UNIVERSITY OF EDUCATION, WINNEBA

FOOD HABITS OF UNIVERSITY OF EDUCATION, WINNEBA CAMPUS FEMALE WORKERS AND THEIR FAMILIES

VIVIAN EYI-MENSAH

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VIVIAN EYI-MENSAH

A Thesis in the Department of Home Economics Education, Faculty of Science Submitted to the School of Graduate Studies, University of Education, Winneba in Partial Fulfilment of the Requirements for Award of the Master of Philosophy (Food And Nutrition) Degree.

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DECLARATION

STUDENT'S DECLARATION

I, Vivian Eyi-Mensah declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part of whole, for another degree elsewhere.

SIGNATURE.....

DATE.....

SUPERVISORS' DECLARATION

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

NAME OF SUPERVISOR.....

SIGNATURE.....

DATE.....

NAME OF CO-SUPERVISOR.....

SIGNATURE.....

DATE.....

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DEDICATION

This work is dedicated to my daughter Kukuwah Titibeah Quarshie.

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ABSTRACT

Food is fundamental and basic to human survival, and maintaining health. What and when we eat affects our health. Food habits like what and when we eat depends on the diverse socio-cultural and economic environment. Traditionally, provision of family meals is part of the woman's main domestic activities. A woman in paid job outside the home suffers in her home management. This study sought to explore issues pertaining to the dual role of the employed woman with regard to feeding the family and her commitment to her job. The study was conducted on the Winneba Campus of the University of Education. A questionnaire and an interview guide were used to collect data from 132 female staff respondents. Data collected was analysed by means of SPSS to derive frequencies and percentages on the results. ANOVA was used to test the hypotheses on employment and marital status on food habit. Findings of the study revealed that most of the employed women depended on reheated dishes to feed the family because of the limited time at their disposal; the woman's job affected the family meal schedule, especially breakfast and supper time on weekdays; most of them ate packed meals during lunch break; the family's main challenge was the inability to wait for the minimum two hours after supper before bedtime; the respondents were most often assisted by someone, especially househelps to cope with problems associated with feeding the family; the respondents used labour-saving devices in the preparation and cooking of family meals; they were also aware of some diet-related diseases and this influenced their choice of food for family meals. Based on the findings it is recommended that fresh fruits and vegetables should always be added to the reheated dishes to make up for the vitamins destroyed in the reheating process; family members must encourage each other to wait for the minimum of two hours after eating supper before going to bed; they can engage in

activities which will keep them awake; family members should have yearly health examinations to detect any diet-related disease early for early treatment. The study has emphasized that when women engage in paid jobs outside the home, it affects the food habits of the family.

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter describes the background to the study, statement of the problem, purpose and objectives of the study, research questions and hypotheses, significance of the study, limitations, delimitations, definition of terms and the general layout of the report.

1.2 Background to the Study

Life is precious and by eating properly we can live a healthier, happier and longer life. Nutrition plays a significant role in human life before a person is born although we may not be aware of this. Nutrition affects us in major ways, depending on the food we eat. Eating is embedded in the flow of day to day life and a person who eats well stands a better chance to build the body's immune system. Nutrition experts say human beings are a reflection of what they eat.

Each day's choices of nutrition may benefit or harm the individual in subtle ways. When these are repeated over years and decades, the consequences of the benefits or harm accumulated become extensive and visible. For every individual, there is a certain amount of nutrients he/she needs to grow, stay healthy and sustain life. The World Health Organization (WHO) has set recommended daily allowances for most nutrients based on factors such as age, sex, activity level and physiological conditions of the person (Codex Alimentarius Commission, 2012).

Since the 1950s' the link between diet and chronic diseases such as cancer and cardiovascular diseases has been increasing worldwide (WHO, 1990). Most commonly diet-related diseases in Ghana today such as hypertension, diabetes type 2, coronary heart diseases, and kidney diseases can be reduced by eating the right kinds

of food in their right proportions (Diet Therapy Unit (DTU), Institutional Care Division Ghana Health Service, 2008). For example, recent statistics taken at the DTU of the Korle-Bu Teaching Hospital in Accra showed about fifty –three percent (53%) increase in diet-related diseases between the years 2004 and 2007.

Majority of the patients were not aware of the right kinds of food to eat and the appropriate time to eat. When people are not eating properly, they become more prone to diseases and even death. According to Letsa (2012), food habits of persons who are genetically predisposed to certain diseases like *Diabetes mellitus,* hypertension and obesity (which is a diseased state), can either inhibit or aggravate their condition.

Food habits refer to why and how people eat the foods they eat as well as the ways they obtain, store, use, and discard food (Rodriguez, 2011). People's food habits form in relation to other people alongside everyday activities that take place in family groups, work and at school. According to Barasi (1977), some of the main components of a person's food habits are food choices, number of meals, timing of meals, size of meals, method of preparation, how the food is eaten and people with whom the meal is eaten. Food habits for the purpose of this research will refer to what, when and why people eat. Good nutrition goes a step beyond the concept of good food. The kinds of food people eat or snack on and the time they eat actually go a long way to define their health status. According to Hanson (2011), eating a late supper and going to bed immediately can predispose a person to excessive weight gain.

Body Mass Index (BMI), a mathematical ratio for height and weight, is used to estimate healthy weight of average people. A BMI of 19 -24.9 is desirable for most adults. A person with a BMI of 25 – 29.9 is considered overweight and a person with

a BMI of 30 and above is considered obese. Obesity is a malnutrition condition in which a person's body weight is at least 20% higher than a normal body weight. The excess body weight is usually attributed to an accumulation of body fat, and this has a negative effect on one's health.

Obesity and overweight are related terms since an obese person is overweight, however an overweight individual may not be obese. Overweight at times may be due to a large body frame, a large or dense skeletal mass and heavy muscular development, and not necessarily body fat. Obesity is associated with an increased risk for heart disease, diabetes and other life-threatening diseases. According to Allen and Sachs (2007), obesity is connected to many health problems and the link between obesity and diabetes is high. Research has shown that virtually all obese persons have marked insulin resistance. Studies on obesity similarly focus the problem on individual eating behaviours rather than the food industry, limited access to nutritious food, or the increasing lack of physical activity. Current policies for public health action on obesity prevention also identify the importance of environment in shopping and dietary behaviour (Lang and Heasman, 2004).

Globally, we are witnessing a large scale pandemic in terms of overweight, obesity and its related chronic diseases (Baxi, 2006). The WHO estimates show that the prevalence of obesity is dramatically increasing in developed and developing countries. Statistics on the prevalence of obesity in seven African countries, Ghana included, have shown that Ghana has the largest number of overweight and obese people of over three million out of the estimated population of 22 million (Ghana News Agency, 2007).

The chemicals present in food and those present in the human body are almost the same. For example, the carbon, hydrogen, oxygen, nitrogen and sulphur found in

food are the same chemicals that make the body structure. Good food habits help people to get all the nutrients their bodies need to promote desirable body weights and good health. On the other hand poor food habits lead to poor health. Therefore, developing good family food habits is crucial for the well being of the family.

Feeding the family is an activity central to family life. According to Nelson (1996) and DeBourdeaudhujj and Van-Oost (1998), families are the most important units for providing foods and exercising social influence on eating behaviour in human society. Women play multiple roles in the family that affect the health and well being of family members. In almost all societies around the world women are assigned by custom to be meal providers. Women also play an important role as generators of family income, whether in household farms or businesses or as wage employees. Such work is likely to be essential for the survival of the family. The argument that a woman's place is the home is now refuted. In the past women worked mostly out of recessing but now many women are working because it is self-fulfilling. Over the past decades, women have been increasingly employed in both public and private businesses. Along with this change, significant changes in the life patterns of women and household chores have occurred.

Clearly, the traditional role, in which the woman stays at home caring for the home and children while the man provides economic support no longer exists. The prevailing practice today is a dual earner household. Due to several factors women are taking more paid jobs in addition to their major traditional role of providing meals for the family and maintaining the home. Because of the time constraints women face, their roles as meal providers and as providers of family income at times conflict with one another, with potential implications on the food habits of family members. Employed women face daily challenges to their food choices resulting from the need

to integrate demanding work and family lives. Increasing family work hours and work schedule inflexibility give rise to lesser time and energy assigned to family meal preparation. As more mothers have become employed and family work hours have increased, time spent on household work including meal preparation has decreased (Bianchi, 2000).

Nonetheless, women continue to make adjustments in the work life to fit family life. But the hectic demands and schedules of work life have limited the amount of time and energy devoted to family life. The working woman's time and energy are now shared between taking care of her family which involves the provision of nutritious and healthy meals and her employment.

Winneba is the municipal capital of the Effutu Municipality. Geographically it is in the coastal area of the Central region. The main economic activities of the indigenes are fishing and trading. The location of the University of Education has made the town accessible to all kinds of people and has attracted people from all walks of life to settle either permanently or temporarily for employment. The University of Education, Winneba (UEW) community is made up of a lot of working women whose job descriptions are very demanding. Examples of such workers are lecturers, administrators, secretaries, accountants and nurses. Some of these women have rigid working hours which demand that they report to work at certain times of the day and remain there for specific periods of time. This makes it difficult for them to allocate sufficient time to prepare family meals. The development of healthy food habits can be affected by such lifestyle situations. Families with poor food choices may suffer from undesirable health issues.

Children develop food habits mostly from the home and practice it throughout adulthood. The classification of foods for example, as meals, snacks and which foods

are suitable for which meals are taught to children, when the children become adults they teach the patterns to their children thus passing it on to new generations. When poor food habits are acquired, it could have dire consequences on their health, some of which may manifest in later years. Patrick and Nicklas (2005) were of the view that because parents play such a critical role in determining the diet of their children, as meal providers and role models, pressure on parents' food choices has great importance for the nutrition and health status of their children. According to Horwarth (1991), the precursors of nutritionally related adult diseases such as stroke and cancer are frequently established during childhood and adolescence. If children were fed well they would grow better and perform excellently in academics (Letsa, 2011).

1.3 Statement of the Problem

The statutory working hours in the university and the extra hours most women working in the university spend on the job, coupled with the social environment in which they find themselves pose a major challenge to them in their attempt to devote their time and attention to both the home and their work. Their weekends may be full of activities which put a lot of strain on their energy and time by making it increasingly difficult for them to have enough time to attend to their duties as homemakers responsible for feeding the family adequately. If work demands too much of the woman's time and energy, she may feel that she has no personal resources left to deal with family meals and healthful food choices. The working woman, who is faced with time constraints, may tend to rely on support from other members of the household or outside the household. Whoever assists with the preparation of the family meal may, when not properly guided, use her standards to feed the family and not precisely that of the homemaker. This could lead to feeding

the family with meals that are not balanced. Secondly, the working woman who has no support may resort to eating outside the home or ordering for food from catering establishments to feed the family. Such foods may not be of high nutritional quality and also the individual nutritional needs of family members may not be catered for. Some working women prefer to hurriedly prepare meals after a busy day on the job which probably leads to eating late or deep into the night. Nutritionally, this is not healthy. It is recommended that supper should be eaten latest by 6pm to enable the body to digest and make use of the energy generated before retiring to bed. Often work schedules make it impossible for the working woman and her family to develop good or healthy food habits. What is it like with the working women of the University of Education, Winneba campus? How do they cope with the demands of their work and maintain good nutritional habits of themselves and their families? What do they know about nutrition and what implications does this have for changing eating habits? Is there any relationship between awareness of diet-related diseases and their food habits? Food habits of the working women of UEW and their families and their awareness of diet-related diseases are the focus of this study.

1.4 Purpose of the Study

The purpose of the study was to explore issues pertaining to the dual role of the working woman with respect to her job commitments, the provision of meals to her family and her level of awareness of diet related diseases.

1.5 Research Objectives

The research objectives were to

1. Examine the kinds of food eaten by UEW, Winneba Campus female workers and their families.

2. Examine the meal schedule of UEW, Winneba Campus female workers and their families.
3. Identify challenges of UEW, Winneba Campus female workers in feeding the family.
4. Find strategies UEW, Winneba Campus female workers have adopted to cope with their dual role as family meal providers and paid workers.
5. Find out what UEW, Winneba Campus female workers and their families know about diet-related diseases.

1.6 Research Questions

The following research questions were formulated to guide the study:

1. What kinds of food do UEW, Winneba Campus female workers and their families eat?
2. What is the meal schedule of UEW, Winneba Campus female workers and their families?
3. What are the challenges of UEW, Winneba Campus female workers in feeding their families?
4. What strategies have UEW, Winneba Campus female workers adopted to cope with their dual role as family meal providers and paid workers?
5. What do UEW, Winneba Campus female workers and their families know about diet-related diseases.

1.7 Hypotheses

The following hypotheses were tested:

The first null hypothesis tested was

H_0 : There is no statistical significant difference between the food habits of the families of female Senior members, Senior staff and Junior staff of UEW, Winneba Campus.

The second null hypothesis was

H_0 : There is no statistical significant difference between the food habits of families of single, married and widowed female workers of UEW, Winneba Campus.

1.8 Significance of the Study

Nutritionists say we are a reflection of what we eat. Aside from this the time we eat also plays a significant role on our health. The results of this study may shed some light on the impact of women employment and the food habits of families. This will enable women who are employed to adopt appropriate food habits and strategies for themselves and for their families.

To the staff of UEW, it will be a source of reference materials to guide them pay attention to their eating habits and if need be restructuring their habits. It will also equip me as a teacher, to be in a better position to teach students these principles.

If families develop healthy food habits, it is possible that the rate of nutrition-related diseases will reduce. The findings of this study will also be a starting point for further research to add to the body of knowledge in the area of feeding the family.

1.9 Limitation

The present study was limited in scope because it covered only the Winneba Campus of UEW because of the distance and location of the other campuses. This study is only a step to know the food habits of women employed in a portion of the formal sector. The researcher observed that some of the respondents were a bit hesitant to provide information especially during the interview sessions. Others

hesitated in providing responses to the questionnaire items based on the fear that they may be revealing their weaknesses.

1.10 Delimitation

The study confined itself to the female workers at the Winneba Campus of the University of Education, Winneba due to proximity and accessibility to me. The study was limited to discussions on the working woman's management of her family meals in relation to her selection, preparation, service of family meals and the health of family members. The study did not focus on the nutrient value and nutritional content of food.

1.11 Definition of Terms

For the purpose of understanding this study, the following words used in the work have been interpreted. It must however be noted that these words possess different dictionary meanings but only the context under which they have been used in this work was considered.

Convenience Foods	-	Commercial products designed for ease of consumption.
Diet	-	The usual food consumed by a person
Family	-	The dependants the female workers live with
Food habit	-	What, why and when people eat
Food security	-	Access by all people at all times to food needed for a healthy life
Nutrition	-	The intake of nutrients and subsequent use by the body
Poor diet	-	Diet which does not contain the right amounts of nutrients.
Preserve	-	Keeping of cooked food to prevent spoilage

Prefab meals - Combination of convenience foods to form a meal.

Storage - Keeping food items to increase its shelf life.

Working woman - Woman working full time outside the home.

1.12 Assumptions

1. It is assumed that food habits of families of working women are poor and this may affect the health of family member. A comprehensive study into these food habits will help to suggest ways to improve food habits and promote healthy eating.
2. The researcher assumed that the respondents were truthful when filling out the questionnaire.
3. Respondents answered the items in the questionnaire not in the way they thought the researcher wanted them to answer but rather than how they truly felt.

