and outside the main building. The market is made up of different traders ranging from selling foodstuffs, provisions to beauticians, banks and transportation. Kaneshie is located in the Okai koi South district. Kaneshie is bounded on the east by Awudome, South is Abossey Okai, West is Odorkor and to the North is Bubiashie.

![Figure 2: Picture of Kaneshie Market](image)

3.4 Study population

The study population comprised of women 18 and above who are within the story building and have demarcated stalls or work in a stall.
3.5 Sample size determination

The sample size was calculated based on Cochran’s formula (1963-1975). A prevalence of 22% was used as the prevalence of obesity among women in Accra based on the study by (Ofori-Asenso et al., 2016). Therefore using the Cochran’s formula, the sample size was computed.

\[ N = \frac{z^2 p(1-p)}{d^2} \]

*\( N \)* = the required sample size
*\( Z \)* = *Z* statistic for 95% level of confidence (1.96)
*\( d \)* = Precision at a *P* - value of 0.05
*\( P \)* = Expected prevalence or proportion of overweight and obesity among women

The sample size is therefore

\[ n = 263 \]

The sample size for the study was therefore approximated to 266 respondents.

3.6 Study variables

3.6.1 Dependent variable

Perceptions and stigma of overweight and obesity.

3.6.2 Independent variable

Body size (obese, overweight or normal weight), age, educational level, cultural beliefs
3.7 Sampling

3.7.1 Sampling method

This study employed systematic random sampling to obtain the 266 participants. The market has a total of 2,345 stalls within the building, and this was divided by the calculated sample size of 266 to obtain an interval of nine (9). The first stall in the ground floor was sampled and an interval of nine stalls were skipped before sampling the next respondent. The respondents were sampled in this manner until the sample size of 266 was obtained. One hundred and thirty (130) respondents were sampled from the ground floor, fifty-nine (59) from first floor and seventy-seven (77) from the second floor. Sampled respondents comprised of both normal weight, overweight and obese women. Out of the 266 sampled respondents, ten of them (comprising of five normal weight, five overweight and obese individuals) were purposively sampled to partake in the in-depth interviews. Their selection for the interview was based on their actual body mass index (BMI). Considering the nature of their work, a prior notice was given to the market women to ensure that the time of interview was convenient for them.

3.8 Data Collection Technique

Interviewer administered semi-structured questionnaires was used to obtain quantitative data from the respondents whiles an in-depth interview guide was used to collect the qualitative data. The open and closed ended questionnaire was used to collect data on socio-demographic characteristics, household assets and wealth, perceptions of overweight and obesity as well as stigma of overweight and obesity. In addition, a weighing scale and height measuring instrument was used to collect anthropometric measurement for the calculation of respondents BMI. All measurements were taken with respondents clothes on, however those with heavy clothes on like jackets and sweaters were kindly asked to remove them
before being weighed. They were also asked to remove their shoes or sandals, watches and belts and empty their pockets prior to measurements. Participants were asked to stand on the weighing scale putting both foot at demarcated positions on the scale and their weight were measured using TANITA weighing scale (model TBF-300A, TANITA Corporation, USA). A well-mountable height rod was used to measure the height of respondents. The in-depth interview guide was used to further collect data on perceptions and experiences of stigma in relation to overweight and obesity. The in-depth interviews were audio recorded and notes was taken as well.

3.9 Pilot study
The questionnaire and interview guide was piloted among market women in Madina Market because the women there are comparable to the sample in the main data collection site Kaneshie Market. The pilot was to ensure that the questions asked are understood and clear enough to generate relevant responses as well as enable the research assistants get familiar with the questionnaire. Necessary modifications and clarification of terms were effected based on responses from the pilot study procedure.

3.10 Training of research assistants
Two research assistants who could read and write as well as speak two local dialects (Ga and Twi) fluently were recruited and trained for a day. Training entailed explanation of the questionnaire in English, Ga and Twi, ethics and seeking informed consent from study participants. This was done to ensure that the research assistants collect valid and reliable data as well as conform to the ethical guidelines of the study.
3.11 Data processing and analysis

3.11.1 Data analysis procedure

Microsoft excel (version 2010) was used for data entry and cleaning. The data was exported into statistical software Stata (version 14) analysis. The questionnaire consisted of five sections (sections A, B, C, D and E) with 50 items. Section A consisted of socio-demographic data of respondents and section B sought out to collect data on household assets and wealth. Section C consisted of questions eliciting responses on perceptions of overweight and obesity, section D considered stigmatization associated with overweight and obesity and section E measured actual BMI of participants. Descriptive statistics including frequencies were used to describe the socio-demographic characteristics and cross tabulations were used to assess the perceptions relating to overweight and obesity. Pearson Chi-square and fishers’ exact test for categorical variables was done to test for association between perceived bodyweight description (outcome variable) and socio-demographic characteristics. Multiple ordered logistic regression model was further done to test for the strength of association between perceived body weight and significant socio-demographic characteristics. All the in-depth interviews were audio recorded and transcribed verbatim after which they were coded and themes generated. A thematic content analysis of the information was carried out manually. The themes were developed based on the objectives and any other findings that occurred repeatedly in the transcripts.

3.12 Ethical issues

The study sought ethical clearance from the Ghana Health Service Ethical Review Committee (GHS-ERC: 16/02/17). Also, permission from leaders and overseers of the market like the market queen mother and elders of the market were sought before commencement of the data collection. Ethical issues in research design and procedures was
ensured. These included participant participating voluntarily and the right to refuse answering any question they are not comfortable with liberty to withdraw from the study anytime if they so wish. Participant were assured that whatever information they share will be handled with strict confidentiality and will be used purely for research purposes. Data analysis was done at the aggregate level to ensure anonymity. No name or personal identifying information was documented in the data collected. A written informed consent (Appendix 3 and 4) was obtained from participants prior to their participation. It was affirmed and re-echoed that deciding to opt out of the study was not going to attract any punishment.
CHAPTER FOUR

4.0 RESULTS

This chapter presents results on socio-demographic characteristics, respondents perceived body weight and perceptions about overweight and obesity, as well as stigma of overweight and obese persons.

4.1 Socio-demographic characteristics of respondents

Table 1 shows the distribution of socio-demographic characteristics of the 266 women sampled from the Kaneshie market with an average age of 41.7 years (SD: ±12.31) with about half (50.8%) of them aged between 40 to 49 years. About a third of the women indicated Junior high school or middle school form 4 as their highest educational level completed; 26.3% were Senior High School or vocational school graduates. University graduates were just 6.4%. The respondents were mostly Ga-dangbes (45.5%), Akans (33.8%), Ewes (18.1%) and Northerners (2.6%). About half (54.1%) of the study participants were married while 7.9% were divorcees, 6.4% were separated and 7.1% widows. All the respondents were traders selling merchandise like food stuffs (30.1%), beauty products (19.6%) or rendering services like dressmaking (3.8%) or hairdressing (6.0%). The rest of the women (40%) sells clothes, plastic products, provisions and kitchen utensils.
<table>
<thead>
<tr>
<th>Socio-demographic factors</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of respondents</td>
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<td></td>
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<tr>
<td>18-29</td>
<td>49</td>
<td>18.4</td>
</tr>
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<td>30-39</td>
<td>67</td>
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<td>40-49</td>
<td>68</td>
<td>25.6</td>
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<td>50-59</td>
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<td>22.9</td>
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<tr>
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<td>Highest educational level</td>
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<td></td>
</tr>
<tr>
<td>None</td>
<td>37</td>
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</tr>
<tr>
<td>Primary</td>
<td>46</td>
<td>17.3</td>
</tr>
<tr>
<td>JHS\Form 4</td>
<td>96</td>
<td>36.1</td>
</tr>
<tr>
<td>SHS\SSS\vocational</td>
<td>70</td>
<td>26.3</td>
</tr>
<tr>
<td>Tertiary</td>
<td>17</td>
<td>6.4</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Akan</td>
<td>90</td>
<td>33.8</td>
</tr>
<tr>
<td>Ga-dangbe</td>
<td>121</td>
<td>45.5</td>
</tr>
<tr>
<td>Ewe</td>
<td>48</td>
<td>18.1</td>
</tr>
<tr>
<td>Northerner</td>
<td>7</td>
<td>2.6</td>
</tr>
<tr>
<td>Current marital status</td>
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<td></td>
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<tr>
<td>Single</td>
<td>29</td>
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</tr>
<tr>
<td>Divorced</td>
<td>21</td>
<td>7.9</td>
</tr>
<tr>
<td>separated</td>
<td>17</td>
<td>6.4</td>
</tr>
<tr>
<td>married</td>
<td>144</td>
<td>54.2</td>
</tr>
<tr>
<td>cohabitation</td>
<td>36</td>
<td>13.5</td>
</tr>
<tr>
<td>Widow</td>
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<td>7.1</td>
</tr>
<tr>
<td>Type of trade involved</td>
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<td></td>
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<td>80</td>
<td>30.1</td>
</tr>
<tr>
<td>Beauty products</td>
<td>52</td>
<td>19.6</td>
</tr>
<tr>
<td>clothes\mother care</td>
<td>41</td>
<td>15.4</td>
</tr>
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<td>plastics</td>
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<td>7.9</td>
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<td>provisions</td>
<td>37</td>
<td>13.9</td>
</tr>
<tr>
<td>kitchen utensils</td>
<td>9</td>
<td>3.4</td>
</tr>
<tr>
<td>seamstress</td>
<td>10</td>
<td>3.8</td>
</tr>
<tr>
<td>hairdressing</td>
<td>16</td>
<td>6.0</td>
</tr>
</tbody>
</table>
4.2 Perceived body weight of respondents
The results from fig.3 showed that most (70%) of them perceived themselves to be overweight while a few (13%) perceived themselves to be of normal weight; 17% identified themselves as obese. The pie chart below displays the distribution of respondent’s perceived weight.

