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**RESEARCH ARTICLE**

# FOOD CHOICES OF ADOLESCENTS AND ITS ASSOCIATED HEALTH IMPLICATIONS IN ADANSI NORTH DISTRICT OF GHANA

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**ABSTRACT**

The purpose of the study was to investigate the food choices of teenagers and the health related problems of food consumed by teenagers. The study was conducted in two senior high schools in the Adansi North District of Ghana. The simple random technique was used to select 205 students. Questionnaire were used to elicit information from the students. Data was analysed descriptively. The study revealed that staple food of most students is 'kenkey' and fish therefore it is likely they may lack valuable nutrients from other food sources. It was also revealed that most students feel hungry in the afternoon which implies that they are given little or no money for lunch at school. Most students (65.3%) eat together with the whole family so until they go back home no food for them. Those who eat in school also make decision on choice of food based on what they can afford. The study also revealed that the major source of influence of the teenagers' food choice is their parents since food choice for the adolescents are largely informed by food availability and affordability. It also indicated that most of the adolescent (72.8%) buy their own food from the street food vendors. The researchers therefore recommended that all stakeholders should help to support the teenagers to choose the right and balanced food as this determine the kind of adults they may be in future.



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## INTRODUCTION

In spite of man's strong desire to search for food for survival all over the world, he does not eat every edible plant or animal available to him. Different individuals and societies have used food differently and have made different choices in their food selection. Thus what one group or individual sees as food may be rejected meanly looked upon by another. These attitudes and choices grow and develop from individuals to families and then to societies. Hence each family member grows up with a developed choice, taste and attitude to the foods available to him. There is a growing concern among teenagers about their food choices because they form the most energetic team/population in the family life cycle. The teenage falls within the age group from thirteen to nineteen years and they exhibit such life styles which call for immediate attention. Their meal patterns appear unorganized as well as their food choices appearing unstructured. Nutritional intake during childhood and adolescence is important for growth (Story *et al*. 2002). The development of lifelong eating behaviours (Coulson *et al*., 1998) may have long term health implications. In recent years, the quality of children and adolescents' diets in Africa has become of growing concern to researchers and health professionals.

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Studies have consistently shown that many children and adolescents have poor dietary habits that do not meet recommended dietary guidelines (Gregory *et al*., 2000; Story *et al*., 2002). Children and adolescents are increasingly consuming high intakes of foods rich in fat, sugar and salt, and low intake of fruits, vegetables, whole grains and calcium-rich foods (Institute of Medicine, 2007). There is also evidence to suggest that dietary quality declines from childhood to adolescence (Lytle *et al*., 2000; Lien *et al*., 2001). For example, Lytle *et al* found that as students moved from primary to junior and senior high school, their consumption of breakfast, fruits, vegetables and milk decreased, whereas soft drink consumption increased (Lytle *et al*., 2000). Research suggests that the adolescent diet is often poor, lacking in essential nutrients (Shepherd and Dennison, 1996), therefore opportunities for promoting the nutritional status of adolescents should be identified. Factors such as lifestyle, developmental, social, and environmental influences can account for the shifts in dietary choices as children move into adolescence (Story *et al*., 2002). In recent years, several national and international initiatives designed to promote healthy eating have identified the importance of young people's dietary choices for the short and long term health of the population (British Medical Association, 2003; Verecken *et al*., 2004). However, interventions aimed at the modification of young