1.13 The General Layout of the Report

The thesis report consists of six chapters. The first chapter which is basically the introduction deals with the background to the study, statement of the problem, purpose and objectives, research questions and hypotheses, significance of the study and delimitations.

Chapter two discusses literature reviewed and related research which borders on a brief introduction of the chapter, theoretical framework, empirical framework and summary of the literature reviewed. Chapter three is concerned with the research methodology and data collection. This includes the research design, study population, sample and sampling procedure, instrumentation and pre-test, data collection procedure and procedure for data analysis.

Chapter four is about the presentation and analysis of data the collected. It consists of analysis of results for questionnaire, presentation of interview responses and testing of hypotheses, while chapter five deals with the discussion of the main findings of the research. Finally, chapter six summarises the research findings, conclusions, recommendations and suggestions for further research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Overview

This chapter discusses and reviews a variety of materials that form the literature in relation to food habits and health, and how it influences the health of the family. The literature is reviewed under the following headings

1. Theoretical framework
2. Empirical framework
3. Summary of Literature Review

2.2 Theoretical Framework of the Study

Theory is a set of interrelated constructs, definitions and prepositions that represent a systematic view of phenomena by specifying relations among variables, with the purpose of explaining and predicting the phenomena (Kerlinger, 1970).

Food is an important component of daily life influenced by the place we live and the group of people we belong to. Food and health are related concepts; the body needs nutrients and energy to function. Food habit is the product of environmental influences on the eating patterns of individuals living together with respect to long time practice (Amoako-Kwakye, 2010). Families are considered to be domains for social practices through which feeding flows. Family feeding practices are the set of food related social practices that take place in social groupings and whose enduring practice patterns characterise its participants and their interactions as families.

In this study two theories will be tested to explain the environmental influences on the eating patterns. The theories are Boorse's health theory and Bourdieu's 'habitus'/culture concept.

2.2.1. The Boorse Health theory

Currently health is often defined in terms of disease, and described as the absence of disease. Boorse (1981) used evolutionary biology in his bio statistical theory of disease, claiming that disease is a divergence from what is normal. This divergence does not presuppose that the person perceives the disease, which could be silent. In this view, health and disease are determined statistically. Boorse claims that a disease implies a biological deviation, while illness is the experience of disease. Accordingly disease is a pre-requisite for illness. According to this perspective, health is equated to the absence of illness and disease.

Health is concerned with the optimum functioning of the body. This involves both the psychological state and the physiological needs of the body which include the maintenance of the body, prevention of deterioration accompanying the ageing process, as well as repair of damage caused by diseases. Nutrition, as a scientific discipline that studies nutrient requirements for optimal functioning of the body, regards food and eating as a means by which nutrients are delivered to the biological system. Wardlaw (2003) defined nutrition as the science of food, the nutrients, the substances therein, their action, interaction and balance in relation to health and disease, and the process by which the human organisation ingests, digests, absorbs, transports, utilizes and excretes waste food substances. Nutrition is also a concept that examines the relationship between what a person eats and his health (Scherwitz and Kesten, 2005).

Roberts and Williams (1996) stated that the nutritional status is the condition of an individual's body tissues and health, especially as they relate to the nutrients that are essential to structure, functions and maintenance of body tissues. Furthermore Wardlaw, Hampi and Disilvestro (2004) stated that nutritional status is the nutritional

value of a person determined by anthropometrical measures, biochemical measures of nutrients in the blood and urine, clinical examination, dietary analysis and economic evaluation. Preventive medicine and health education hold individuals themselves responsible for health, claiming that self-inflicted illness is the result of body abuse, which is overeating, smoking, lack of exercise etc. If individuals conserve their bodies through dietary care and exercise, they will enjoy better health and live longer.

2.2.2. The Bourdieu Habitus/Cultural theory

The Bourdieu (1977) concept of 'Habitus' represents a custom which allows people to act, think, and orient themselves in the social world. These systems are the result of social experiences, collective memories and ways of moving and internalized thinking in people's body and mind. The 'habitus' of a person is shaped by the lifestyle of the person. This incorporated system of dispositions gives a limited number of principles for people's way of thinking and acting in their specific social contexts. These fundamental embodied principles are cultural, outside the conscious mind, and could not be affected by intention, changed deliberately, or made explicit.

'Habitus' is subjective but not individualistic and it is common to all members of a group or class and constitutes a prerequisite for acting and thinking among members of the group (Bourdieu, 1977). It could be exemplified by the fact that different social groups have different table manners, which they may transfer to their children's habitual behaviour and norms of conduct. 'Habitus' is not easy to remould but if the social circumstances are demanding 'habitus' could be slowly modified through different strategies, or a person can escape from the social field (Bourdieu, 1977). Habits whether good or bad are often established during childhood and are influenced by the environment.

In this study the above theories have been chosen as a framework since they focus on food habits and health. The bio statistical theory in particular plays a major role in the study since it represents the dominating health view in good food choices and health promotion. The health view influenced by the 'habitus' has an everyday influence on people. Krause (1966) stated that poor food habits account for a large number of nutritional deficiencies and good food habits are basic to sound body structure. Therefore good food habits are needed to improve the nutritional status and health of the masses.

2.2.3. The concept of food and food habits

Food

Any substance eaten by living things for their survival is referred to as food. Pyke (1990) defined food as anything either solid or liquid, possessing a chemical composition, which enables it when eaten to do one or more of three things:

a. provide the body with materials from which it can produce heat or other forms of energy;
b. provide materials for growth, maintenance, repair or reproduction, and
c. supply substances, which normally regulate the production of energy for the process of growth, repair or reproduction.

Fox and Cameroon (1993) also considered food as the substances which when eaten and absorbed by the body produce energy, promote growth and repairs tissue or regulate these processes. In the same vein Wardlaw (2000) observed that food provides both energy and the materials needed to build and maintain all body cells. Amoako-Kwakye (2010) said that most people simply define food as anything that keeps a human being alive. In addition the author stated that food is anything that conforms to the prejudices, beliefs and taboos of the people to whom it is presented so

that they will be willing to eat it and is available without restriction by social or community barriers which prevent people from eating it.

Adigbo and Madah (2010) explained food as anything solid or liquid that when eaten and digested promotes growth, repair worn out tissues, provides heat and energy, fights against diseases and infections, and regulates the body processes. The latter authors added that for a person to have a balanced diet one should vary food used in preparing dishes. Simply put, food is any substance consumed to provide nutritional support for the body. It is usually of plant or animal origin and contains essential nutrients which are ingested, assimilated to produce energy, maintain life and stimulate growth (Davidson, 2006). Although nature offers an enormous variety of food stuffs, people usually select food according to the quality in which they are produced and give preference to those that satisfy their basic needs. Thus selection of food is usually conditioned by several factors.

Food habits

Food is essential to survival. The myriad ways in which people acquire food and eat are remainders of the complex social qualities of food and eating. Du Puy and Mermel (1995) described the origin of food habits from ancient times. According to the two authors, the ancient man lived a nomadic life of hunting and gathering migrating animals, and plants, but humans were freed from searching for food when purposeful agriculture appeared about 10,000 years ago.

People of different ethnic groups and geographical areas eat different types of food and food combinations. There are many factors which make people decide to eat the way they do. According Adigbo and Madah (2010), food habits are those practices people form around food, like the way they eat their food, how they prepare the food, and the types of combinations they make. The latter authors added that food habits are

developed from many influences in people's lives and it can affect them positively or negatively. Food habits are developed over a period of time and with a lot of practice. In the same vein, Amoako-Kwakye (2010) stated that food habits are a product of the environmental influences on culture in relation to food. She added that taste and habits developed over the years may influence the choice of food one eats. Additionally, food habit is defined as the way in which people select, cook, serve and eat foods that are available to them (Barb, 2007). Furthermore, Krause (1966) defined food habits as the response of individuals or groups to social and cultural pressures in selecting, consuming and utilising portions of available food supply. Barasi and Mottram (1990) added that food habits are referred to as the typical behaviour of a particular group of people or culture in relation to food. The foods people choose, methods of preparation, methods of cooking, the numbers of meals per day, time of eating during the day as well as portions eaten, make up the food ways or food habits of people (Bryant, Dewalt, Courtney and Schwartz, 2003).

According to Oniang'o, Mutuku and Malaba (2003), food habits are among the oldest and most entrenched aspects of many cultures that exert deep influence on the behaviour of people, the latter authors added that the cultural background determines what is eaten as well as when and how and that in every part of the society, people have diverse feeding habits that have been inherited from generation to generation.

Food habits differ from one family to another, one ethnic group to another and from country to another. These differences come about because of many influences on people, whilst some foods are not regarded as food at all by some groups; the same foods are delicacies for others. For instance, the Krobos of Ghana do not accept snails as food but to the Akans of Ghana this is a delicacy. The diet and

dietary regimes of a people are formed with respect to a lot of factors. Studying food habit implies studying the eating routine and identifying food choice patterns characteristic of population groups. This could start by identifying dominant food choice patterns and then by exploring eating patterns in a relationship with the context that constrains or enables food choices into certain configurations.

Younger children pay more attention to the eating habits and consumption of their parents and their family. Family appears to have a major influence on adolescents' eating behaviour by affecting food attitudes, preference and values that affect intake (Stroebele and DeCastro, 2004). According to the latter authors, frequently eating together with the family improve healthy eating patterns and also meals eaten with friends or family members are larger than meals eaten with strangers, alone or co-workers.

2.3 Empirical Framework

2.3.1 Factors that influence food habits

Better nutrition and healthy living require an understanding of factors that influence what we eat (Oniang'o *et al.*, 2003). According to Krause (1966), factors that make people form food habits may include:

Economic status

A poor person who becomes rich would immediately change his or her eating habit by going in for expensive food items, eating in catering establishments which will measure up to their status, change consumption patterns (act of buying and using food items) etc. Wong, Higuera and Valencia (1984) examined the relationship between household income level and expense and consumption of food in urban marginal areas of Mexico and found a marked tendency to increase consumption of high protein foods as family income increased. More so, diversity

in food intake has been observed by numerous studies in affluent societies to be associated with people with high socio-economic status (Popkins, Siega-Riz and Haines, 1996; Hjartaker and Laud, 1998; Friel, Keller, Nolan and Harrington, 2003; Laasksonen, Prattalak, Helasoja, Uutela and Lahelma, 2003). Similarly, Amoako-Kwakye (2010) asserted that economic factors have very strong influence on the type of foods people eat as well as how they are prepared, served and eaten. Belk (2006) reported that the new elites of Zimbabwe increased the frequency of meat consumption, as well as the quality of diet as family income increased.

Ethnicity

All ethnic groups have their food customs. Culture influences the acceptability of food. A people's culture has a lot of influence on the kind of foods people eat in each community (Oniang'o *et al*., 2003). As cultural groups develop over the ages they form their own living patterns which include food customs. Each group stated what its members could or could not eat; how the food should be cooked and when it could be eaten. Amoako-Kwakye (2010) stated that a person may eat foods because either one was brought up to eat them or found them comfortable.

Region of Residence

Neumark-Sztainer, Hannan, Story, Croll and Perry (2003) reported that family meal patterns were associated with sociodemographic factors. According to Levin, Ruel, Morris, Maxwell, Armar-Klemesu and Ahiadeke (1999), urban dwellers consumed a more varied diet with more processed staple foods, richer in animal proteins and fats than their rural counterparts. The authors added that urban dwellers also have a greater dependence on local street foods for snacks and

meals, given their constraints on time and the need to substitute labour intensive foods for more readily available foods. Amoako-Kwakye (2010) stated that migration influences food habits, particularly if familiar food items are not available.

Food availability

The kinds of food available to you usually are the kinds you eat. According to Cullen, Smallings, Thompson, Watson, Reed and Konzelmann (2009) food availability and parenting behaviours around food and eating influence child dietary behaviour. One of the most influential factors in food choices of adolescents is food availability (Story, Neumark-Sztainer and French, 2002).

Religion

What people can or cannot eat have been dictated by their religious beliefs. Religious proscriptions range from a few to many, from relaxed to highly restrictive. This affected the behaviour of followers, for example in some religions specific foods are prohibited, such as pork among Jewish and Muslim adherents. The symbolic or ritual aspect of food is often of primary importance to food selection and use (Stocks and Brown, 2002). The latter authors added that food would be refused if its significance makes it unacceptable to the eater, on the other hand a food can be craved, sought after and dreamed about if its symbolic significance is positive. For instance, Muslims do not eat pork because Islam forbids it. You are forbidden to eat carrion; blood; pig's meat; any animal over which any name other than God's has been invoked; any animal strangled, or victim of a violent blow or fall, or gored or savaged by a beast of prey, unless you still slaughter it; or anything sacrificed on idolatrous altar; but if any of you is forced by hunger to eat forbidden food, with no intention of doing wrong, then

God is most forgiving and merciful (Quran 5: 3). The same pork is appreciated by the Jehovah Witness sector of the Christian community. In the same vein Hare Krishnans are vegetarians because their religion also forbids the eating of animals/animal products. Onions are forbidden to the Hare Krishna because to them it arouses strong passion.

Technology

This provides scientific methods of preserving and processing food so that food is available throughout the year. According to Haddad (2011), there are a lot of home appliances that are available to the woman to be used at home to help save labour in the aspect of meal preparation.

Health

Health personnel may instruct people to abstain from certain foods due to the health conditions, some people may also stop the intake of some food items because of the discomfort they experience after taking such foods. Living with diabetes means successfully controlling glucose levels by consciously sticking to a diet that avoids certain foods that are generally high in fat and sugar (Westlake, 2012).

Education

The nutritional knowledge of a person affects the person's choice of food. Improvement in mothers dietary behaviour results in improved dietary behaviours among her household (Cullen, 2009). The authors added that the availability of healthful food in the home as well as improving parenting behaviour and skills associated with food and eating promotes the prevention of

obesity. Socioeconomic factors particularly education and income are key contributors to the diet of a given family (Adler and Rehkopf, 2008; Bahr 2007).

Time and energy availability

Time is required for planning and organising the hand and foot work of meals; time and energy are required for shopping, meal preparation and clean up after meals. Devault (1997) was of the view that women must know the food likes and the dislikes of their family members, plan the timing and location of meals and keep up with complicated and ever-changing news on nutrition and food safety. Sop, Gouado, Tetanye and Zollo (2010) added that controlling feeding practices of young adults could help to reduce the prevalence of chronic diseases during adulthood. Women are responsible for controlling the health of other family members (Umberson,1992). Women often take the blame for their failure to provide their families with nutritious food. Since food is women's responsibility, the corollary of individualisation of food related health problems is that women are to blame (Allen and Sachs, 2007).

2.3.2. Healthy Eating Habits

Good nutrition and exercise are crucial to the family's health and well being. Making the right choices of food and drink and taking regular exercise can protect the family against many killer diseases like coronary heart disease and cancer.