Figure 3: Perceived body weight of respondents

4.3 Perceptions associated with overweight and obesity
Most of the respondents had body weight perception that is inconsistent with their body mass index (BMI) status. The first section of Table 4, a cross tabulation of actual BMI against the perceived body weight of respondents shows that 56.5% of the respondents who perceived themselves to be overweight were obese, based on their BMI. Similarly, 28.6% and 14.3% of respondents who perceived themselves to have normal weight were overweight and obese respectively. Overall, BMI assessments showed that 56.39% were obese 27.1% being overweight and 16.5% had normal weight status.
The respondents preferred to gain weight for varying reasons. Majority (60%) of the women with perceived normal weight wanted to gain some more weight while 59.1% of those with perceived overweight wanted to maintain it. Conversely, 73.3% of women who perceived themselves as obese wanted to lose some weight instead.

One-third (34.3) of the respondents with perceived normal weight based their reason for wanting to gain or maintain their weight on societal acceptance whiles respondents with perceived overweight or obese status wanted to maintain or lose weight because of health considerations. More than half (54.3%) of the women with perceived normal weight indicated that most people are comfortable and accept their current weight status although most of the overweight and obese women stated that people were of the opinion that they are too fat.

**Association of Perceived body weight with Socio-demographic/economic factors, in 266 market women**

Table 2 shows the results of a Pearson Chi-square and fishers’ exact test for categorical variables to test for association between perceived bodyweight description (outcome variable) and socio-demographic characteristics. Respondents age group, marital status and socio-economic status were found to be significantly associated with their perceived bodyweight (p<0.05). All other socio-demographic characteristics were not significantly related to respondents’ perceived body weight. A significance level of 0.05 was used to statistically confirm an association between variables and bodyweight descriptions.
Table 2: Assessing the effect of socio-demographic\economic on the perceived body weight of women at Kaneshie market.

<table>
<thead>
<tr>
<th>Socio-demographic factors</th>
<th>Normal</th>
<th>Overweight</th>
<th>Obese</th>
<th>$\chi^2$</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>age group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>17(34.69)</td>
<td>30(61.22)</td>
<td>2(4.08)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-39</td>
<td>10(14.93)</td>
<td>51(76.12)</td>
<td>6(8.96)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-49</td>
<td>4(5.88)</td>
<td>44(64.71)</td>
<td>20(29.41)</td>
<td>42.71</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>50-59</td>
<td>3(4.92)</td>
<td>43(70.49)</td>
<td>15(24.59)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-67</td>
<td>1(4.76)</td>
<td>18(85.71)</td>
<td>2(9.52)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>4(10.81)</td>
<td>25(67.57)</td>
<td>8(21.62)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest educational level</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td>4(8.7)</td>
<td>33(71.74)</td>
<td>9(19.57)</td>
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<td>JHS Form 4</td>
<td>12(12.5)</td>
<td>65(67.71)</td>
<td>19(19.79)</td>
<td>0.529</td>
<td>§</td>
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<td>SHS Form 4</td>
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<td>51(72.86)</td>
<td>6(8.57)</td>
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<td></td>
</tr>
<tr>
<td>Tertiary</td>
<td>2(11.76)</td>
<td>12(70.59)</td>
<td>3(17.65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ga-dangbe</td>
<td>14(15.56)</td>
<td>65(72.22)</td>
<td>11(12.22)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ewe</td>
<td>7(14.58)</td>
<td>85(70.25)</td>
<td>24(19.83)</td>
<td>0.454</td>
<td>§</td>
</tr>
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<td>Northerner</td>
<td>2(28.57)</td>
<td>4(57.14)</td>
<td>1(14.29)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divorced</td>
<td>2(9.52)</td>
<td>14(66.67)</td>
<td>5(23.81)</td>
<td>36.4</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Separated</td>
<td>1(5.88)</td>
<td>15(88.24)</td>
<td>1(5.88)</td>
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<tr>
<td>Married</td>
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<td>103(71.53)</td>
<td>28(19.44)</td>
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<tr>
<td>Cohabitation</td>
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<td>26(72.22)</td>
<td>4(11.11)</td>
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<tr>
<td>Widow</td>
<td>0(0)</td>
<td>14(73.68)</td>
<td>5(26.32)</td>
<td></td>
<td></td>
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<tr>
<td>company/government house</td>
<td>0(0)</td>
<td>4(66.67)</td>
<td>2(33.33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>care takers</td>
<td>2(40)</td>
<td>3(60)</td>
<td>0(0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>food stuff</td>
<td>8(10)</td>
<td>60(75)</td>
<td>12(15)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beauty products</td>
<td>5(9.62)</td>
<td>34(65.38)</td>
<td>13(25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>clothes/smother care</td>
<td>4(9.76)</td>
<td>32(78.05)</td>
<td>5(12.2)</td>
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<td></td>
</tr>
<tr>
<td>Plastics</td>
<td>4(19.05)</td>
<td>14(66.67)</td>
<td>3(14.29)</td>
<td>0.531</td>
<td>§</td>
</tr>
<tr>
<td>Provisions</td>
<td>7(18.92)</td>
<td>22(59.46)</td>
<td>8(21.62)</td>
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<td></td>
</tr>
<tr>
<td>kitchen utensils</td>
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<td>6(66.67)</td>
<td>0(0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seamstress</td>
<td>1(10)</td>
<td>8(80)</td>
<td>1(10)</td>
<td></td>
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</tr>
<tr>
<td>hairdressing</td>
<td>3(18.75)</td>
<td>10(62.5)</td>
<td>3(18.75)</td>
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</tr>
<tr>
<td>socio-economic status</td>
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<td></td>
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</tr>
<tr>
<td>poorest</td>
<td>6(18.75)</td>
<td>13(40.63)</td>
<td>13(40.63)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>poor</td>
<td>2(6.45)</td>
<td>24(77.42)</td>
<td>5(16.13)</td>
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</tr>
<tr>
<td>middle income</td>
<td>3(9.09)</td>
<td>27(81.82)</td>
<td>3(9.09)</td>
<td>0.002**</td>
<td>§</td>
</tr>
</tbody>
</table>
Association between socio-demographic\economic factors and perceived body weight of women at Kaneshie market

After adjusting for marital status and socio-economic status in table 3, older women (50-59 years) were more likely to see themselves as obese than younger (18-29 years) (AOR=8.75, 95% CI: 2.28 – 33.48). Among women within the ages of 40 and 49, the odds of perceiving an obese body weight, compared to perceiving normal body weight is 4.09 times higher than that of women within the ages of 18 to 29 years (AOR=4.09, 95% CI: 1.12 – 14.93).

