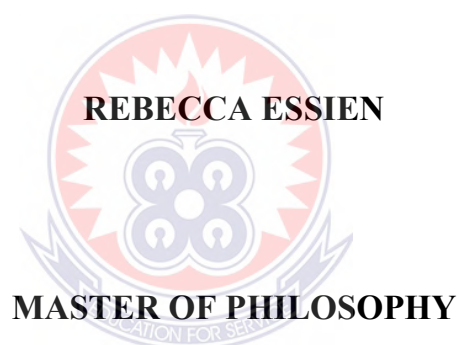


UNIVERSITY OF EDUCATION, WINNEBA

**PERCEPTION OF BODY WEIGHT, ITS MANAGEMENT PRACTICES
AND NUTRITIONAL STATUS OF YOUNG ADULTS IN AGONA
NKWANTA, GHANA**



2022

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NKWANTA, GHANA**



**A thesis in the Department of Home Economics Education,
Faculty of Home Economics, submitted to the School of
Graduate Studies in partial fulfilment
of the requirements for award of the degree of
Master of Philosophy
(Home Economics)
in the University of Education, Winneba**

JUNE, 2022

DECLARATION

Student's Declaration

I, Rebecca Essien hereby declare that, apart from references and quotations contained in published works which have been identified and dully acknowledged, this thesis is entirely my own original work and that it has not been submitted, either in part or whole for another degree elsewhere.

Signature.....

Date.....

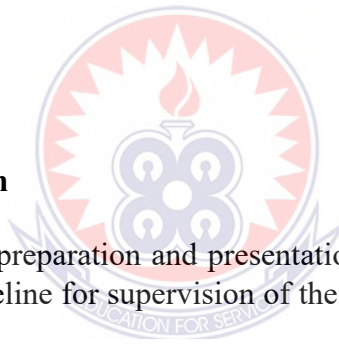
Supervisor's Declaration

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guideline for supervision of thesis as laid down by the University of Education, Winneba.

Supervisor's Name: Md. Comfort Kutum Madah

Signature.....

Date.....



DEDICATION

This work is dedicated to my lovely husband, Isaac Simmons Bassaw, Professor Samuel Asiedu- Addo, my late father, John Cephas Essien, Dr Peter P. K. Yalley, Dr Emmanuel Okumi Andoh, my brother, Gideon Cephas Essien of blessed memory, my mother, Madam Elizabeth Essien and my lovely daughter, Eliana Gyedzi Bassaw for their love, support and encouragement which never ceased to sustain me throughout this entire programme.



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I owe the Almighty God all the gratitude for His immense blessings and mercies betrothed upon me throughout the programme. I say to God be the glory for a successful completion of the entire programme.

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Acknowledgement is also due to all those whose work have been cited in this study.

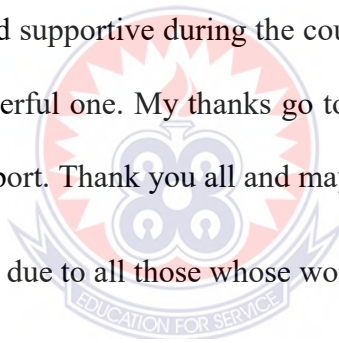
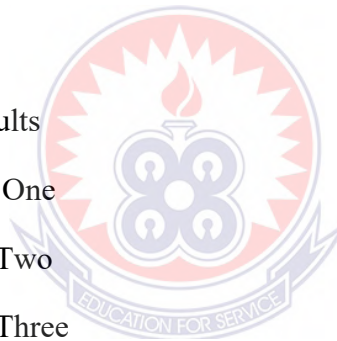


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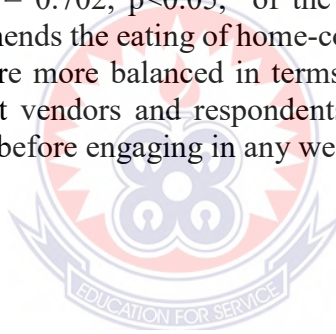
LIST OF ACRONYMS

BMI	-	Body Mass Index
BWP	-	Body Weight Perception
CDC	-	Centre for Disease Control and Prevention
NNP	-	National Nutrition Policy
SCT	-	Social Comparison Theory
SDT	-	Self-Discrepancy Theory
WHO	-	World Health Organization



ABSTRACT

This study assessed perception of body weight, its management practices and nutritional status of young adults in Agona Nkwanta. The need for this study was due to the fact that many young adults are concerned about their physical appearance and engage in certain practices in order to attain the desired body ideals. The sample size was 237. Quantitative method involving correlation and cross-sectional designs were used. Findings showed that 61% females and 78% males do perceived their body weight to be normal. 36% females and 20% males perceived themselves to be underweight, whilst 3% females and 2% males of perceived themselves to be overweight. But with the use of anthropometric measurements 73% were within the healthy weight range of ($>18.50 - 24.99$), 17% were underweight (<18.50), whilst 10% were overweight ($>25 - 29.9$). Weight management practices; 20% engages in exercise to lose weight, 8%-diet to lose weight, 13% -laxatives/pills to lose weight. 3%-eating more food to gain weight, 12%-pills only to gain weight, 21% combine exercise and dieting to lose weight, 15%-both dieting and pills to lose weight whilst 8% combine dieting and pills to gain weight. For nutritional status; 45% eat locally available food groups “1-2 times per week”, 47% eat it “3 or more times per week”, whilst 8% do not take sugary foods. There was a strongly significant positive correlation between weight perception and weight management practices $r(237) = 0.799$, $p < 0.05$; weight perception and nutritional status- $r(237) = 0.702$, $p < 0.05$, of the study respondents. Based on the finding, the study recommends the eating of home-cooked food as my findings showed that home-cooked food are more balanced in terms of quality, quantity and hygiene than fast foods and street vendors and respondents should calculate their BMI and consult qualified persons before engaging in any weight management practices.



CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter gives a brief overview of the topic under discussion to enable readers appreciate the scope of the work done. It comprises of the following: background, problem statement, purpose of the study, objectives, research questions, significance of the study, delimitation of the study, limitations of the study and organization of the study

1.1 Background to the Study

Studies have acknowledged that body weight perception (BWP) among young adults is fast gaining recognition as a great determinant of nutritional status and weight management practices (Gaylis, Levy & Hong, 2020; Ursoniu, Putnoky & Vlaicu, 2011). Dorosty, Mehdikhani, Sotoudeh, Rahimi, Koohdani and Tehrani (2014) asserted that BWP plays a key role in weight management and nutritional habit formation. Park (2011) posited that underestimation of one's body weight can be a risk factor for obesity, while overestimation of *underweight*/normal weight can be a risk factor for unhealthy weight control practices, and may cause eating disorders (Tawima, Sasiwan & Supakorn, 2018). Khasnutdinova and Grjibovski (2010), confirmed that being underweight, overweight, or obese has a negative consequence on health and development of adolescents and young adults alike. It can extend into adulthood, increasing the risk of chronic non-communicable diseases and disability (Khasnutdinova & Grjibovski, 2010).

This suggests that misperception of weight may have adverse effects on nutritional behaviours and weight management practices. Therefore, understanding the correct perception of self-weight is imperative for the prevention of depression, social anxiety, and eating disorders (Isomaa, Isomaa, Marttunen, Kaltiala,-Heino & Bjorkqist, 2011). Despite the significance of the perception of weight, only few studies have assessed perception of body weight in relation to nutritional status and weight management practices in adolescents and young adults in Africa, particularly Ghana (Quaidoo, Ohemeng & Amankwah-Poku, 2018). Park et al. (2019) observed that providing critical information on BWP is the best way of informing adolescents and young adults to prioritize their nutritional habits and weight management practices in order to live a healthy long life.

Rahman and Berenson (2010) defined body weight perception as the degree of concordance between perceived body weight and measured weight. They observed that accurate perception of body weight is very important for obesity, diabetes, heart diseases, high blood pressure, and stroke prevention. The World Health Organization (WHO, 2018) technical report indicates that obesity has tripled worldwide since 1975. In 2016, more than 1.9 billion adolescents aged 16 years and older were overweight (i.e. 39%), 462 million are underweight whilst over 650 million (i.e. 13%) were obese (WHO, 2016). Underweight (i.e. low-weight-for-age) was 15% of adolescents aged 16 years and older (WHO, 2018). Over 340 million children and adolescents aged 5-19 were overweight or obese in 2016 (WHO, 2016). Overall, 13% of the world's adult population (i.e. 11% of men and 15% of women) were obese in 2016. 40 million children under the age of 5 were also overweight or obese in 2018 (WHO, 2018). 45% of deaths among 5-years and older children are attributable to underweight or overweight in low and middle income countries of which Ghana is part.

According to Ghana National Nutrition Policy (NNP) 2013 to 2017, the prevalence of underweight and overweight among youth and children remain persistently high over the last two decades. Wasting among children is a result of failure to receive adequate nutrition which affect the youth in their emerging adulthood (NNP, 2013). Underweight among the youth in Ghana was rated as 13.9%. Ghana Nutrition Data (DHS) put the prevalence of overweight/obesity among women of reproductive age 15–49 years at 30% in 2008 and 40% in 2014 (USAID, 2018). Prevalence of thinness among women of reproductive age (15–49 years) was 14% in 2008 and 16% in 2014 (USAID, 2018). Regionally, Upper East had 27% underweight, Greater Accra 7%, Upper West 14%, Northern 13%, Central region 12%, and Western region 13.5% (NNP, 2013). These indicators suggest an upsurge in the prevalence of underweight and overweight among the Ghanaian youth who are in their reproductive age of which the age range (18 – 25) form part. USAID (2018) attributed the problem to the absence of a coherent national nutrition policy that outlines a framework for developing and implementing nutrition interventions at all operational levels, defines institutional roles and responsibilities, and articulates linkages and co-ordination arrangements has contributed to limiting the scope and scale of nutrition and other preventive health interventions. Non availability of a national policy also limits the extent to which pressure can be brought to bear on government to provide resources for implementation in a sustained manner (USAID, 2018). These statistics implies that it is of great essence to look into body weight perception of Ghanaians, particularly Agona Nkwanta of the Ahanta West Municipality as the young adults often misperceive their weight status, irrespective of actuality.

Dereń, Nyankovskyy, Nyankovska, Luszczki, Wyszynska, Sobolewski and Mazur (2018) disclosed the prevalence of weight perception among Ukrainian children aged 6–18 years and found that 12.1% are obese, 17.6% overweight and 12.6% underweight based on WHO and US Centre for Disease Control and Prevention (CDC) growth standard. United States Health and Nutrition Examination Surveys (NHANES) also revealed the increased prevalence of adolescent obesity from 5.0% to 20.6% between 2013 and 2014 (Ogden et al., 2016). Cheung et al. (2011) studied adolescent perception of body weight in Hong Kong and found that 16.5% of men and 34.9% of women were underweight respectively. In terms of obese or overweight 26.7% were men and 13.2% were women. Among women, 30.9% of those underweight and 75.5% of those with normal weight desired a slimmer body shape. They concluded that overweight and obesity in men and underweight in women were prevalent among Hong Kong adolescent aged 16 upwards. Inappropriate body shape desire might predispose individuals to unhealthy weight loss or gain behaviours. So, careful consideration of actual weight status in body image desires is crucial for health promotion (Cheung, Van de Vijver & Leong, 2011).

In the views of Tawima, Sasiwan and Supakorn (2018) the complex relationship among body weight, nutritional status and weight management practices are important because of its influence on pubescent health behaviour. Quaidoo et al. (2018) observed that many young adults have the tendency to be concerned about their physical appearance and undertake practices in order to achieve certain body ideals. There is however limited information from developing countries on the weight perceptions of young adults (i.e. individuals leaving the adolescence life stage and preparing to take on adulthood) and whether these opinions influence their nutritional status and weight management practices is yet to be investigated. Therefore, this study sought to use

Agona Nkwanta of the Ahanta West municipality of Ghana as a case study to explore young adults' nutritional status, their weight perceptions and the methods they use to manage their weight. The basis for the choice of Agona Nkwanta of the Ahanta West municipality was based on the dissatisfaction young adult expressed with regard to their body image which led many of them adopting unhealthy weight control behaviours including the use of drugs to make them slimmer (Efah-Otoo, 2017; Ahanta West Municipal Health Directorate, 2017).

1.2 Problem Statement

The problem which necessitated this study in Agona Nkwanta of the Ahanta West Municipality was the dissatisfaction of the youth aged sixteen (16) to twenty-five (25) with their body weight in relation to body image or appearance. They perceived themselves as underweight or overweight irrespective of their actual body weight status. According to Madam Caroline Efah-Otoo, Ahanta West Municipal Health Director, the 2017 report on overweight and underweight related diseases showed that the youth aged 16years to 25years in particular have resulted to the use of drugs sold in the open market and other unorthodox means to reduce their weight or increase their body weight to make them look more beautiful and attractive. The Western Regional Health Director, Dr. Jacob Mahama asserted that the behaviour of the youth is putting much stress on the health system. More importantly the use of these unorthodox means to manage their weight is putting the youth who form the human resource base of the nation at risk (Ameade, Ibrahim, Ibrahim, Habib, & Gbedema, 2018). Our societal adoration for model type physiques constantly displayed in the mass media and magazines by celebrities or superstars may be the cause that influences the unhealthy weight control measures of the youth (Trible, 2015). In contrast, young adults who are

overweight and do not perceive themselves as such are unlikely to practice healthy weight control behaviours and diet (Khambalia et al., 2012).

Shin and Nam (2015) stated that weight misperception is the discordance between an individual's actual weight and the perceived weight. According to a recent study, body size misperception is a strong predictor of body dissatisfaction regardless of actual weight status (Knowles et al., 2015; Perkins et al., 2010). Consequently, distorted BWP and body dissatisfaction may lead young adults to adopt unhealthy weight control behaviours including drug use to control their weight. Numerous socio-demographic and environmental factors affect weight misperception in young adults such as gender, body mass index (BMI), culture, socioeconomic status and media exposure (Kim & So, 2014; Martin et al., 2009; Perkins et al., 2010). Studies indicate that young adults who are underweight or normal perceive themselves as overweight, consequently increasing their risk of eating disorders, unhealthy weight management behaviours and depression (Koul, 2002; Tang et al., 2010).

Accordingly, accurate body weight perception by young adults in the era of numerous health challenges is critical to effective dieting and weight management behaviour. Therefore, this study sought to provide an insight for young adults in Agona Nkwanta of the Ahanta West municipality to comprehend and appreciate the link among body weight perception, nutritional status, and weight management practices for healthy living.

1.3 Purpose of the Study

The purpose of this study was to examine perception of body weight, its management practices and nutritional status of young adults in Agona Nkwanta.

1.4 Objectives of the Study

The objectives of the study were to:

1. examine perception body weight among young adults in Agona Nkwanta.
2. identify weight management practices employed by young adults in Agona Nkwanta.
3. assess the nutritional status of young adults in Agona Nkwanta.
4. examine the relationship among body weight perceptions, nutritional status and weight management practices of young adults in Agona Nkwanta.

1.5 Research Questions

The following research questions guided the study:

1. What are the perceptions of body weight among young adults in Agona Nkwanta?
2. What weight management practices are employed by young adults in Agona Nkwanta?
3. What is the nutritional status of young adults in Agona Nkwanta?
4. What is the relationship among body weight perception, nutritional status and weight management practices of young adults in Agona Nkwanta?

1.6 Significance of the Study

The findings of this study will shed light on young adults' body weight perceptions, nutritional status and strategies employed in weight management. It will establish the link among body weight perception, nutritional status, and weight management practices for healthy living. It will also, inform policy formulation and implementation by stakeholders; Ghana Health Service (GHS), Ministry of Health (MoH) and Non-Governmental Organizations in health. Lastly, the study will serve as a reference point

for those who wish to conduct similar studies in the future.

1.7 Delimitation of the Study

This research was undertaken among young adults at Agona Nkwanta of the Ahanta West municipality.

1.8 Limitations of the Study

The researcher acknowledged the fact that a study of this magnitude and importance should have covered all the Metro/Municipal/District Assemblies (MMDAs) in Ghana. But due to financial constraints and time limit, the researcher finds it more appropriate to concentrate on Agona Nkwanta of the Ahanta West municipality for easy manageability of the data within the scheduled time frame.

1.9 Organization of the Study

This study comprises of six chapters. Chapter One captures the background to the study, the problem statement, the research objectives, the research questions, the purpose of the study, significance of the study, scope and organization of the study. Chapter Two, deals with review of related literature. Chapter Three focuses on methodology which describes the research design, the setting, the population, sampling technique and sample size, data gathering instruments, data collection procedures of the study and methods of the analysis. Chapter Four presents the results the findings. Chapter five discusses the findings. In chapter six, summary of the findings based on the research questions will be presented together with conclusions and recommendations. The chapter ends with limitations and suggestions for further studies.

CHAPTER TWO

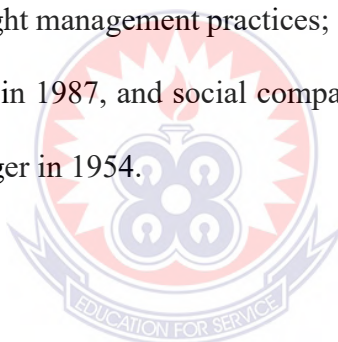
LITERATURE REVIEW

2.0 Overview

This chapter covers the theoretical, empirical and conceptual review. Thus, Self-discrepancy theory and Social comparison theory that underpin the study, studies done by others which relate to the study and a diagrammatic framework that summarized the various concepts and the relationship that exist between them.