Healthy eating is not about strict nutrition philosophies. There are no good or bad foods; it is the overall balance of the diet that matters. How people choose to put together meals and snacks with drinks will determine whether their style of eating is healthy or not. The balance to strive for is to select foods from a nationally recognised six food group model (Appendix A). According to Adigbo and Madah (2010), the Ghanaian staple foods have been divided into six groups according to their function in the body, composition and uses in the Ghanaian meal pattern. These groups are:

- Animal products
- Beans, nuts and oily seeds
- Fruits and vegetables
- Cereals and grains
- Fats and oils
- Starchy roots and plantain

Nutrition knowledge presumably influences attitudes and eating behaviour. Most consumers do not know the importance of healthy eating habits and the disorders it can trigger in humans if they do not eat right. Healthy eating habit is one of two factors that are not present in today's society. Learning the habits of healthy eating can boost one's energy, sharpen one's memory and stabilize one's mood. Corbin, Lindsey and Welk (2000) stated that one's food choices can reduce the risk of diet-related diseases. Healthy eating is more than the food on the plate, it is important to think about food as nourishment rather than just something to gulp down (Paul, Smith and Segal, 2012). According to Corbin *et al.* (2000) failure to eat properly can result in many health problems and that people should eat more starchy foods, more fruits and vegetables, moderate amounts of foods from animals and animal products, and very small amounts of food from fats and oils. The latter authors added that six out of the ten leading causes of death in North America are linked to improper eating. Similarly, Wardlaw (2000) commenting on eating habits stated that not consuming enough nutrients also makes people more likely to suffer consequences of poor food habits.

Good eating habits start with good meal management. People can expand their range of healthy food choices by learning how to plan ahead to create and maintain a satisfying healthy diet. Barasi and Mottram (1990) described food as a fundamental

necessity for life and all living things must provide themselves with sufficient food. They added that to be able to choose and prepare meals that are balanced, enjoyable and satisfying to all family members, there is the need to manage meals served.

According to Roos, Lahelma, Virtanen, Prattale and Pietinen (1998), the corners of a proper diet are variety, balance, moderation and palatability. Variety can be obtained by alternating the selection of food items everyday from each segment of the daily food guide. Those whose food behaviour was in accordance with dietary guidelines had a healthier nutrient intake. The Recommended Dietary Allowance (RDA) represents levels of intakes of essential nutrients that on the basis of scientific knowledge are judged by the Food and Nutritional Board of the Academy of Science of the United States of America to be adequate to meet the nutrient needs of practically all healthy persons (Neil, 2006).

Taste has remained the most important factor in food choice, therefore consumers do not easily change to more healthful food choices unless they also believe that those food choices taste good (Guthrie, Derby and Levy, 1999). American Dietetic Association and International Information Council asserted that healthy foods do not taste good; indicating that taste preference may be significant to food habits. It costs more to eat healthy foods. In a study by Frazao and Allshouse (1996) the authors found that food products modified in fats, sodium and other food components generally costs more than their standard counterparts.

2.3.3. Women's Work and Family Meal Management

Challenges

In many societies, cultural, religious, or family norms dictate women's specific roles and this at times hinder their participation in economic life. Women are mostly responsible for reproductive and care-giving functions, such as preparing food,

cleaning the home, attending to children and caring for ill and elderly family members. Traditionally, women performed reproduction roles that ensure the welfare of households and among these are childbirth, child upbringing and meeting the nutritional need of households, maintenance of environmental cleanliness, and maintenance of values of the family (Adu-Okoree, 1996; Oslon and DeFrain, 2000).

According to Allen and Sachs (2007), cooking is almost universally coded as women's work in the home. Regardless of culture, class or ethnicity, the majority of women cook and serve food for their families. Women's food provisioning represents their ties to family and also maintains cultural traditions that are at the heart of many women's identities (Allen and Sachs, 2007). Women go to the market, store, and shop, unpack groceries, prepare meals, serve, and wash dishes and clean kitchen. The latter authors added that employment which is the exchange of labour for money leaves out the various types of productive work (family base production) to which women contribute heavily.

According to Geddes, Robinson and Lockyer (2004), women are responsible for most of the unpaid housework. This practice is fuelled by the long-standing view that feeding and maintaining the home is women's work. The latter authors added the fact that women were still largely responsible for unpaid house work and at the same time were increasingly engaging in paid work means that the issue of balancing family life and paid employment has become an important one. Similarly, Ramizi (1986) attested that whether a woman works in the fields, factory, or in a management position and whether she has little or no considerable qualification she must give equal attention to her family. Additionally, Deacon and Firebaugh (1988) affirmed that even though women's participation in the labour force is generally on the increase, there is still evidence that women continue to assume primary

responsibilities for the home. Women are more involved in and responsible for food practices in their families (Schafer and Schafer; 1989, Calnan, 1994; Charles and Kerr, 1998) and this holds true irrespective of their employment status (Schafer and Schafer, 1989). Working women typically substitute sources of care to care for their families. Ethnographic studies indicate the wide range of alternative providers are used, including other members of the household, kin or non-kin support networks and hired domestic help.

Levin *et al.* (1999) stated that a high proportion of women are found in the labour force, balancing their roles as family meal providers and income earners. The need for women to save time in meal preparation has increased the share of the food budget going into processed foods, convenience foods and snacks and meals available as street foods. Haddad (2011) reported that household food security is negatively affected when women work outside the home. These results are similar to Canadian data indicating that the independent effect of a wife's employment outside the home was almost always negative and significant for the household nutrient intake (Campbell and Harton, 1991). Again, in an econometric analysis of rural women in Ghana, Higgins and Alderman (1997) showed that greater predicted time in agricultural work had negative and significant impacts on women's nutritional status as measured by body mass index. However, in other settings, the negative effects of energy and other stresses from work may be offset by increased consumption of food or health care made possible by the women's labour incomes.

Research conducted primarily in industrialized countries finds a positive association of employment and health, for women (Ross and Mirowsky, 1995).The health benefits of work may come in part through improved self-esteem leading to better preventative practices. The income contributed by mother'swork would benefit

family nutrition. The extent or even existence of this benefit, however, depends on how the additional income is spent. If women have strong (relative to their spouses) preferences for family welfare and they have control over their own earnings, the income effects on nutrition will be larger than from equivalent increments to spouse's or other household income. According to Alderman, Chiaporri, Haddad, Hoddinot and Kanbur (1995), several econometric analyses indicate that income in the hands of women is more likely than men's income to be spent on items such as food that benefit the family. Similarly, Glick and Sahn (1998) stated that increments to maternal income have effects on preschooler height for age, and it is more than 10 times greater than the effects of other household income on preschooler height for age. In the same vein, Haddad and Hoddinott (1994) reported that in a study of rural Côte d'Ivoire, a larger predicted share of household income earned by women led to better child anthropometric outcomes. The same result was found for Guatemala (Engle, 1991).

Whether women control their own earnings or not will depend on the specific cultural context. In many African societies, women's and men's incomes are not pooled or are only partially pooled within the household, so each member retains control over their own earnings (Fapohunda, 1988; Munachonga, 1988); essentially there are separate, or partially separate, economic spheres within the household. In these cases meeting the nutritional needs of the family typically falls within the women's economic sphere. Where income instead is pooled, the key factor is decision-making power over the use of this income, and this is likely to be a function of each member's contribution, or more generally, their economic status. A number of studies indicate that when women work, they gain greater power in decision-making regarding the use of household resources (Acharya and Bennett, 1982; Blumberg,

1988; Engle, 1993). This may be because working outside the home fosters greater assertiveness or confidence. In these situations the income benefits of women's employment to families may be large.

Patterns of low nutritional quality convenience food used for family meals might be shaped within constrains experienced by employed women in preparing more nutritious food from scratch, conditions created by employment and the norms that support women as predominantly responsible for family food choices. According to Roos *et al.* (1998) employment status of the women is associated with food behaviour of the family. Food habits of the employed woman are most often better in terms of quantity of food and variety than that of the unemployed woman. Divorce or becoming a widower or an orphan may therefore influence the food habit of the family (Roos et al, 1998). Again, Larrieu, Letenneur, Berr, Dartigues, Ritchie and Alperovitch (2004) pointed out that unmarried or widowed men living alone are more likely to have poorer intakes of food which affect their nutritional status. Eating family meals together has been associated with better child nutrition (Neumark-Sztainer *et al.*, 2003).

Time scarcity can be seen as a recently emerged cohort influence on food choice (Jabs and Devine, 2006). The latter authors added that researchers agree that working women today feel more time pressured with less time for marketing /shopping and meal preparation. Time scarcity has led to late night eating in many families. Ma, Olendzki, Chiriboga, Hebert, Li, Li, Campbell, Gendreau and Ockene (2005) reported on the dangers of late night eating by stating that eating late in the evening, particularly meals filled with carbohydrates raises the amount of glycogen the muscles store, and if the glycogen is not used as fuel eventually it will become fat. Studies done by Sloan (1999) in consumer behaviour illustrated that there is critical

time pressure amongst working women as they are expected to perform at work and be mothers at home. Due to lack of time in families with working wives, meal times have become far less structured, more individualistic and there is a notable decline in the number of families having meals together (De Boer, McCarty, Cowan and Ryan, 2003). Steiner, Crooks and Uthoff (1996) reported conflicting schedules most often as the reason families did not eat together more frequently. The later authors added that two worker families, mother working a second job, working late and too many hours were all listed as barriers to families eating together. According to Compan, Moreno, Ruiz and Pascual (2002), research has established that eating dinner together can have a positive effect on family communications, nutritional intake of the entire family (Fisher, Mitchell, Smiciklas-Wright and Lipps-Birch 2001), development of family traditions (Steiner et al., 1996) and the culinary skills of family members (Stocks and Brown, 2000).

Coping strategies

Coping has been defined as the things people do to avoid being harmed by life strains (Pearlin and Schooler, 1978). Managing both work and family makes it necessary for the working woman to use strategies in decision making process, especially decisions on food preparation and consumption for their families. Coping strategies may include things people do to change the conditions that cause strain or control the emotional consequences of strain (Pearlin and Schooler, 1978). For the purpose of this study, coping strategies may include the ways that working women manage food selection in response to the temporal and physical strain of paid job and family roles.

According to Kinder and Green (1978), meal management includes all the decision-making and all the hand-and-footwork that meals entail. The latter authors

stated that the meal manager should be able to satisfy the nutritional needs of the family members and therefore a lot of decision making. Additionally in order for the woman to achieve good meal management she needs to educate herself on food safety techniques such as purchasing safe food, practicing safe handling of food while in the kitchen and properly storing foods and leftovers (McWilliams, 2005). Greater income and education make available a broader range of family and work adaptive strategies that can have impact on food choices because of access to more information or household help (Moen and Wethington, 1992).

According to Keating (2005), the family adopts division of labour in the home to ensure good meal management. Much of the preparation and serving of food is now been transferred from women's reproductive labour in the home to others (Allen and Sachs, 2007). In addition, Keating (2005) stated that children, extended family members and some husbands contribute to family maintenance which includes the provision of meals. According to Allen and Sachs (2007), affluent career women increasingly maintain the illusion of "doing it all" by hiring domestic workers to clean the house and feed the family. Furthermore, Kalongo (2004) reported that the increase in married women in paid jobs have resulted in the proliferation of househelps. Additionally, Adams (2008) stated that services of househelps are engaged to support the woman in performing her housework which is mostly centred on caring for the family. This offers some relief to the working woman and the latter author added that in order to fulfil the multiple role demand of worker and meal provider, women cope by seeking help from extended family members, friends or hired labour (Jabs and Devine, 2006). The latter authors added that managing household is difficult for working women who do not have someone to share housework with.

According to Devine, Jastra, Jabs, Wethington, Farrel and Bisogni (2006), most working women prepared meals ahead of time and made enough food to last more than one meal. The latter authors added that some working women spent large part of their non-working days shopping and preparing family meals. Gofton (1995) contended that working women have no time to prepare a meal from the scratch everyday so they feed their families on deep frozen microwave (heated) foods. The production of time-saving food preparation equipment such as microwave ovens, rice cookers, blenders, etc. were industry's response to consumer's desires to prepare food at home with limited time and effort (Gofton, 1995; Jabs and Devine, 2006). Capps and Park (1999) found that the availability of a microwave oven in the household increased the probability of eating already prepared meals. According to Verlegh and Candel (1999), a number of working women do not have time to prepare traditional meals and mostly depend on convenience foods and in their research found that respondents with paid jobs are more frequent users of convenience foods.

Adow, Daaku and Ofosu (1993) reported that since most working wives/mothers go to work during the week, most of their marketing and cooking are done during the week end and the food is divided into portions, stored and used during the week. The latter authors added that two or three types of soups and stews were prepared in large quantities, kept in safe conditions and reheated when needed. Reheated dishes apply to dishes that are already cooked or leftovers which are reheated to make them appealing again. King (1975) was of the view that reheated dishes are an important part of economical housekeeping and that reheated dishes save time and energy. Amoako-Kwakye (2010) asserted that there is the need to preserve most foods to make them available for consumption. She added that when food was not fresh, they were not harmful but they became less attractive to the

consumer. Colour change is the most important change that occurs in food that is not fresh but the colour of food is important to its enjoyment. People may reject food that is not considered to have acceptable colour. Change of texture as well as oxidation also occurs in some foods that are not fresh. For instance leafy green vegetables may become wilted and tough. The green pigment is also changed to olive green.

Food storage is traditionally a domestic skill and it is important industrially also (Leistner, 2000). Food is stored by almost every human society. According to Adigbo and Madah (2010), food storage is the act of keeping food at appropriate temperature or conditions and places to avoid spoilage and prolong its life until it is ready for consumption. The latter authors added that without proper storage, the quality and nutritive value of food cannot be maintained. People store foods either by the dry storage, refrigerator storage or freezer storage methods. In a research by Furst, Connors, Bisogni, Sobal and Falk (1996), it was found out that the availability and appropriate storage space or place in the household to keep food items purchased affects food choices.

In order to prevent food spoilage food must be preserved. Preservation is the act of keeping food in a good condition by giving it a special treatment to last longer. Freezing is one of the most commonly used processes domestically for preserving a wide range of food including prepared foodstuffs which would not have required freezing in their unprepared state (Leistner, 2000). Refrigeration drastically improves the diets of many people by allowing foods to be safe from the action of enzymes which cause food to rot (Leistner, 2000). Drying is one of the most ancient food preservation and storage techniques which reduces water activity sufficiently to prevent or delay bacterial growth. Hot temperatures preserve food by destroying micro-organism and enzymes

2.3.4 Nutrition and Health

Nutrition is about food and the people who eat it. According to Barasi and Mottram (1990), nutrition is about the interaction between food and the people who eat it. People's eating behaviour has a decisive effect on their health. One of the several ways a person can ensure optimal growth, maintenance, and general health of the body is through good nutrition. Payne and Hahn (1998) said that the compositions of health were intrinsic and extrinsic resources on which the individual could draw to participate fully in his or her own growth and development. Nutrition-related knowledge can range from an understanding of the chemical structure of food to diet-related diseases. Rogers (1983) identified three types of knowledge:

i. Awareness of diet-disease relationships
ii. Principles (e.g. cholesterol is found in animal food only) and
iii. How-to knowledge (how to select foods with low fat or how to read labels accurately).

One of the attributes frequently assessed by nutrition surveys is the belief in the relationship of diet and health (Amoako-Kwakye, 2010). According to Nashida, Uauy, Kumanyika and Shetty (2004) given the central role that nutrition plays in health and chronic disease and obesity prevention, the urgency for public health to improve population nutritional status is of vital importance. Carrol and Miller (1991) added that as emphases were directed to health promotion, it was hoped that individuals will evaluate their food habits and make adjustments that would contribute to a better quality of life and optimal health. Again, such adjustments may mean eating less or differently than at present, giving up a habit that is hard to break yet certainly harmful to health. When choosing foods, nutrition is only one consideration with taste, cost, convenience, etc. as other attributes (Guthrie *et al.*, 1999). The latter

authors added that if consumers did not value nutrition as a factor in selection or they valued other factors more highly, they might not choose nutritious foods even when they were knowledgeable about nutrition.