From the multiple ordered logistic regression model, Socio-economic status was identified to have an effect on the perceived body weight of the study participants (p=0.056). Thus, the odds of perceiving obese body weight, compared to perceiving normal body weight among the poorest group is 4.38 times higher than that of women within the richest category (AOR=4.38, 95% CI: 1.33 – 14.39), after adjusting for marital status and age. However, there wasn’t enough statistical evidence to conclude that marital status are related to the perceived body weight of the market women.
Table 3: Assessing the association of socio-demographic\economic on the perceived body weight of women at Kaneshie market.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Perceived body weight</th>
<th>AOR</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>age group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 - 29</td>
<td>ref</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>30-39</td>
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<td>3.91</td>
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<td>40-49</td>
<td>4.09</td>
<td>1.12</td>
<td>14.93</td>
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</tr>
<tr>
<td>50-59</td>
<td>8.73</td>
<td>2.28</td>
<td>33.48</td>
<td>0.01**</td>
</tr>
<tr>
<td>60-67</td>
<td>2.23</td>
<td>0.32</td>
<td>15.76</td>
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<tr>
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</tr>
<tr>
<td>Single</td>
<td>ref</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Divorced</td>
<td>1.63</td>
<td>0.21</td>
<td>12.61</td>
<td>0.071</td>
</tr>
<tr>
<td>Separated</td>
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<td>0.12</td>
<td>4.52</td>
<td>0.071</td>
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<td>Married</td>
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<td>1.11</td>
<td>14.64</td>
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</tr>
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<td>0.32</td>
<td>5.17</td>
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</tr>
<tr>
<td>Widow</td>
<td>2.73</td>
<td>0.37</td>
<td>20.04</td>
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<tr>
<td><strong>Socio-economic status</strong></td>
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</tr>
<tr>
<td>Richest</td>
<td>ref</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Poorest</td>
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<td>1.33</td>
<td>14.39</td>
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<td>Poor</td>
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<td>2.09</td>
<td>0.68</td>
<td>6.41</td>
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<tr>
<td>Rich</td>
<td>0.87</td>
<td>0.28</td>
<td>2.70</td>
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</tr>
</tbody>
</table>

P-values in parentheses;*p<0.05, **p<0.01, ***p<0.001 values were multiple ordered logistic regression model, ref: the reference category, AOR: adjusted odds ratio from the multiple ordered logistic regression model, CI: confidence interval.
<table>
<thead>
<tr>
<th></th>
<th>Perceived body weight</th>
<th>Normal (%)</th>
<th>Over weight (%)</th>
<th>Obese (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=35</td>
<td>N=186</td>
<td>N=45</td>
<td></td>
<td>N=266</td>
</tr>
<tr>
<td>Actual BMI body weight</td>
<td><strong>Normal</strong></td>
<td>20(57.14)</td>
<td>24(12.9)</td>
<td>0(0)</td>
<td>44(16.54)</td>
</tr>
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<td></td>
<td><strong>Overweight</strong></td>
<td>10(28.57)</td>
<td>57(30.65)</td>
<td>5(11.11)</td>
<td>72(27.07)</td>
</tr>
<tr>
<td></td>
<td><strong>Obese</strong></td>
<td>5(14.29)</td>
<td>105(56.45)</td>
<td>40(88.89)</td>
<td>150(56.39)</td>
</tr>
<tr>
<td>Body weight preference</td>
<td><strong>Lose some</strong></td>
<td>4(11.43)</td>
<td>64(34.41)</td>
<td>33(73.33)</td>
<td>101(37.97)</td>
</tr>
<tr>
<td></td>
<td><strong>Gain more</strong></td>
<td>21(60)</td>
<td>12(6.45)</td>
<td>1(2.22)</td>
<td>34(12.78)</td>
</tr>
<tr>
<td></td>
<td><strong>Maintain it</strong></td>
<td>10(28.57)</td>
<td>110(59.14)</td>
<td>11(24.44)</td>
<td>131(49.25)</td>
</tr>
<tr>
<td>Reasons for weight preference</td>
<td><strong>Societal acceptance</strong></td>
<td>12(34.29)</td>
<td>47(25.41)</td>
<td>14(32.56)</td>
<td>73(27.76)</td>
</tr>
<tr>
<td></td>
<td><strong>Health consideration</strong></td>
<td>10(28.57)</td>
<td>61(32.97)</td>
<td>19(44.19)</td>
<td>90(34.22)</td>
</tr>
<tr>
<td></td>
<td><strong>Self- satisfaction and confidence</strong></td>
<td>9(25.71)</td>
<td>51(27.57)</td>
<td>8(18.6)</td>
<td>68(25.86)</td>
</tr>
<tr>
<td></td>
<td><strong>Meet media’s ideal look description</strong></td>
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Findings from the qualitative data (in-depth interviews) is similar to the results from the quantitative data. An emergent theme from the transcript was the “desire to gain some amount of weight” by participants with normal weight. They expressed that desire because they claim it is fashionable to have some body weight and shape so as to look nice when you dress.

“I would like to gain some weight because when you are too slim and you dress it does not look nice on you but when you have some weight but not too fat that is nice”-(IDI 54 year old overweight woman).
“I would like to gain some weight especially get some more buttocks and hips so that when I dress it will look nice like when you wear a straight dress and you have buttocks and hips it looks very nice” - (IDI, A 25 year old normal weighted woman)

Participants who were obese also expressed the “desire to lose weight” and recounted actions or measures they have embarked on to lose weight. Their attempts to lose weight spanned from dieting to exercising, drinking herbal teas and extreme measures such as going without food for some time.

“I have tried to drink lime the whole day, go jogging and after a week or two I become tired and stop” (IDI 25 year old obese lady)

“I am working on my diet seriously I don’t eat certain things and I don’t eat late too and sometimes I go to jogging but not regularly because of my children so in a month I go like twice” (38 year old obese woman)

“I have a machine for exercising like the bicycle but it is stationary, so I use that and I drink this Chinese herbal tea that is used for slimming”. - (IDI, 40 years old obese woman)

Expressions of stigma from the quantitative data (Table 4) showed that respondents with normal body weight stated that people accept their current body weight whereas the obese respondents reported that people expressed concerns about their weight saying they were too big. These results also came up in the qualitative data. Mainly, the obese participants in the IDIs gave instances where they were told by family members, friends or strangers of being too fat and should do something to lose some weight. This is evidenced in the quotes below.
“Most people here (Kaneshie Market) pass comments like you are fat ooo, why are you not jogging or doing exercise. Some people say it in an annoying way to the extent that you get angry and ask them to mind their own business”- (IDI, 25 years old obese woman).

“I will say with my father. When I am eating he always says you are too fat and you are still eating this kind of food. You need to check your diet because you are becoming overweight sometimes he looks at you and say eii look at your arms. Your arms is becoming big, you need to check it or see a dietician. And I will say ah this is how I am. My weight is always the same. He will say no you’ve changed. Now you are becoming too fat. It makes me feel bad”- (IDI, 36 year old obese woman).

“when they pass by we pass comments that they are too fat, there is this young lady on our floor here she is so fat that her knees hurt and she can’t walk but she thinks it is nice but it is not nice because if both of us are asked to run now I will run faster than her but she is younger than I am so it is not good to be that fat”- (IDI, 56 year old normal weight).

4.4 Perceived Causes of overweight and obesity

Findings from the research highlighted the different perceptions individuals had about the causes of overweight. Participants with normal weight perceived overweight and obesity to be caused by excessive eating. They stated that overweight/obese individuals lack self-discipline with regards to their eating habit, therefore they eat big portions of food as well as those concentrated with fats. Although some of them, attributed weight gain to hereditary, they were of the opinion that if you don’t catalyze it by excessive eating it will not manifest. Furthermore, it was perceived that excessive eating coupled with physical inactivity leads to weight gain. Obese/overweight persons however, explained that their state was hereditary
and disputed the arguments of their excessive eating or physical inactivity expressed by the participants with normal weight.

“We have to blame them because they are the ones eating the food and not exercising. I think that obesity is mainly due to eating too much food or fatty food and not exercising because you can’t say it is a family thing. You have to eat to get fat” - (IDI, 56 year old normal weight).

“I don’t know much but what I know is that obesity is caused by eating too much fats and oils” - (IDI, 19 year old normal weight woman)

I will blame them (overweight/obese persons) because there is this woman in my church she is so fat and whenever we have an occasion that involves food you will see her bring two plates and she will take maybe banku and rice and eat all. So then I saw that her fatness is due to excessive eating so for some people it is the way they eat that makes them fat.