2.1 Theoretical Framework

The theoretical basis present theories that underpin the study of body weight perception, nutritional status and weight management practices; self-discrepancy theory developed by Edward Tory Higgins in 1987, and social comparison theory proposed by a social psychologist Leon Festinger in 1954.



2.1.1 Theories

a) Self-Discrepancy Theory

The term “self-discrepancies” refers to the presence of incompatible or conflicting beliefs about one’s self, with negative consequences on the person’s well-being (Higgins, 1987; Maroiu & Maricutoiu, 2017). Self-discrepancy theory (SDT) states that individuals compare their “actual” self to internalized standards or the “ideal/ought self” (Maroiu & Maricutoiu, 2017). The inconsistencies between “actual”, “ideal” and “ought” are associated with emotional discomforts. According to Higgins (1989), SDT describes how individuals are likely to experience discomfort when they hold conflicting beliefs about themselves. Moreover, the type of discrepant self-representation explains the type of discomfort one experience. There is no doubt that

an individual's self-concept is the primary source of emotional-motivational difficulties (Crane et al., 2008; Dittmar, 2005). Vartanian (2012) observed that self-discrepancy theory presents the "self" as being multifaceted and consisting of various domains that define the self. The theory postulates three domains of self:

- a. the 'actual' self which is characterized by a subjective perception of one's attributes, for example, 'I am overweight';
- b. the 'ideal' self which refers to the attributes that the individual would like to possess, for example, 'I want to be thin/slim'; and
- c. the 'ought' self which involves the attributes that the individual believes that he or she has a duty to possess, for example, 'my friends are all thinner than I am, so I have to lose some weight' (Vartanian, 2012).

These different states of the "self" relate to body image/shape which under score some of the reasons why people have been found to misperceive their body weight (their actual self). The theory further provides information about why people are motivated by their ideal/ought states of self to reach their desired body shape or size (Halliwel & Dittmar, 2010). It also, highlights the subjective nature of body image and how an individual's beliefs about how they should look are the main reasons behind any motivations to change how they look. As a source of reference, they use their personal perspectives and experiences instead of relying on objective facts and health standards (Halliwel & Dittmar, 2010).

The SDT explains the concept of 'self-discrepancy' as a cognitive process that is generated by a perceived difference between an individual's two states of self, actual and ideal/ought (Vartanian, 2012). This discrepancy then results in a particular emotional response (Halliwel & Dittmar, 2010). The theory outlines the specific

emotional outcomes of perceiving a discrepancy between one's actual self and one's ideal/ought self. In other words, self-discrepancy occurs when individuals' perception of their weight does not match what they consider their 'ideal' weight ought to be according to the norms imposed by social pressures. This mismatch has the potential to lead to emotional discontent.

According to the theory, this actual-ideal discrepancy elicits emotions related to dejection, such as dissatisfaction with perceived body image (Hartmann et al., 2014; Higgins, 1987; Vartanian, 2012). Social and peer pressure consequently creates expectations expected to motivate the individual to engage in weight management strategies which can have either a negative or a positive outcome (Vartanian, 2012). Zheng, Klem and Sereika (2015) opined that a discrepancy between the actual and ought states of "self" elicit agitation related emotions such as anxiety and guilt arising from a sense that one has dishonoured one's obligations. This sense of failure towards the self stems from the actual-ideal self- discrepancy, and a sense of failure towards the other that stems from the actual-ought self-discrepancy. This could lead to an overall sense of resentment directed towards the self and a need to minimize this effect by conforming to weight standards imposed by one self and peers. Lee, Seo and Shim (2015) posited that individuals' subjective experience of their weight may result in developing an emotional response to their evaluation, which motivates them to lose weight, gain weight or remain at the same body weight. This emotional response could be seen on a continuum from complete acceptance and sense of contentment with one's body to extreme discomfort and resentment with one's appearance (Lee et al., 2015; Zheng et al., 2015).

Thus, due to the emotional consequences associated with self-discrepancies, individuals are motivated to engage in certain weight management practices in an effort to reduce the discrepancy (Halliwell & Dittmar, 2010; Veale et al., 2003). By reducing the discrepancy they are numbing or eliminating the negative emotions associated with it and feel that they are meeting their personally and socially imposed weight related expectations. Their efforts could include dieting, exercising, over-eating, excessive use of laxatives, self-induced vomiting, and self-starvation to mention a few strategies they may resort to, but the list is virtually endless. The success or failure of these methods has the potential to affect an individual's health and emotional well-being (Steptoe et al., 2015). Higgins (1987) conceptualized the model as:

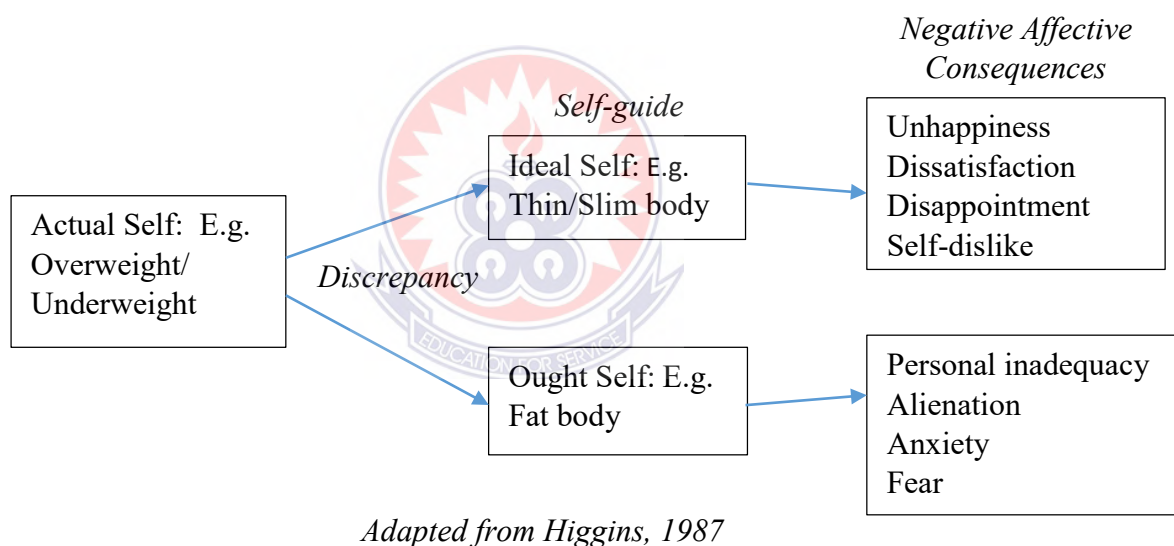


Figure 1: Conceptual illustration of Self-discrepancy theory showing young adults' body weight perception (i.e. overweight/underweight) and its negative affective consequences.

According to Higgins (1987), the ideal body image that one desire as a result of peer and societal pressure may bring negative consequences to the individual such as self-dislike and health related problems. The ought-self; for instance, ‘All my friends are slimmer than I am, so I have to lose some weight’ causes personal inadequacy, self-alienation, anxiety or fear. These situations compel the young adult to adopt some strategies to lose or gain weight purposely to reshape her beauty to look more attractive without consideration to the health implication of underweight or overweight. In Ghana, the traditionally appreciated body type tends to equate what is referred to as the overweight body type in developed countries (Adusei, 2014). The unique life stage that typically occurs between the ages of 16 to 25 can be termed young adulthood. This is where a young person moves from the tussles of adolescence and prepares to take on the responsibilities of adulthood (Majors, 2015; Maruf, Akinpelu & Nwankwo, 2012; Poobalan & Aucott, 2016). How individuals learn to evaluate their weight can be seen as an internal and external process. Their weight may be evaluated on how they feel about themselves, how they compare themselves to others and on what they perceive as ideal body weight or shape (Voelker et al., 2015).

b) Social Comparison Theory

Social comparison theory (SCT) posit that human beings are social being that engages in comparison process as a way of establishing a benchmark by which we make accurate/inaccurate evaluations of ourselves (Schultz et al., 2002). The SCT process involves people coming to know themselves by evaluating their own attitudes, abilities, and beliefs in comparison with others (Suls & Wheeler, 2000). In most cases, youth try to compare themselves to their peers. This means that individuals determine their own social and personal worth based on how they stack up against others as a way of fostering positive subjective well-being/self-image, self-improvement, or self-

motivation. SCT was proposed by a social psychologist Leon Festinger in 1954. Festinger (1954) proposed three types of social comparison: (a) upward social comparison (i.e. comparing oneself with someone judged to be better than oneself such as physical appearance, wealth); (b) downward social comparison (i.e. comparing oneself with someone judged to be not as good as oneself), and (c) lateral social comparison (i.e. comparing oneself with another who is considered to be more or less equal).

Relating SCT to body weight perception among young adults, SCT provides a framework for young adults across gender to evaluate their weight perception in relation to weight management practices and nutritional status. This implies that the SCT provide critical perspectives for understanding the mechanisms that underlie weight discrepancy findings. SCT also, holds that individuals make decisions about themselves based on their opinions and others comparatively. When Festinger first proposed this theory, he argued that social comparison will lead group members to conform to the norms of the group they belonged (Suls & Wheeler, 2000). The extent to which group members conformed to the norms of the group was tested by Schacter (1959) who revealed that affiliation and fear are central to the explanation of why social comparison happened. For example, if people are in an environment where the majority are overweight, they may feel they are less overweight based on their comparison to others. Downward comparisons of body weight perception suggests that people are more likely to compare themselves to those who are “worse off” than they are, as it will boost their self-esteem, whilst upward comparison suggest that adolescents and young adults particularly compare their weight in terms of appearance/self-image with someone judged to be better than oneself.

A study by Wheeler and Miyake (2007) revealed that the use of SCT in everyday life suggest that downward comparisons will increase a person's overall feelings of well-being. Wheeler and Miyake studied college students over a two-week period and found that making a choice between upward and downward comparisons were largely based on the relationship a person had with the intended comparison target. Their study noted that an individual's self-image and self-esteem are strong indicators of the type of comparison young adults make in terms of weight perception. Hence, self-esteem/self-image are key influencers of body weight and it is important to assess studies that addresses body weight perception and social comparison.

Therefore, when evaluating body weight perception, identified discrepancies between actual body mass index (BMI) and perceived weight may indicate a lack of education about proper weight categories, as well as the risks associated with being outside of normal weight ranges. Studies using SCT assess weight-related perceptions of those who feels they are heavier or too thin than they actually are (Abalkhail et al., 2002). According to Schultz, Paxton and Werthein (2002), body weight perception comparisons are more likely to occur when socio-cultural ideals are internalized as young adults have an instable view of their body image. Young adults are increasingly concerned with their body weight perception as thinness like models and celebrities are considered ideal particularly by young women (Abalkhail et al., 2002; Schultz et al., 2002).

Morrison, Kalin and Morrison's (2004) study teenagers in Canada and found that adolescents were likely to use universal targets such as celebrities, magazine models and athletes who usually have thin/slim body to make comparisons with their body, and often times, these comparisons lead to a negative body image. Additional research has

evaluated self-discrepancy, i.e., when self- concept does not meet one's self-ideal, as it relates to the thin/slim-ideal found in the media. The thin/slim-ideal body compel young adults in particular to try and have an appearance that mirror celebrities and models thereby endangering their own lives. In one study, women who had higher levels of self-discrepancy were more likely to engage in social comparison with media targets than those who had lower self-discrepancy. These two research studies indicate the profound influence the media has on body weight comparison. SCT has also been used to study how people evaluate their own feelings of attractiveness (Gordon, 1966; Stapel & Blanton, 2007). Durso and Latner (2008) stated that the type of relationship a person has with their intended point of comparison influences how they compare themselves with this target.

Simply put, Stapel and Blanton (2006) explained that self-perception and behaviour do not occur in a social vacuum: who we are, and what we do, is often a function of what other people are and do. Others can inform us of who we are, where we stand ("I am slimmer compared to him"); others can inspire us ("I want to be like her"), or discourage us ("I can never be like her"). In effect, SCT is a fundamental process of self-conception through the perception of others-self, as it is identified with others (Križan & Gibbons, 2014; Suls, Collins, & Wheeler, 2019).

2.1.2 Body weight perception and factors influencing it

There have been increasing tendency in modern times to focus on body image by young adults, which has predisposed many to perceive themselves and others according to what is thought to be an ideal body weight and shape. Weight perception can be understood as a subjective opinion or interpretation of one's own body weight relative to others (Chithambo & Huey, 2013), and this perceptions could be related to

psychological factors such as low self-esteem (Park, 2011). This supposition underscores the significance of weight perception being subjective as it encompasses both self-perception and attitudes towards oneself and others that may be unreliable (Abalkhail et al., 2002). It also highlights the fact that weight perception is based on an evaluation of oneself which is linked to one's experience, mental health status (i.e. level of self-esteem and self-confidence) and subjective view of one's body image (Abalkhail et al., 2002; Park, 2011). However, body image or appearance consists of; (a) the body an individual identifies as the way it looks, (b) the body an individual actually desired for himself, (c) the body an individual considers ideal for the opposite sex, and (d) the body an individual feels the society he or she belong dictates as ideal (Maruf et al., 2012; Park, 2011). When a person has a realistic and positive attitude about his/her body, he/she tends to show appreciation, respect and acceptance for herself/himself. As such the individual is more likely to have control over his/her dietary behaviour (Maruf et al., 2012; Quick & Byrd-Bredbenner, 2014).

Individuals are said to have inaccurate weight perception when they incorrectly evaluate their weight to the degree that it does not correspond with their actual weight. (Bhurton & Jeewon, 2013). People are considered to have a distorted perception of their body weight when there is a significant discrepancy between their perceived weight and actual weight (Andrew et al., 2016). Thus, for example, they perceive themselves as overweight whereas they are in fact underweight. This can lead to poor self-esteem, negative self-schema, psychological distress, eating disorders and harmful weight control behaviours (Furnham et al., 2013; CDC, 2009; Harrison, 2000). This is further supported by Mchiza, Steyn, Hill, Kruger, Schonfeldt, Nel and Wentzel-Viljoen (2015), who found in their study that most South African females had a misconception about their weight, and the greater the discrepancy between actual and perceived weight, the

more dissatisfied they were with their body weight. Bhurton and Jeewon (2013) opined that there are negative psychological and behavioural consequences associated with a distorted weight perception. They explained that it causes the youths particularly women to adopt unhealthy strategies to cut down or increase their weight in order to maintain or enhance their body image/shape (Bhurton & Jeewon, 2013).

Peltzer and Pengpid (2012) conducted a study at the University of Limpopo using Multidimensional Body—Self Relations Questionnaire (Cash, 2015) and calculated students Body Mass Index (BMI). The result showed that most students in their sample incorrectly estimated their body weight; thus having a distorted body weight perception. This was also the case in Mwaba's (2009) study in which the same discrepancy was found among Black South African university students. Mwaba (2009) concluded that further probe needs to be done to find out the factors that led to the discrepancy between how people evaluate their body weight and what is the reality of their weight situations. Phetla and Skraal (2017) found similar results in their study, which indicated that even health-care professionals in South Africa have distorted perceptions of their body weight. These conclusions confirm that, although people are surrounded by a large amount of information on health, there is still an unexplainable growth in weight perception and related problems.

Body weight perceptions are influenced by a number of socio-cultural, environmental and psychosocial factors such as family, peers, gender, culture, ethnicity and race (Florin et al., 2011). Some researchers have even found that parents have a strong influence on not just their child's actual weight but very often even on the child's perceived weight through conscious and unconscious processes (Swaminathan, Selvam, Pauline, & Vaz, 2013). It was also found that over 50% of children who

become excessively weight conscious and concerned in adulthood had parents with the same problem (Bornman, 1999). This creates a new idea and way of thinking in which weight perceptions and their related issues such as management practices, nutritional status may originate in childhood through parental projections, critiques, reinforcements and positive feedback. This potentially speaks to the idea of weight perceptions and its associated problems, potentially being an intergenerational pattern.

Youth and children are said to be affected by societal pressures to be a certain weight to the extent that they too have been found to be weight conscious (Al- Mohaimeed, 2015). There also seems to be a misclassification that exists in parents with overweight or obese children, where they perceive their obese child as being healthy and well fed (Al-Mohaimed, 2015). This increases the chances of their children misperceiving their own weight and developing a family pattern of obesity with a distorted perception of being at normal weight. Beyond this, other studies have found that children under the age of 15 years onward engage in weight management strategies that are often unnecessary and that could negatively affect their development (Isomaa, Isomaa, Marttunen & Kaltiala-Heino, 2010).

Puoane et al. (2010) found in their study that Black women's perceptions of their weight was largely influenced by the weight of their peers, which is used as a comparative stance, instead of health standards or healthy body weight norms. Together with this, Bornman (1999) reported that cultural expectations with regard to what is an ideal body type played a significant role when assessing Black South African women's self-image. In many Black cultures, being overweight or physically voluptuous is associated with being beautiful, strong and desirable. This is also evident in a study conducted by Faber and Kruger (2005) in a rural setting in KwaZulu-Natal, which discovered that

overweight and obese black females had no problem with their (over)weight and perceived their weight as normal. Therefore, there seems to be a preference/acceptance or positive response towards overweight or obese females within that setting.