According to Howarth (1991), a healthy and nutritious diet can prevent diseases and improve health conditions leading to an improved quality of life. Nutrition plays a significant role in human life, and it will continue to affect us in major ways depending on the food we select. Optimal nutrition plays a key role in keeping people healthy and that there is nothing better than being healthy almost all your life. Research shows that the food we choose to eat or not to eat may increase our life span or the quality of our lives. Not a day goes by without new feature stories about food and its impact on health (Dole Food Company, Inc., 2000).The functional capacity and health of an individual depends to a great extent, on his/her national status and food security, which are the cornerstones in determining nutritional well being. Good nutrition is the cornerstone for survival, health and development for current and succeeding generations (Tontisirin and Yamborisut, 1995).

According to Sop, Gouado, Tetanye and Zollo (2010), in many developing countries, malnutrition ranging from under nutrition to over nutrition is affecting the health of the population. Fulfilling the body's requirement for energy and nutrients is essential for good health. Intakes of energy and/or nutrients below or in excess of the body requirements for prolonged period of time can adversely affect health through malnutrition. More and more data report nutritional status of adolescent boys and girls with increased prevalence of overweight and obesity ranging between 40% and 60% respectively (Pourghassem, Gargari, Hamed, Saeideh, Ghassabpour and Ayat, 2004; Bener, 2006). Many studies show that overweight and obesity in childhood and adolescence are highly predictive of adulthood weight and diseases (Serdula, Ivory,

Coaastes, Freedman, Williamson and Bayers, 1993; Guo, Roche, Chumelo, Gardner, and Siervogel, 1994; Bekketeig, 1998). A nutritionally adequate diet is considered a critical component of a lifestyle aimed at promoting healthful and active aging (Bartali, Salvini, Turrin, Lauretani, Russo, Corsi, Bandinelli, D'Amicis, Palli, Guaralnik, and Ferracci, 2003).

The components of food

When food is eaten it is broken down into its component parts and used by the body. Energy is locked up in food and comes from carbohydrate, fat, protein and alcohol (Campbell, Foskett and Ceserani, 2008).

Fats and oils

Fats and oils are energy giving nutrients which incidentally has the same name in the food groups. Fat is a very concentrated form of energy. The same weight of pure fat has over twice the energy of sugar or starch. Fat is present in foods in two main types; saturated fat in foods from animal source like butter, cheese, milk, and fatty meats. Unsaturated fat is found in foods from plant (e.g. nuts and seeds) and oily fish (e.g. tuna, salmon, and mackerel) sources. Fats take a longer time to digest. Oils make the starchy staples more palatable and satisfy appetite (Oniang'o *et al.*, 2003). In Africa much of the fat content of traditional diets comes from plant oils such as red palm oil, groundnut oil and coconut oil (Oniang'o *et al.*, 2003). A diet that is totally fat-free would result in fat-soluble vitamin deficiencies, while excessive intake may lead to obesity and cardiovascular disease (Davies, 2002).

Carbohydrates

Carbohydrates are of two types; sugars, which occur naturally in certain foods like fruits and honey but are added to many manufactured foods particularly confectionery, cakes and biscuits. Complex carbohydrates also known as starches are

found naturally in filling foods like yam, cassava, potato, bread, cereals, grains etc for good health. Cereals are considered as staple foods in many areas. Most of the dietary energy comes from staple cereals, contributing 40-60% of the total dietary energy supply (Oniang'o *et al.*, 2003). The latter authors added that Africans eat more grain foods, but most of them consume less than one serving of fruits per day. One should eat a lot of complex carbohydrate for good health (Schlenker, 1993). If the diet is too low in carbohydrates, the protein will be used to provide energy at the expense of being available for growth and repair of tissue. High intake of sugars may raise blood levels of glucose, insulin and lipids. Excess carbohydrates is stored as fat and is a contributory factor in the development of obesity. Fibre is the roughage found in plant foods and is good for the digestive system. It prevents constipation and lowers the energy value of foods (Schlenker, 1993). Good sources include all whole grain cereals, pulse, fruits, vegetables and nuts.

Protein

Protein is the body-building nutrient found in animal foods like meat, fish, cheese and eggs and also in vegetable sources including cereals, pulses and nuts. Kwashiorkor is associated with inadequate intake of protein (Adigbo and Madah, 2010). Excess intake of protein can contribute towards a surplus of energy.

Vitamins and minerals

Vitamins and minerals are needed in minute amounts for many bodily processes. Since the body cannot make these essential micronutrients, they have to be provided by the diet. Poor diet may lead to a vitamin or a mineral deficiency (Pollan, 2007). Fruits and vegetables are important in the diet because they provide good sources of vitamins and minerals (Oniang'o *et al.*, 2003).

Water

According to Amoako-Kwakye (2010), life is considered as a chemical process and water is the only environment within which the biochemical processes of life can go on. About 70% of the human body is made up of water and so this makes water vital to health, it assists in regulating the body temperature, aids digestion, absorption and assimilation of nutrients and is an important ingredient in all body fluids and blood. It helps in the elimination of waste through the excretory organs. Water needs to be drunk throughout the day because the body cannot produce it on its own (Letsa, 2012). The body's water needs are supplied through food, fruit drinks and beverages. The adult body needs about 2-3 litres of water per day (Davies, 2002). Water is not stored in the body and there is a continual loss of water as a result of normal bodily functions. Lack of water leads to dehydration and sodium depletion is also associated with dehydration.

Awareness of diet-related diseases and relationships

Awareness of the relationship between diet and health (diet-disease relationships) may stimulate interest in learning about nutrition and healthful nutrition habits, thus acting as a first step in acquiring the knowledge necessary for dietary improvement. According to Worsley (2002), in order to achieve nutrition education which is important in empowering individuals to improve their diet, it may be useful to increase knowledge of the nutritional contents of commonly consumed foods. Colavito, Guthrie, Hertzler and Webb (1996) added that the aim of nutritional education is to communicate sufficient knowledge of a healthy diet. There is a link between mothers' education and the nutritional status and health of their children (Barrera, 1990; Thomas, Strauss and Henriques, 1991; Senauer and Garcia, 1991; Thomas and Strauss, 1992; Kassouf and Senauer, 1996). According to Ippolito and

Mathios (1996) public health campaigns, along with media attention have raised awareness among consumers.

According to Guthrie *et al.* (2006), in developed countries most female meal planners are aware of health problems related to increase or decrease in nutrient intake. Variyam, Blaylock and Smallwood (1995) added that although research has shown that awareness can be associated with dietary improvement, data collected indicate that the awareness is not a panacea to the problems. The list of diet-related diseases is vast but the most common and serious include heart disease and certain forms of cancer (Purdue University, 2002). To prevent or help treat any of these conditions, a healthy, balanced dietary lifestyle is important. According to the American Heart Association (1998), a healthy diet is an invaluable tool in fighting and preventing such illnesses.

Diet and Heart Disease

Heart disease and other cardiovascular conditions such as heart attack and stroke are significantly correlated to diet (McGill, McMahan and Giddings, 2008). According to Davies (2002), the term Coronary Heart Disease (CHD) is used to describe a group of disorders which occur as a result of failure of the coronary arteries to supply enough blood to the heart muscle. This is associated with the narrowing and hardening of the arteries due to atherosclerosis or the deposition of cholesterol, fatty acids and blood clots on the inside of the blood vessel. Awareness of fat and cholesterol as diet risk factors for heart disease is increasing among Americans (Guthrie *et al.*, 1999) as well as among Ghanaians (Letsa, 2011).

Diet and Hypertension

High blood pressure, medically referred to as hypertension is the elevation of the arterial blood above the normal range expected in a particular age group (Java Powered Medical Dictionary, 2002). According to Guthrie *et al.* (1999), a lot of consumers are becoming aware of the relationship between sodium consumption and hypertension.

Diet and Cancer

Cancer refers to a broad category of disease characterised by an uncontrolled and therefore virulent growth cells (Schwab, 2008). Cancer is influenced by many epidemiologic factors such as diet, alcohol and smoking among others (William, 1994). The latter author added that many studies link what we eat and do to the development of cancer. Direct relationships between preserved or salty foods and stomach cancer have been consistently observed in case control and correlation studies. High consumption of fresh fruits and vegetables has consistently been found to decrease the risk of stomach cancer. High animal fat, low fibre intake is factor of colorectal cancer. According to a research done by the Purdue University, a high fat diet is associated with heightened risk for colon cancer and breast cancer which has the highest mortality rate amongst American women. In addition obesity, a common result of excessive eating and unhealthy dietary lifestyle, is associated with high risk for breast cancer. The awareness of the link between diet and cancer has increased in recent years but remains at a lower level than heart disease although fewer consumers associate fat with cancer than with heart disease (*Guthrie et al*., 1999).

Diet and Obesity

Obesity is simply defined as a condition in which there is an excessive amount of body fat (Davies, 2002). If the intake of energy from the diet is greater than energy output, the excess is stored as adipose tissue and this is associated with an increase in body weight. Obesity is one of today's most visible public health problems. It is a significant risk factor for serious diseases including vascular diseases, hypertension and stroke, diabetes mellitus and various forms of cancer. According to Stroebele and De Castro (2004) the global prevalence of obesity was 20.4% among adults in 2004 in developed countries. The latter authors added that it is possible that environmental factors such as when, where and with whom food is eaten might be responsible. Obesity is becoming more common as the African population leave their traditional feeding habit to embrace modern ones (Oniang'o *et al.*, 2003). Awareness of health problems related to health and obesity is all but universal, yet obesity remains a growing health problem in modern society (American Heart Association,1998).

Diabetes Mellitus

Diabetes mellitus, simply referred to as diabetes is a disorder of carbohydrates metabolism in which sugars are not oxidized to produce energy due to lack of the pancreatic insulin. According to Oniang'o *et al.* (2003), *Diabetes mellitus* is a disease characterised by raised glucose concentration in the blood, as a result of deficiency or diminished effectiveness of insulin. According to Sizer and Whitney (2000), high blood glucose is normally associated with diabetes and that diabetes is among the top ten killers of adults and it can lead to or contribute to a number of other serious diseases. Sugary and starchy foods elevate the levels of sugar in the blood, if the body output of insulin is too low or the insulin produced is ineffective, the blood sugar remains high (Oniang'o *et al.*, 2003). The latter authors added that taking reduced fat

dairy foods, cutting down visible fats and oils, eating more vegetables; reducing fatty nutrient poor snack foods and reducing alcohol intake will help to reduce the chances of developing *Diabetes mellitus*.

Stroke

The term stroke is used to describe damage to brain tissue due to either cerebral infarctions causing restriction of blood flow to the brain or to a lesser extent, to a haemorrhage in the brain. It is a major cause of disability among elderly people. Stroke is a sudden attack of weakness affecting one side of the body as a consequence of an interruption of flow of blood to the brain (Java Powered Medical Dictionary, 2002).

Constipation

Constipation is characterised by infrequent bowel movements due to low intake of dietary fibre. A number of disorders are associated with constipation e.g. gall stones, diverticular disease and large bowel cancer (Davies, 2002). The insoluble dietary fibre has long been known to relieve constipation (Oniang'o *et al.*, 2003). Dietary fibre is vital because of its effect on possible diet-related diseases.

Food practices of concern

According to Lowenberg, Todhunter, Wilson, Savage and Lubawski (1979), a common eating pattern is three meals (breakfast, lunch and dinner/supper) per day with snacks in between. Meal frequency is adapted to lifestyles and work patterns of the family. In a traditional rural household, the main family meals are prepared in the evening and the evening meals are often eaten together (Oniang'o *et al*., 2003). Urbanization has greatly influence traditional feeding habits. Hart (1997) reported that today's parents have longer work hours, and many families consist of only one parent

or of two parents who are both working outside the home. Eating patterns are often irregular because of school/work activities and social demands (Hutchings, 1979). The latter author added that nutrient intake may be irregular that is more than the RDA one day and less the next day. Hence it is important to note that it is not necessary to meet all nutrient needs every day, provided an adequate intake over a period of a few days or a week averages out. According to Guthrie *et al*. (1999), time constraints have a negative effect on an individual's performance of recommended dietary practices. The latter authors added that research has shown how working women have changed in their food choices and consumption styles. Again, the latter authors added that working women were influenced by a number of factors in their food choices, purchases and consumption of food products of which time pressure was critical. Aguiar and Hurst (2005) investigated the patterns of eating and found that following retirement, the reduction in food expenditure is matched by an increase in time spent shopping and preparing meals such that overall there is no decline in food intake.

According to Allen and Sachs (2007), few families or individuals in households eat all of their meals together. Household members who work, go to school or spend time outside the home often eat breakfast, lunch and sometimes dinner away from home in restaurants, cafeterias, or other food establishments (Allen and Sachs, 2007). According to a study by Bidgood and Cameron (1992), and Shaw (1998) family members skip meals on many occasions due to the demands of mothers work. A research work by Basrur (1998) showed that as much as 42% of children do not consume breakfast before going to school. Gay (1987) reported that one of the most frequently missed meals is breakfast which plays an important role in providing the needed energy and nutrients after an overnight fast and can aid in concentration

and performance at school or work. Breakfast is often referred to as the most important meal of the day and evidence suggests that breakfast contributes to man's well-being in a number of areas (Morgan, Zabik and Stampey, 1986). First, it is a central component of nutritional well-being, contributing to total daily energy and nutrient intake (Nicklas, Bao, Webber and Berenson, 1993). Hill, Greer, Link, Ellersieck and Dowdy (1991) analyzed the dietary records of children aged from one to five and found that those who skipped breakfast had lower total energy intake than did those who ate breakfast. Nicklas *et al*. (1993) also reported similar findings. A number of studies have also found that skippers have relatively worse intake of various vitamins and minerals (Hanes, Vermeersch and Gale, 1986; Bidgood and Cameron, 1992; Nicklas *et al*., 1993). Nutrient intake during the rest of the day tends not to compensate for skipping breakfast (Nicklas *et al*., 1993). In fact, skippers are more likely to eat high-fat snacks and to have higher cholesterol levels than do breakfast consumers (Resnicow, 1991).

It has also been contended that skipping breakfast has deleterious effects upon various aspects of cognitive functioning. According to Pelican, O'Connell and Byrd-Bredbenner (1985), teachers report that hungry children are more likely to be apathetic, inattentive, and disruptive. This anecdotal evidence is supported by Meyers (1989) who has asserted that calorie deprivation can lead to children being so apathetic and listless that they withdraw from play, exploration, and social interaction. In particular hunger in the morning can affect performance at school (Meyers, 1989). Pollitt, Gersovitz and Gargiulo (1978) concluded that lack of breakfast may affect arithmetic and reading ability as well as physical work output. A study by Pollitt *et al*. (1978) tentatively confirmed that fasting could affect cognitive functioning. Likewise, Conners and Blouin (1983) found that children who ate breakfast made fewer errors

on a continuous-performance task and did better on an arithmetic test. Similarly, Simeon and Grantham-McGregor (1989) found that stunted or previously malnourished children, as compared with a control group, were adversely affected on cognitive tests by not eating breakfast. However, studies by Dickie and Bender (1982a, 1982b) found that missing breakfast had no effect on performance in arithmetic or on short-term memory and attention-demanding tasks. Likewise, Craig (1986) found no effect of breakfast on mental performance. In South Africa, Walker, Hill and Millman (1973) found that the groups of rural black (21%), urban black (19%), Indian (13%), European-African-Malay and white (14%) pupils who had no solid breakfast had poor mental performance.