“I was born with it, it is not like I gained this much weight when I grew up but I was born with it so when I was in school I was big. It is genetic and both of my parents are fat I took after my mother she has big buts.” - (IDI, 38 year old obese woman)

4.5 Preference of slender women by Ghanaian men

Ghanaian men were perceived to prefer slimmer women or those with some amount of weight but not obese women by the study participants. Some of the reasons they gave were that the men may not be able to carry obese persons should anything happen to them that required being taken to the hospital. Other participants revealed that a husband with an obese wife at home will go out and cheat on her with a slimmer woman. One obese woman explained that men perceive them to be unhealthy and therefore at risk of dying than women with normal weight.
“Some men say that they don’t like fat girls because they think fat girls are not healthy and fat girls will die early. And at times they complain that what if somethings happens to you who is going to carry you?” - (IDI, 25 years old obese woman).

“I will like to say that the fat people must try and lose weight or else their husbands will leave them because he will not be able to raise even just one leg, so he will go and get a slim person whose leg he can raise” - (IDI, 38 years old normal weighted woman)

4.6 Stigma associated with overweight and obesity

4.6.1 Derogatory name callings

Results from the quantitative data showed that derogatory name calling is a very common stigmatizing attitude that overweight and obese people experience. All the study participants were aware of the names used to call overweight/obese persons. About 65% of all the respondents indicated that overweight/obese persons were not comfortable with those names. Derogatory name calling was also one of the themes that emerged as a stigmatizing attitude from the qualitative data. Women with normal weight mentioned different names by which they call overweight and obese persons and this was confirmed by obese participants as they also mentioned names they are tagged with. These derogatory names were used to describe how they look or tease and laugh at them. Some of the participants of normal weight in the qualitative research explained how uncomfortable these name calling was for the overweight and obese persons. Overweight and obese persons expressed dislike, shame and anger when they are called those names.

“we call such people obolo or bosa (a big fish that comes to the sea shore), such people have different names, others also describe them as obigi and when they call
them such names we see that they are not happy and it bothers them” - (IDI, 38 year old normal weight woman).

“They say obolo, okesie, bigsize and stuffs like that, it is annoying but sometimes you just have to ignore them and go your way” - (IDI, 25 year old obese woman).

4.6.2 Challenges of using public spaces and public transport

About 52% of the respondents surveyed were of the view that overweight/obese persons should not be treated differently when they join public transport whilst 44% were of the view that they should be treated differently. This different treatment encompassed making them uncomfortable as well as aware of the inconveniences their weight causes for other passengers who sit beside them when they join public transport. Findings from the in-depth interview revealed that overweight/obese persons were discriminated against in public transport. Participants with normal weight stressed on the fact that everyone pays the same fare hence each individual is entitled to a whole seat but overweight and obese persons occupy other people’s seat creating inconveniences. Usually, people avoid sitting by overweight/obese persons in public transport or pass comments about how they have occupied all the space with their big bodies.

“When they sit in the public transport like the trotro for instance people pass comments like you are too big you have taken up all the space. There is this woman in my neighbourhood, she is very fat, so when we sit in the trotro and she is coming to board the car nobody wants her to sit by them because she will take up all the space and the entire seat carries four people but when she sits she takes up the space of two people so then the slim person there will be squeezed so as for me when she is coming to board the car, I don’t make her sit by me” - (IDI, 56 year old normal weight woman)

“People usually pass comments like woman you are too big you cannot sit here, go and get a taxi. The other day I went to board this commercial bus and this very fat women went to sit inside, in fact she went to sit in first because she knows that when she goes later people will not want her to sit by them so when the other passengers
started teasing her saying she is too big and has occupied the space meant for two people for that matter she should pay for two but she didn’t mind them” - (IDI, 30 year old normal weight woman).

Overweight and obese participants in the IDIs recounted instances where they were treated badly in commercial vehicles because of their body size and weight. As quoted…

“Because of my weight I am large so definitely I will come in some one’s seat. The seats are for individuals but sometimes I take more than my own seat so definitely someone will complain. So before the person even comes to sit the person will look at you and check other seats whether there are other spaces. If there is no space that’s when the person comes to sit beside you. But if there is space you see that they all bypass you and go to the next seat but if there is no space when they are coming to sit beside you they start murmuring or saying certain things that you have to push because you have taken part of my seat” - (IDI, 36 year old obese woman).

“sometimes it is annoying because you will be sitting beside a slim person and the person knows you are fat but the person will open the legs because the person is also paying and entitled to a full sit so you have to squeeze and you know the seat is four and there is some small space left you hear them saying that as for me I cannot sit there the space is small I can’t sit. On one or two occasions I have experienced this and the mate had to go like that and leave the seat because no one was willing to sit there” - (IDI, 25 year old obese woman).

4.6.3 Denial of jobs due to overweight/obese

Overweight and obesity were documented as barriers to acquiring certain jobs. Some participants recounted how they were denied some job opportunities because of their weight and body size. Instances were cited of how the media prefers people with slim personality as opposed to overweight or obese persons. One participant narrated how difficult it has been for her to get a white collar job after graduating from the university because of her weight and therefore had to settle for selling with her mother in the market.
“My friend and I applied for a job in one of the big hotels as a front desk receptionist, my friend got the job but I didn’t get it and the reason they gave was that the job required smart people. Even though I told them I was smart, I think they did not believe me because people usually say fat people are not smart. So now I am here selling with my mother” (IDI, a 25 year old obese woman).

“because of my weight I was supposed to run a TV show in which I started but along the line when I was looking for sponsorship I was told because of my size they can’t put in their money because it wouldn’t fetch money so the best thing for me to do is to go on a diet so that I will be very slim and good looking meaning because of my weight I wasn’t good looking. Those were some of the reasons why I left the media, even now when you watch TV even news, most of the presenters are not overweight. There are some workplaces if you have too much weight they will not give it to you because they want smart people” (IDI, a 36 year old obese woman)

4.7 Effects of stigma on overweight and obese persons

Feelings of shame, anger, and self-pity are some of the sentiments obese women expressed when they are subjected to discriminatory or stigmatizing behaviors. Some of them shy away from some social gatherings like pool parties and even going to church because of the comments and attention they will attract due to their weight. Overweight and obese persons described how embarrassing and annoying it is when they are stared at or talked about in the streets.

“Sometimes you will be walking in town and you will see that everybody’s attention is on you and sometimes you are wondering what they are looking at only to find out that they are looking at you and you ask yourself why me? Or when you are walking with your friends and they pass comments about your weight, it is not nice, it is embarrassing.” (IDI, a 36 year old obese woman).
“yes, sometimes when you go to some places the way they will look at you as if you are not normal even at church when you are about to sit down they will be saying things like you will break the chair ooo, it hurts but what can you do” - (IDI, 38 year old obese woman)

“I will never go for a pool party because of wearing the bikini alone. People will say that this fat girl in bikini or maybe there is a social gathering and you have to sit on small chairs and when you go there they will pass comments like are you coming to sit on these chairs? You will break it and so because of that you will say let not go anywhere let me be at home because I will have my peace” (IDI, 38 year old obese woman).
CHAPTER FIVE

5.0 DISCUSSION

In public health, stigma is known to be responsible for imposing suffering on people subjected to it (Puhl and Heuer 2010). Unfortunately, stigma and discrimination towards obese persons are ubiquitous, making it a universal public health concern (WHO, 2000). Perceptions that overweight and obese people are lazy, lack self-control and are responsible for their weight gain further exacerbates the problem of stigma and discrimination meted out on them. This study therefore investigated the perceptions and stigmatization associated with overweight and obesity among women of reproductive age. Findings from the study revealed inconsistent body weight perception compared to their BMI among the study population. Women who were obese perceived themselves to be overweight, likewise those who perceived themselves to be of normal weight were overweight. This inconsistent perceived body weight could be because the women are in denial of their unhealthy weight, or do not want to be labelled as obese. Studies have reported women to be more likely to underestimate their body weight (Madrigal, Sanchez-Villegas et al. 2000, Ploeg, Chang et al. 2008). This misperceptions respondents have about their weight could hinder them from engaging in healthy behaviours thereby making them prone to gaining more weight. Because studies have also shown that people who perceive themselves as being overweight are more likely to practice weight control behaviours and endeavour to lose as compared to those who misperceive their weight (Neumark-Sztainer, Paxton et al. 2006, Cheung, Ip et al. 2007, Lemon, Rosal et al. 2009). Participants in this study who perceived themselves as overweight or obese expressed the desire to lose weight and reported engaging in various weight loss activities. This goes on to buttress the evidence that people who perceive themselves to be overweight and obese realize the need to lose weight and are more likely to engage in weight loss activities. Cheung and colleagues revealed that females who
perceived themselves as overweight were more likely to exercise, limit calorie intake, self-medicate with diet pills, or use purgatives in attempts to lose weight (Cheung, Ip et al. 2007). This study population were aware of the health implications of being overweight and obese, so they could have been the motivating factor for expressing the desire to lose weight and making initiatives to achieve that. Furthermore, the stigma and discrimination experienced due to their body weight could account for their efforts to lose weight in order to fit or be accepted. However, contrary to our findings, a study conducted in a rural village in South Africa revealed that overweight and obese women were unconcerned about their weight and most of them did not want to lose weight (Faber and Kruger 2005).