people's food choices have had limited impact. The limited impact of these interventions may be partly due to an inadequate understanding of the factors associated with children's and teenager's food choices (Story *et al*., 2002; Trew *et al*., 2006). In a systematic review of the effectiveness of interventions on young people's healthy eating, Shepherd *et al* reported that dietary influences may vary with age and many interventions were not tailored to different age groups (Shepherd *et al*., 2006). In Ghana the ability of individuals, groups and societies to choose, consume, select and utilize food tends to vary among families. The role food plays in one's life has become an interesting issue over the years. The attitude of individuals and groups of people towards the food consumed has become a major concern since the final choice they make has several implications on their well-being. The Ghanaian adolescent group is found in the senior high schools most of which are boarding schools.The importance of teenagers in the family and in the nation as a whole is of vital importance to national development. Teenagers who fall amongst the school going group that is Junior High School and Senior High School are the group most vulnerable to nourishment. The major reasons are that apart from their ignorance about the nutritional implications of food types, they exhibit natural craving for foods packed with empty or hidden calories. Besides, they appear to eat based on what their perceived peer group is eating. Even while at home, parents' food choices for their adolescents are largely informed by food availability and affordability. Hence the evidence of high incidence of nutritional deficiencies and poor eating habits among teenagers. A broad range of factors has been identified as important for the food choices of young people (Trew *et al*., 2006), few studies have set out to qualitatively examine young people's own views (Neumark Sztainer *et al*., 1999; Stevenson*et al*., 2007;Warren *et al*., 2008). Which is also the case in the Ghanaian situation. Thus it becomes imperative that the food choices of this group who are also of the school going age, thus Senior High Schools be investigated. It is in the light of these that this study seeks to examine the food choices of these teenagers and their health implications.

The main objective of the study is to examine the food choices of teenagers in some selected Senior High Schools in the Adansi North District and its associated implications on their health. Specifically, the study seeks to: a) determine the pattern of food choices by teenagers, identify factors that influence the food choices of teenagersand b) to identify the health related problems of food consumed by teenagers.

## LITERATURE

Recently, researchers have proposed more comprehensive theoretical models of eating behaviour that take account of multiple interacting factors (Story *et al.,* 2002; Verecken *et al*., 2004b). A theoretical framework based on social cognitive theory (SCT) and the ecological model was adopted to explain young people's food choices and eating behaviours (Story *et al*., 2002). Social Cognitive Theory (SCT) explains behaviour in terms of a triadic, reciprocal model in which a person's behaviour, personal factors and the environment in which the behaviour is performed interact and influence each other (Bandura, 1997; Glanz, 2008). Key constructs of SCT that are relevant to eating behaviour include observational learning (modelling), reinforcement responses to a person's behaviour that increase or decrease the chances of its recurrence), self-efficacy (self-confidence to change behaviour) and self-control (Glanz, 1997).

The ecological model considers the relationship between individuals and their environments and behaviour is viewed as affecting and being affected by multiple levels of influences including microsystems, mesosystems, exosystems and macrosystems (Bronfenbrenner, 1994). The integrated theoretical framework based on SCT and an ecological model has identified multiple individual, social environmental, physical environmental and macrosystem factors that interact to influence young people's food choices (Story *et al*., 2002; Patrick and Nicklas, 2005). These factors include hunger (Frenche*t al*., 1999; Neumark-Sztainer *et al*., 1999), food preferences (Shepherd and Dennison, 1996; Birch and Fisher, 1998), self-efficacy (Frenn *et al*., 2003; Long and Stevens, 2004), food appeal, time demands, convenience, cost (Neumark-Sztainer *et al*., 1999; Bissonnette and Contento, 2001), nutritional autonomy (Videon and Manning, 2003), parental food practices (Wardle *et al*., 2005; Van Strein *et al*., 2009), home food availability (Hearn *et al*., 1998; Bere and Klepp, 2005), socio economic position (Vereecken et al., 2004a), peer influences (Contento *et al*., 2006; Romero *et al*., 2009), school food environment (Kubik *et al*., 2003), eating out (French *et al*., 2001; Guthrie *et al*., 2002), food advertising (Kraak and Pelletier, 1998) and social and cultural norms of eating (Trew *et al*., 2006). While some of these factors such as food preferences are consistent and influence food choice throughout life, others are developmental factors uniquely associated with being an adolescent (Neumark-Sztainer *et al*., 1999; Story *et al*., 2002; Trew *et al*., 2006). For example, gaining autonomy and independence are important developmental factors that influence the eating patterns of adolescents (Bassett *et al*., 2007).