Whitney and Rolfes (2002) stated that inadequate intake of minerals and vitamins would reflect in slow growth rates in children, inadequate mineralization of bones, insufficient iron stores and anaemia. According to Ma, Bertone, Stanek, Reed, Hebert, Cohen, Merriam and Ockene (2003), some studies have suggested that eating patterns which describe eating frequency, the temporal distribution of eating events across the day, breakfast skipping and the frequency of eating away from home maybe related to obesity. Singleton and Rhoads (1982) in an Australian study found that the most common reason for skipping meals was no time, no one to prepare the food, not liking the food and non-availability of food. The dietary patterns of children are determined by social psychological and economic factors (Neil, 2006). Their food choices and food preferences depend on what their parents and care givers provide (Whitney and Rolfes, 2002). A research conducted by the latter authors revealed that parents with or without any effort guide children food preferences and establish the style for what is eaten, how it is eaten, with whom it is eaten and the quality of food. Several investigators have recently reported links among parental fat intake and

children fat intake (Birch and O'Fisher, 1998). According to O'Dea (2006), students from both primary and secondary schools are looking to their parents and teachers to encourage them to be more healthful with regards to meals.

Changes in lifestyles and eating habits have led to a demand for more snack foods; consequently, snacking has become a regular feeding habit (Oniang'o *et al*., 2003). Snacking is a way of life for many people and not necessarily a bad habit (Steinberg, Riley and Stapleton, 1997). The latter authors added that a nutritious snack should be something from the food guide pyramid that is high in nutrients and fibre and low in fats and salts. In addition, the authors said eating regular meals at breakfast, lunch and dinner is always not enough to provide needed calories and that snacks can provide children nutrients that regular meals may not furnish. According to Celentano (2000) time-starved parents value snacks, a real value in the in-between meals. Parents have indicated that family members eat different snacks since snacks are an important part of an important healthy eating plan throughout the day. Snacking is a healthy way if they contribute nutrients people need to stay healthy. In contrast Dhruv, Patel and Iyer (2011) were of the view that the consumption patterns of snacks have a role to play in the development of diseases.

2.4 Summary of Literature Review

This chapter identified the health and culture theories. The literature is in agreement that food habit has an influence on the health of people. It emphasizes on some factors that influence food habits and the consequences of good eating behaviour on health. It also gives an insight into the challenges and how the woman who is employed in the formal sector balances her two roles as a family income earner and meal provider. In addition, nutritional knowledge, people awareness level

of diet related diseases and finally some food practices were also identified in the literature review.

CHAPTER THREE

METHODOLOGY

3.1 Overview

This section presents an overview of the methods used in the study. Areas covered include the research design, population, sample and sampling techniques, instrumentation, data collection techniques and method of data analysis.

3.2 Research Design

The survey design was used. Survey questions individuals on a topic or topics and then describe their responses (Jackson, 2006). The survey design allows researchers to study larger groups of individuals more easily. The study employed the mixed research approach in collecting data. Quantitative techniques were applied to test hypotheses and qualitative methods were used to answer the research questions. Quantification is defined as a numerical method used to describe observations of materials or characteristics (Sidhu, 2003). Data collection was based on precise measurement using structured and validated data collection instruments. Qualitative research lays emphasis on holistic description, which describes in detail all what goes on in an activity or situation (Creswell, 1994).

3.3 Population

The target population used for this research consisted of all female workers of UEW. The accessible population was made up of the female workers at the Winneba campus of UEW. According to the Vice-Chancellor's Annual Report and Basic Statistics (2011), UEW, Winneba campus has a total female staff population of 438, made up of 71 teaching staff or senior members, 127 non-teaching staff or senior staff in teaching departments and 240 central administration/support staff.

3.4 Sample and Sampling Technique

A sample size of 132 respondents was used. This was made up of 22 teaching staff, 38 non-teaching staff in teaching departments and 72 administrative and support staff. This is 30% of the population and a fair representation of the entire population. Leedy (1997) asserted that for quality research, at least 30% of the accessible population for the study is a fair representation for the acceptance of accurate results.

Stratified random sampling technique was employed to select the sample size of respondents for the study. According to Black (2012), stratified random sampling technique is used when the population is divided into non-overlapping sub-populations called strata. The researcher then extracts a random sampling from each of the sub-populations (strata). The main reason for using stratified random sampling is that it has the potential of reducing sampling errors. Firstly, the respondents were placed into three different groups based on the campus which they work, as in north campus, central campus or south campus. In the next phase, the female workers were placed into categories of junior staff, senior staff and senior members. Finally, the desired number of respondents was selected from each stratum through simple random sampling. In instances where there were only a few respondents in a given stratum, all the respondents in that stratum were purposely selected. For example at the central campus there were only five (5) female senior members and they were purposely selected.

3.5 Instrumentation

Questionnaire and an Interview Guide were used by the researcher to collect data**.**

Questionnaire

Questionnaire is a written set of questions which is given to a large number of people to collect information. Questionnaire is an appropriate instrument to use in a survey research. Kerlinger (1970) stated that questionnaire is widely used to collect data in educational research because it is developed to answer research questions. It is very effective for securing factual information about practices and conditions of which the respondents are presumed to have knowledge. It is used for inquiring into the opinions and attitudes of respondents. As Babbie and Mouton (2001) noted, it is through the use of a questionnaire that it is possible to evoke response from participants about feelings, beliefs and experiences or activities. In this study the technique was applied to examine the food habits of female workers and their families at (UEW) Winneba Campus.

The self-designed questionnaire consisted of two sections with the section 'A' comprising of demographic data of respondents. The section 'B'had five (5) sets of questions with each set made up of six (6) to make a total of 30 close-ended questions. According to Gillham (2008), the closed form type of questionnaire is easy to fill out, takes little time, keeps the respondent on the subject, is relatively objective and fairly easy to tabulate and analyze. Copies of the questionnaire are in the Appendix B.

The items in the questionnaire were grouped under the following sub-headings;

i. Kinds of food eaten
ii. Meal schedules
iii. Challenges in feeding the family
iv. Coping strategies
v. Awareness of diet related diseases.

Interview

Interview which is more or less an oral questionnaire was employed to extract pertinent information from some of the respondents. I did this by preparing very simple open ended interview questions (Appendix C). This allowed me to have a face-to-face interaction with respondents and at the same time establish a rapport between me and the interviewees. I observed that certain confidential information which could not be divulged by respondents when employing the questionnaire were willingly given out as I took time to explain the questions more clearly to the interviewees just the way I wanted it. The use of interview afforded me the opportunity to seek the clarification of the same information at various stages of the interview, thus providing a check on the truthfulness of responses.

3.6 Reliability and Validity

In order to ensure the reliability of the research instruments, a pre-test involving a smaller size of respondents was conducted using the same set of instruments (questionnaire and interview guide). Another reason for conducting the pre-test was to improve the content validity of the instrument. The pre-testing was done at University of Cape Coast (UCC) with a population which has similar characteristics as UEW. The instrument was given to my main supervisor for validation.

The reliability of the questionnaire was then determined through the use of the Statistical Package for the Social Sciences (SPSS) version 19. With this, the Cronbach coefficient alpha, a measure of reliability was used in that it was considered appropriate since the items were multiple choices. The coefficient alpha obtained for the main study was 0.842. According to Borg, Gall and Gall (1993), coefficient of

reliability values above .75 are considered reliable. The average inter item correlation ranged from 0.58 to 0.92. De Vaus (2004) suggests that anything less than .30 is a weak correlation for item-analysis purposes.

I sought to establish the content validity and face validity of the research instruments. Content Validity is based on the extent to which a measurement reflects the specific intended domain of content (Carmines and Zeller, 1991). Similarly, Waltz, Strickland and Lenz (1991) defined content validity as the extent to which an instrument adequately samples the research domain of interest when attempting to measure phenomena.

The questionnaire as well as the interview protocol was given to the main supervisor of this research work, a Professor at the Department of Home Economics at the University of Education, Winneba to determine their content validity. The supervisor examined the instrument to identify any ambiguities and also made the necessary clarifications to the items. This resulted in the deletion of incorrect items and replacement of such deleted items with more suitable ones. Some questionnaire items were also modified based on the recommendations of the expert in order to ensure that the instrument would appropriately answer the research questions.

Face validity pertains to whether the test "looks valid" to the examinees who take it, the administrative personnel who decide on its use and other technically untrained observers (Anastasi, 1988). The face validity of the questionnaire was also established with the help of the main supervisor. This led to the correction of all typographical errors and elements of ambiguity in the final version of the instruments. The instrument was then deemed to be suitable for gathering information on food habits of female workers of UEW and their families.

The interview protocol was also pre-tested with the same sample used in pre-testing the questionnaire. The reliability of the interview was then assessed using inter-rater reliability. The reliability of the interview protocol was also enhanced by the fact that I held one-to-one interview sessions with the various respondents using almost the same questions. According to Conway, Jako and Goodman (1995), one-to-one interviews with standardized questions appear to have the highest reliability.

3.7 Data Collection Procedures

I distributed the questionnaire personally to the respondents in their respective Departments and Offices after permission had been sought at their Departments and Offices and issues were explained to the respondents.

Respondents were allowed a period of one week within which to complete the questionnaire. I went round to collect the completed questionnaire for analysis. Additional one week was used to collect late responses. An interview guide was used to interview some of the respondents. A period of one week was used for the interview.

3.8 Method of Data Analysis

For the analysis of data for this study, I used Statistical Package for Social Sciences (SPSS) version 19 to establish data, derive frequencies, and percentages. The Analysis of Variance (ANOVA) was used to test the equality of more than two population means and so I used to find out whether there were differences between the food habits of the families of female senior members, senior staff and junior staff of UEW, Winneba Campus. The ANOVA was also used to find out whether there are

differences between the food habits of families of single, married or widowed, female staff of UEW, Winneba Campus.

CHAPTER FOUR

RESULTS

4.1. Overview

The first section of the results which comprises of the demography of the respondents was analysed using simple percentages. This section presents the age, employment status, marital status, dependants and place of residence. The second section presents the research questions and the hypotheses. The research questions were analysed using frequency distribution counts and simple percentage and the hypothesis was analysed using ANOVA.

SECTION A

4.2. Demography of Respondents

This section describes the age, employment status, marital status, dependants and place of residence of the sample drawn from the population of female workers of Winneba Campus of UEW.

Table 1: Age Distribution of Respondents

Age (Years)	Freq.	%
21-30	38	28.8
31-40	38	28.8
41-50	31	23.5
51-60	17	12.9
60+	8	6.1
Total	**132**	**100**

The total sample drawn for the study consisted of 132 respondents. From Table 1, 28.8% of the total respondents were between the ages of 21-30; 28.8% were between the ages of 31-40; 23.5% were between the ages of 41-50; 12.9% were between the ages of 51-60 while 6.1% were above the age of 60years. Majority of the respondents 57.6% were therefore between the ages of 21-40.

Table 2: Employment Status Distribution of Respondents

Status	**Freq.**	**%**
Junior staff	53	40.2
Senior staff	61	46.2
Senior members	18	13.6
Total	**132**	**100**

Table 2 indicates that 59.8% respondents were seniors (senior staff and senior members) while 40.2% were junior staff. The Table also reveals that senior staffs were 46.2% and the senior members13.6%.

Table 3: Marital Status Distribution of Respondents

Status	**Freq.**	**%**
Single	44	33.3
Married	80	60.6
Widow	8	6.1
Total	**132**	**100**

Table 3 shows that most of the respondents (60.6%) were married as against 33.3% who were single. The presentation of widows was 6.1%.

Table 4: Distribution of Number of Dependants

Number	Freq.	%
One	33	25.0
Two	26	19.7
Three	15	11.4
Four	20	15.2
More than four	2	1.5
No dependant	36	27.3
Total	**132**	**100**

Table 4 shows the frequency of the number of dependants living with the respondents. Seventy-two point seven percent (72.7%) of the respondents lived with dependants whose number ranged from one to more than four.

Table 5: Place of Residence

Place	Freq.	%
Campus	17	12.9
Winneba Township	90	68.2
Outside Winneba Township	25	18.9
Total	**132**	**100**

Table 5 shows that majority of the respondents (68.2%) resided in Winneba Township while 18.9% and 12.9% resided outside Winneba Township and on campus respectively.

4.3 Presentation of Results

4.3.1 Presentation of Questionnaire Results

Research Question One

What kind of foods do the UEW, Winneba campus female workers and their families eat?

Table 6: Foods Mostly Eaten by Female Workers and their Families

Type of Food	Freq.	%
Freshly prepared foods	46	34.8
Reheated foods	52	39.4
Convenience foods	19	14.4
Food from catering establishment	11	8.3
Food from food vendors	4	3.0
Total	**132**	**100**

Table 6 revealed that 39.4% of the respondents mostly ate reheated foods while 34.8% ate freshly prepared foods. Fourteen point four percent (14.4%) of the respondents ate convenience foods; 8.3% ate food from catering establishment while 3.0% ate food bought from food vendors.

Table 7: Type of Food Mostly Selected for Preparing Family Meals

Type of Foods	Freq. (MultipleResponse)	%
Animal and animal products	130	22.4
Starchy roots and plantain	101	17.4
Beans, nuts and oily seeds	58	10.0
Fruits and Vegetables	73	12.5
Fats and oils	87	15.0
Cereals and Grains	132	22.7
Total	**581**	**100**

From Table 7, it is indicated that 22.7% of the respondents mostly selected foods from cereals and grains for preparing family meals; 22.4% selected foods from the animal and animal products, followed by starchy roots and plantain group, (17.4%). A smaller percentage (15.0%) selected food from the fats and oils group while 12.5% selected fruits and vegetables for preparing family meals. Beans, nuts and oily seeds group was the least selected (10.0%) in family meals preparation.

Table 8: Source of Food Respondents Eat for Lunch

Source	Freq.	%
Packed meal from home	45	34.1
Buy food from food vendors	34	25.8
Eat in catering establishment	28	21.2
Go home for lunch	17	12.9
Packed meal from catering establishment	6	4.5
Other sources not listed	2	1.5
Total	**132**	**100**

According to Table 8, 34.1% of the respondents ate packed meals from home during lunch break; 25.8% of the respondents bought food from food vendors during lunch break; 21.2% of the respondents ate in catering establishment during lunch break; 12.9% of the respondents went home for lunch, while 4.5% ordered packed meals from catering establishments during lunch break. One point five percent (1.5%) ate from other sources not listed.

Table 9: Nutritional Quality of the Family Diet

Quality of diet	Freq. (Multiple Response)	%
Low fat intake	56	12.0
Low sugar intake	72	15.5
Low salt intake	49	10.5
High vegetable and fruit intake	94	20.2
Minimum of 8 glasses of water a day	85	18.3
Spices and condiments	66	14.2
None of the above	43	9.3
Total	**465**	**100**

Table 9 shows that 20.2% of the respondents had high vegetable and fruit intake as a characteristic of the family diet; 18.3% of the respondents had a minimum of eight glasses of water a day for each member, as a characteristic of the family diet; 15.5% had a low sugar intake as a characteristic of the family diet; 14.2% of the respondents had spices and condiments as a characteristic of the family diet. Twelve percent (12%) of the respondents had low fat intake as a characteristic of the family diet; 10% had low salt intake as a characteristic of the family diet while 9.3% of the respondents had none of the characteristics stated as part of their diet.