Perceived causes of overweight and obesity in this study were excessive eating, consumption of fatty foods, physical inactivity and heredity. It is well known that the key factors involved in overweight and obesity are dietary and physical activity habits (Martinez 2000). Similar to our findings, a systematic review by Sikorski, Luppa et al. (2011) on the stigma of obesity in the general public and its implications for public health showed that although the public acknowledged the multi causality of obesity to some extent, causes that are within the individual's control like physical inactivity and consumption of fatty foods were named most frequently in population surveys. Therefore overweight and obese persons are blamed for their weight and body sizes. Obese participants in this study attributed their weight to genetic and hereditary factors. Gonçalves, González et al (2012), also reported similar findings where obese adolescents in their study also perceived their obese state to be caused by genes and attributed their condition to their heritage (Gonçalves, González et al. 2012).

Generally, both overweight/obese and women with normal weight perceived that men preferred slender women to obese or overweight persons. This perception could be due to the proliferation of western culture, where slender women are perceived to be the most
attractive. For instance, a study on preferences for female body weight and shape in three European countries showed that men preferred relatively slender women (Swami, Neto et al. 2007). Nonetheless, dissimilar to our findings a comparative study on female body dissatisfaction and perceptions of the attractive female body in Ghana, the Ukraine, and the United States revealed that Ghanaian men preferred women with heavier than the average female body as opposed to men in the western countries who perceived slender women as more attractive (Frederick, Forbes et al. 2008).

Overweight and obese persons experience different kinds of stigma and discrimination globally and this has been documented in a number of studies (Puhl and Brownell 2006, Muennig and Bench 2009). Overweight and obese persons in this study experienced stigma and discrimination in the form of derogatory name callings, denial of jobs, and rude comments about their weight or body size in public spaces. Weight based name calling is a common stigmatizing attitude overweight and obese persons are subjected to (Puhl, Luedicke et al. 2011). In this study, some of the names used included obolo, obiggie, big size all of which are offensive. The main perpetrators of these name callings who were women with normal weight said they do it to coerce them to endeavor to lose weight. Although they may claim to have good intents for stigmatizing overweight and obese persons, their attitude and behavior tend to have a negative toll on them. This is because stigmatization of overweight and obese persons is reported to lead to psychological conditions such as depression, low self-esteem and cause stress (Schafer and Ferraro 2011; Puhl & Brownell, 2006).

Stigma and discrimination of obese persons when seeking for jobs or even at their workplace is very common (Paul and Townsend 1995; Nowrouzi, McDougall et al. 2015). Some obese persons in this study reported being denied jobs because of their weight and body size. Some jobs like the media prefer slender women so denial of jobs in the media company as reported
by participants in this study is not surprising. Employers are also usually of the opinion that overweight employees are less active and more liable to on the job injuries and illnesses, as well as are less productive (Paul and Townsend 1995). Therefore, most obese persons face weight bias and discrimination at every stage of the employment process (Nowrouzi, McDougall et al., 2015). Flint, Čadek et al., (2016) also reported that employers rated obese candidates as less suitable compared with normal weight candidates. Their findings further contribute to evidence that obese people are discriminated against in the hiring process. This goes to buttress the results of Puhl and Brownell (2003) who explained that stigmatization and discrimination are experienced in three important areas of living; employment, education, and health care.

The stigma and discrimination overweight and obese persons are subjected to have social and psychological effects on them (Puhl and Heuer 2010). Research has documented that overweight and obese individuals who experience weight stigmatization have higher rates of depression, anxiety, social isolation, and poorer psychological adjustment (Puhl and Heuer 2010). Our findings also revealed that overweight and obese persons excluded themselves from social gatherings like pool parties and even church activities because of the stigma and discrimination they experience. They expressed sentiments of anger, shame and embarrassment when they are subjected to such treatments. The stigma that these women are subjected to affects their social life as well as their psychological wellbeing.

The findings of the study confirmed some of the reported concepts in the conceptual framework. It was conceptualized that body weight, age, educational level and cultural beliefs will influence the perceptions people have about obesity and overweight as well as their stigmatizing attitude. The body weight of individuals did determine the perceptions and stigmatizing attitude towards overweight and obese persons as people with normal body weight perceived obesity to be caused by excessive eating and physical inactivity and
therefore blamed them for their condition as opposed to obese persons who attributed it to hereditary. The perceptions and stigmatizing attitude did not differ for persons with varying ages, educational level and cultural beliefs.
CHAPTER SIX
SUMMARY, CONCLUSIONS AND RECOMMENDATION

6.0 Summary of Findings

This study sought to find out the perception and stigmatization associated with overweight and obesity among women at Kaneshie Market. With the objective of finding the perceptions and experiences of stigma associated with overweight and obesity, a mixed method research study design was employed. Two hundred and sixty-six market women were sampled using systematic random sampling and ten in-depth interviews were conducted among purposively selected obese and women of normal weight in the market. The main study findings include:

1. The study revealed that majority of the women sampled misperceived their body weight. Obese women perceived themselves to be overweight and overweight persons perceived themselves to be of normal weight.

2. Perceived causes of overweight and obesity were excessive eating, eating of fatty foods and physical inactivity.

3. The study furthermore reports that stigmatization of overweight and obese women came in the form of derogatory name callings, challenges in using public space and transport, and denial of jobs.

4. Due to these stigmatizing attitudes, overweight and obese participants expressed sentiments of shame, embarrassments and sometimes anger and this made them avoid some social gatherings.
6.1 Conclusion

Majority (56%) of the women sampled in the quantitative aspect of the study were obese and obesity is believed to be caused by excessive eating, consuming fatty foods and physical inactivity. Their perceived cause of obesity influenced the stigma meted out on the obese/overweight persons as they were blamed for their condition.

6.2 Recommendations

1. Effective educational interventions should be organized with the focal points being on educating the public to desist from stigmatizing and discriminatory attitudes towards obese/overweight persons.

2. There is a need to sensitize women to be conscious of their weight and adopt healthy lifestyles since majority of the women surveyed were overweight.

3. Policies should be implemented to prevent discrimination of overweight/obese persons when seeking for job.

4. There is a need for public health intervention to address misperceptions about weight status especially for the overweight and obese persons making them oblivious to measures needed to lose or manage their weight.

6.3 Limitations of the study

The study sought to conduct two focus group discussions among market women of normal weight and overweight/obese, however, the researcher was unable to conduct the focus group discussions as the market women were unable to avail themselves due to the nature of their work. In-depth interviews was therefore used. Hence the findings of this study is limited in scope. This notwithstanding, it provides an understanding on the perceptions and experiences of stigma of overweight and obese persons.
REFERENCES


### APPENDICES

Appendix 1 Timeline

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Appendix 3: Informed Consent (Quantitative)

Consent Information/ Statement of Consent (structured survey questionnaire)

MASTER OF PUBLIC HEALTH

DEPARTMENT OF POPULATIONS FAMILY AND REPRODUCTIVE HEALTH

SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF GHANA, LEGON

CONSENT INFORMATION

PURPOSE OF RESEARCH

You are invited to participate in a research study on perceptions and stigmatization of overweight and obesity among women of reproductive age. This study is to describe perceptions people have about overweight and obesity and their experiences as overweight and obesity persons.

You were selected as a possible participant in this study because you meet our selection criteria and you were retained in our sampling. This study is looking for a minimum of 256 participants.