These findings highlights the profound influence that psychosocial factors such as cultural expectations have on people's perspective of their weight and what is considered to be healthy. In both studies the women's ideal body type seems to be largely based on what they have been socialized to think is appropriate. This reinforces the idea that people long for a sense of belongingness and acceptance which is obtained in various ways, such as being a certain body shape or size. Many African cultures are known to promote a fuller figured physique as it is associated with good living. Ogunjimi, Ikorok and Olayinka (2010) conducted a study on the prevalence of obesity among Nigerian nurses and found that the respondents perceived obesity as being a sign of wealth and affluence. This social status seems to carry great weight as many women in these societies strive towards having a fuller figure despite being fully aware of the health risks involved (Ogunjimi et al., 2010).

On the other hand, Western cultures seem to have preference for slimmer/thinner body shape (Florin et al., 2011). Westernized people are complimented for maintaining a body weight that tends to be closer to the underweight side of the weight spectrum. At times this glorified slimmer/thinner body shape could be classified as underweight and even malnourished. Being thin may be associated with good health, a sense of impulse control, class, elegance and a positive regard towards the self (Florin et al., 2011). This is completely misleading and in some cases can become life- threatening. In contrast to some African cultures, Western culture has a fundamental belief that having a low body weight is attractive.

In both cultures, weight has some level of importance as it is associated with a certain quality of life and social acceptance. However, the extreme ideals created in both cultures are not realistically healthy and can lead to a number of physical and psychological disorders (Isomaa et al., 2010). Physically, engaging in unhealthy eating patterns to get weight puts one at risk of developing nutritional disorders. Psychologically, struggling to meet the cultural criteria for what is considered to be the perfect body weight or shape can lead to the onset of anxiety (Faber & Kruger, 2005). Being positively acknowledged for a body shape which is actually dangerous to one's health further encourages the weight problem, be it overweight or underweight. This illustrates how body shape preferences and body image perceptions can be culturally influenced and determined.

In addition to the aforementioned factors, the media plays an influential role in young adults and adolescents perspective of what constitute the ideal body weight and shape, and this adds real pressure to work towards a socially desirable body shape (Zaccagni et al., 2014). The body image represented in the media as being the “*ideal body shape*” is not always based on reality but rather emphasizes misleading belief of the existence of a perfect human body shape/image. The type of physique found in many magazines and on websites supports the Western ideal of striving towards thinness or having a slimmer physique. This had great influence on many people, even those in non-Western cultures and Ghana, specifically Agona Nkwanta in the Ahanta West municipality which is the focus of the study is not an exception. Thus, the manner in which both young men and women are portrayed in the media may send out a message to many impressionable young adults that they are ‘not good enough’ or that they need to ‘do something’ about how they look, because it does not correlate with what the media and many celebrity role models depict as being attractive, acceptable and normal body

shape (Ting et al., 2012). This misrepresentation of the ideal body weight could lead to emotional discomfort with one's own body image (Faber & Kruger, 2005).

Wardle, Haase and Steptoe (2006) found discrepancy between perceived weight and actual weight among young female college students, and this was related to their reported dissatisfaction with their body image. This discrepancy suggests a widespread misconception about one's weight. Wardle et al. noted that exposure to influential channels of information where celebrities and models showcase themselves predispose young adults to feel unattractive, have low self-esteem, hence, becoming depressed and feeling pressured to try to 'fit' into those westernized cultural norm. Vonderen and Kinnally (2010) explain that women often use these media as a source of guidance in terms of how they need to look like. This reinforces the expectations many young adults have to be of a certain weight and the fear of criticism and being judged when they do not fit the prescribed body weight shape.

Maruf, Akinpelu, and Nwankwo (2012) observed that there seems to be clear gender difference in weight perception, and what is considered ideal body weight is different amongst men and women. They found that the ideal body shape is largely influenced by what the opposite gender finds attractive, which has its roots in what is socially considered as masculine and feminine (Maruf et al., 2012). It was also found that young men and women have different conceptions of what is healthy and unhealthy, and that they engage in different weight management strategies to obtain different results. Swami and Tovee (2015) explain that both men and woman, but more so women, look to other people of the same gender for evidence of body weight fitness and thus become influenced by different types of feedback.

The online forums (i.e. websites) which is the current trend that promote an unhealthy perspective of the ideal body weight and image inadvertently endorses health conditions such as anorexia nervosa (Borzekowski et al., 2010). These websites provide their followers with a sense of belonging as it is mostly populated by young adults who have a strong desire to lose weight and have found that such websites have helped in their quest for extreme weight loss (Borzekowski et al., 2010). These website provide tips on how to lose weight fast, for instance, “*want to lose weight within one week?*” which is dangerous such as drug use, purging, starving and other unorthodox means. They also, provide pictures of themselves and celebrities looking very slim (Borzekowski et al., 2010). These sites put all of us at risk of developing eating disorder by glamorizing an unhealthy body weight/shape. Thus, exacerbating the risk of serious illnesses. Eating disorders, such as anorexia nervosa are seen as lifestyle choices that show strength, control and power rather than debilitating diseases that negatively hinder one’s capacity to function to fully (Lewis & Arbuthnott, 2012).

Andrew et al. (2016) stated that individuals with a precise awareness of their own weight status have more control over their eating behaviours and are more likely to be happier and confident with themselves in the management of their weight. El Ansari et al., (2010) found that young females who perceived themselves as too fat had the desire to be slimmer. They concluded that young females are more likely to perceived themselves as “too fat” (although they are not necessarily ‘fat’) as they reported feeling stressed and unhappy with their lives. The observation made by El Ansari et al. (2010), corresponds to Grogan et al. (2013), study on 20 women’s experiences of dress fit and body image in the United Kingdom. Study respondents’ extemporaneously response to clothes they tried on was audio-recorded. Respondents were also body-scanned and photographed in their favourite dress and told to discuss both the scan and the

photograph in semi-structured interviews. A slender hourglass physique with full breasts and full hips along with a small well-defined waist was the body idealized by all the women examined regardless of their actual physique. All these women wanted to be “in proportion” and not to be “fat” or masculine-looking (Grogan et al., 2013).

Stevens, Singh and Lu (2012) posited that negative or positive evaluation of one’s weight is precipitated by a number of internal and external factors. Once individual have formed a negative and abject self-image, it will have a profound influence on how they feel and how they behave. They noted that people live in society where they may feel that it is better to conform than to be different even if conformity comes with serious health implications. Thus, the feedback received from the society seems to play a major role in determining one’s satisfaction or dissatisfaction with one’s weight (Stevens et al., 2012). This feedback can promote either healthy or unhealthy weight standards. This suggests that people seem to base their understanding of a healthy weight on their experiences, social influences and feedback from others instead of medical facts.

2.1.3 Nutritional status of young adults and factors influencing it

Hebden, Chan, Louie, Rangan, and Allman-Farinelli (2015) asserted that life stages of young adulthood is characterized by rapid weight gain, mostly among those born in recent decades in environments saturated with cheap, highly palatable, processed foods. This suggests that the environs of young adult is a critical factor in determine their health status. They observed that taste, convenience/availability, cost, nutrition/health value, smell and stimulatory properties influence food selection of young adults (Hebden et al., 2015). Stok, de-Vet, de-Ridder andde-Wit (2016) revealed that peer social norms also shape the food intake of young adults. Aronson, Wilson, and Akert

(2005) explained that social norms are the behavioural standards that exist in a social group for what is considered correct and appropriate behaviour, and they emerge from the shared practices and expectations of group members. They noted that healthy eating is key across all age groups, but young people's unhealthy eating behaviour is a cause for concern. This is because studies have shown that young people eat too much unhealthy food such as high-calorie, low-nutrient-dense snacks and fast food (Bauer et al., 2009). Popkin, Adair and Ng (2012) attributed the problem to socioeconomic status, societal influence, and more essentially food insecurity which led to global nutrition transition and the pandemic of obesity in developing countries. They eat too little healthy food such as fruits and vegetables (Larson et al., 2007). Gardner and Steinberg (2005) added that young adults are more sensitive to peer influence and peer pressure than older adults across various domains such as risk taking and health behaviour (Rivis & Sheeran, 2003). Rivis and Sheeran (2003) stated that young adults do not often consider the nutritional constituent of what they eat as compared to the older adult.

Relating to Africa, specifically the Ghanaian context, Popkin et al. (2012) and USAID (2018) posited that socioeconomic status, food security, cultural identity and ideals, peer pressure, food trends and fads determine the nutritional choice and related behaviour of young adults. The National Nutrition Policy (NNP) of Ghana 2013 – 2017 state that the nutritional behaviour of Ghanaian is premised on cultural identity and ideals (i.e. shared values, beliefs, norms, and social roles-transmitted inter-generationally), socioeconomic status, food security, and food trends and fad. These intend influence nutritional choices and body weight/image perception of individuals directly or indirectly (Kreuter & Haughton, 2006). Personal factors such as attitudes and personal principles, body image acuties, eating habits also impact nutritional

choices (Vries, Dijkstra & Kuhlman, 1988; Napier et al., 2014; NNP, 2013; USAID, 2018).

Hamzah, Suandi, Ismail and Muda (2019) asserted that people's belief concerning their current and future health; level of health knowledge (i.e. education received) would modify their attitude towards nutritional behaviour. Nutritional behaviour of youth are influenced by multiple external and internal factors (Ames et al., 2013; Story, Neumark-Sztainer & French, 2002; Viner, Ozer, Denny, Marmot, Resnick, Fatusi & Currie., 2012). External factors include environment and culture, whilst internal include attitudes, self-control, and subjective norms. Previous studies considered personal factors such as experiences, self-construal, age, and gender as determinant of nutritional status (Gifford & Nilsson, 2014). Kulbok and Cox (2002) reiterated that young adult health, and nutritional behaviour which determine body weight perception relate to eating habit, sleeping, and exercise habits. Other primary factors that determine nutritional status are hereditary, food preferences, knowledge of food and fads (Kulbok & Cox, 2002). The USDA, (2015) highlights three behaviors that are very essential to supporting healthy body weight; namely eating a nutritious diet, being active, and getting a good night's sleep. A number of studies on healthy body weight have focused on eating good food and exercise (Ganasegeran et al., 2012; Hsu, Chiang & Yang, 2014).

Vries et al. (1988) posited that the individual's approach towards his/her health is contingent on "*attitude, social influence and self-efficacy*" which are personal factors. This means that nutritional behaviour of people are dependent on individual's attitude, shared influences and personal judgment of how well the individual make his/her food choices. Other research findings added that personal factors interrelate with

environmental factors to influence the lifestyle of a young person leading to the nutrition behaviours observed (Vries et al., 1988; Hamzah et al., 2019). In an attempt to explain young adults' nutrition behaviours which inexorably defined their nutritional status with regard to BWP, the factors have been grouped into two major interrelated stages as environmental (i.e. social factors) and personal factors, and how the factors influence the lifestyle of young adult, nutritional choices and related behaviours, hence, nutritional status have been conceptually shown below.

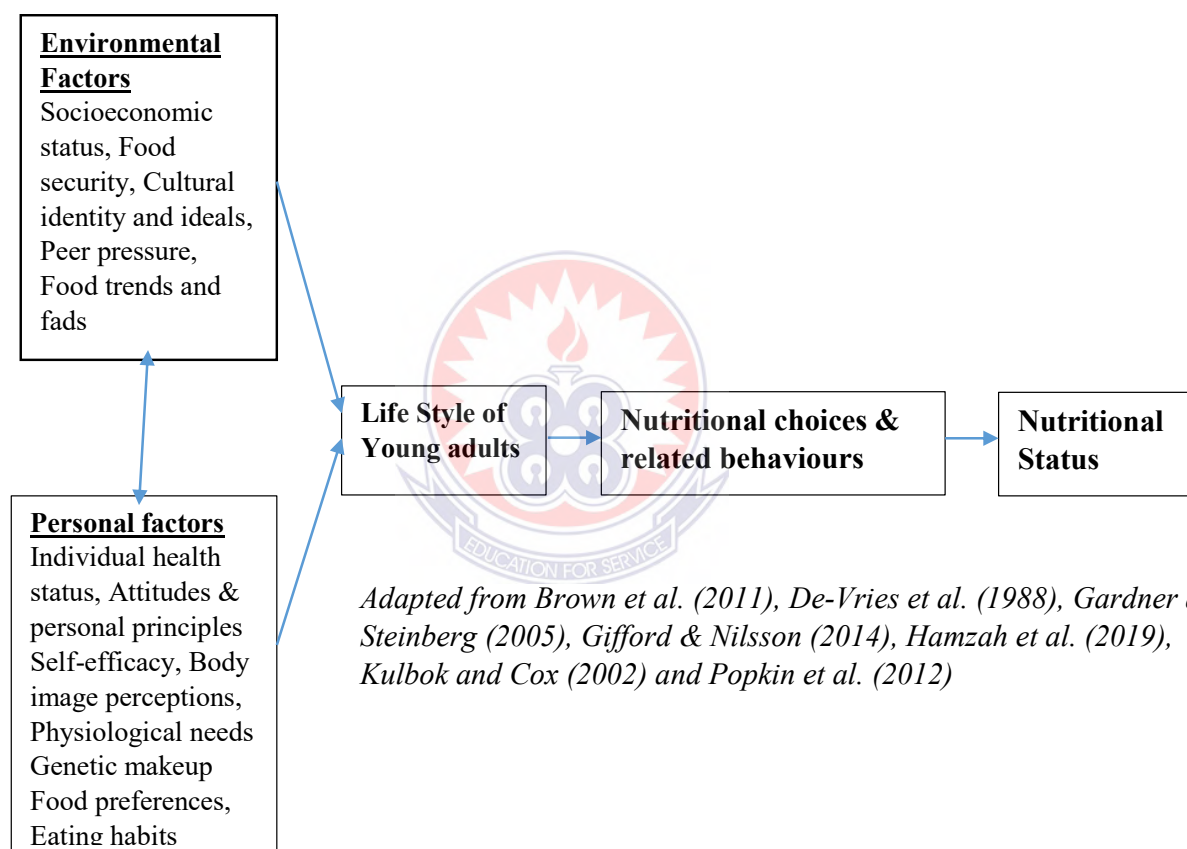


Figure 2: Conceptual illustration of factors influencing young adults' nutritional status

2.1.4 Weight management practices

Weight management strategies are activities aimed at helping individuals to gain weight, lose weight or maintain a healthy body weight. These strategic activities include dieting, exercising, drug use known as pharmacotherapy and surgery that individuals

engage in with the hope of reaching desired weight (Olubukola, & Olubukola, 2012). Weight management is needed for people with weight problems as untreated weight problems can lead to health disorders that negatively affect different spheres of life (Ogunjimi, Ikorok & Olayinka, 2010). Health disorders associated with weight problems include increase risk of osteoarthritis, strokes, type 2 diabetes, fatty liver disease, sleep apnea, high blood pressure, heart and kidney diseases (US, NIDDK, 2020). However, effective weight management can help to address physical problems (i.e. physical impairment), psychological problems (i.e. restore positive regard for oneself) social problems (i.e. engage in social activities), and economic problems (i.e. decrease health care costs).

Weight management is often misconstrued as implying weight loss, whereas it is a process of living a healthy lifestyle in which one engages in healthy practices to obtain or maintain a healthy weight. To achieve a healthy weight, people who are overweight would need to lose weight, and those who are underweight would need to gain weight. However, the choice to engage in weight management strategies is largely influenced by one's weight perception, accurate detection of a weight problem and one's emotional response to the perceived weight snags (Olubukola & Olubukola, 2012).

According to the self-discrepancy and social comparison theory, people are motivated to use weight management strategies to minimize the discrepancy between their perceived weight and ideal weight (Schultz et al., 2002; Vartanian, 2012). Weight management strategies are used in an effort to bring one's perceived weight closer to what is seen as the "*ideal weight*". Thus, ultimately reducing the emotional discomfort created by the supposed discrepancy. This has the potential to create an overall sense of personal satisfaction with one's weight and body image. However, the sense of

satisfaction does not necessarily denote good health (Walcott-McQuigg, 2005). People may be satisfied with their weight despite it being riskily unhealthy. For example, people who are pro-anorexia or other underlying health condition may feel confident and satisfied with their thinness regardless of the health risks involved. Walcott-McQuigg (2005) noted that the logical response to perceiving once weight as unfit is to rectify it by engaging in weight management strategies like apt dieting and exercising: adopting a healthy lifestyle to dangerous behaviours like taking diet pills or extreme use of laxatives. Addressing weight related concerns can therefore become a time consuming and challenging process that affects both physical and mental health (Wardle et al., 2006).

Alfermann and Stoll (2000) added that the two main factors that impact weight control behaviour are perceived dissatisfaction and satisfaction with one's weight. It has been found that people who are dissatisfied with their weight tend to engage in weight management behaviours that are often dangerous and unhealthy to achieve rapid result. This correlates with Mwaba's (2009) findings that majority of South African students who were dissatisfied with their weight were more likely to engage in unhealthy weight management behaviours compared to those who were satisfied with their weight. Respondents admitted that healthier methods like dieting or exercise took longer time to get result (Mwaba, 2009). But unhealthy weight control such as pills or restricting food intake have negative effect on a person's well-being (Ferraro, Patterson & Chaput, 2015).