In focus groups conducted with American adolescents, factors perceived as important in influencing food choices included hunger, appeal of food, lifestyle factors, food availability, parental influences, benefits of food, situation-specific factors, mood, body image, media, habit and vegetarian beliefs (Neumark-Sztainer *et al*., 1999). Stevenson *et al* assessed Irish adolescents' perceptions of, and influence upon, healthy eating behaviour (Stevenson *et al.,* 2007). Recently, Warren *et al*. examined age associated differences in Welsh primary school aged children's perceptions of food (Warren *et al*., 2008). A key finding was the way in which control over food choice and access to healthy/unhealthy food options differed between younger and older participants across home, school and eating out settings.

### Dietary Patterns

When children are young, the parents and the family control what they eat but as they get older, what their friends eat in school and what is available to them in the school will have an impact on what they eat (Wardlaw *et al*, 2004). According to Neill *et al* (2006) what children eat at school depends on many factors including the cafeteria environment, pressure, administrative support, teacher participation, cafeteria staff and quality of food choices offered. Williams (1994) states that, physical and psychosocial pressures influence teenagers eating habits. He explained that social pressures and tensions concerning figure control sometimes cause adolescent girls to follow unwise, self-imposed crash diets for weight loss. This can result in eating disorders such as anorexia nervosa and bulimia nervosa. Williams (1994) points out that due to a girl's physiology, sex differences associated with fat deposits during

the growth period and her lack of physical activity may gain her excess weight. According to Roberts and Williams (1996) adolescents neglect to eat breakfast at home and that the female more than the male skip lunch as well as more of the evening meals. Neill (2006) maintains that adolescents consume more fat than they need to, and that globalization has brought fast foods eating establishment to most countries especially to developing countries. Williams (1994) pointed out that teenagers prefer popular tasty and easy to find junk foods which may lack one or more of the essential nutrients such as calcium, vitamin A, and may also be too high in calories saturated fats and sodium to eating a nutritious meal at table at home. Again, Whitney and Rolfes (2002) state that adolescents and children frequently drink soft drinks instead of fruit juice or milk, lunch, supper and snacks and this becomes a problem when intakes become excessive.

**Factors That Influence Food Choice**

The food choices that we make and the development of our habits concerning food are influenced by many interacting factors such as social, biological, economical, etc.

**Social Determinant of Food Choice**

Humans as biological being require food to sustain life. They eat to satisfy hunger and to meet a basic drive for food. But a person is also a social being. Human have learned to live and work together and have organized themselves into societies. As infants grow and develop, they are incorporated into this society through a variety of experiences, and some of these experiences involve food. Our pattern of eating includes the foods deemed acceptable and the time periods and settings in which these foods are consumed. The family structure and interactions among family members are important influence on the development of our food habits, their rigidity and the ease with which they may be changed. The development of the food patterns begins with the family but is modified as a child grows into adulthood and travels in ever-widening circles of contact with others.

On the other hand, Williams (1994) is of the view that the adolescents between eleven to eighteen years who are going through body changes due to hormonal effects have their caloric needs increased because of the metabolic demands of growth and energy expenditure. The female adolescent will begin to lose iron monthly with the onset of menses. According to Williams (2002) the life of a school going adolescents is full of stress and strains so the need of the adolescent for vitamins and minerals is high. He further stated that the calcium requirement for all adolescents must be increased to at least 1200mg per day to meet the demands of bone growth. According to Whitney and Rolfes (2002) the RDA for most vitamins increases during the adolescent years. Williams and Roberts (1996) have stated that adolescents require high amount of thiamin, riboflavin and niacin because of their high-energy requirement. However, recommendations for vitamin A, E, C and folate are the same for adults