Research Question Two

What is the meal schedule of the UEW, Winneba campus female workers and their families?

Table 10: Agreement or Disagreement on How Work Affects Meal Times

Does Work Affect Meal times?	Freq.	%
Strongly agree	26	19.7
Agree	82	62.1
Neutral	22	16.7
Disagree	2	1.5
Strongly disagree	0	0
Total	**132**	**100**

Table 10 shows that 81.8% of UEW Winneba female workers agreed that pressure of work affected their family meal times; 16.7% of the workers were undecided, while 1.5% disagreed.

Table 11: Time for Serving the Family's Evening Meal

Time	Freq.	%
Before 6.00 p.m.	40	30.3
Between 6.00p.m.-7.00p.m.	76	57.6
Between 7.00p.m.-8.00p.m.	14	10.6
After 8.00p.m.	2	1.5
Total	**132**	**100**

Table 11 indicates 57.6% of the respondents normally served the family's evening meals between 6.00-7.00p.m. Thirty point three percent (30.3%) of the respondents served the evening meal before 6.00p.m. Thus by 7.00pm 87.9% of the respondents

served the family's evening meals. A further 10.6% had the evening meals between 7.00-8.00p.m. leaving only 1.5% to serve the family's evening meals after 8.00p.m.

Research Question Three

What are the challenges of UEW, Winneba Campus Female workers in feeding their families?

Table 12: Family Members Skipping Meals due to Mother's Work

Response	**Freq.**	**%**
Yes	117	88.6
No	15	11.4
Total	**132**	**100**

According to Table 12, 88.6% of the respondents had family members skipping meals due to their work while 11.4% of the respondents had family members not skipping meals because of her work.

Table 13: Waiting Time after Evening Meal before Going to Bed

Time	**Freq.**	**%**
30 mins	11	8.3
1 hr	60	45.5
1 hr 30 mins	42	31.8
2 hrs and more	19	14.4
Total	**132**	**100**

Table 13 shows that 45.5% of Winneba campus female workers and their families wait for one hour after eating the evening meal before going to bed. These were followed by 31.8% of the respondents and their families who wait for one hour and thirty minutes after eating the evening meal. Fourteen point four percent(14.4%) of

the respondents and their families wait for 2 hours and more after eating the evening meal before going to bed. Only 8.3% waited for 30mins after eating the evening meal before going to bed.

Research Question Four

What strategies have UEW; Winneba campus female workers adopted to cope with their dual role as family meal providers and paid workers?

Table 14: Time Intervals for Preparing Family soups

Time interval	Freq.	%
Daily	30	22.7
Weekly	61	46.2
Fortnightly	17	12.9
Monthly	8	6.1
Other*	16	12.1
Total	**132**	**100**

*Times not stated in the questionnaire

From Table 14, 46.2% of the respondents prepared soup for the family to last one week; 22.7% of the respondents prepared soup daily for the family; 12.9% of the respondents prepared their soups fortnightly; 6.1% of the respondents prepared the soups monthly while12.1% prepared soups to last at times not stated in the questionnaire.

Table 15: Time Intervals for Preparing Family Stews/Sauces

Time interval	Freq.	%
Daily	31	23.5
Weekly	46	34.8
Fortnightly	30	22.7
Monthly	19	14.4
Other*	6	4.5
Total	**132**	**100**

*Times not stated in the questionnaire

Table 15 shows that 23.5%, 34.8% and 22.7% of respondents of UEW female workers prepared stew/sauces daily, weekly and fortnightly respectively. Fourteen point four percent (14.4%) of the respondents prepared stews/sauces to last for one month. Only 4.5% of the respondents prepared their stews/sauces at times not stated in the questionnaire.

Table 16: Support during Meal Preparation

Source of support	Freq.	%
None	51	38.6
House help	32	24.7
Children	22	16.7
Husband	17	12.9
Extended family member	6	4.5
Other	4	3.0
Total	**132**	**100**

Table 16 shows that 38.6% UEW Winneba Campus female workers required no support; 24.7% used house-helps; 16.7% used their children; 12.9% were assisted by; husbands; 4.5% were assisted by extended family members; while 3.0% had support from sources other than stated in the questionnaire.

Table 17: Frequency of Shopping for Food Items

Time interval	Freq.	%
Weekly	30	22.7
Fortnightly	71	53.9
Monthly	25	18.9
As and when items are needed	6	4.5
Total	**132**	**100**

From Table17, 53.9% UEW Winneba Campus female workers shopped for food items fortnightly; 22.7% shopped for food items on weekly basis;18.9% shopped for food items on monthly basis while 4.5% shopped for food items as and when food items were needed.

Table 18: Mode of Purchase of Food Items

Status	Freq.	%
Place an order	6	4.5
Bulk purchasing on market days	53	40.2
Employ services of purchasing agents	27	20.4
Purchasing on week-ends	38	28.8
Other	8	6.1
Total	**132**	**100**

As indicated in Table 18 40.2% UEW, female workers engaged in bulk purchasing on market days; 28.8% purchased their food items on week-end; 20.4% employed the services of purchasing agents to get the food items needed; 6.1% used means other than what were stated in the questionnaire to purchase food items, while 4.5% of the respondents placed orders for their food items.

Table 19: Storage Methods Mostly Used for Storing Food Items.

Status	Freq.	%
Room temperature storage	6	4.5
Refrigerator storage	81	61.4
Freezer storage	45	34.1
Total	**132**	**100**

From Table 19, 61.4% UEW, Winneba campus female workers stored their food items using the refrigerator; 34.1% stored their food in freezer while 4.5% stored their food at room temperature.

Table 20: Preservation of Cooked Foods

Status	Freq.	%
Heating	11	8.3
Refrigeration	60	45.5
Freezing	61	46.2
Total	**132**	**100**

Table 20 shows that 46.2% of UEW, Winneba campus female workers preserved their cooked food by freezing, 45.5% preserved their cooked food by refrigeration while 8.3% preserved their cooked food by heating.

Table 21: Labour Saving Devices Used in Cooking

Labour saving device	Freq. (Multiple Response)	%
Stove (gas/electric)	132	27.7
Blender	130	27.3
Rice cooker	85	17.9
Electric kettle	65	13.7
Microwave	41	8.6
Toaster	21	4.4
Pressure cooker	2	0.4
Total	**476**	**100**

Table 21 shows that 27.7% of the respondents used either gas or electric stove for cooking; 27.3% used blenders; 17.9% used rice cookers; 13.7% used electric kettles; 8.6% used microwave ovens; 4.4% used toasters while 0.4% used pressure cookers.

Research Question Five

What is the U.E.W., Winneba campus female workers and their families' knowledge of diet- related diseases?

Table 22: Food Is Medicinal

Response	Freq.	%
Strongly agree	47	35.6
Agree	64	48.5
Neutral	17	12.9
Disagree	4	3.0
Strongly disagree	0	0
Total	**132**	**100**

According to Table 22, 84.1% of the respondents agree that food is medicinal; 12.9% were undecided and only 3.0% disagreed.

Table 23: **Diet-related diseases respondents were aware of.**

Diseases	Freq. (Multiple Response)	%
Hypertension	132	19.4
Obesity	132	19.4
Kwashiorkor	132	19.4
Diabetes	121	17.9
Goitre	98	14.4
Cancer	20	2.9
Scurvy	20	2.9
Marasmus	10	1.5
Renal disease	10	1.5
Protein energy malnutrition	5	0.7
Total	**680**	**100**

Table 23 indicate 19.4% UEW, Winneba campus female workers were aware of hypertension, obesity and kwashiorkor as diet-related diseases; 91.7% were aware of diabetes; 74.2% of were aware of goitre; 15.2% were aware of cancer; 15.2% were aware of scurvy; 7.6% were aware of marasmus; 7.6% were aware of renal disease while only 3.8% were aware of protein energy malnutrition.

SECTION B

4.3.2 Presentation of Interview Results

The respondents involved in this study were carefully selected from various levels in order to ensure that responses provided were fairly representative of the views of all female workers in UEW regardless of their status. The interview was conducted to support responses in the questionnaire. Consequently 15 respondents made up of four senior members, five senior staff and finally six junior staff members all of whom were employees at UEW were selected. Thus junior members were marginally more represented than senior members and senior staff.

Number of dependants living with respondents

The researcher posed this question to the women staff in order to find out about the number of individuals who depended on the respondents for their feeding needs. Responses provided by the interviewees to this question gave an indication to the fact that, generally, most of the female workers at UEW had family sizes ranging from two to five members. There were three women who had more than four people depending on them for their nutritional needs.

Follow up questions revealed that some of the dependents were not necessarily nuclear or extended family relations but rather from several varied backgrounds. In actual fact, respondents revealed that some of the people they catered for were children from needy backgrounds, house helps and in some cases orphans. This

eventually culminated in a rise in the number of dependants which were looked after by the respondents. For instance, one woman was a widow with no child but had as many as three young people whose educational, food and clothing needs she exclusively provided. Senior Members and the Senior Staff generally had higher number of dependants than their junior colleagues.

Respondents' Places of Residence

This question sought to establish the residence of the respondents with respect to whether they stayed within the university campus, the Winneba Township or at a location outside of Winneba. I deduced from answers provided that very few of the women resided on the university campus. The majority of respondents (94%) lived in the Winneba Township in agreement with Table 5. Several reasons accounted for this observation. According to some of the ladies, they stayed on the Winneba Township because of problems of unavailability of accommodation for them and their families on the university campus. Others also expressed that despite the advantage of proximity to the workplace which came with staying on the university campus, they preferred to stay outside of the campus due to other commitments outside of work. Only one out of the 15 respondents interviewed stayed outside of the Winneba Township. This respondent explained that her young family was already settled in a nearby town, thus there was the need for her to be close to them in order to cater for their needs.

Kind of food Frequently Eaten by Respondent

A question was posed to respondents as to the type of food as well as the origin of meals which they provided to their families. With regards to the origin of a typical meal at home, respondents overwhelmingly indicated that they and their

dependents mostly ate either freshly cooked food or reheated food or both in confirmation of responses Table 6. Time and energy constraints were the reasons behind their families eating reheated dishes on week days but freshly prepared food on weekends. Some explained that they opted for the above options of food due to the number of dependants and also the need to avoid wastage of previously prepared food. A few indicated the cost effectiveness of buying relatively cheap raw materials at the market place to prepare food for one's family as their main reason for opting for the above mentioned foods rather than eating at expensive food joints and restaurants.

In instances where respondents said they ate convenience food or food from catering services and vendors, it was explained that it was due to time constraints, absence of fuel to heat food or to the absence of any dependants. However people who resorted to convenience foods and food from vendors were few (2 people) compared to the total of 15 respondents. This also supports responses in Table 6. On the type of foods used in the preparation of meals by respondents the general trend was that the junior and senior staff members indicated that they used mostly cereals for preparation of family meals and this was sometimes supplemented with starchy roots and plantain (Table 7).

Two out of the four senior members interviewed predominantly used a lot of animal products, fats and oils and to some extent fruits and vegetables for the family meals. Not much mention was made of beans, nuts and oily seeds by the other persons involved in the interview.

Respondents mentioned the energy providing qualities of starchy foods as the main reason for using them in preparing food. Others stated that they used such foods because they were easy to obtain and relatively cheaper on the market.

Places Where Respondents Often Ate Food

Responses provided to this question were varied. Generally all the respondents in clarification of Table 8 took their breakfast and supper at home in the mornings and in the evenings with their families before leaving for the workplace and after arriving at home from work. However in the afternoons, many respondents and their family members bought food at joints near their places of work or school.

Some of them took packed food from the house which they ate during the afternoon break hours or in their free times. There were however two senior members staying on campus who said they often rushed home to take lunch during lunch break. There was also the trend of senior members and senior staff eating at the catering establishments on campus such as the university's restaurant (Food Production Unit of the Home Economics Department), compared to junior staff who mostly brought food from their homes or purchased food from private foods vendors during the lunch break.

What is Your Typical Evening Meal Schedule for a Day?

How Work Affects Feeding of the Family

The general theme that arose out of the answers provided to this interview item was that the demands of most women at the workplace had a direct impact on the feeding needs of their families with respect to the type of food which they served to their families and the time it was served. Respondents explained that it was quite common for them to spend extra hours at the work place and got home late. In such instances, they were compelled to either cook late in the night or resort to reheated or convenience foods in order to cater for the feeding needs of their dependants.

The pressure at the work place also demanded that sometimes the women had to buy food from catering establishments or food vendors to feed their families after arriving late from work. One of them remarked:

> *"I remember the other day; I left the office so late in the night so when I arrived at the house all of them had gone to sleep without taking any supper".*

Another interesting observation which came out from the responses of the interviewees was that, in most homes supper was served quite early on weekends than on weekdays. Evidently it was due to the fact that these women did not have any work duties to grapple with on the weekends. Clearly, senior members, senior staff and junior staff and their families feeding times were affected by demands at the work place. Interestingly two junior staff respondents said their work requirements did not affect the feeding needs of their families.

I discovered from the interview that paid work also affected feeding of the family positively. Majority of the respondents said they had more money for feeding the family because they did not rely solely on their husbands' income to feed the family. Part of their salaries going into feeding ensured food security in the home.

How Respondents Coped with their Feeding Challenges

There were several challenges which were identified from the respondents. One of the main challenges identified was the problem of how the family fed in the absence of the woman especially when schools were on vacation and the woman was at work. Some respondents who were mostly senior members stated that they had employed the services of house helps who helped to provide the feeding needs of their dependants, especially the young ones in their absence.

Others prepared lunch packs for their children to take to school or dished out their lunches into food warmers or well covered bowls and left them on the dining table. Some said they made sure they stuffed their homes with foods which their family members could eat in their absence. A senior member also stated that she always ensured that there was much food in the refrigerator at all times so that the family could eat at all times. At other times, the elder children and sometimes husbands of these women took over the feeding role of the woman to make sure that food was provided to all the members of the family.

Some women who had no spouses alternatively chose to provide money to their dependants to buy food from food vendors in case they were not at home. All the respondents engaged in one form of bulk purchasing or the other and all of them had at least two labour saving devices (cookers and blenders) to help them cope with some of the challenges they faced in feeding the family.

4.5 Testing of the hypotheses

Hypothesis one

H_o : There is no statistically significant difference between food habits of the families of female senior members, senior staff and junior staff of UEW

Table 24: ANOVA Table of Effects Employment Status on Employee Food Habit

Employment status	Number of respondents	Mean responses	F	p-value
Senior member	18	80.56	0.445	0.642
Senior staff	61	81.98		
Junior staff	53	81.94		

A one-way between groups analysis of variance was conducted to explore the impact of employment status of female workers of UEW on their families' food habit. There was no statistically significant difference at the $p<0.05$ level in the food habit scores for the three groups [$F(2,129)=0.445$, $p=0.642$]. This means that the food habit of senior members, senior staff and junior staff female workers and their families were not significantly different and thus the null hypothesis could not be rejected.

Responses from the interview conducted indicate that the three groups ate reheated dishes on weekdays; had some forms of support in coping with feeding of the family and some staff had breakfast and supper at home but ate lunch outside the home. These interview responses support responses in the questionnaire indicating that there was no statistically significant difference between the food habit of the families of female senior members, senior staff and junior staff.