Health problems that are associated with unhealthy weight control behaviour include the risk of being malnourished, developing an eating disorder and having respiratory problems (Ferraro et al., 2015). Peltzer and Pengpid (2012) found this to be true of their

South African university students sampled. Many of the students in their study who engaged in unhealthy weight management strategies reported physical symptoms such as low blood pressure, memory problems, dizziness and fatigue. These symptoms were mostly reported by people who were using pills, restricting calories and skipping meals. By contrast, Olubukola and Olubukola (2012) found that respondents who engaged in healthy weight management strategies reported less negative symptoms. However, the overuse of healthy strategies can yield unhealthy results (Ferraro et al., 2015), such as excessive exercise can lead to chronic fatigue and dizziness. The major weight-loss strategies ranging from diets, medication to surgery have been discussed below.

(a) Pharmacotherapy/drugs use

Medical science has developed a variety of drugs to help address overweight and underweight prevalent; however excessive use will have adverse side effects on users (Grief & Miranda, 2010). Some of these drugs are benzphetamine, phendimetrazine and phentermine for short term treatment (Joo & Lee, 2014). Sibutramine (Meridia) and orlistat (Xenical) for long-term weight loss routines in treating obesity (Grief & Miranda, 2010). It is recommended by US food and drugs (Joo & Lee, 2014). These drugs have also been implicated in dependency and nutritional deficits after long-term use (Olubukola, & Olubukola, 2012). The need for a lifestyle change and diet modifications seems to be a challenging task for many people, mainly for young adult whose primary goals is weight loss. An appealing alternative for people on weight-loss quest are the easily obtainable non-prescription and somewhat prescriptive pills that can aid weight loss. However, the use of these pills can affect the body's natural way of functioning.

(b) Dieting

Putterman and Linden (2004), assert that different reasons for weight management lead to different means of weight management, which result in different outcomes and consequences. For example, a person who is looking to adopt a healthier lifestyle, compared to someone who is looking for a short-term crash diet, will manage their weight-loss strategies differently. A healthier life style requires one to follow a balanced eating plan and engage in regular exercise, whereas a crash diet is mostly simply focused on restricting calories and limiting food intake. Persons on a crash diet may see changes in their weight much more quickly than people trying to adopt a healthier lifestyle. Faster results generally require means that tend to be unhealthy and people who resort to such means often tend to regain the weight lost. The two different weight management strategies also result in different levels of functioning and physical well-being (Majors, 2015). A balanced lifestyle is said by Rao et al. (2011) to be beneficial and helps your body to function at its optimal capacity; whereas a crash diet, due to its restricted nutritional value, can lead to malnutrition and decreased body functioning.

(c) Surgery

One of the latest trends in weight loss is surgery (Richardson et al., 2009). Researchers have found a rapidly increasing trend of weight-loss surgery from gastric bypasses, bariatric surgery, intra-gastric balloons as well as laser and surgical liposuction (Rao et al., 2011). Some of the adverse consequences of these surgical treatments include excess skin, mood disorders, eating disorders, maladaptive eating patterns and extended recovery difficulties (Ames, Patel, Ames & Lynch, 2009). In a society which seems to struggle with delayed gratification, weight-loss surgery has become one of the quickest and most successful weight-loss strategy. Despite its promise of instantaneous weight loss, the risks are high and dangerous (Grief & Miranda, 2010; Rao et al., 2011;

Richardson et al., 2009). Weight-loss surgery can sometimes be a bluff as it addresses the problem superficially and the lack of weight maintenance after the surgery can result in regaining the weight lost. It also does not address the deeper emotional and psychological difficulties that possibly caused the initial weight gain (Shrivastava & Johnston, 2010). For example, people who engage in comfort eating are at greater risk of regaining their weight after surgery if the reason why they used food as a stress reliever and a source of emotional nurturance is not addressed. The over-advertised fast-food outlets can make it difficult for people who undergo “*weight loss surgery*” to attain and maintain weight loss without the emotional difficulties associated with comfort eating.

(d) Physical activity

Studies on physical activity revealed that people with normal body mass index engage in more exercise than underweight or overweight counterparts (Majors, 2015; Sirang et al., 2013). Physical activities help control body weight, reduce fat, burn calories and, prevent chronic heart diseases such as cancer, heart and stroke (CDC, 2010; CDC, 2011; Hammond & Levine, 2010; Ludwig, 2007). Hence, Zaccagni et al. (2014) affirmed that people who engage in regular physical activities coupled with proper dieting behaviour are more satisfied with their body weight than less or non-active people. WHO (2019) report on health and physical fitness suggested that adult aged 18 to 64 years need to participate in 2 hours 30 minutes moderate intensity aerobic physical activity per week. For more health and fitness benefit, 5 hours is recommended. US, Centers for Disease Control and Prevention (2010) added that physical fitness activities should go along with balanced dieting. Eating fruits and vegetable is critical in achieving good health (US, Centers for Disease Control and Prevention, 2010).

2.2 Empirical Reviews

Zaccagni, Masotti, Donati, Mazzoni and Gualdi-Russo (2014) studied the body image and weight perception, nutritional choices and physical activity of 734 Italian university students. 354 were women aged 21.5 ± 2.9 years and 380 male aged 22.1 ± 3.6 years. Height, weight, BMI and weight status were considered for each respondents. Body image perception was assessed by a silhouette matching technique. A new index, FAI (Feel status minus Actual status Inconsistency), was used to assess weight status perception inconsistency. Findings showed that body weight/image dissatisfaction is influenced by socio-cultural environment and peer group effect which are linked to eating disorders and low self-esteem. Also, 4.7 % of women preferred to have thinner body like models and celebrity women compared to 3.8% of men. The mean FAI values were positive in females and negative in males, indicating a tendency of the women to overestimate their weight status and of the men to underestimate it. Men were more physically active than women. The study concluded that there is greater discontent and higher weight status perception among female Italian university students surveyed than males. Our findings suggest that the FAI index can be very useful to evaluate the perceived weight status by body image in comparison to actual weight status. However, this study failed to evaluate the nutritional choices of the students. The methods of data collation and analysis were not stated but can be inferred by those who are statistically inclined. But, the current study will explicitly give details of methodological paradigms used to enhance clarity of comprehension.

Mbogori and Arthur (2019) examined the associations among body weight status perception, health status, diet quality, and consumption of fruits and vegetables within the adolescent population in the US using a cross-sectional survey of 1737 adolescents (12-17 years). The study was necessitated by the tendency of adolescent in the US to

be concerned about their physical appearance and undertake practices in order to achieve certain body ideals. It was sponsored by the National Cancer Institute of United State. The adolescents reported the perception of their weight status, diet quality, health status, and the frequency with which they consumed common fruits and vegetables in a week. Results showed that 62% of the adolescents reported perceiving their weight as “just right,” and 10.9%, 22.4%, and 4.7% perceived their weight to be “underweight,” “a little overweight,” and “very overweight,” respectively. Those who perceived their weight status as “just right” also reported their health and diet to be “very good”. Similarly, adolescents who perceived their weight to be just right consumed significantly more fruits and vegetables than those who perceived their weight as “underweight” or “overweight.” Results of the study have central implications for future research on weight, health status, diet quality, and healthy eating behaviors among adolescents. The study conclude that weight perception has a correlation with nutritional status. Hence, discussions with nutrition professionals regarding realistic weight ideals would be beneficial for this age-group since half of the study’s respondents had inaccurate perceptions about their current weight statuses.

A similar study by Maruf et al (2012), examined the perceived body image and weight of 121 Nigerian university undergraduates with a mean age of 22.34 ± 1.88 years. Sixty percent (60%) of male study respondents perceived themselves to have normal weight when they were actually overweight while 50% of females perceived themselves to be normal weight when they were actually overweight. Interestingly, normal weight respondents thought that they were fatter than they actually were. The overweight female respondents estimated their personal ideal and desired body images bigger (fatter) than their self-perceived body image (showing a desire to be fatter). Male

respondents perceived smaller body images for the female than the female perceived for the male.

Most study respondents in Zaccagni et al. (2014), study indicated that they would have liked to be thin (slender) whereas study respondents in Maruf et al. (2012) study, had desires that run through being normal weight and overweight. The fact that there was a desire to be thinner among the Italian sample than the Nigerian sample may be explained by socio-cultural influencers of weight perception. One of the barriers to reducing the rise in obesity in developing countries could be its cultural acceptability. Black people tend to receive positive feedback about their bodies from friends and family even though they are clearly overweight.

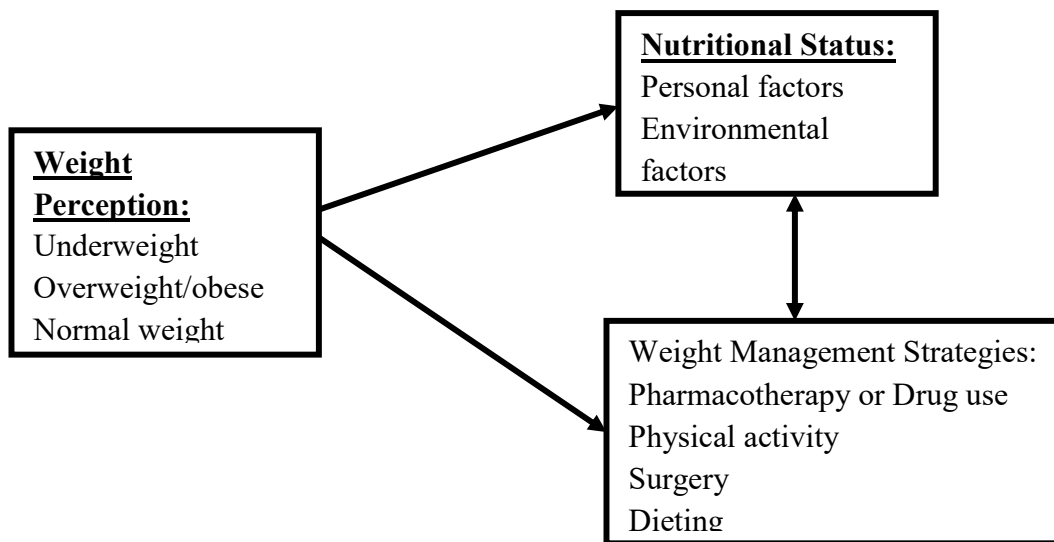
Dorosty, Mehdikhani, Sotoudeh, Rahimi, Koohdani and Tehrani (2014) examined weight perception and health status among 542 women working at health centres of Tehran using multivariate logistic regression analysis. The results showed that more than 40% of women with normal BMI overestimated their body-weight status their desire to be thin/slim. 15.8% of these women had obesity. It was also revealed that normal-weight women had significantly more misperception of weight status (OR 8.16, 95% CI 4.82-13.82) than overweight/obese women.

Gaylis, Levy and Hong (2020) assessed the relationships between BWP, BMI, food choices and physical activity, among 1,212 Southern California male and female adolescents using multivariate logistic regression analysis. Finding revealed the following; 39.3% of females studied perceived themselves as overweight whereas lower 26% males considered themselves to be overweight ($\chi^2 (2) = 22.73, p < 0.001$). On preference to control weight to look slimmer like models, 50.4% of females tried to lose weight compared to 19.2% male, whilst 41.6% male tried to gain weight or never

tried to control their weight (41.6%) ($\chi^2(3) = 133.09, p < 0.001$). Statistically, the study conclude that more females (61.3%) than males (52.2%) were concerned about controlling their weight to look better ($\chi^2(3) = 17.71, p = 0.001$). Major reason for weight control was to look better followed by to improve health. Interestingly, adolescents who perceived themselves as thin consumed unhealthier foods (hamburgers and regular soda), where those who perceived themselves as fit and overweight ate healthier foods (salad and vegetables). Results of this study validate that an accurate perception of weight is critical to the success of education and behaviour intervention programs for both overweight and normal weight adolescents.

2.3 Conceptual Model of the Study

This conceptual model summarizes the study pictorially by showing the relationship that exist between the study variables: weight perceptions, nutritional status and weight management strategies. WHO (2019) report emphasized that the weight of the individual whether overweight, underweight or normal depend largely on the weight management strategy and nutritional habit of the individual. Hence, the proposition that there is a direct correlation between weight perceptions, nutritional status and weight management strategies (WHO, 2019). Therefore, the researcher propose the model below to establish the correlation among weight perceptions, nutritional status and weight management practices of young adults in Ahanta Nkwanta.



Researcher's Construct

Figure 3: Nutritional status and weight management practices of young adults in

Ahanta Nkwanta



CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Overview

This chapter discusses the research design, the setting (population and sampling technique), instruments for data collection, procedure and time frame, validity and reliability, and data analysis (statistical analysis) plan.

3.1 Research Design

The study adopted a quantitative approach. The rationale for adopting quantitative approach was because the researcher quantified and measured weight perception, nutritional status and weight management of young adult. Creswell (2008) posit that quantitative study involves collection of data so that information could be quantified and subjected to statistical treatment in order to support or refute alternative knowledge claim. McMillan and Schumacher (2014) corroborated by stating that quantitative research relies heavily on numbers in reporting results. The study used multiple stage research design comprising of cross sectional survey and correlation. Hall (2008) said cross sectional designs are used to collect data to make inferences about a population of interest at one point in time. With regards to correlational design, Tharenou, Donohue and Cooper (2007), Taherdoost, (2016) and Mckinney (2011) noted it is used to collect opinions of a population by studying a sample of the population to determine whether, and to what degree, a relationship exists between two or more quantifiable variables. Correlational designs are used to collect quantifiable data from respondents to measure, examine, or analyze the relationship between two or more variables and generalize findings to the population (Saunders, Lewis & Thornhill, 2007; Mckinney, 2011; McDaniel & Gate, 2006).

Zikmund and Babin (2010) added that responses are usually collated through structured instruments. Therefore, the basis for the use of correlation and cross sectional design in this study was to assess the body weight perceptions and nutritional status of young adults, identify their weight management strategies as well as establish the correlation between BWP, nutritional status and weight management practices adopted by young adults in Agona Nkwanta of the Ahanta West municipality.

3.2 Setting of the Study

The study area was Agona Nkwanta, which is the municipal capital of Ahanta West Municipality located along the southern coast of Ghana established per L.I 1395 (GSS, 2014).

3.3 Population of the Study

Agona Nkwanta has a population of 14,104, with 73.4% literates and the youth constitute 52% (GSS, 2014). Ethnic composition in the Municipal is quite homogeneous with the Ahanta as the dominant group. Other ethnic groupings are Fanti, Nzema, Wassa and Ewe. The Ahanta West Municipality has three Traditional Councils namely: Busua, Lower Dixcove and Upper Dixcove Traditional Council. Ahanta West Municipality population is 106,215. Males constitute 48.1%, females 51.9%. The youthful population constitute 41% of the entire municipal (GSS, 2014).

3.3.1 Targeted population

The targeted population of the study was all the young adults between the ages of 18 to 25 years residing in Agona Nkwanta who attend church. Youth in the churches were targeted because the report of the Ahanta West District Analytical (2020) revealed that 89% of the population is Christian. Hence, the need to select respondents from churches to enable easy administration of questionnaire in designated location. In all three

hundred (300) young adults were targeted. The churches include; St. Francis of Assisi Catholic Church-Agona, Wesley Methodist Church-Agona, Christ Apostolic Church Int. Agona central, Seventh-Day Adventist Church-Agona central, The Pentecost Church of Ghana-Agona Central, Deeper Life Bible Church-Agona Nkwanta, The Church of Pentecost, English Assembly-Agona, Assemblies of God Church, Agona.

3.4 Sampling Technique and Sample Size

Cluster and simple random samplings were used to select the respondents from the churches involved in the study. Cluster sampling was used to group the young adults on the bases of the church they attend, because the churches were separated further apart from one another. Johnson and Christensen (2010) posit that cluster sampling is used when the elements in the population are geographically spread out. Jackson (2012) and Arthur, Waring, Coe and Hedges (2012) added that in cluster sampling, the respondents that represent the population are identified and included in the sample. Then, simple random sampling was used to select the respondents from each cluster. The simple random sampling approach was used to help ensure that each young adult in a cluster had an equal chance of being selected as a respondent in the study. A total of two hundred and thirty (237) young adults were selected from the three clusters. Sekaran (2003) suggested that it is advisable to use larger samples in quantitative study for easy generalizability of the findings.

3.4.1 Criteria inclusion and exclusion

Young adults were included if they: (a) completed at least Junior High School education, (b) residing in Agona Nkwanta at the beginning of the study and c) willing to participate in the study. Also, persons with symptomatic diseases, pedal oedema, physically disabled or who were pregnant at the time of the study were excluded from

the study as their characteristics would have affected the accuracy of anthropometric measurements.

The table below shows the sample size distribution.

Table 1: Sample size and sampling procedures

Respondents	Sample size	Sampling Technique
St. Francis of Assisi Catholic Church-Agona,	40	Cluster & random sampling
Wesley Methodist Church-Agona,	30	Cluster & random sampling
Christ Apostolic Church Int, Agona Central	28	Cluster & random sampling
Deeper Life Bible Church-Agona Nkwanta	25	Cluster & random sampling
The Pentecost Church of Ghana-Agona Central	24	Cluster & random sampling
Assemblies of God Church-Agona Nkwanta	34	Cluster & random sampling
Seventh-Day Adventist Church-Agona,	33	Cluster & random sampling
The Church of Pentecost, English Assembly-Agona	23	Cluster & random sampling
Total	237	

Source: Essien, 2020

3.5 Data Collection Instrument

The study was based on primary data. The primary data was the information gathered from the field directly through the questionnaire administered. The questionnaire consisted of demographic information, weight perceptions, and nutritional status and weight management practices.