**Nutritional related problems of children and adolescents**.

**Malnutrition**

Malnutrition continues to be a major threat to millions during childhood years (Chopra, 2003, Santrock, 2005). Malnutrition and starvation are daily facts of life for children in many countries (UNICEF, 2003). According to Brown and Allen (1998) it was estimated that eleven million pre-school children were malnourished. Puberty is a risk factor that interacts with children nutritional status to affect physical and cognitive development (Marcon, 2003). Pollit and Mathews (1998) state that malnourished children who do not take breakfast perform poorly in task requiring concentration and their attention spans are shorter and even score lower on intelligence test than their well-fed peers. Malnutrition is directly linked to cognitive deficits because of negative effects on brain development (Liu *et al*, 2003)

**Anaemia**

This is an iron deficiency which affects children's health and their behaviour more than adults.Carley (2003) state that iron deficiency anaemia results in chronic fatigue. According to Santrock (2005) young children from low-income families are most likely to develop this deficiency. According to the World Health Organization (2006) 48% of children and infants. One to two year old suffer from anaemia 40% of school children and 30-55% adolescents also suffer from anaemia. Roberts and Williams (1996) stated that iron deficiency anaemia in pre-school children caused delayed mental and physical and decreased resistance to infections. Childhood iron deficiency anaemia can lead to a decrease in both stamina and learning abilities because the oxygen supply to cells decreases (Whitney and Rolfes, 2002). The effects of anaemia on learning and behaviour are similar and mild due to moderate under nutrition. Even mild cases lead to shortened attention span, irritability, fatigue and a decrease in the ability to concentrate. Anaemic children are known to do poorly on vocabulary, reading, and maths, problem-solving and psychological test (Himes and Dietz, 1994)

**Obesity**

Wardlaw *et al* (2004) also argued that ridicule, embarrassment, depression and short stature linked to early puberty are the main consequences of obesity. Current researchers point out to many causes of obesity. Researchers believe that although diet is still an important factor, inactivity is the key to increased childhood obesity (Troiano *et al*, 2000). According to Ebbeling *et al* (2002) and Whitney and Rolfes (2002) children who glue themselves to the television for an average of twenty –four hours a week or ten hours playing computer and video games, excessive snacking, over reliance on fast foods restaurants, parental neglect, lack of safe areas to play and high fat energy food choices also contribute to childhood obesity. Schinner *et al* (2003), stated that nutrition and overweight are also key problems among adolescent. Another problem related to eating habits which becomes prominent during adolescence is the intense concern about their appearance and especially their weight, which may lead to unhealthy eating and excessive dieting (Santrock 2005). A number of studies documented that adolescent girls who have a strong desire to weigh less, are motivated to look like the girls and women they see in the media and are likely to become very concerned about their weight (Field *et al*, 2001; Sabtrock, 2005). Research on adolescents' eating disorders reveals that girls that felt negatively about their bodies in early adolescent were more likely to develop eating disorders than girls who did not (Brooks el at, 1989). Again girls who were both sexually active with boyfriend in a pubertal transition were most likely to be

dieting or engage in disordered eating patterns (Caufmann, 1994)

**Anorexia Nervosa**

Anorexia nervosa is a serious eating disorder that can lead to death. This involves the pursuit of thinness through starvation (Davison and Neale, 2001). According to Roberts and Williams (1996) majority of persons with anorexia nervosa are adolescents although it has been seen in other age groups. Olivardia *et al* (1995) and Roberts *et al* (1996) have stated that the disorder has not been commonly seen in males but when it does occur in males, the symptoms and other characteristics such as family conflict are usually similar to those reported by females who have the disorder. Whitney and Rolfes (2002) say that people with anorexia nervosa have protein – energy malnutrition similar to marasmus. Starvation brings other physical consequences such as loss of brain tissue, impaired immune response, anaemia and loss of digestive functions that worsens malnutrition (Addolorato *et al*, 1998; Alende, *et al*, 1998). Most adolescents suffering from anorexia nervosa set high standards which they are not able to reach and they become stressed with concern about how others perceive them.Unable to meet these high standards, they turn to something they can control, that is their weight (Striegel *et al* 1993; Schmidt, 2003).