Hypothesis Two

H_0: There is no statistically significant difference between food habits of the families of single, married or widowed, female staff of UEW, Winneba Campus.

Table 25: ANOVA Table of Effects of Marital Status on Employee Food Habits

Marital Status	Number of respondents	Mean responses	F	p-value
Married	80	80.95	2.181	0.117
Single	44	83.23		
Widow	8	82.00		

A one way between groups analysis of variance was conducted to explore the impact of marital status of female staff of UEW on their families' food habit. There was no statistically significant difference at the $p<0.05$ level in the food habit scores for the

three groups [F(2,129)=2.181,p=0.117]. This means that the food habit of the families of single, married or widowed female workers were not significantly different and thus the null hypothesis could not be rejected.

Responses from the interview conducted indicate that the three groups ate cereals and grains; had their evening meals after 6p.m. and their work affected the feeding of their families because of time and energy constraints. These responses support responses in the questionnaire indicating that the food habit of the families of single, married or widowed female staff was not significantly different.

CHAPTER FIVE

DISCUSSION

5.1 Overview

This chapter is dedicated to the discussion of the results obtained from the analysis of data gathered to answer the various questions formulated in the research under the various research objectives.

5.2 Research Objective 1

Examine the kinds of food eaten by UEW, Winneba campus female workers and their families.

The first research objective sought to examine the kinds of food eaten by UEW Winneba campus female workers and their families. From the analysis (Table 6), was revealed that majority of female workers of UEW, Winneba Campus mostly ate reheated dishes. Time and energy are two important factors in meal planning and preparation. However, the woman who goes out to work may be faced with time constraints, and may also experience fatigue after a hard day's work. Therefore the working woman may prepare most of the dishes she feeds the family with in advance, stores and uses them when needed. According to the respondents, they would have preferred freshly prepared food almost every day but that would not be possible. Freshly prepared food may taste better and be richer in food values than reheated food as some nutrients may be reduced during cooking and further reheating may destroy the little that might be left after the cooking. Coagulation of protein occurs with heating but too much heating may destroy the constituent amino acids and thereby destroy the protein value of the food.

Adow *et al.* (1993) said that most working housewives cooked during the week-ends and stored food. The food was reheated for service to the family during the

week. This is in agreement with what most UEW, Winneba campus female workers do.

Most respondents selected cereals for preparing family meals because it served as staple for most Ghanaians and it also kept well and was cheaper. Indeed, Adigbo and Madah (2010) have stated that in many areas of Ghana, cereals are considered as staple foods. According to the respondents the selection of food items and the type of dishes prepared were mostly influenced by preference.

Most individuals prefer to eat meals prepared at home than buying food from outside the home because they were sure of the food's nutrient content and the conditions under which the food was prepared. For this reason, some families packed meals to work places and schools for their lunch (Table 8). O'Dea (2006) agrees with this in her statement that students from both primary and secondary schools often looked up to their parents and teachers to help them acquire healthful food habits.

Snacks are small amounts of light food that is eaten between meals or instead of a meal. Although snacks are supposed to be nutritious most of the snacks people buy are calorie dense foods and information from respondents in this study revealed that a majority of the respondents ate snacks in agreement with Steinberg *et al.* (1977) that snacking is a way of life for many people.

Several factors are taken into account before the selection of food for family meals. Many people usually would like to eat what food is available forgetting about their nutritional needs**.** This finding is akin to that of Story *et al.* (1999) that one of the most influential factors in the food choices of adolescents is food availability**.** Because parents are responsible for making foods available to children and adolescents, they can have a profound impact on preferences and, hence,

consumption. For instance, in Ghana in a family of both adults and children, mothers would always serve the fathers with the best portions of meat leaving the children who need the protein for growth. In the present study respondents were mostly influenced by the preferences of the parents in the selection of food for family meals. In effect there were several factors which influenced the choice of meal at home aside from the nutritional needs of the family members. As noted by Adler and Rehkopf (2008) and Bahr (2007), socioeconomic factors, particularly education and income, were key contributors to the diet of a given family. This conclusion agrees with Wong *et al*. (1984) who examined a relationship between household income level expense and consumption of food in urban marginal areas of Mexico. The authors found a marked tendency to increase consumption of high protein foods as family income increased. A similar trend was also reported by Belk (2006) who found that new elite of Zimbabwe increased the frequency of meat consumption, as well as the quantity of their diet.

With reference to description of the diet of families I am of the view that in Ghana most people cannot describe the diet in terms of low fat, low sugar, minimal condiments etc. In this study majority of the respondents were unable to use the above attributes to describe the family meal. Nutrition education is important in empowering individuals to improve their diet. Worsley (2002) suggests that in order to achieve this, it may be useful to increase knowledge of the nutritional content of commonly consumed foods.

5.3 Research Objective 2

Examine the meal schedule of the UEW, Winneba campus female workers and their families.

Data provided by the respondents indicated that the pressure of the paid jobs affected the meal times of the respondents and their families. Hart (1997) noted that today's parents had longer work hours, and many families consisted of only one parent or two who were both working outside the home. This is in sharp contrast with a typical housewife who is not working outside the home and thus has more time on her hands to see to her commitment to the family as a meal provider. Being home enables her to prepare and serve family meals in time. This is unlike the working woman who has to work a minimum of eight hours and who arrives home late and tired before providing the family with their meals, which leads to having late supper. The non-working woman can prepare and serve her family meals with no delays.

As at UEW, closing from work at 5.00pm, spending time to arrive home, heating and serving the evening meal will go past 6.00pm on week days. Thus meal times for supper will definitely be affected by the job the mother is engaged in. As observed by Adu-Okoree (1996); Oslon and DeFrain (2000), traditionally women perform reproduction and nurturing roles such as child birth, child upbringing, meeting nutritional needs of the household, maintenance of environmental cleanliness, and maintenance of values of the family. Most UEW female workers normally served the family's evening meals or supper between 6-7pm. Breakfasts were also eaten earlier than one would have preferred due to the time the woman leaves home for work.

Although an impression might be created that meal providers were always present when the family ate, data in this study revealed that most of UEW, Winneba

Campus female workers were not always present when the family ate. It is evident from the study that most of the respondents had different meal times for week-days and for week-ends. On weekends, when they did not go to work, meal preparation and service were much earlier than week-days. Some foods take longer time to digest hence eating the evening meal earlier than late evening will assist with good digestion and assimilation. Nutritionists advice that after having the evening meal, one is supposed to wait for 2hrs before going to bed. Indeed data analysis indicated that most female workers at UEW and their families were not pleased with the kind of meals they ate as well as the times they eat such meals, especially the evening meal. Meals eaten were not always what the family wanted but due to time constraints on the part of the mother, the entire family was compelled to eat whatever food was provided. This observation is consistent with those made by Steiner *et al.* (1996) that conflicting schedules explained the reason why families did not eat together more frequently. The members of a family working, mother working a second job, shift work, working late, too many working hours were all contributory factors to displeasure with the meals and meal times.

Most of the families in this study ate breakfast and supper at the same time, sat at the same table but did not necessarily eat from one bowl. Having meals together fosters good relationship between family members and promotes belongingness among them**.** Many studies can be cited to support the above findings. Eating dinner together has a positive effect on family communication skills (Compan *et al*., 2002), nutritional intake of the entire family (Fisher *et al*., 2001) and development of family traditions (Steiner *et al*., 1996). The major findings from all of these studies reveal that family meals are of high importance to parents but today's societal problems limit the number of family meals eaten together. This study indicates that the pressures at

the work place have a negative effect on the ability of women to attend adequately to the feeding needs of their families.

5.4 Research Objective 3

Identify challenges of UEW, Winneba Campus female workers in feeding their families.

The findings have revealed that majority of the female workers of UEW face the challenge of preparing family meals and the situation has resulted in the individual families having to eat different meals on weekdays from those at weekends when the woman has enough time for cooking. The families of such working women express displeasure with weekday meals.

Most family members skipped meals on many occasions due to the demands of the mother's work. Similar results have been recorded by Bidgood and Cameron (1992) and by Shaw (1998). Singleton and Rhoads (1982) found that the most common reasons given for skipping meals were no time, no one to prepare the food, dislike for the food and non-availability of food**.** Though some respondents skipped some meals, a majority of the families always ate breakfast and supper at home and at weekends they ate lunch as well. In contrast to always having breakfast at home, Gay (1987) claimed that the most frequently missed meal was breakfast. Basrur (1998) recorded that 42% of children did not consume breakfast before going to school. Breakfast plays an important role in providing needed energy and nutrients after an overnight fast and aids in concentration and performance at school or work.

Analysis of the data revealed that most respondents and their families waited for just an hour after eating the evening meal before going to bed. But in Ghana, our main meals are usually carbohydrate dense, and since the evening meal is the last and main meal of the day, I am of the view that individual should wait for at least 2 hours

after supper before going to bed. Ma *et al.* (2005) have waived against late night eating by stating that eating late in the evening, particularly meals filled with carbohydrates, raises the amount of glycogen the muscles store and if the muscles do not use this stored glycogen as fuel it is stored as fat. Eating early in the evening helps with good digestion of food eaten by the individual. Most respondents revealed that they would change their eating pattern if they had less working hours.

5.5 Research Objective 4

Find strategies UEW, Winneba campus female workers have adopted to cope with their dual role as family meal providers and paid workers.

The ultimate aim of eating food is for survival. The kind of food we eat and the time it is eaten, and probably the reason the food is eaten has a decisive effect on our health. Meal providers should always have to go the extra mile to get food for the family despite all other commitments. Conclusively the UEW Winneba Campus female workers prepared their soup and sauce weekly so that the family easily prepared and added the staple part to them on a daily basis for the family to have nutritious and balanced diet throughout the week.

The preparation of weekly family meals requires a lot of time and energy and therefore meal providers need some form of support to enable them work easily and efficiently. Hence majority of UEW, Winneba Campus female workers employed house-helps to support them with the preparation of family meals and other household chores. This observation is in agreement with Kalongo (2004) that the increase of women in paid jobs has resulted in the proliferation of house helps. Adams (2008) similarly noted that the services of house-helps offered some relief and support to especially working women in performing their housework which is mostly centred on caring (provision of meals inclusive) for the family. Another strategy adopted by the

respondents was that they preferred to shop for food items on a fortnight basis. Some also did so by bulk purchasing on market days. Social commitments are very important to families and by adopting the latter strategies the working woman could have some week-ends free to attend to social commitments.

To prevent food spoilage and ensure that maximum amounts of nutrients were retained in the food, so that the individual eating the food would not end up eating empty calorie foods; most respondents stored their food using refrigeration and freezing methods.

The study also revealed that most of the respondents had at least three labour saving devices (electric/gas stoves, blenders and rice cookers) for cooking. Labour-saving devices ensured easy and fast cooking. Such labour saving devices ensured family eating at the appropriate time and deriving maximum amount of nutrients in the food which would lead to good health.

5.6 Research Objective 5

Find out what UEW, Winneba Campus female workers and their families know about diet-related diseases.

Most UEW, Winneba campus female workers and their families agreed that food was medicinal and that some diseases were managed with an appropriate diet. For instance they know that kwashiorkor, goitre and scurvy were caused by nutrient deficiencies in the body.

Most of the female workers at UEW were aware of at least five diet-related diseases. Knowledge of diet-related diseases and their consequences on our health would guide the respondents on their choice of food for the family. Several studies (Barrera, 1990; Senauer and Garcia, 1991; Thomas *et al*., 1991; Thomas and Strauss, 1992; Kassouf and Senauer, 1996) have indicated a link between mothers' education

and the nutritional status and health of their children.The latter authors observed that most of their respondents had health issues arising from the family diet. Colavito *et al.* (1996) added that the aim of nutrition education is to communicate sufficient knowledge of a 'healthy' diet.

Different members of a family have different nutritional needs. This probably is the reason why families may not eat from the same bowl although they may eat at the same table. I am of the view that not eating from the same bowl would enable the meal provider to cater for the individual's nutritional needs better. However it is not always that the meals provided cater for the nutritional needs of all the family members. Several investigators have recently reported links among parental fat intake, and children's fat intake (Birch and O'Fisher, 1998). It is likely that such practices foster rather than prevent the development of childhood obesity and eating problems (Birch and O'Fisher, 1998).

As most symptoms of diet-related disease do not show until after a long time, the researcher is of the view that most people who are suffering from diet-related disease may not be aware of it since no symptoms may be present and they may not also have been diagnosed of any diet-related disease. Secondly in our parts of the world people see fatness (obesity) as a sign of good living and beauty for the African woman. Stroebele and De Castro (2004) asserted that globally the prevalence of obesity was 20.4% among adults in 2004. To confirm this view, most of the respondents and their families, as revealed in the findings have not been diagnosed of any diet-related disease.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Overview

In this chapter the researcher focuses on the summary of the main findings of the study, conclusions and general recommendations.

6.2 Summary

The purpose of this study has been to explore issues pertaining to the dual role of the working woman with respect to her job commitment, the provision of meals to her family and their level of awareness of diet-related diseases. The study was based on several specific objectives and hypotheses. The objectives were:

1. The kind of food eaten by the UEW, Winneba Campus female workers and their families,
2. their meal schedule
3. challenges faced by the UEW, Winneba Campus female workers in feeding their families
4. find out strategies adopted by the UEW, Winneba Campus female workers to cope with their dual role as family meal providers and paid workers
5. Find out the knowledge of UEW, Winneba Campus female workers about diet-related diseases.

In order to provide solutions to achieve these objectives and to test the hypotheses, the researcher devised various strategies to approach the issue.

The null hypotheses formulated for the study were

H_0 : There is no statistical significant difference between the food habits of the families of female senior member, senior staff and junior staff of UEW, Winneba campus.

H_0 : There is no statistical significant difference between the food habits of the families of single, married and widowed female workers of UEW, Winneba campus.

To accomplish this study, related literature was reviewed under several sub-headings:

1. Theoretical framework; which comprised of the health theory, cultural theory, concept of food and food habits.
2. Empirical framework looked at comprised factors influencing food habits, healthy eating habits, women's work and meal management, nutrition and health and food practices of concern.

The research was carried out on the north, central and south campuses of UEW, Winneba. To ensure the collection of accurate data for the study, a questionnaire and an interview guide were developed and administered to solicit information from the female workers of UEW, Winneba Campus.

Stratified random sampling technique was used to sample the respondents. In all 132 respondents were selected from a population of 438 which constituted 30% of the population. All the 132 questionnaire administered were retrieved. Fifteen (15) respondents out of the total sample size were interviewed for clarification.

For the analysis SPSS data analysis programme was used to quantify the data and generate tables and percentages of the responses of the respondents.

- The study revealed that food eaten by UEW female workers and their families was mostly reheated dishes. The female workers mostly selected food items from the cereals and grains food group to prepare the family meals and the

type of dishes prepared is influenced by preference. Most family members of the female workers of UEW, Winneba Campus ate packed meals from home during lunch time and it was not always that they ate snacks.

- The study has shown that meal time and the kind of meals were affected by the pressure of work on the female workers. Hence the meals eaten during week days were different from those at weekends when the women were not at work.
- The work schedule of the female workers also had an influence on the meal schedules of their families. The families mostly had their evening meals late while breakfast was eaten early because of the female workers work schedule. The kind of foods eaten was also due to time and energy constraints experienced by the female workers during family meals preparation.
- The study revealed that the working woman was at times unable to prepare the family meals and the meals had to be skipped due to job commitments. An important revelation was that because the families ate their evening meals late the families were unable to wait for two hours after eating before going to bed at night.