3.5.1 Weight perception assessment questionnaire

To make it easy for respondents to response to the questionnaire, Pulvers, Lee, Kauri, Mayo, Fitzgibbon, Jeffries, Butler, Hou, and Ahluwalia (2004) figure rating scale was

adopted. Respondents were presented a series of nine male and nine female silhouette pictures that depicted body sizes starting from very thin (assigned '1') and ending at morbidly obese (assigned '9'). The assignment of body weight status on the figure rating scale was as follows: underweight (silhouettes 1 and 2), Normal Weight (silhouettes 3, 4 and 5), Overweight (silhouettes 6 and 7) and Obese (silhouettes 8 and 9). The pictures were arranged in two rows. The top row depicted male body sizes while the one below represented body sizes for females. Respondents were required to circle one of the nine silhouettes that fit the participant's idea of what their current body looks like, the body type the participant wants for them self, the body type the participant thinks Ghanaian society wants for their sex and the ideal body for the opposite sex. This section of the questionnaire was adapted from Pulvers et al. (2004); Maruf et al. (2012); Zaccagni et al. (2014). It is located in section "B" of the questionnaire. This particular standardized figure rating scale was used because of its cultural relevance as a body image rating instrument for people of African descent (Pulvers et al., 2004). Respondents also indicate whether they were underweight, normal or overweight as a means of ensuring consistency in their response

3.5.2 Assessment of weight management practices

The questionnaire in Section C, elicited information on respondents' weight management strategy. Respondents were asked whether they were currently trying to lose weight, gain weight, maintain their current weight or were not trying to do anything about their weight at all. Questions were adapted from Majors, (2015). Lifestyle behaviours were examined using a series of questions that assessed alcohol consumption, whether respondents were smokers or not and their physical activity levels in a typical week using questions adapted from Majors (2015) and Zaccagni et al. (2014).

3.5.3 Nutritional status/dietary intake questionnaire

Information was gathered on the number of complete meals a participant ate on a typical day, whether these meals were home-cooked or bought, how often one ate out and how many sachets of water a participant drank on a typical day. A food frequency questionnaire was adapted from FAO (2018), Majors's (2015) United States' National Health and Nutrition Examination Survey (NHANES) and Hong Kong 2005-2007 dietary intake survey to fit into the Ghanaian context. The questionnaire assessed the dietary intake of the young adults per week with options: 1-2 times a week, 3-4 times a week, 5-6 times a week, 7 times a week or never. The occasion it was eaten: breakfast, lunch or supper and the source of food: homemade, fast-food/restaurant/cafeteria or foodstall/hawkers. This was to identify dietary patterns of the respondents.

3.5.4 Anthropometric measurements

All anthropometric measurements were taken as per standard procedures (CDC, 2010/11). The height of study respondents was taken using a portable wall-mounted stadiometer (i.e. Seca GmBh & Co. 2171821009 Stadiometer). Respondents stood upright with their back against a wall and their head in the Frankfurt horizontal plane while the researcher and field assistant took the height measurement. Weight was measured using a digital weighing scale (Ohaus SD 200 Digital Scale); respondents wore light clothing and were barefoot or wearing socks whilst their weight and height were being measured. The waist and hips was measured using a flexible tape measure, in order to calculate the waist-to-hip ratio of respondents.

3.6 Validity and Reliability of the Instruments

The instrument was given to two experts who reviewed its relevance and terminologies to the study. Their corrections were used in the reconstruction of the instrument. To

ensure reliability of the instrument, a test re-test method was employed. A pilot study was done by administering the questionnaire on thirty (30) respondents in Mpohor District not included in the study at an interval of two weeks. The reliability was calculated to obtain the internal consistency reliability coefficients 0.89. Nunnally (1978), recommended that instruments used in basic research should have reliability of about 0.70 or better. Therefore, the Cronbach alpha of 0.89 showed that the instrument was highly reliable for the study.

3.7 Data Analysis Procedure

Statistical Product and Service Solution version 20 and Microsoft Excel 2010 were used to analyze data descriptively. Statistical techniques used to analyze the data were frequency counts, percentages, mean, standard deviation and Pearson's Product Moment correlation. The analysis of respondents' 'Feel-weight-status-minus-Actual-weight-status Index (FAI), i.e. a section of weight perceptions, was as follows: the BMI of a participant was referred to as their 'Actual-weight-status'. Actual-weight-status was categorized based on WHO's cut-points for adults: underweight i.e., a BMI below 18.5 kg/m², normal weight i.e., BMI from 18.5kg/m² to 24.9 kg/m², overweight i.e., BMI from 25 kg/m² to 29.9 kg/m², and obese i.e., above 29.9 kg/m². As described by Zaccagni et al. (2014), in their study, FAI is an index used to assess if there is or not a realistic weight status perception in a participant on the basis of body size assessment (i.e., actual-weight-status) and the feel figure (i.e., the silhouette a participant picked as their opinion of what their current body looks like). Scores were calculated by subtracting the actual- weight-status score from perceived current body weight score (i.e., feel-weight-status). An underweight actual-weight-status got a score of 1, normal weight actual-weight-status got a score of 2 and overweight actual-weight-status got a score of 3, and an obese actual-weight-status got a score of 4. This conventional code

was subtracted from the perceived current body weight (i.e., very thin/thin silhouette, average silhouette, slightly heavy/overweight silhouette and obese silhouette scored 1, 2, 3 and 4 respectively). Scores of zero indicated accurate body image perception. Positive scores indicated that respondents perceived that they were heavier (fatter) than they actually were, whereas negative scores indicated that individuals perceived that they were thinner than they actually were in reality.

Logistic regression was conducted to examine the possible association between sources of nutrition information and the nutritional status of respondents. Source of nutrition information was the independent variable (coded as yes, I use this source or no, I do not use this source) and nutritional status was the dependent variable (coded as unhealthy BMI and healthy BMI for one aspect of the test and unhealthy waist-to-hip ratio and healthy waist-to-hip ratio for the other aspect of the test; both aspects of the test were used to explain respondents' nutritional status). Binary logistic regression analysis was used to examine the possible relationship between weight perceptions, nutritional status and management practices in relation to demographic background.

3.8 Ethical Considerations

Ethical measures such as informed consent (McMillan & Schumacher, 2010), safeguarding against manipulation of respondents (Bogdan & Biklen, 2007), confidentiality and anonymity were adhered to (Cohen et al., 2007; Johnson & Christensen, 2008; Neutens & Robinson, 2010; McMillan & Schumacher, 2010). As a result respondents in the study were briefed on their right to take part in the study or withdraw from the study at their own volition. There were clear instructions on how to complete and returned the questionnaire.

CHAPTER FOUR

RESULTS

4.0 Overview

This chapter presents the study results on body weight perceptions of young adults of Agona Nkwanta in the Ahanta West municipality, the strategies they use in weight management, nutritional status and the correlation between body weight perceptions, nutritional status and weight management practices.

4.1 Presentation of Results

4.1.1 Demographic characteristics of the study respondents

Two hundred and thirty-seven (237) respondents took part in the study; 156 were females representing (66%) and 81 were males representing (34%). The *mean age* of the respondents in the study was 20.34 indicating that majority of the study respondents were 20 years old. Salkind (2010) asserted that the mean is a parameter that measures the central location of a distribution of a random variable and is a vital statistic that is widely reported in scientific literature.

Table 2: Biodata analysis

Response	Variables	Mean ($\sum x$) SD(σ)	N(%)
Age (in years)		20.34(3.2)	
Gender	Female		156(66%)
	Male		81(34%)
Highest education	Tertiary		118(50%)
	Secondary		83(35%)
	Basic		36(15%)
Occupation	Student		105(44%)
	Professional		118(50%)
	Unemployment		14(6%)
Marital Status	Married		119(50%)
	Single		113(48%)
	Others		5(2%)

Source: Essien, 2020

In terms of highest education attained; 118 representing (50%) respondents had tertiary education, whilst 83 respondents representing (35%) had secondary education. Thirty-six (36) respondents representing (15%) had basic education. With regards to occupation; 105 respondents representing (44%) were students. 118 respondents representing (50%) were professionals in their specialised field of endeavour. 14 respondents representing (6%) were unemployed. Marital status of respondents were also studied and findings revealed the following; 119 respondents representing (50%) were married. 113 respondents representing (48%) were single or unmarried whilst others such as “separated, divorced, widow/widower constituted two percent (2%) representing five (5) respondents. The rationale for studying the demographic characteristics of the study respondents was based on the preposition that demographic information provides data regarding research respondents and is necessary for the determination of whether the individuals in a particular study are a representative sample of the target population for generalization purposes (Salkind, 2010). More critically, demographic data allows the researcher to better understand specific contextual physiognomies of the study participant that may influence the result of the study.

4.2 Research Question One

What are the body weight perceptions among young adults in Agona Nkwanta?

The research question one seeks to examine the body weight perceptions among young adults of Agona Nkwanta in the Ahanta West municipality. To answer the research question in details, respondents were asked to indicate how their neighbourhood/friends describe them in terms of their weight? The result revealed that sixty (60) respondents constituting twenty-five percent (25%) noted that their friends’ perceive them to be

underweight. 40 respondents representing seventeen percent (17%) said that their friends' perceive them to be overweight whilst one hundred and thirty-seven (137) representing fifty-eight percent (58%) stated that their friends' perceive them to be in their normal weight range. This revelation buttresses the views of Quaidoo et al. (2018) who posited that many young people have the tendency to be concerned about their physical appearance and undertake practices in order to achieve certain body ideals due to how society in which they live look at them. Similarly, Agyapong et al. (2020) added that accurate body weight perception is important to maintaining an ideal body weight and appearance. The figure 4.1 below shows a pictorial view of how friends or neighbourhood in Agona Nkwanta perceive weight of young adults.

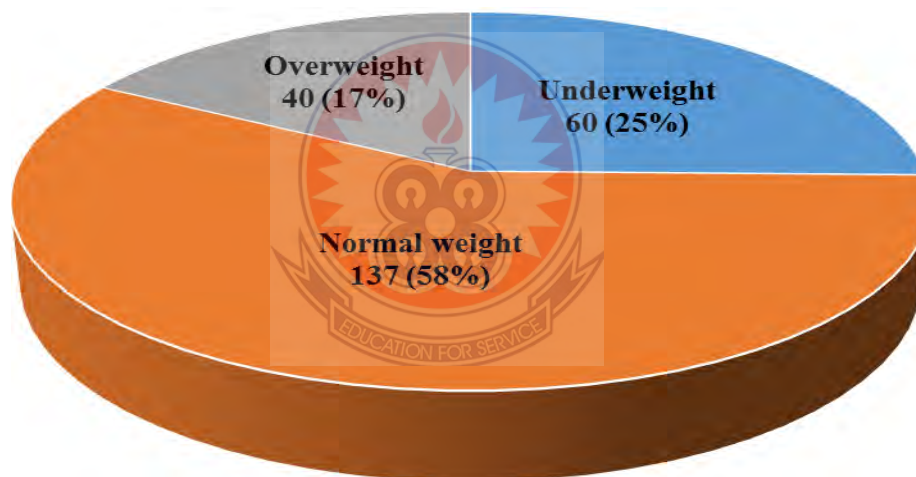


Figure 4: Neighbourhood/friends perception of participant weight

Source: Essien, 2020

As a confirmatory test, respondents were also asked to specify how terrified they are when they realized that they fall within one of the following category: underweight, overweight and obese. In responding, respondents noted the following: thirty-six (36) respondent representing fifteen percent (15%) posited that they have concern when they realized that they are either: underweight, overweight or obese *“always”*. One hundred and fourteen (114) respondent representing (48%) said they *“sometimes”* have the concern of being underweight, overweight or obese whilst fifty-one (51) respondents

representing twenty-two percent (22%) noted they “*often*” consider their present status of being underweight, overweight or obese. Thirty-six (36) respondents representing fifteen percent (15%) said they “*never*” experienced the concern of being underweight, overweight or obese. This analysis showed that majority of respondent do experienced the concern of being underweight, overweight or obese at one point in their life. The respondents’ views were in line with Maroiu and Maricutoiu (2017) assertion of self-discrepancy theory which posit that individuals often compare their “actual” self to internalized standards or the “ideal/ought self”. These researchers noted that the discrepancies between “actual”, “ideal” and “ought” brings about emotional discomforts that compel some individuals to adopt unhealthy weight management practices for quicker result (Maroiu & Maricutoiu, 2017). In contrast, Yeng and Sedek’s (2012) study among subjects who were categorized as underweight, majority of them 72.7% perceived themselves as underweight, 24.2% subjects perceived themselves having normal weight, whereas 3.0% as overweight and no one perceived themselves as being obese. The researchers also found that 62% of the respondents were dissatisfied with their body shape, particularly females were found to have higher body dissatisfaction and intended to become thinner than males (Yeng & Sedek, 2012).

The bar chart below illustrates the respondents view pictorially.

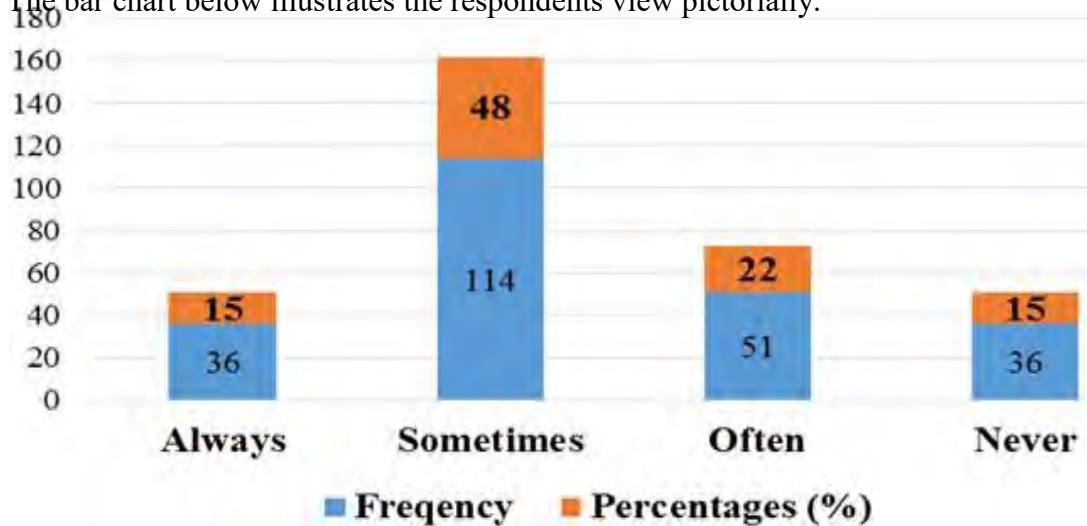


Figure 5: Respondents concerns of being underweight, overweight or obese by study respondents

Source: Essien, 2020

4.2.1 Respondents perceptions of idealized/perfect body image/appearance

With regards to ideal body image preferences, the Table 3 provide the silhouette selected by the respondents as the ideal body for themselves (i.e., Actual self), ideal-self (i.e., Silhouette that they would like to possess in respect of Agona Nkwanta societal preferences and the ought-self (i.e., Silhouette that they believe that they owe it a duty to possess. The analysis were done based on gender penchant. This is because Hartmann, Rieger and Vocks (2019) disclosed that men and women perceive their body image differently. This analysis will clarify Voges et al. (2019) and Hartmann et al. (2019) study.

Table 3: Respondents perceptions of ideal body image/appearance

Body characteristics	N(%)
Actual self: Perception on one's attributes (females)	
Selected an underweight silhouette	56(36%)
Selected a normal weight silhouette	95(61%)
Selected an overweight silhouette	5(3%)
Actual self: Perception on one's attributes (males)	
Selected an underweight silhouette	16(20%)
Selected a normal weight silhouette	65(78%)
Selected an overweight silhouette	2(2%)
Ideal self: Silhouette that you would like to possess (female)	
Selected an underweight silhouette	50(32%)
Selected a normal weight silhouette	106(68%)
Selected an overweight silhouette	0(0%)
Ideal self: Silhouette that you would like to possess (male)	
Selected an underweight silhouette	39(48%)
Selected a normal weight silhouette	42(52%)
Selected an overweight silhouette	0(0%)
Ought self: silhouette that you believe you owe it a duty to possess (female)	
Selected an underweight silhouette	35(23%)
Selected a normal weight silhouette	108(69%)
Selected an overweight silhouette	13(8%)
Ought self: silhouette that you believe that you owe it duty to possess (male)	
Selected an underweight silhouette	9(11%)
Selected a normal weight silhouette	72(89%)
Selected an overweight silhouette	0(0%)

Source: Essien, 2020

Considering “*Actual self*” for female respondents, fifty-six (56) of them representing thirty-six percent (36%) selected an underweight silhouette. Majority of female respondents ninety-five (95) representing sixty-one percent (61%) chose normal weight silhouette for actual-self, whilst only five (5) female respondents representing three percent (3%) selected an overweight silhouette as their actual-self. With regards to “*Actual-self*” for men, majority of respondents’ sixty-three (63) representing seventy-eight percent (78%) indicated their actual-self to be normal weight silhouette, whilst only sixteen (16) respondents constituting twenty percent (20%) selected an underweight silhouette for actual-self. Two respondents (2) representing two percent

(2%) selected an overweight silhouette for actual-self. This analysis has shown that majority of both male and female identify their actual-self to be of normal weight silhouette.