VOLUNTARY PARTICIPATION

Your participation in this study is entirely voluntary. Your decision not to participate will not have any negative effect on you or on your relation. In the course of the study you can withdraw anytime you want to, without any consequences.
DURATION OF STUDY INVOLVEMENT

This research study is expected to take approximately 2 months to interact with selected participants and to gather necessary information. Responses will be put together and analyzed in the next month. Final report should be complete by the end of July, 2017.

PROCEDURES

If you choose to participate, the research assistant will explain all the procedures to be followed in a language you understand. You will be given the opportunity to ask all questions you may have and further explanations will be given. Notes will be taken by the research assistant and the in depth interview and focus group discussion will be tape recorded hence your consent is needed before it commences.

Signing or Thumb printing of Questionnaire

If you agree to participate, you will be requested to sign a consent form or thumb print if you wish to indicate that you fully agree to take part. This will be done after understanding the purpose of study and agreeing to be part of study.

Administration of Questionnaire

A set of questions will be asked by the research assistant for which you will be requested to provide genuine answers as much as possible. You can however decide not to answer questions you feel uncomfortable with. Each questionnaire will take less than 30 minutes to complete.
Risks

There are no risks attached to responding to the questionnaires. Your identity will not be disclosed whatsoever in this study; however for purposes of data analysis each form will be coded.

PARTICIPANT RESPONSIBILITIES

As a participant, your responsibilities include:

- Follow the instructions of the research assistant
- Complete your questionnaires as instructed
- Ask questions as you think of them
- Tell the research assistant if you change your mind about staying in the study

WITHDRAWAL FROM STUDY

If you first agree to participate and later change your mind, you are free to withdraw your consent and discontinue your participation in the study. Your decision will not affect you in any way.

POSSIBLE RISKS, DISCOMFORTS, AND INCONVENIENCES

The study involves no risk, however, we anticipate some discomfort during the interview process given the sensitive nature of the topic. Questions will be asked about your background, anthropometric measurements will be taken and your perception of overweight and obesity will be asked. Some questions focus on your personal life and you may feel uncomfortable answering those questions or you may not have answer to a particular question. You are free to skip any questions you are not comfortable answering.
You should talk with the research assistant if you have any such discomforts and ask questions whenever you want for clarification. You are also free to skip any question you are not comfortable answering.

**POTENTIAL BENEFITS**

There is no direct benefit to the participant of this study however the information you will provide will contribute to the overall knowledge on women’s perception and stigmatization concerning overweight and obesity. This information will help us in knowing how women perceive and their experiences in being stigmatized as a result of their weight and appearance. We further hope that the outcome of this study would be used to advice on policies that bother overweight and obesity persons especially strategies that seek to address community attitude and perceptions towards overweight and obesity.

**PARTICIPANT’S RIGHTS**

You should not feel obligated to agree to participate. Your questions should be answered clearly and to your satisfaction. If you decide not to participate, tell the research officer.

**CONFIDENTIALITY**

We would like to assure you that whatever information you provide will be handled with strict confidentiality, will be used purely for research purposes, and will never be used against you. Data analysis will be done at the aggregate level to ensure anonymity. Your name or personally identifying information will not be published in any report. Some staff of the research team may sometimes review the research records, but no unauthorized individual(s) will be able to access your information.
The results of this study may be presented at scientific or public health meetings or published in scientific or public health journals. Your identity and/or your personal information or that of your relation will not be disclosed except as authorized by you or as required by law. No response given will be disclosed to any unauthorized persons. Neither your name nor any identity traceable to you or your relation will be indicated on the survey forms.

**CONTACT INFORMATION**

Questions, Concerns, or Complaints: If you have any questions, concerns or complaints about this research study, its procedures or risks and benefits, you should ask the research assistant.

Independent Contact: If you are not satisfied with how this study is being conducted, or your questions/ concerns etc. are not satisfactorily answered by the research assistant or if you have further concerns, complaints, or general questions about the research or your rights as a participant, please contact:

Hannah Frimpong  
GHS-Ethical Review Committee  
Research and Development Division  
Ghana Health Service  
P. O. Box MB 190  
Accra  
Office: 0302 681 109  
Mobile: 024 451 6482  
Email: Hannah.Frimpong@ghsmail.org

Or

Dr. Richmond N.O. Aryeetey (Supervisor)  
School of Public Health  
University of Ghana, Legon  
Tel: 00244129669  
e-mail: raryeetey@ug.edu.gh
Statement of Consent

I have read this consent form or it has been read and explained to me. I have had the opportunity to discuss this research study with …………………………… and or his/her study staff. I have had my questions answered by them in a language I understand. The risks and benefits have been explained to me. I believe that I have not been unduly influenced by any study team member to participate in the research study by any statement or implied statements. I understand that my participation in this study is voluntary and that I may choose to withdraw at any time. I freely agree to participate in this research study.

I understand that information regarding my personal identity/ that of my relation will be kept confidential.

By signing this consent form, I have not waived any of the legal rights that I have as a participant in a research study.

Participant signature/Thumb print________________________

Date ___________________

(Day / month / year)
Appendix 4: Informed Consent (Qualitative)

Consent Information/ Statement of Consent (interview guide)

MASTER OF PUBLIC HEALTH
DEPARTMENT OF POPULATIONS FAMILY AND REPRODUCTIVE HEALTH
SCHOOL OF PUBLIC HEALTH, UNIVERSITY OF GHANA, LEGON

CONSENT INFORMATION

PURPOSE OF RESEARCH

You are invited to participate in a research study on perceptions and stigmatization of overweight and obesity among women of reproductive age at the Kaneshie market. This study is to describe perceptions people have about overweight and obesity and their experiences as overweight and obesity persons.

You were purposively selected as a possible participant in this study because you meet our selection criteria and you were retained in our sampling. This aspect of the study will interview eight overweight and obesity women of reproductive age in-depth and four focus group discussions made up of six participants each comprising of overweight and obese women.

VOLUNTARY PARTICIPATION

Your participation in this study is entirely voluntary. Your decision not to participate will not have any negative effect on you or on your relation. In the course of the study you can redraw anytime you want to, without any consequences.
**DURATION OF STUDY INVOLVEMENT**

This research study is expected to take approximately 2 months to interact with selected participants and to gather necessary information. Responses will be put together and analyzed in the next month. Final report should be complete by the end of July, 2017.

**PROCEDURES**

If you choose to participate, the research assistant will explain all the procedures to be followed in a language you understand. You will be given the opportunity to ask all questions you may have and further explanations will be given. Notes will be taken by the research assistant and the in-depth interview and focus group discussion will be tape recorded hence your consent is required before it commences.

**Signing or Thumb printing of consent form**

If you agree to participate, you will be requested to sign a consent form or thumb print if you wish to indicate that you fully agree to part. This will be done after understanding the purpose of study and agreeing to be part of study.

**The use of interview guide**

A set of questions will be asked by the principal investigator for which you will be requested to provide your thoughts and experiences about the subject matter. You can however decide not to answer questions you feel uncomfortable with. Each interview will last for about an hour.
Risks

There are no risks attached with the interview. Your identity will not be disclosed whatsoever in this study; however for purposes of data analysis transcribed audio recordings will be coded.

PARTICIPANT RESPONSIBILITIES

As a participant, your responsibilities include:

- Ask questions as you think of them
- Tell the principal investigator if you change your mind about staying in the study

WITHDRAWAL FROM STUDY

If you first agree to participate and later change your mind, you are free to withdraw your consent and discontinue your participation in the study. Your decision will not affect you in any way.

POSSIBLE RISKS, DISCOMFORTS, AND INCONVENIENCES

There is no risk associated with this study, however, we anticipate some discomfort during the interview process given the sensitive nature of the topic. Questions will be asked about your background, anthropometric measurements will be taken and your perception of overweight and obesity will be asked. Some questions focus on your personal life and you may feel uncomfortable answering those questions or you may not have answer to a particular question. You should talk with the research assistant if you have any such
discomforts and ask questions whenever you want for clarification. You are also free to skip any question you are not comfortable answering.

**POTENTIAL BENEFITS**

There is no direct benefit to the participant of this study however the information you will provide will contribute to the overall knowledge on women’s perception and stigmatization concerning overweight and obesity. This information will help us in knowing how women perceive and their experiences in being stigmatized as a result of their weight and appearance. We further hope that the outcome of this study would be used to advice on policies that affect overweight and obesity persons especially strategies that seek to address community attitude and perceptions towards overweight and obesity.