As strategies, the female workers of UEW, Winneba Campus:

i. Prepared their soups and sauces/stews to cover a week's family consumption.
ii. Engaged paid house-helps to assist with family meal preparation.
iii. Engaged in fortnightly bulk purchasing of food items on market days.
iv. Stored most of their food items in refrigerators and cooked food in freezers.
v. Had at least three labour saving devices which she used in cooking.

- The study also revealed that working woman at UEW, Winneba Campus recognised food as medicinal and as such health issues influenced their families' food choices. Not surprisingly the female workers and their families were aware of at least five diet-related diseases. However a vast majority of the female workers of UEW, Winneba Campus and their family members had not been diagnosed to have any diet-related disease.

6.3 Conclusions

The study topic focused on the food habits of the female workers of UEW, Winneba Campus and their families. One key factor that had an influence on the choice of meal of the female workers and their families was the problem of insufficient time. Such families depended mostly on reheated dishes because of the limited time the female worker had after close of work to prepare fresh meals from the scratch.

Various strategies such as employing the services of househelps, bulk purchasing on market days and cooking in bulk to cover at least a week were what the working woman used to cope with her dual role as a paid worker and a family meal provider. Breakfasts were eaten early at home before family members left for work or school and their lunches were packed for them to eat during lunch time

Time for eating their evening meals was usually after 6pm and breakfast was earlier than 8am. The study also revealed that the female workers of UEW, Winneba Campus agreed that food was medicinal and thus food choices they make were sometimes influenced by the medicinal needs of the individual family members. The female workers were also aware of some diet-related diseases. In conclusion, it is evident that female UEW workers do not have ample time to feed their families well like they would have loved to.

6.4 Recommendations

In a bid to improve upon the food habits of the working mother and her family, the following recommendations have been made:

Firstly, based on the findings that most of the families involved in the study eat reheated dishes, it is recommended that a lot of fresh fruits and vegetables should be eaten with meals. This would make up for the lost vitamins which were destroyed in the process of reheating dishes.

Based on the fact that most female workers usually arrive from the work place late, it is suggested that the staple (accompaniment) should always be freshly prepared as most staples do not require long preparation time. This should adequately cater for the menace where female workers hard pressed with time are unable to spend adequate time on food preparation. In this case the families will be afforded the opportunity of eating at least one freshly prepared dish in each meal.

To avoid the current situation whereby the families of these workers go to bed immediately after eating their supper, it is suggested that families must resort to watching television or engaging in any activity that will keep them awake in order to prevent them from going to sleep almost immediately after eating the evening meal. This might include partaking in activities such as playing educative video games and parents helping their wards to complete their school assignments.

The finding that the families of these female workers skip meals occasionally is a matter of concern that needs to be addressed. Consequently, it is advised that the female workers must put in place effective interventions to avoid their families skipping meals, especially breakfast. Thus it is advised that more emphasis should be placed on the preparation of nutritious snacks by mothers for their families to prevent

the habit of staying for hours without food after work due to pressure of work. It is also suggested that the families resort more to the eating of fruits to make up for the nutrient deficit caused by the skipping of meals.

To avoid the habit of some families skipping breakfasts as revealed by the current study, mothers are entreated to partly prepare breakfasts the night before. This will enable them to provide their families with breakfast in the morning with less difficulty. Such a measure will go a long way to keep the mother and to some extent her family busy after the evening meal in order to avoid them going to bed immediately after supper.

The UEW, Winneba Campus female workers who are sometimes unable to attend to the feeding needs of their families on time due to demands at the work place should encourage adults in the home to feed the children before 5 pm so that they can go to bed by 7 pm, after the recommended two-hour waiting period. Older children in the family should also be taught how to reheat dishes so that they could feed themselves and younger ones in case the mother is late in arriving home from the workplace.

Planning of daily family meals should be done ahead of meal preparation, taking into consideration the effect of the mother's job commitments on the family meals. If possible, working mothers should go home quickly after close of work so that the family can have their evening meals on schedule.. This will prevent the existing practice of working mothers wasting much time on trying to organize meals daily for the family.

Since the symptoms of diet-related diseases take a long time to show up, it is recommended that UEW authorities should initiate a yearly health examination programme for all its employees and their dependants. Such a programme must among other factors, be geared towards the identification of any nutritional deficiencies in people and also the provision of effective measures to rectify any observed anomalies. In addition, there must be a concerted effort aimed at promoting nutritional education and sensitizing the UEW community on the need to regularly undertake check-ups in order to identify and treat any diet-related diseases among female staff and their families.

Finally, different studies of similar magnitude should be taken on other campuses of UEW and also on other women in the informal sector in order to have a general view of food habits of employed women and their families.

These recommendations should be taken seriously so that the health of the family which is the basic unit of society can be improved or enhanced.

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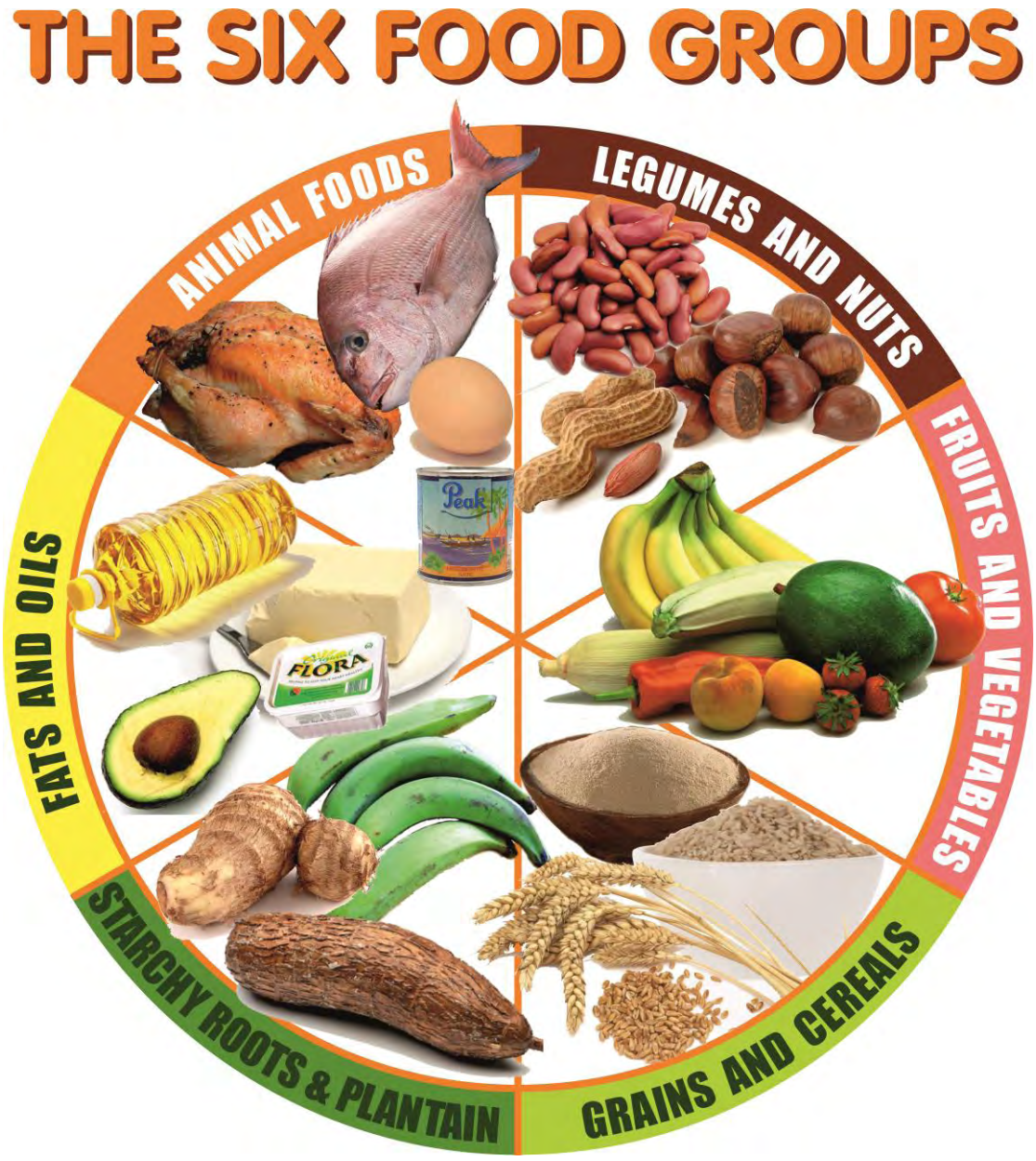
APPENDIX A



APPENDIX B

QUESTIONNAIRE ON FOOD HABITS OF UNIVERSITY OF EDUCATION, WINNEBA CAMPUS FEMALE WORKERS AND THEIR FAMILIES.

To obtain data on food habits of female workers and their families, this questionnaire has been designed. I would therefore appreciate your candid opinion on the under listed questions to facilitate the study. Anonymity is assured.

Please tick the appropriate box and express your views in the spaces provided.

SECTION A

DEMOGRRAPHIC INFORMATION

1. **Age (Years)**

21- 30 [ ] 31 - 40 [ ]

41- 50 [ ] 51 - 60 [ ]

60+ [ ]

2. **Employment Status**

Junior staff [ ] Senior Staff [ ] Senior Member [ ]

3. **Marital Status**

Single [ ] Married [ ] Widow [ ]

4. I) Do you live with any dependants? Yes [ ] No [ ]

II) If yes, how many are they?

1 [ ] 2 [ ] 3 [ ] 4 [ ] more than 4 [ ]

5. **Place of residence**

[ ] Campus

[ ] Winneba Township

[ ] Outside Winneba Township

SECTION B

Please tick only one, with the exception of questions *2, *6, *23 and *25

Kinds of food are eaten.

1. Which of the following foods do you and your family **mostly** eat?

   (a) Freshly prepared food [ ]

   (b) Reheated foods [ ]

   (c) Convenience food [ ]

   (d) Food from food vendors [ ]

   (e) Food bought from catering establishments [ ]

2. * Which of the following types of food do you **mostly** select for preparing family meals?

   (a) Animal and animal products [ ]

   (b) Starchy roots and plantain [ ]

   (c) Beans, nuts and oily seeds [ ]

   (d) Fruits and vegetables [ ]

   (e) Fats and oils [ ]

   (f) Cereals and grains [ ]

3. Is snacking part of your/family meals?

   Always [ ] Sometimes [ ] Never [ ]

4. Which of the following **mostly** influences the selection of food for family meals?

   [ ] Age

   [ ] Type of work of family members.

   [ ] Cost

   [ ] Preference (what you would like to eat)

5. What does the family **mostly** eat during lunch break?

   [ ] packed meals from home

   [ ] go home for lunch

   [ ] buy food from food vendors

   [ ] eat in catering establishment

   [ ] packed meal from catering establishment

   [ ] others (specify) .....

6. * Which one of the following is a characteristic of the family's diet?

   [ ] Low fat intake

   [ ] Low sugar intake

   [ ] Low salt intake

   [ ] High vegetable & fruit intake

   [ ] Minimum of 8 glasses of water a day

   [ ] Spices and condiments intake

   [ ] None

Meals schedules.

7. Meal times for week days and week-ends

   [ ] The same [ ] Different

8. The pressure of your work affects family meal times

   [ ] Strongly agree

   [ ] Agree

   [ ] Neutral

   [ ] Disagree

   [ ] Strongly Disagree

9. At what time do you normally serve the family's evening meal?

   [ ] Before 6pm

   [ ] Between 6 - 7pm

   [ ] Between 7 - 8pm

   [ ] After 8pm

10. Is the family pleased with the time for their meals times?

    [ ] Yes [ ] No

11. Do all family members eat at the same time?

    [ ] Yes [ ] No

12. Is the family eating the kinds of food they eat because of the limited time you have? [ ] Yes [ ] No

Challenges in Feeding the Family.

13. i. Are you able to prepare your/family meals?

    [ ] Yes [ ] No

    ii. Meal times for week days and week-ends

    [ ] The same [ ] Different

14. Are your family members skipping meals due to your work?

    [ ] Yes [ ] No

15. After eating the evening meal, how long do they wait before going to bed?

[ ] 30mins [ ] 1hr [ ] 1hr 30mins

[ ] 2hrs [ ] more than 2hrs

16. Is the family pleased with their meals?

[ ] Yes [ ] No

17. Which of the following does the family eat at home and how often?

i. Breakfast [ ] Always [ ]Sometimes [ ] Never

ii. Lunch [ ] Always [ ]Sometimes [ ] Never

iii. Supper [ ] Always [ ]Sometimes [ ] Never

18. If you had less working hours would you change your eating pattern?

[ ] Yes [ ] No

Coping Strategies.

19. How often are family meals prepared?

i. Soups

[ ] Daily [ ] Weekly [ ] Fortnightly [ ] Monthly

[ ] Other

ii. Stews/Sauces

[ ] Daily [ ] Weekly [ ] Fortnightly [ ] Monthly

[ ] Other

20. i. Do you have support with meal preparation?

[ ] Yes [ ] No

ii. If yes, who?

[ ] House-help

[ ] Husband

[ ] Children

[ ] Extended family member

[ ] Others (Specify).....

21. i. How often do you shop for food items?

[ ] weekly

[ ] Fortnightly

[ ] Monthly

[ ] As and when food items are needed

ii. How do you purchase food items?

[ ] Place an order

[ ] Bulk purchasing on market days

[ ] Employ the services of purchasing agents

[ ] Purchasing on weekends

[ ] Others (Specify).....

22. i. Which of the following storage methods do you **mostly** use for your food items?

[ ] Dry storage

[ ] Refrigerator storage

[ ] Freezer storage

ii. How do you **mostly** preserve cooked food?

[ ] Heating

[ ] Refrigeration

[ ] Freezing

23. *Which of the following labour saving devices do you use?

Microwave	[ ]
Blender	[ ]
Cooking range	[ ]
Electric kettle	[ ]
Rice cooker	[ ]
Toaster	[ ]
Pressure cooker	[ ]

24. i. Are you always present when the family eats?

[ ] Yes [ ] No

ii. Do family members eat together?

[ ] Yes [ ] No

Awareness of Diet-Related Diseases

25. *Which of the following diet related disease(s) are you aware?

Obesity	[ ]
Hypertension	[ ]
Diabetes	[ ]
Cancer	[ ]
Renal disease	[ ]
Marasmus	[ ]

Kwashiokor [ ]

Goitre [ ]

Scurvy [ ]

Protein Energy Malnutrition [ ]

26. Food is medicinal.

[ ] Strongly agree

[ ] Agree

[ ] Neutral

[ ] Disagree

[ ] Strongly disagree

27. Do health issues influence the diet of the family?

[ ] Yes [ ] No

28. Do meals provided cater for the nutritional needs of all your family members?

[ ] Always [ ] Sometimes [ ] Never

29. Have you ever been diagnosed of any diet-related disease?

[ ] Yes [ ] No

30. Have any of your dependants ever been diagnosed of any diet-related disease?

[ ] Yes [ ] No

THANK YOU

APPENDIX C

INTERVIEW GUIDE

1. What is your employment status?
2. How many dependents do you live with?
3. Where are you staying?
4. What kind of food do you frequently eat?
5. Where do you often eat?
6. What is your typical meal schedule for a day?
7. How is your feeding the family affected by your work?
8. How do you cope with your feeding challenges?