However, further probe of respondents views on “*Ought-self*” showed that thirty-five (35) female representing twenty-three percent (23%) selected an underweight silhouette that they believe they owe it a duty to possess. One hundred and eight (108) female respondents representing sixty-nine percent (69%) selected a normal weight silhouette that they believe that they owe it a duty to possess. On the contrary, thirteen (13) respondents representing eight percent (8%) noted that they prefer overweight silhouette to their current body image. On the side of male respondents, seventy-two (72) of them representing eighty-nine percent (89%) selected a normal weight silhouette for ought-self, whilst nine (9) respondent representing eleven percent (11%) selected an underweight silhouette for ought-self.

None of the male respondents desire overweight silhouette as their current perfect image which they believe they owe it a duty to possess. The views of the male respondents on the “*Ought-self*” were in-line with Voges et al. (2019) assertion that men are comparatively less dissatisfied with their own body image than women and consider themselves to be better-looking and less overweight. This implies that women are more dissatisfied with their actual body than men, and more likely to adopt ways to reduce or gain weight to enable them assume desired body image (Keski-Rahkonen & Mustelin, 2016; Karazsia et al., 2016).

With regards to societal ideals; “*Ideal self*” (i.e. Silhouette that Agona Nkwanta society would like individual female and male to possess. Fifty female respondents (50) representing thirty-two percent (32%) selected an underweight silhouette. One hundred

and six respondents (106) representing sixty-eight percent (68%) selected a normal weight silhouette whilst nobody selected an overweight silhouette. This analysis implies that majority of female respondents believed that the perfect body that society want women to take-up was their normal weight and not any induced body silhouette. In terms of male respondents, forty-two (42) representing fifty-two percent (52%) acknowledged a normal weight silhouette as the ideal-self for Agona Nkwanta society whilst thirty-nine (39) respondents representing forty-eight percent (48%) selected an underweight silhouette as the ideal-self for Agona Nkwanta society. None of the male respondents also chose an overweight silhouette as an ideal-self for Agona Nkwanta society. Consistent with this finding is Kuan et al. (2011) who found that more than half of the females preferred their ideal figure to be underweight whereas about 30% males chose an overweight figure as their ideal model. The authors reported further that females were generally more concerned about body weight and body shape.

4.2.2 Anthropometric measurements of the study respondents

Casadei and Kiel (2021) posited that anthropometric measurements are critical in determining whether an individual is underweight, overweight or obese. Bhattacharya, et al.'s (2019) study buttressed that anthropometric measurements are essential in assessing nutritional and health status of persons. Hence, anthropometric measurements of respondents were taken to enable easy examination of respondents' weight perception. The analysis are displayed in the Table 4.

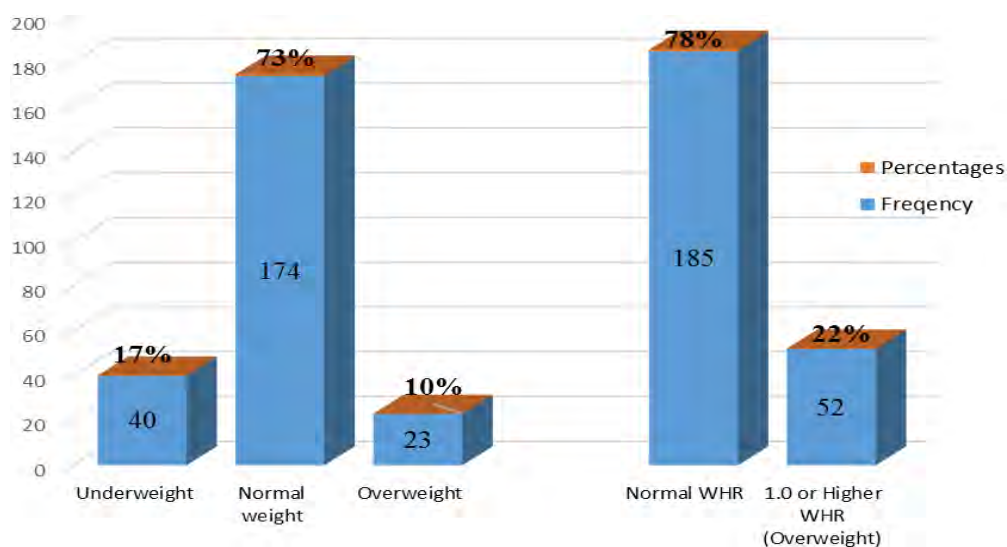
Table 4: Summary of respondents' anthropometric measurements

Variables	Mean (SD)
*BMI (Kg/m ²)	
Females	22.3 (3.0)
Males	223.8 (3.9)
**WHR	
Females	0.79 (0.05)
Males	0.75 (0.03)

*BMI-refers to Body Mass Index classified based on WHO cut-offer for adults

Source: Essien, 2020

More than half of the respondents 73% constituting one hundred and seventy-four (174) respondents had normal Body Mass Index (BMI). Seventeen percent (17%) representing forty (40) respondents were underweight whilst twenty-three (23) respondents representing ten percent (10%) were also overweight. According to the World Health Organization (WHO, 2021) a healthy Waist-to Hip Ratio (WHR) fall with the following range: (a) 0.9 or less for men and (b) 0.85 or less for women. In both men and women, a WHR of 1.0 or higher increases the risk for heart disease and other conditions that are linked to being overweight (WHO, 2021).

**Figure 6: BMI and WHR analysis of study respondents**

Source: Essien, 2020

From the analysis one hundred and twelve (112) women representing forty-seven percent (47%) had normal WHR whilst forty-four (44) respondents representing nineteen percent (19%) had 1.0 or higher WHR indicating that they are overweight. With regards to men WHR, seventy-three (73) respondents representing thirty-one percent (31%) had normal WHR whilst eight men representing three percent (3%) had 1.0 or higher WHR indicating that they are overweight. This analysis suggests that 73% of respondents were of normal weight according to their actual BMI whilst 27% perceived their weight to be normal.

4.3 Research Question Two

What weight management strategies were employed by young adults in Agona Nkwanta?

The research question two seeks to identify weight management strategies employed by young adults in Agona Nkwanta to either lose weight, gain weight or maintain their weight. To address the key question, respondents were asked some prelude questions as follow: (1) Do you have any concerns about your current body weight? Yes/No. Are you trying to: lose weight, gain weight, stay the same weight or not doing anything about my weight? The analysis is provided in Table 5 together with the respondents' weight management strategies.

Table 5: Summary of respondents' weight management strategies

Responses	N (%)
Yes	191 (81%)
No	46(19%)
Lose weight	187 (79%)
Gain weight	50 (21%)
Exercise to lose weight	47 (20%)
Diet to lose weight	20 (8%)
Take laxatives/pills to lose weight	30 (13%)
Eat more to gain weight	7 (3%)
Take pill to gain weight	28 (12%)
Exercise & laxatives/pills to lose weight	50 (21%)
Diet & laxatives/pills to gain weight	20 (8%)
Diet & laxatives/pills to lose weight	35 (15%)

Source: Essien, 2020

From the Table 5, it can be observed that one hundred and ninety-one (191) respondents representing eighty-one percent (81%) noted that they have concern about their weight whilst forty-six (46) respondents representing nineteen percent (19%) said no. With regards to what they are doing about their weight concerns, one hundred and eighty-seven (187) respondents representing seventy-nine percent (79%) said they were trying to lose weight whilst fifty (50) respondents representing twenty-one percent were of the view that they were doing their best to gain weight. This means that more than half of the respondents were trying to lose weight in order to attain normal/Healthy Weight (i.e., >18.50 – 24.99).

Concerning weight management strategies, forty-seven (47) respondents representing twenty percent (20%) said they engage in exercise to lose weight. Twenty (20) respondents representing eight percent (8%) engage in diet to lose weight. Thirty (30) respondents representing thirteen percent (13%) said they have been taking laxatives/pills to lose weight. Seven (7) respondents representing three percent (3%)

said they engage in eating more food to gain weight. Twenty-eight (28) respondents representing twelve percent (12%) engage in only pills taking to gain weight. Fifty (50) respondents representing (21%) engage in both exercise and dieting to lose weight, whilst thirty-five (35) respondents representing fifteen percent (15%) engages in both dieting and pills to lose weight. Twenty (20) respondents representing eight percent (8%) depend on dieting and pills to gain weight. It can be observed from the analysis that greater number of the respondents uses combination of diet and exercise to lose weight than exercise alone or pills alone. It is also apparent that one-third of the respondents depend on combination of diet and pills to gain weight. The findings agree previous literature. For instance, studies suggested that body image and body shape concerns have a significant influence on weight loss behaviors practice and play a significant role in weight management (Wharton et al., 2008). Similarly, Kuan et al. (2011) found that students engaged in dieting more frequently, had self-induced vomiting, and used laxatives and exercise as their weight-loss strategies. These findings portrayed that young adults are at risk to be involved in unhealthy weight loss behaviors.

The findings run parallel with previous literature. For example, Payne-Palacio and Canter (2016) reported that significant weight loss in people tempts them to try varied strategies of weight gain. Attempts to lose, maintain, or gain weight are common practices among individuals. However, the strategies to achieve these goals vary. Some prefer diets prescribed by dietitians, while others follow “popular” or “fad” diets encouraging irrational and, sometimes, unsafe practices (Payne-Palacio & Canter, 2016). A plethora of weight management (WM) services are available in the UAE ranging from weight-loss/fitness centers to bariatric surgeries; however, statistics on their usage and client registries are not yet established. Dietitians take the lead in the

promotion of public health nutrition through the blend of scientific knowledge and understanding of social and cultural factors that influence what people eat (Kushner, 2014). Reduction in total caloric intake, skipping meals, fasting ≥ 24 hours, taking diet pills or diuretics, and joining weight loss programs (Kruger et al., 2014); increasing physical activity, eating diet foods or products, drinking a lot of water, and following a special diet (Lin & Lee, 2015); or using meal replacements are common strategies utilized to achieve the desired WM goals. Moreover, bariatric surgery has been demonstrated to be the most effective and long-term treatment for individuals with severe obesity or moderate obesity complicated by comorbid conditions that is not responsive by nonsurgical approaches (Payne-Palacio & Canter, 2016). Potentially harmful weight control practices were reported in females including excessive exercise, starvations, purging, laxatives, slimming tablets, and smoking for weight control, while males used excessive exercise, starvation, and smoking to lose or maintain weight (O'Dea & Abraham, 2021).

4.4 Research Question Three

What are the nutritional status of young adults in Agona Nkwanta?

The type of food stuffs consumed in the locality a week and where the food is prepared were assessed to determine whether respondents were eating the right amount of food in terms of quantity and quality. The analysis were shown in Table 6 and 7 this was done because Knox et al. (2003) asserted that adequate consumption of the right amount of food both in terms of quantity and quality enhances healthy living.

Table 6: Summary of nutritional status assessment

Food items respondents do consume	Frequency (%)		
	Never	1-2 times Per week	3 or more per week
Porridges, bread, rice, maize, pasta/noodles, wheat, fante kenkey, fufu, yam, cocoa yam	77(32%)	106(45%)	54(23%)
Vegetable oil, palm oil, coconut oil, butter, sheep fat, margarine, mayonnaise etc.	77(32%)	160(68%)	-
Spinach, salat, green-garlic, green-onion, cabbage, okra, carrot, eggplant, tomatoes, garlic, cucumber, onion, cauliflower, mushrooms fresh/dried, green beans, green pepper, beetroot	22(9%)	77(33%)	138(58%)
Beans, soybeans, peas, bambara beans etc.	28(12%)	106(45%)	103(43%)
Milk, skins milk, sour milk, yogurt, ice-cream, cheese	54(23%)	100(42%)	83(35%)
Beef, mutton, goat, rabbit, chicken, goose, turkey, quail, sausages, veal, lamb and chevron, meat of wild animals and games	50(21%)	144(61%)	43(18%)
Quail eggs, chicken eggs, goose eggs, turkey eggs, duck eggs etc.	39(17%)	140(59%)	58(24%)
Fresh and frozen fish, canned fish, smoked fish, dried fish, caviar, crab sticks	-	61(26%)	176(74%)
Sugar, honey, candies, chocolate, cakes, biscuits, jams, toffee, lollipops	142(60%)	95(40%)	-
Sesame seed, almonds, pumpkin seeds, walnuts, peanuts, apricot seeds etc.	-	237(100%)	-
Apple, banana, watermelon, lemon grapes, pears, melon, muskmelon, oranges, cherries, strawberries, blackberries, pineapple, grapefruit, orange juice, banana juice, pineapple juice, apple juice etc.	-	90(38%)	147(62%)
Pastries (e.g., meat pie, doughnut, cake)	50(21%)	148(62%)	39(17%)

Source: Essien, 2020

Respondents were asked to identify the food they eat, the number of times per week or not at all, and the source the food was prepared from (i.e., home-made, fast-food etc.).

With regards to Cereals and grains (i.e. starchy food), one hundred and six (106) respondents representing 45% identify porridge, bread, rice, maize, pasta/noodles, wheat, fante kenkey, fufu, yam, and cocoyam as the food they eat “1-2 times per week”.

Fifty-four (54) respondents representing 23% said they eat starchy foods 3 or more times per week. Seventy-seven (77) respondents representing 32% said they do not eat starchy foods. Green leafy vegetables and other vegetables in the locality such as; spinach, salad, green garlic, green onion, cabbage, okra, carrots, eggplant, tomatoes, garlic, cucumber, onion, cauliflower, mushrooms fresh/dried, green beans, green pepper, beetroot that respondents do consume were also examined. One hundred and thirty-eight (138) respondents representing 58% said they consume vegetables “3 or more times per week”. Seventy-seven (77) respondents representing 33% indicate “1-2 times per week”. Twenty-two (22) respondents representing 9% said “never”. Fats and oil food group include; vegetable oil, palm oil, coconut oil, butter, sheep fat, margarine, mayonnaise etc. and seventy-seven (77) respondents representing 32% said they do not take oily foods. One hundred and sixty (160) respondents representing 68% do take oily foods “1-2 times per week”.

Legumes such as beans, soybeans, peas, bambara beans etc. were also assessed, and twenty-eight (28) respondents representing 12% said they do not eat beans, soybeans, peas, and bambara beans. One hundred and six (106) respondents representing 45% indicate “1-2 times per week” and one hundred and three (103) respondents representing 43% noted they eat beans, soybeans, peas, and bambara beans “3 or more times per week”. Milk and milk products such as ideal milk, skim milk, sour milk, yogurt, ice-cream and cheese were also identified as locally consumed foods and fifty-four (54) respondents representing 23% said they do not take milk and milk products. One hundred (100) respondents representing 42% said they eat milk and milk products “1-2 times per week”. Eighty-three (83) respondents representing 35% noted that they eat milk and milk products “3 or more times per week”. Considering animal proteins (i.e. flesh foods and organ meat). These food include beef, mutton, goat, rabbit, chicken,

goose, turkey, quail, sausages, veal, lamb and chevron, meat of wild animals and games, fifty (50) respondents representing 21% said they “never” eat them. One hundred and forty-four (144) respondents representing 61% said they eat animal products “1-2 times per week”. Forty-three (43) respondents representing 18% said they take beef, mutton, goat, rabbit, chicken, goose, turkey, quail, sausages, veal, lamb and chevron, meat of wild animals and games “3 or more times per week”. Egg types include quail eggs, chicken eggs, goose eggs, turkey eggs, and duck eggs were also assessed and one hundred forty (140) respondents representing 59% said they take “1-2 times per week”, fifty-eight (58) respondents representing 24% chose “3 or more times per week” whilst thirty-nine (39) respondents representing 17% noted they do not eat egg types. Fish and sea foods assessed were fresh and frozen fish, canned fish, smoked fish, dried fish, caviar, and crab sticks and the respondents indicate the following; sixty-one (61) respondents representing 26% said they eat fresh and frozen fish, canned fish, smoked fish, dried fish, caviar, and crab sticks “1-2 times per week”. One hundred and seventy-six (176) respondents representing 74% indicate they eat fish and sea foods types “3 or more times per week”.

The respondents view on sweets such as sugar, honey, candies, chocolate, cakes, biscuits, jam, chocolate, toffee, lollipops were as follows: one hundred and forty-two (142) respondents representing 60% said they do not take surgery foods whilst ninety-five (95) respondents representing 40% said they take surgery foods “1-2 times per week”. Nuts and seeds-sesame seed, almonds, pumpkin seeds, walnuts, peanuts, and apricot seeds were assessed and all the respondents noted they eat them “1-2 times per week”. Pastries (e.g. meat pie, doughnut, cake) were assessed and the responses were; fifty (50) respondents representing 21% said they do not eat pastries. One hundred and forty-eight (148) respondents representing 62% indicate “1-2 times per week” whilst

thirty-nine (39) respondents representing 17% chose “3 or more times per week”. In like manner, the assessment of Fruits and fruit juice such as apple, banana, watermelon, lemon grapes, pears, melon, muskmelon, oranges, cherries, strawberries, blackberries, pineapple, grapefruit, oranges juice, banana juice, pineapple juice, and apple juice were as follow: ninety (90) respondents representing 38% chose “1-2 times per week” whilst one hundred and forty-seven (147) respondents representing 62% chose “3 or more times per week”. From the analysis it can be observed that majority of respondent noted that they eat the locally available food groups “1-2 times per week” and “3 or more times per week” in exception of the surgery foods which majority of respondents; 60% said they do not consume.