**PARTICIPANT’S RIGHTS**

You should not feel obligated to agree to participate. Your questions should be answered clearly and to your satisfaction. If you decide not to participate, tell the interviewer (principal investigator).

**CONFIDENTIALITY**

We would like to assure you that whatever information you provide will be handled with strict confidentiality, will be used purely for research purposes, and will never be used against you. Data analysis will be done at the aggregate level to ensure anonymity. Your name or personally identifying information will not be published in any report. Some staff of the research team may sometimes review the research records, but no unauthorized individual(s) will be able to access your information.
The results of this study may be presented at scientific or public health meetings or published in public health journals. Your identity and/or your personal information or that of your relation will not be disclosed except as authorized by you or as required by law. No response given will be disclosed to any unauthorized persons. Neither your name nor any identity traceable to you or your relation will be indicated on the survey forms.

**CONTACT INFORMATION**

Questions, Concerns, or Complaints: If you have any questions, concerns or complaints about this research study, its procedures or risks and benefits, you should ask the research assistant.

Independent Contact: If you are not satisfied with how this study is being conducted, or your questions/ concerns etc. are not satisfactorily answered by the research assistant or if you have further concerns, complaints, or general questions about the research or your rights as a participant, please contact:

Hannah Frimpong  
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Research and Development Division  
Ghana Health Service  
P. O. Box MB 190  
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Office: 0302 681 109  
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Tel: 00244129669  
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Or
Statement of Consent

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I understand that information regarding my personal identity/ that of my relation will be kept confidential.

By signing this consent form, I have not waived any of the legal rights that I have as a participant in a research study.

Participant signature/Thumb print_________________________

Date ___________________(Day / month / year)
Appendix 5: Research Questionnaire

SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA

Interviewer: ………………………… Date: …………………………

I am a student from the School of Public Health conducting a research into the perceptions and experiences of overweight and obesity stigma among women of reproductive age at Kaneshie market. This questionnaire seeks to collect information on demographics, bodyweight perceptions and anthropometric measurements of your weight and height. Any information collected would be treated with supreme privacy. Thank you for your cooperation. The process would not take much of your time. Please tick your most appropriate choice and provide the most sincere response for the spaces provided.

Your rights as a Participant

If you have any questions about your rights as a research participant, you can contact the Administrator of the GHS Ethical Review Committee at the following address:

Hannah Frimpong  
GHS-Ethical Review Committee  
Research and Development Division  
Ghana Health Service  
P. O. Box MB 190  
Accra  
Office: 0302 681 109  
Mobile: 024 451 6482  
Email: Hannah.Frimpong@ghsmail.org

SECTION A:

SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. How old are you? ………………… Years.
2. What level of school have you completed? …………………
3. Ethnicity for Ghanaians only
   Akan [1]                                          Ewe [3]
   Ga-Dangbe [2]                                    Others (specify) …………………
4. Marital status :
5. How many children have you ever had? .................................

6. Head of household:

7. Residential status:

8. How many persons are in your household? ..............

9. What do you trade in at the market?

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

SECTION B: Household Assets and wealth

<table>
<thead>
<tr>
<th>Q1. What is the main source of drinking water for your households?</th>
<th>Q2. What is the main source of water used by your household for other purposes such as cooking and hand washing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Piped into dwelling place</td>
<td>1. Piped into dwelling place</td>
</tr>
<tr>
<td>2. Piped into yard/plot</td>
<td>2. Piped into yard/plot</td>
</tr>
<tr>
<td>3. Piped into neighbour</td>
<td>3. Piped into neighbour</td>
</tr>
<tr>
<td>4. Public tap/standpipe</td>
<td>4. Public tap/standpipe</td>
</tr>
<tr>
<td>5. Tube well or borehole</td>
<td>5. Tube well or borehole</td>
</tr>
<tr>
<td>6. Protected well</td>
<td>6. Protected well</td>
</tr>
<tr>
<td>7. Unprotected well</td>
<td>7. Unprotected well</td>
</tr>
<tr>
<td>8. Rainwater</td>
<td>8. Rainwater</td>
</tr>
<tr>
<td>10. Cart with small tank</td>
<td>10. Cart with small tank</td>
</tr>
<tr>
<td>11. Surface water (river/dam, ponds, streams, canal)</td>
<td>11. Surface water (river/dam, ponds, streams, canal)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q3. Where is that water source located?</th>
<th>Q4. How long does it take you to go there, get water, and come back?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In own dwelling place</td>
<td>Minutes: ..............</td>
</tr>
<tr>
<td>2. In own yard/plot</td>
<td>Don’t know: ..........</td>
</tr>
<tr>
<td>3. Others specify</td>
<td></td>
</tr>
<tr>
<td>Q5. What kind of toilet facility do members of your household usually use?</td>
<td>Q6. Do you share this toilet with other households?</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
| 1. Flush to septic tank  
2. Flush to pit latrine  
3. Ventilated improved pit latrine  
4. Pit latrine with slab  
5. Pit latrine without slab/open pit  
6. Bucket toilet  
7. No facility/bush/field  
8. Others specify……………... | 1. Yes, other household members  
2. Yes, public  
3. Not applicable  
4. No response |

<table>
<thead>
<tr>
<th>Q7. How many households use this toilet facility?</th>
<th>Q8. Where is this toilet facility located?</th>
</tr>
</thead>
</table>
| Number of people: ……….  
Don’t know…………………… | 1. In own dwelling  
2. In own yard/plot  
3. Others specify………. |

<table>
<thead>
<tr>
<th>Q9. What type of fuel does your household mainly use for cooking?</th>
<th>Q10. Is cooking usually done in the house, in a separate building or outdoor</th>
<th>Q11. Do you have a separate room which is used as kitchen?</th>
</tr>
</thead>
</table>
| 1. Electricity  
2. LPG  
3. Natural Gas  
4. Biogas  
5. Kerosene  
6. Charcoal  
7. Straw/shrubs/grass  
8. Agricultural crop  
9. Animal dung  
10. Others specify: ….. | 1. In the house  
2. In a separate room  
3. Outdoors  
4. Others specify: … | 1. Yes  
2. No |
Q12. Does your household have any of the following?

<table>
<thead>
<tr>
<th></th>
<th>Codes for Q12(circle appropriate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Electricity</td>
</tr>
<tr>
<td>2.</td>
<td>A wall clock</td>
</tr>
<tr>
<td>3.</td>
<td>A radio</td>
</tr>
<tr>
<td>4.</td>
<td>Television</td>
</tr>
<tr>
<td>5.</td>
<td>A mobile phone</td>
</tr>
<tr>
<td>6.</td>
<td>A refrigerator</td>
</tr>
<tr>
<td>7.</td>
<td>A freezer</td>
</tr>
<tr>
<td>8.</td>
<td>An electric generator</td>
</tr>
<tr>
<td>10.</td>
<td>Computer/laptop</td>
</tr>
<tr>
<td>11.</td>
<td>Video DVD/VCD</td>
</tr>
<tr>
<td>12.</td>
<td>Sewing machine</td>
</tr>
<tr>
<td>14.</td>
<td>Table</td>
</tr>
<tr>
<td>15.</td>
<td>Cabinet/cupboard</td>
</tr>
</tbody>
</table>

Q13. What material is used for the floor of your house?

<table>
<thead>
<tr>
<th></th>
<th>Q14. What material is used to roof your house?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Earth/sand floor</td>
</tr>
<tr>
<td>2.</td>
<td>Dung floor</td>
</tr>
<tr>
<td>3.</td>
<td>Wood planks</td>
</tr>
<tr>
<td>4.</td>
<td>Parquet or polished floor</td>
</tr>
<tr>
<td>5.</td>
<td>Vinyl or asphalt strips</td>
</tr>
<tr>
<td></td>
<td>tiles/terrazzo</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q15. What material is used for the exterior walls of your house?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>No walls (Natural Walls)</td>
</tr>
<tr>
<td>2.</td>
<td>Cane/palm/trunks (NW)</td>
</tr>
<tr>
<td>3.</td>
<td>Dirt (NW)</td>
</tr>
<tr>
<td>4.</td>
<td>Bamboo with mud (Rudimentary Walls)</td>
</tr>
<tr>
<td>5.</td>
<td>Stone with mud (RW)</td>
</tr>
<tr>
<td>6.</td>
<td>Uncovered adobe (RW)</td>
</tr>
<tr>
<td>7.</td>
<td>Cardboard (RW)</td>
</tr>
<tr>
<td>8.</td>
<td>Refuse wood (RW)</td>
</tr>
<tr>
<td>9.</td>
<td>Cement (Finished Wall)</td>
</tr>
<tr>
<td>10.</td>
<td>Stone with lime/cement (FW)</td>
</tr>
</tbody>
</table>
11. Bricks (FW)
12. Covered adobe (FW)
13. Wood planks/shingles(FW)
14. Others specify………..