The media also portrays thin as beautiful in their choice of fashion models that many adolescents' girls want to emulate. This fashion image especially in the Ghanaian culture contributes to the incidence of anorexia. Andrist (2003) confirms that the fashion image in American culture, which emphasizes that 'thin is beautiful' contributes to the incidence of anorexia nervosa.

**Bulimia Nervosa**

Bulimia nervosa is an eating disorder characterized by episodes of binge eating followed by attempts to purge the excess food taken up by the body by vomiting or misuse of laxatives, diuretics, enemas, fasting and excessive exercise (Wardlaw *et al*, 2004; Santrock, 2005; Whitney and Rolfes, 2002). Most bulimia are pre-occupied with food have a strong fear of becoming overweight and are depressed or anxious (Davison and Neale, 2002). Wardlaw *et al* (2004) stated that bulimia begins in late adolescent and up to 4% or more adolescents and college women suffer from bulimia nervosa. A study of adolescent girls found that increased dieting, pressure to be thin, exaggerated importance of appearance, body dissatisfaction, depression symptoms, low self-esteem and low social support predicated binge eating (Stice *et al*, 2002; Santrock 2005; Wardlaw 2004 ' Whitney and Rolfes (2002). According to Wardlaw *et al* (2004) and Whitney and Rolfers (2002) health problem associated with bulimia nervosa arise from 1. Vomiting, this causes demineralization of teeth.2. Regularly dropping of blood potassium which can disturb the heart's rhythms and even produce death. 3. Stomach ulcers and bleeding and tears in esophagus can develop. and 4. Constipation which may result from frequent use of laxatives.

**Biological Determinant of Food Choice**

The choice of food is influenced by many factors among them are following;

**Hunger and Satiety**

The central nervous system is involved in controlling the balance between hunger, appetite stimulation and food intake (Kearney *et al*, 1997). The macro-nutrients i.e. carbohydrates, proteins and fats generate satiety signals of varying strength. The balance of evidence suggests that fat has the lowest satiating power, carbohydrate has an intermediate effect and protein has been found to be the most satiating power (Stubbs *et al*, 1996). A liking for sweetness and a dislike for bitterness are considered inmate human traits, present from birth (Steiner, 1977). Taste preferences and food aversions develop through experiences and are influenced by our attitudes, beliefs and expectation (Clarke, 1998).

**Economic and Physical Determinants of Food Choice**

**Cost and Accessibility**

Low income groups have a greater tendency to consume unbalanced diets and in particular have low intakes of fruits and vegetables (Estevez *et al*, 2000). However, access to more money does not automatically equate to a better quality diet but the range of foods choice which is dependent on resources such as transport and geographical location. Healthy food tends to be more expensive when available within towns and cities compared to supermarkets on the outskirts (Donkin *et al*, 2000). However improving access alone does not increase purchase of additional fruit and vegetables which are still regarded as probably expensive (Dibsdall *et al*, 2003). The potential for food wastage leads to reluctance to try new foods for fear the family will reject them. In addition, a lack of knowledge and the loss of cooking skills can also inhibit buying and preparing meals from basic ingredient (Dibsdall *et al*, 2003). Education on how to increase fruit and vegetables consumption in an affordable way such that no further expense, in money or effort is incurred has been proposed (Dibsdall *et al*, 2003). Effort of governments, public health authorities, producers and retailers to promote fruits and vegetable dishes as value for money could also make a positive contribution to dietary change (Cox *et al*, 1998b).

## METHODOLOGY

**Research Design**

The research design used is descriptive survey. Gay (1987) describes descriptive approach as a process of collecting data in order to test hypothesis to answer questions concerning the status of the subject of study. The descriptive survey studies the relationships between non-manipulated variables in a natural setting and helps the researcher to arrive or come out with a clear, meaningful and acceptable result. The design was used to solicit views, perceptions, ideas, and suggestions from students to examine their choice of foods in schools in the Adansi North District.