To critically comprehend the nutritious nature or how balanced the local food consumed is, the place the food was prepared has been examined in the light of the literature. Wiig-Dammann and Smith (2009) study revealed that socioeconomic factors affect food choices relative to nutrient content and its balanced nature. They emphasized that low-income individuals’ food choices impact their dietary intake, weight and health status (Wiig-Dammann & Smith, 2009). US Committee on Examination of Food Resource Adequacy and SNAP Allotments; Food and Nutrition Board; Committee on National Statistics; Institute of Medicine and National Research Council (2013) added that availability of the purchasing power of the individual determines the quality and adequacy of a balanced food consumed on daily bases and within the weeks ahead. Akenteng et al. (2023) found that proportions of young adults who consumed from the different food groups over a 24-hour period were: grains, white roots and tubers, plantain (100%); pulses (10.2%); nuts and seeds (34.1%); dairy (8%); meat, poultry and fish (86.9%); eggs (7.3%); dark green leafy vegetables (29.9%); other vitamin-A rich fruits and vegetables (2.2%); other vegetables (81%); other fruits (7.3%). Dietary

diversity scores were positively and significantly correlated with intake of micronutrient, with correlation coefficients of .169, .186, .191, .173 and .175 for vitamin A, niacin, vitamin B6, iron and zinc, respectively. A systematic review of adolescents living in low-and middle-income countries reported poor dietary intake from sources of food such as meat, fruits, vegetables and milk products, but, indulge in a nutrient-poor diet (Bali et al., 2022; Keats et al., 2018). Adolescents engaged in excessive consumption of starchy staples and low consumption of meat, milk and milk products and eggs (Hady et al., 2014).

Nti et al.'s (2013) results revealed that major foods consumed daily were fish (90.4%), rice (74.8%), fruits (63.3%), roots/tubers (47.3%) and plantain (45.4%). Most of the students did not meet their energy and nutrients requirements except for iron, niacin and vitamin C. Calcium intake was particularly low with intakes for males and females being 264 mg and 243 mg respectively. It is recommended that nutrition education programs should target adolescents in Senior High Schools in order to increase their knowledge on food nutrients and its importance to the body. This is of much importance as habitual inadequate intake of calories and nutrients might adversely affect their growth and development (Nti et al., 2013).

Table 7: Summary of Source of the prepared food consume by respondents

Source of the prepared food	Frequency (%)
Fast food joint or Restaurant	55(23%)
Street food vendors/ Street hawkers	60(25%)
Home-made (i.e. food prepared at home)	70(30%)
Cafeteria or Canteen	52(22%)
Total	237

Source: Essien, 2020

Table 7 shows the distribution. Seventy (70) respondents representing 30% consumes home-made food. Sixty (60) respondents representing 25% like buying food from street food vendors or street hawkers. This food may not be sufficiently balanced in terms of nutrients. Fifty-five (55) respondents representing 23% consumes food prepared at fast food joint or restaurant. Fifty-two (52) respondents representing 22% consumes Cafeteria or Canteen foods. The analysis implies that majority, (167 [70%]) of the young adult age 18-25 in Agona Nkwanta prefer eating food outside the home. Consistent is these findings is WHO (2018) who reported that there is a shift towards eating food prepared outside the home since some people view it as a mark of affluence. Similarly, FAO (2017) stated that most young adults prefer all kinds of food are sold by food vendors, presenting the options for variety and choice for customers but foods sold by these food vendors have significant nutritional implications (nutritionally balanced diets, sufficient in quantity and quality, and or nutrition-related diseases). As many people prefer to eat more and more food prepared and sold outside their homes, they increase their risk of exposure to bacteria. It has recently been discovered that the food vending industry has become a greater contributor to the illness problem (Magee, 2017). Street foods are readily preferred by most people especially amongst the emerging ones since they perceive it as readily available, inexpensive, nutritionally-balanced (Dun-Dery, 2012; Swanepoel et al., 2015).

4.5 Research Question Four

Is there a correlation between body weight perceptions, nutritional status and weight management practices of young adults in Agona Nkwanta?

To determine the relationship between the variables, a correlation matrix was constructed and it shows that the variables are significantly related to each other. Thus, the result showed that the respondents perception of their body weight have influence on the weight management strategies they would adopt. In the same vein the respondents' body weight perception would also influence or determine the kind of food they would eat or their eating habit. Statistically, it can be observed from the correlation Table 8 that the correlation coefficient for Weight Perception and Weight Management Strategies was $r(237) = 0.799$, $p < 0.05$, indicating significantly strong positive relationship. The correlation coefficient for Weight Perception and Nutritional Status was $r(237) = 0.702$, $p < 0.05$, also indicating significantly strong positive relationship.

Table 8: Summary of the correlation between weight perception, nutritional status, and weight management strategies

		Correlations		
		Weight Perception	Weight Management Strategies	Nutritional Status
Weight Perception	Pearson Correlation	1	0.799**	0.702**
	Sig. (2-tailed)		0.000	0.002
	N	237	237	237
Weight Management Strategies	Pearson Correlation	0.799**	1	0.839**
	Sig. (2-tailed)	.000		0.000
	N	237	237	237
Nutritional Status	Pearson Correlation	0.702**	0.839**	1
	Sig. (2-tailed)	0.002	0.000	
	N	237	237	237

** . Correlation is significant at the 0.05 level (2-tailed).

Source: Essien, 2020

With regards to the model summary, Montgomery, Peck and Vining (2021) opined that model summary table reports the strength of the relationship between the model variables. From the model summary Table 9 it can be observed that 93% of variance in weight perception is explained by Weight Management Strategies and Nutritional Status of the respondents. That is “R²” in the model summary table is the coefficient of determination (Hasan, 2020), which is the proportion of variance in the dependent variable: Weight Perception that can be explained by the predictor variables: Nutritional Status, Weight Management Strategies. The value 0.930 of Nutritional Status, and Weight Management Strategies explained 93% in Weight Perception. This analysis is consistent with Karazsia et al. (2017) and Keski-Rahkonen and Mustelin (2016) who established that body weight perception of the individual influences his/her choices of food selection and weight management strategies he or she adopt.

Table 9: Summary of model summary

Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.813 ^a	0.930	0.890	0.4491

a. Predictors: (Constant), Nutritional Status, Weight Management Strategies

b. Dependent Variable: Weight Perception

Source: Essien, 2020

Also, Table 10 showed that the way an individual perceive his or her weight has a significant effect on the weight management strategies and the nutritional habit he or she embrace in order to assume the desired body shape. Mathematically, the regression model with all the two predictor variables (i.e. weight management strategies and nutritional status) result in the equation; $R^2 = F(3, 135) = 45.67, P < 0.05$.

Table 10: ANOVA analysis

		ANOVA ^b				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.777	3	7.222	45.67	0.000
	Residual	23.352	135	0.158		
	Total	50.129	139			

a. Predictors: (Constant), Nutritional Status, Weight Management Strategies
b. Dependent Variable: Weight Perception

Source: Essien, 2020

This finding agrees Seo and Li (2012) who reported a significant relationship between ethnicity, body weight perceptions, nutritional status and weight management practices of young African American adults. Interestingly as the young adults perceived themselves to be thin tended to consume unhealthier foods, such as hamburgers and regular soda daily, where those who perceived themselves as fit and overweight made healthier food choices by eating more salad and vegetables. Those who perceived themselves as thin may consume junk food more frequently because they believe they are slender, have a fast metabolism and can afford the extra calories. Even though those adolescents who perceive themselves as thin may actually be of normal weight, establishing healthy dietary behaviours at an early age is exceptionally important because these behaviours initiated in adolescence are likely to carry over into adulthood and may have long-term impacts on health (Kelder et al., 2014).

CHAPTER FIVE

DISCUSSION

5.0 Overview

This chapter presents the discussion of the study result on body weight perceptions of young adults of Agona Nkwanta in the Ahanta West municipality, the strategies they use in weight management, nutritional status and the correlation between body weight perceptions, nutritional status and weight management practices. The thesis had 4 research questions which are all discussed in this chapter with reference to the analyses done in chapter 4.

5.1 Research Question 1

What are the body weight perceptions among young adults in Agona Nkwanta?

The study result of objective 1 revealed that majority of young adult of Agona Nkwanta do perceive their body weight to be of normal weight range. However, section of them also considers themselves to be underweight and overweight just as their friends and neighborhood do at times. Statistically, 61% female perceived themselves to be of normal weight, 36% perceived themselves to be underweight, whilst 3% of females perceived themselves to be overweight. No female perceived herself to be obese. With regards to males: 78% of male perceived themselves to be of normal weight. 20% male perceived themselves to be underweight, whilst 2% male perceived themselves to be overweight. No male perceived himself to be obese. Some of these weight perceptions could be wrong. Thus, looking at your body without any accurate measurement may give them inaccurate information about their true body weight (Bhattacharya et al., 2019).

This weight perception compels some of people (i.e., the young adults) to engage in weight management practices that put their health at risk at times or in most circumstances (Quaidoo et al., 2018; Agyapong et al. 2020). The respondent also indicated that they become worried when they noticed that they are either underweight or overweight. Maroiu and Maricutoiu (2017) noted that these self-discrepancy make some young adult to compare their “actual” self to internalized standards or the “ideal/ought self” which brings about emotional discomforts. Hence, adopt unhealthy weight management practices for quicker result (Maroiu & Maricutoiu, 2017). Wardle et al. (2006) and WHO (2021) indicate that the use of anthropometric measurements revealed the true picture of an individual body weight. Therefore, anthropometric instruments were used to determine the accurate weight of the study respondents. Majority of males and females fall within the normal body weight whilst less than half of the samples were underweight and overweight. Statistically, 73% of respondents had normal BMI, 17% were underweight whilst 10% were overweight.

The mean BMI for (Females=22.3, SD=3.0; Males=22.8, SD=3.9) and the WHR mean for (Females=0.79, SD=0.05; Males=0.75, SD=0.03) indicating that majority of respondents were in their normal weight range. This is consistent with the WHO (2021) standard matrix for healthy Waist-to Hip Ratio (WHR) for men is 0.9 or less; and females 0.85 or less. In both men and women, a WHR of 1.0 or higher increases the risk for heart disease and other conditions that are linked to being overweight or obese (WHO, 2021). From the numerical indicators, some of the respondents wrongly gauged their body weight, which does not correspond with their actual body weight, and this raises concern with regard to the weight status of the Agona Nkwanta young adults. Khutlang (2018) said if young people are grossly misperceiving their weight, then there is a greater risk of more profound weight-related problems such as self-induced ill-

health, premature mortality as a result of wrong weight perception. An 11-year Norwegian study of 1196 adolescents who were followed until they reached young adulthood found that the normal-weight adolescents who overestimated their body weight subsequently gained 0.66 body mass index (BMI) units and 3.46 cm in their waist circumference (WC) as compared to normal weight adolescents who perceived their body weight correctly (Cuypers et al., 2012). Another 6-year follow-up study in Houston found that adolescents who perceived themselves as overweight, regardless of their actual body weight at the baseline, were 2.5 times more likely to gain weight after six years as compared to those who did not perceive themselves as overweight, adjusting for depression, physical activity, and dieting behaviors (Duong & Roberts, 2014).

5.2 Research Question 2

What weight management practices were employed by young adults in Agona Nkwanta?

With regards to weight management strategies employed by young adults of Agona Nkwanta to either lose weight, gain weight or maintain their weight. The study revealed that 20% engage in exercise to lose weight, 8% engage in diet to lose weight, 13% use laxatives/pills to lose weight, 3% engages in eating more food to gain weight, 12% engage in taking pills only to gain weight, 21% combine exercise and dieting to lose weight, 15% engages in both dieting and pills to lose weight whilst 8% combine dieting and pills to gain weight. The analysis showed respondents used varying weight controlling techniques to either gain or lose weight depending on their perceptions. Nevertheless, it was clear that greater number of respondents uses combination of diet and exercise to lose weight than exercise alone or pills alone whilst one-third (1/3) depend on combination of diet and pills to gain weight. The respondents' views were

consistent with Swaminathan, Selvam, Pauline and Vaz (2013) and Tanck, Vocks, Riesselmann and Waldorf (2019) who argued that incorrect body weight perceptions among young adults is the major cause of unorthodox weight control/management approaches due to the emotional trauma they go through. In furtherance, the respondents views on weight control measures is consistent with the literature as some studies revealed that there are different approaches to weight discrepancy control (Voelker, 2015; WHO, 2019). Zaccagni, Masotti, Donati, Mazzoni and Gualdi-Russo (2014) noted that some ways of body weight managements are healthier than others, but they all rely on the promise of helping individuals to attain and maintain their weight goals. The use of exercising, dieting pills, and the excessive use of laxatives found in this study is consistent with weight management trends in other 79 studies reviewed in literature. However, the current study found that many respondents used a combination of weight management strategies to achieve their desired weight goals.

5.3 Research Question 3

What are the nutritional statuses of young adults in Agona Nkwanta?

Concerning the adequacy of nutritional status of the individuals, the study found that majority of respondents eat the locally available food groups “1-2 times per week” and or “3 or more times per week” in exception of the surgery foods which majority of respondents; 60% said they do not consume. Further analysis showed that majority of the young adult of Agona Nkwanta prefers eating food outside than home-made foods. This is not the best as studies have established that home-made foods are more adequate in quality and quantity than the outside food (Wiig-Dammann & Smith, 2009; WHO, 2021). Knox, Zafonte-Sanders, Fields-Gardner, Moen, Johansen and Paton (2003) asserted that adequate consumption of the right amount of food both in terms of quantity and quality enhances healthy living. Shrivastava, Saurabh-Shrivastava and Ramasamy

(2014) added that assessing the nutritional status of individuals; both young and old is a key part of measures against complicated diseases like gastrointestinal disorders. It helps to identify the presence and type of malnutrition, to define health threatening obesity, underweight, overweight and to devise suitable diets as prophylaxis against growth failure (i.e. micronutrient deficiencies) and diseases in later life (Kyle & Coss-Bu, 2010). A complete nutritional assessment should include: a review of diet history, physical examination, growth and anthropometric measurements (Cole, Flegal, Nicholls & Jackson, 2007), laboratory testing, accurate height and weight measurements and their transformation to relative indices of underweight, overweight and obese to serve as the spine of the nutritional assessment. More importantly the type of food consumed should be cross-examined for efficient nutritional advice (Conde & Monteiro, 2006).

5.4 Research Question 4

Is there a correlation between body weight perceptions, nutritional status and weight management practices of young adults in Agona Nkwanta?

Finally, the study established that there was a strongly significant positive correlation between weight perception, weight management strategies and nutritional status of respondents in the study. This was consistent with Karazsia, Murnen and Tylka (2017) and Keski-Rahkonen and Mustelin (2016) who established that body weight perception of the individual influences food choices and weight management strategies adopted. The respondents view was supported by Khutlang (2018) study which indicates that when the individual notice a discrepancy between individuals' perceived weight and ideal weight they are more likely to try to change this by adopting weight management strategies to address the emotional discomfort of overweight. However, the strategy may be healthy or unhealthy depending on the approach adopted. As has been found in

this study and many other studies (Mwaba, 2009; Peltzer & Pengpid, 2012; Wharton et al., 2008), the respondents' perceived weight does not always align with their actual weight and thus they are described as having a distorted perception of their weight. Upadhyay and Barsha (2014). Found that gender biasness was seen in weight control (statistically significant, p value =0.003). Body weight perception was found significant (p value, 0.001) in relation to weight control behavior. According to a study, weight misperception was a strong predictor of body dissatisfaction regardless of actual weight status (Knowlwa et al., 2015).



CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.0 Overview

This chapter presents the summary of the key findings of the study. It also presents the conclusions drawn from the study as well as the recommendations derived from the study's conclusions.

6.1 Summary

This study examined body weight perceptions among young adults in Agona Nkwanta, the weight management practices they use, the nutritional status of young adults and the relationship that exist between their body weight perceptions, nutritional status and weight management practices adopted. This was necessitated as studies by Bhurtun and Jeewon (2013) revealed that bodyweight perception, sensitivity and acuity inspires weight control practices, and this has led to highly prevalent of weight-loss behaviours among young adults. However, Cheung, Ip, Lam and Bibby (2007) said majority of the young adults have little knowledge or awareness about the association of body weight perception, nutritional status and weight management practices. Lowry, Galuska, Fulton (2002) noted that obesity has been increasing steadily irrespective of the increased prevalence of weight concern and weight management practices ongoing among young adults. Also, literature reviews stressed that females accord much prominence to their body appearance or shape/image and are preoccupied with weight control in teenage years (Malinauskas, Aeby, Overton, Carpenter-Aeby & Barber-Heida, 2007). On the other hand, males value a muscular physique, which they often associate with health (Wang, Liang & Chen, 2009). To achieve their ideal body image,

young adults engage in weight management behaviours which this study has evaluated in respect of young adults of Agona Nkwanta.