<table>
<thead>
<tr>
<th>Q16. Does your household have any of the following?</th>
<th>Codes for Q16 (circle appropriate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A wrist watch</td>
<td>1. 1 Yes 2 No</td>
</tr>
<tr>
<td>2. A bicycle</td>
<td>2. 1 Yes 2 No</td>
</tr>
<tr>
<td>3. A motor bike</td>
<td>3. 1 Yes 2 No</td>
</tr>
<tr>
<td>4. A motor king</td>
<td>4. 1 Yes 2 No</td>
</tr>
<tr>
<td>5. Animal drawn cart (e.g. donkey cart)</td>
<td>5. 1 Yes 2 No</td>
</tr>
<tr>
<td>6. A car or truck</td>
<td>6. 1 Yes 2 No</td>
</tr>
<tr>
<td>7. Tractor</td>
<td>7. 1 Yes 2 No</td>
</tr>
<tr>
<td>8. Others specify…………</td>
<td>8. 1 Yes 2 No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q17. Does any member of your household own agricultural land?</th>
<th>Q18. Does your household own any livestock, herds, other farm animals or poultry?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Yes</td>
<td>1. Yes</td>
</tr>
<tr>
<td>2. No</td>
<td>2. No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q19. Does your household have any of the following?</th>
<th>Codes for Q19 (circle the appropriate)</th>
<th>Q20. How many of the following does your household own?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cattle</td>
<td>1. 1 Yes 2 No</td>
<td>1. Cattle: ....../……/</td>
</tr>
<tr>
<td>2. Horses</td>
<td>2. 1 Yes 2 No</td>
<td>2. Horses: ....../……/</td>
</tr>
<tr>
<td>3. Donkeys</td>
<td>3. 1 Yes 2 No</td>
<td>3. Donkeys: .... /……/</td>
</tr>
<tr>
<td>4. Goats</td>
<td>4. 1 Yes 2 No</td>
<td>4. Goats: ......../……/</td>
</tr>
<tr>
<td>5. Sheep</td>
<td>5. 1 Yes 2 No</td>
<td>5. Sheep: ...... /……/</td>
</tr>
<tr>
<td>6. Pigs</td>
<td>6. 1 Yes 2 No</td>
<td>6. Pigs: ......../……/</td>
</tr>
<tr>
<td>7. Rabbits</td>
<td>7. 1 Yes 2 No</td>
<td>7. Rabbits: ...... /……/</td>
</tr>
<tr>
<td>8. Chicken</td>
<td>8. 1 Yes 2 No</td>
<td>8. Chicken: ...... /……/</td>
</tr>
<tr>
<td>10. Turkey</td>
<td>10. 1 Yes 2 No</td>
<td>10. Turkey: ...... /……/</td>
</tr>
<tr>
<td>11. Ducks</td>
<td>11. 1 Yes 2 No</td>
<td>11. Ducks: ......../……/</td>
</tr>
<tr>
<td>12. Others specify………..</td>
<td>12. 1 Yes 2 No</td>
<td>12. Others specify…/……/</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q21. Does any member of your household own any agricultural land?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Yes</td>
</tr>
<tr>
<td>2. No</td>
</tr>
<tr>
<td>3. Don’t know</td>
</tr>
</tbody>
</table>
SECTION C: PERCEPTION OF OVERWEIGHT AND OBESITY

1. Which of the following do you consider as ideal weight for you? (use pictures)
   1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

2. What would you want to do about your current bodyweight?
   Loss some [ ] Gain more [ ] Maintain [ ]

3. What is your reason for answer in above?
   Societal Acceptance [ ] Health considerations [ ] Self-satisfaction and confident [ ] Meet media’s ideal look description [ ] other (specify)………………………….

4. Which of these are you willing to engage in achieving your ideal weight? (you can choose more than one)
   Use of Pills [ ] Good Nutrition [ ] Exercising [ ] Herbal drinks [ ] none [ ] other (specify)………………………….

5. How do people perceive your current weight status?
   ..............................................................................................................................................................

SECTION D: STIGMATIZING OVERWEIGHT AND OBESITY

1. Are you aware of names people generally use to call overweight or obese persons?
   ..............................................................................................................................................................

2. How do you feel about those names?
   ..............................................................................................................................................................

3. What are some names given to obese persons?
   ..............................................................................................................................................................

4. Do you think overweight/obese persons are lazy? Yes [ ] No [ ]

5. Should overweight/obese persons be treated differently when they join public transport?
   Yes [ ] No [ ] Others.................................................................

6. Should overweight/obese persons be treated differently at school? Yes [ ] No [ ]
   Others.................................................................

7. Should overweight/obese persons be treated differently by the health care providers? Yes [ ] No [ ]
   Others.................................................................

8. Beyond names are there other ways people make overweight and obese persons uncomfortable?
   ..............................................................................................................................................................

SECTION E: ANTHROPOMETRY CODES

WEIGHT (kilograms) [ ]
HEIGHT (cm) [ ]
BMI [ ]
CLASSIFICATION ……………………………..
Appendix 6: In-Depth Interview

UNIVERSITY OF GHANA, SCHOOL OF PUBLIC HEALTH

INTERVIEW GUIDE FOR OVERWEIGHT AND OBESITY WOMEN

1. Who will you describe as overweight/obese person? (show picture)
2. What causes a person to be overweight/obese (Probe: Inherited, Eating habits, laziness, sedentary lifestyle)
3. How do people perceive overweight/obese persons in the typical Ghanaian setting? (Acceptable, indication of good living, caring husband)
4. How comfortable or difficult is it for you to talk about being overweight
5. How does being overweight affect you
   Probe: health effects, mental effects, social effects
6. How does being overweight affect your relationship with other people?
   Probe relationship with spouse, close family associates, children, and friends.
7. Have you done something either to lose weight in the last 12 months? Probe: Exercise, medications, starvation, Prayers etc
8. If yes to question 12 why did you do that to reduce weight
   Probe for stigmatization. Teasing, Name calling, Neglected
9. How do people, like market men and women, friends, neighbours react towards you in relation to your weight?
   Probe: names calling, teased or looked at in a negative way, bad comments
10. Which people are likely to treat overweight and obese persons differently because of their weight?
    Probe: friends, husband, relations, children, work mates
11. In which settings do you experience these reactions
    Probe: transportation, working environment, social gathering
12. What do they do to stigmatize you
    Probe: assault, teasing, name calling
13. Do you have any experience to share associated with these negative reactions
    Probe: experiences by self and others
14. Has stigmatizing from others ever made you do something different? Probe: binge eating, disturbed, suicidal ideations,
15. In your opinion, what things need to be done to improve people’s attitude towards overweight and obese people?
Appendix 7: In-Depth Interview

UNIVERSITY OF GHANA, SCHOOL OF PUBLIC HEALTH
INTERVIEW GUIDE FOR NORMAL WEIGHT WOMEN

1. Who will you describe as overweight or obese person?(Use picture)

2. Which of the pictures will you personally prefer and why?

3. What is your perception about increase in weight?

4. What is your perception about overweight and obesity?

5. How do people in our setting perceive increase in weight of a person especially a woman?
   (Probe: acceptable, sign of good living, good care from husband)

   STIGMATIZATION

1. Have you observed overweight/obese persons being treated differently before?
   (Probe: Transport, school, health facility, market setting)

2. Have you personally treated any overweight and obese person differently because of her weight before?
   (Probe: Transport, school, health facility, market setting, customers)

3. How common is calling name, teasing and laughing at overweight/obese persons is in Ghana?(Probe: the market place, hourly, daily, weekly, monthly)

4. Could you share with us any experience you have of an obese person being treated differently?

5. What was the reaction of the overweight/obese person during and after the treatment?
   (Probe: cry, insults, confused)

6. Do you think treating overweight/obese persons differently will help them put in more effort to reduce their weight?
Appendix 8: Ethical Clearance