Again, this study looked into the issues of the nutritional status of young adult and pointed out that nutritional status is very significant in their life as it defined the condition of the body in respect of food intake, absorption and use of nutrition, as well as the influence of disease-related factors on the individual. In this light, Bhattacharya, Pal, Mukherjee and Kumar-Roy (2019) posited that normal nutritional status is determined by the balance food consumption and normal utilization of nutrients and this influence body-image positively, particularly when it is coupled with exercise. Balance food intake and use by the body is mostly achieved through the consumption of home-made foods (Drewnowski & Evans, 2001).

Weight management practices are key measures to control the individual weight and the appearance of body-shape. Studies in the literature reviewed cited the following; exercise, dieting-reducing fat consumption, reducing number of snacks eaten in between meal, increasing fruits and vegetable consumption, consuming a balanced diet, reducing the amount of food eaten at meal time, skipping meal and fasting), taking pills and surgery (Ryan & Morrison, 2009). However, unhealthy weight control practices have their own consequences. Bhattacharya et al. (2019) indicated that young people who use smoking and taking of pills to control their weight and body shape increase their risk of suffering from heart, lung cancer and other related illnesses. In this Ferraro, Patterson and Chaput (2015) study on “Unhealthy Weight Control Practices: Culprits and Clinical Recommendations” advised young adult to seek medical or physician direction on their desire to control weight and maintain appreciable body shape and size without any health adverse effect on them. In order to follow the flow of this study

comprehensively, the, findings have been arranged under the following themes highlighted with regards to the study objectives.

Body Weight Perceptions among Young Adults in Agona Nkwanta

The findings of the study showed that 61% females and 78% males constituting majority of young adult of Agona Nkwanta do perceive their body weight to be of normal weight range. The study also revealed that 36% females and 20% males perceived themselves to be underweight, whilst 3% females and 2% males of perceived themselves to be overweight. No male nor female perceived herself/himself to be obese. With the aid of anthropometric measurements as recommended by Wardle et al. (2006) and WHO (2021), the true picture or accurate weight of the respondents were revealed as follows: 73% of respondents had normal BMI, 17% were underweight whilst 10% were overweight. The mean for BMI (Females=22.3, SD=3.0; Males=22.8, SD=3.9) and the mean for WHR (Females=0.79, SD=0.05; Males=0.75, SD=0.03) also implies majority of respondents were in their normal weight range as indicated by the frequency count.

Weight Management Strategies Employed by Young Adults in Agona Nkwanta

The findings of the study indicate 20% of young adults of Agona Nkwanta engages in exercise to lose weight, 8% engage in diet to lose weight, 13% use laxatives/pills to lose weight, 3% engages in eating more food to gain weight, 12% engage in taking pills only to gain weight, 21% combine exercise and dieting to lose weight, 15% engages in both dieting and pills to lose weight whilst 8% combine dieting and pills to gain weight.

The analysis showed that respondents used varying weight controlling techniques to either gain or lose weight depending on their perceptions. Findings also showed that incorrect body weight perception among young adults is the major cause of unorthodox

weight management strategies they are using as a result of the emotional trauma they go through.

The Nutritional Status of Young Adults in Agona Nkwanta

With the aid of anthropometric measurements as recommended by Wardle et al. (2006) and WHO (2021), the true picture or accurate weight of the respondents were revealed as follows: 73% of respondents had normal BMI, 17% were underweight whilst 10% were overweight. The mean for BMI (Females=22.3, SD=3.0; Males=22.8, SD=3.9) and the mean for WHR (Females=0.79, SD=0.05; Males=0.75, SD=0.03) also implies majority of respondents were in their normal weight range which revealed that respondents were within the normal range of good nutritional status. With regards to adequacy of nutritional status, findings showed that averagely 45% respondents eat the locally available food groups “1-2 times per week”, 47% eat the locally available food groups “3 or more times per week”, whilst 8% do not take surgery foods.

With regards to places where the food is prepared 30% consumes home-made food. 25% like buying food from street vendors/ street hawkers. 23% prefers fast food joint/restaurant. 22% consumes Cafeteria or Canteen foods. The analysis implies that majority, 70% of the young adult age 18-25 in Agona Nkwanta prefer eating food outside the home.

The Correlation between Body Weight Perceptions, Nutritional Status and Weight Control Practices

Findings of the study established that there is a strongly significant positive correlation between weight perception, weight management practices adopted and the nutritional status of respondents in the study.

6.2 Conclusions

Based on the summary of findings, the study concluded that majority of young adult of Agona Nkwanta do perceive their body weight to be of normal weight range, whilst few perceived themselves to be underweight or overweight. No male nor female perceived herself/himself to be obese. With the aid of anthropometric measurements majority of the respondents (i.e. 73%) were within the normal weight/healthy weight range of ($>18.50 - 24.99$). 17% were underweight (<18.50) whilst 10% were overweight ($>25 - 29.9$). In terms of weight management strategies, respondents used varying weight control methods such as exercise to lose weight, diet to lose weight, and some use laxatives/pills to lose weight. For weight gains some engage in eating more food to gain weight whilst others take pills only to gain weight. Some combine exercise and dieting to lose weight, whilst some engages in both dieting and pills to lose weight. Other also, combine dieting and pills to gain weight. Further analysis showed that respondents used these varying weight controlling techniques to either gain or lose weight depending on their perceptions. However, literature noted that incorrect body weight perception among young adults is the major cause of unorthodox weight management strategies which is the product of the emotional trauma they go through.

Regarding nutritional status adequacy, findings showed that respondents eat the locally available food groups “1-2 times per week”, and “3 or more times per week”, whilst some (i.e. 8%) do not take surgery foods. Further findings indicate 30% consumes home-made food. 25% like buying food from street vendors/hawkers. 23% prefers fast food/restaurant. 22% consumes Cafeteria or Canteen foods. The analysis implies that majority, 70% of the young adult age 18-25 in Agona Nkwanta prefer eating food outside the home. Finally, there was a significantly strong positive link between weight perception, weight management strategies adopted and the nutritional status of

respondents in the study. Most alarming, dietary habits among adolescents who think they are thin include higher amounts of unhealthy foods than those who perceive themselves as overweight. These results suggest that an education component of accurate BWP is vital during the development of behaviours in adolescence, to avoid transcendence into adulthood. Correct perception of weight may influence the success of education and behaviour intervention programmes for both overweight and normal weight adolescents and lead to healthy behaviours over the lifespan. Insight into the mechanisms and aetiology of adolescent body image and body weight perceptions (BWP) are not only important for a theoretical understanding of obesity, but also crucial for designing effective interventions at personal, social and cultural levels. Further efforts should focus on determining if BWP and positive body image can serve as self-motivators to engage in healthy behaviours such as regular nutritional education and healthy eating. It is imperative to evaluate why children with increased body dissatisfaction and inaccurate BWP are less likely to engage in healthy weight management practices.

6.3 Recommendations

The following recommendations were made based on the major findings and conclusions of the study:

- 1) The young adults of Agona Nkwanta should limit the rate at which they consume street food (i.e., food prepared outside the home such as street vendors, fast food) which the study found to be their favorite sparingly. This is because studies have established that many of such cooked food cannot provide the needed balance diet to the body than home cooked food. For example, Knox et al. (2003) noted that home-made foods mostly contain the right amount of nutrients in quantity and quality that enhances healthy living. In term of the

preparation (i.e. hygiene practices), home cooked food are better placed than the street foods.

- 2) Secondly wrong perception of body weight can have adverse effect and psychological trauma on the victim. Therefore, young adults of Agona Nkwanta should go to hospital so that their weight can be correctly checked for them to prevent them from using all manner of weight management practices which can have adverse effect on their health.
- 3) The young adults should also seek physician's advice before adopting any body weight management practices. This is to curtail the adverse effect or the bad consequence that comes with inappropriate body weight management.
- 4) These results show that that the young adults eating habits might lead most of them to become obese. As a result, the National Commission for Civic Education and health care providers in Agona Nkwanta are well positioned to screen and offer culturally-sensitive assistance to all young adults about weight loss, weight control and adoption of healthy lifestyles. This stems from the fact that provider encouragement, even brief advice, can promote modifiable, health behavior change.
- 5) From the findings, it can be validated that excess weight gain is the most important modifiable risk factor for chronic diseases associated with nutrition. Therefore, it is recommended that provider screens and advice can encourage accurate weight perceptions and promote healthy behaviors and lifestyles among young adults in Agona Nkwanta.

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APPENDICES

APPENDIX A

Introductory Letter



August 25, 2020

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

**INTRODUCTORY LETTER
MS. REBECCA ESSIEN**

We write to introduce, Ms. Rebecca Yeboah, an M.Phil student with index number (8180100014) in the Department of Home Economics Education, University of Education, Winneba, who is conducting a research titled: "Body Weight Management Practices and Nutritional Status of Young Adults in Agona Nkwanta of Ahanta West Municipality in Western of Ghana".

We would be very grateful if you could give her the assistance required.

Thank you.

Yours faithfully.....
HEAD
HOME ECONOMICS EDUCATION
UNIVERSITY OF EDUCATION
MR. GUY ESSIEN
WINNEBA
AG. HEAD OF DEPARTMENT (FOOD & NUTRITION)

APPENDIX B

Questionnaires

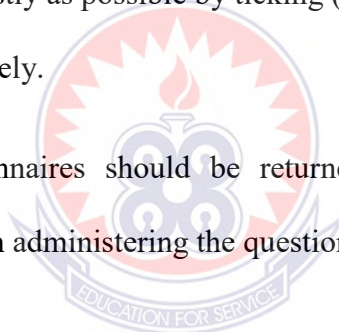
BODY WEIGHT PERCEPTION, WEIGHT MANAGEMENT PRACTICES AND NUTRITIONAL STATUS OF YOUNG ADULTS.

This questionnaire seeks to elicit information on weight perception, nutritional status, and weight management practices of young adults. This information will strictly be used for research purposes and will also be treated with high confidentiality (names are not required). It is purely academic. It is in partial fulfillment of the Award of Master of Philosophy in Home Economics at University of Education, Winneba.

The researcher would be grateful if you could contribute to this study by completing the questionnaire as honestly as possible by ticking (✓) the responses that best suit you in each section appropriately.

NB: Completed questionnaires should be returned to respective assistants who represent the researcher in administering the questionnaire.

Thank you.



SECTION A: BACKGROUND OF RESPONDENTS

1. What is your gender? Male () Female ()
2. What is your occupation?
3. How old are you?
4. What is your marital status
5. What is your highest level of education
6. Weight in Kg.....
7. Height in metres
8. Are you a professional athlete? Yes () No ()

SECTION B: WEIGHT PERCEPTIONS & WEIGHT CONCERN:

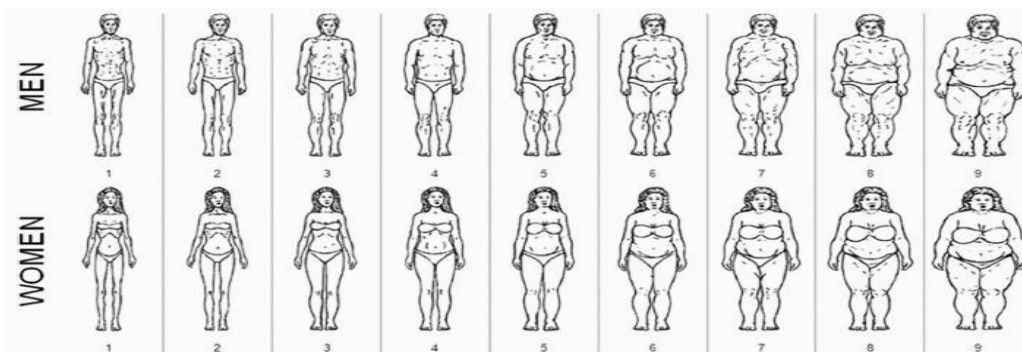
Please circle the appropriate number

(9) How do you or your friends describe your weight?	Code
Underweight	1
Normal weight	2
Overweight	3

Please circle the appropriate number

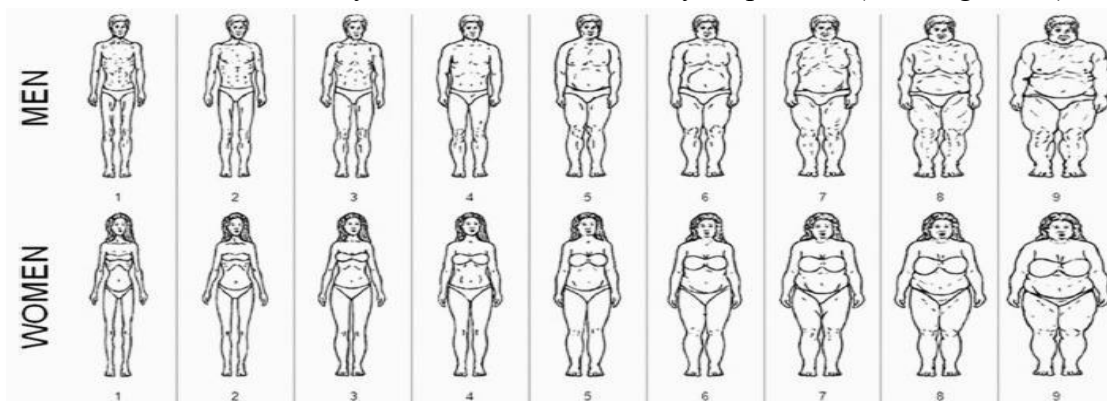
(10) Are you terrified about being underweight, overweight or obese?	Code
Always	1
Sometimes	2
Often	3
Never	4
Usually	5

(11) Which body image or silhouette best represents your body currently (i.e., actual



self)? **Please circle.**

Which silhouette do you believe owe it a duty to possess (i.e., ought self)?



Please circle.

(12) Which body image represents the ideal body for your gender in the Ghanaian society, particularly Agona Nkwanta and Ahanta West Municipality? Please circle.



SECTION C: WEIGHT MANAGEMENT STRATEGIES

(13) Do you have any concerns about your current body weight?

- (a) Yes
- (b) No

Please circle the appropriate number

(15) Are you trying to do any of the following about your weight?	Code
Lose weight	1
Gain weight	2
Stay the same weight	3
I am not trying to do anything about my weight	4

Please circle the appropriate number

(16) In the last 30 days, did you do any of the following?	Code
Exercise to lose weight	1

Diet to lose weight	2
Take laxatives/pills to lose weight	3
Eat more to gain weight	4
Take pill to gain weight	5
Surgery	6
None of the above	7

(17) Do you seek physician advice before implementing any of these weight management strategy?

(a) Yes

(b) No

(18) During the past 30 days, I intentionally ate less food, fewer calories, or foods low in fat to lose weight or to keep from gaining weight?

(a) Yes

(b) No

SECTION D: NUTRITIONAL STATUS/DIETARY INTAKE QUESTIONNAIRE

Identify how often you eat from the following food groups, number of times per week, occasion and source of food.

S/ N	Food groups	Locally available foods like (<i>Underline those you eat in each column</i>) NB: add if not listed	Intake	Number of times per week	Occasion (<i>Tick as applicable to you</i>)	Source of food (<i>Tick as applicable to you</i>)
1	Cereals & grains (starchy food)	Porridge, bread, rice, maize, pasta/noodles, wheat, fante kenkey, fufu, yam, cocoyam	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers
2	Green leafy vegetables	Spinach, salad, green garlic, green onion	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers
3	Other vegetables	cabbage, okra, carrots, eggplant, tomatoes, garlic, cucumber, onion, cauliflower, mushrooms fresh/ dried, green beans, green pepper, beetroot	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers

For Researcher & Field assistants

4	Fats & oil	Vegetable oil, palm oil, coconut oil, butter, sheep fat, margarine, mayonnaise, mixed oil (animal fat and vegetable oil), cow fat	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers
5	Legumes	Beans, soybeans, Peas, Bambara beans	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers
6	milk and milk products	Milk, skim milk, sour milk, yogurt, ice-cream, cheese	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers
7	Animal proteins (flesh foods and organ meat)	Beef, mutton, goat, rabbit, chicken, goose, turkey, quail, sausages, veal, lamb and chevron, meat of wild animals and games	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers
8	Eggs	Quail eggs, chicken eggs, goose eggs, turkey eggs, duck eggs etc	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers
9	Fish & sea foods	Fresh and frozen fish, canned fish, smoked fish, dried fish, caviar, crab sticks	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers
10	Sweets	Sugar, honey, candies, chocolate, cakes, biscuits, jam, chocolate, toffee, lollipops	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers
11	Nuts and seeds	Sesame seed, almonds, pumpkin seeds, walnuts, peanuts, apricot seeds,	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers
12	Fruits	Apple, banana, watermelon, lemon grapes, pears, melon, muskmelon, oranges, cherries, strawberries, blackberries, pineapple, grapefruit	Yes= 1 No= 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria Foodstall/Hawkers
13	Fruit juice	Oranges juice, banana juice, pineapple juice, apple juice	Yes = 1 No = 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Restaurant/Cafeteria

						Foodstall/Haw kers
	Pastries	pastries (e.g. meat pie, doughnut, cake)	Yes = 1 No = 0	Never 1-2 times 3-4 times 5-7 times	Breakfast Lunch Supper Snack	Homemade Fastfood/Resta urant/Cafeteria Foodstall/Haw kers

Measured weight=

Measured height=

Measured waist circumference=

Measured hip circumference=

Calculated Body Mass Index=