**Population**

The population for the study comprised of all students from Asare Bediako Senior high school and Dompoase Senior High School in the Adansi North District.

**Sample and Sampling Technique**

The study involved a sample of 205 respondents. The simple random sampling method was used to pick the respondents.

This was done by assigning numbers to the whole population and bulking all the numbers together. These numbers were well shuffled and picked at random from a container till the number equal to the sample size was obtained. In all 205 participants were chosen for the study, thus 105 respondents from Asare Bediako Senior High School whilst the remaining 100 respondents were selected from Dompoase Senior High School all in the Adansi North District of Ghana.

**Research Instruments**

The main instrument that was used is the questionnaire which is based on the objective of the study. This instrument was used because, it is often easier to ask for people's opinion in printed form and secondly, all the respondents are literates. More so, the respondents will have higher degree of freedom to respond to the items. To enable respondents to indicate their degree of preference and acceptance to given statements, the close ended and Likert-type scale items were used. The questionnaire is made up of bio data such as gender, age and course that the students offer. Others solicited students' views on the preferred patterns of food, factors influencing their preference for those kinds of foods and the environment where the students buy these food items.

## RESULTSAND DISCUSSION

**Determining the pattern of food choices by teenagers**

The study revealed that the staple food of most students is kenkey and fish (a typical Ghanaian indigenous dish of steamed corn dough, fried fish with ground pepper, tomato and onion). Out of the two hundred and five (205) students, (133) representing (65.2%) eat kenkey and fish as their staple food. And (46) also eat rice and stew as their family staple food which is mainly carbohydrate. Poulton and Sexton (1996) and Shamrock have stated that children are also effected by their eating habits because eating habits are ingrained in life. Poulton and Sexton (1996) and Shamrock agreed that what the teenagers eat can positively or negatively affect them. Therefore, teenagers who eat only carbohydrate foods will have negative effects and growth deficiencies.

**Table 1. Age Distribution of Respondents**

| Age | Number of students | Percentage |
|---|---|---|
| 10 - 14years | 19 | 9.3 |
| 15 - 19 years | 164 | 80.0 |
| 20 - 24 years | 22 | 10.7 |
| Total | 205 | 100 |

It also revealed that most students eat together with the whole family. This is a typical Ghanaian home practice whereby the whole family eat from one bowl. Out of total of 204 students, 68 students eat with their family. This implies that they struggle for their share of food and this can affect their nutritional intake, children who eat with their families eat low fat food and less vegetables than children who eat alone (Cullen, 2001). Cullen implies that when you eat alone you can have enough time to eat and also get fair share of the meal which is balanced. This is not the case in the Adansi North District. It was also revealed that (55) female teenagers make their decision on their choice of food based on financial grounds. About (38) of male teenagers also make their decision on their choice of food according to financial grounds. This, by implication means that most of the teenagers are under-nourished. Adansi North District is full of illegal mining and the activities of these illegal miners have destroyed greater percentage of land rendering the inhabitant poor. So those teenagers who based their decision on financial either eats unbalanced meal or they indulge in immoral activities such as fornication, stealing, gambling, etc. before they can eat balanced meal.As agreed by Neill (2006), the dietary patterns of teenagers are determined by social, psychological and economic factors whichplay major role in the dietary patterns of teenagers.

**Identification of health related problems of food consumed by teenagers**

The study revealed that even when the students are outside they eat "kenkey" and "waakye" which are virtually carbohydrates dominated foods. seventy-seven students ate "kenkey" outside their homes while forty-six ate "waakye". In school too there are breakfast are without milk, eggs nor fruits. This can lead to too much carbohydrate in their diet which consequently can lead to overweight and obesity. Majority of students, (85.9%) feel hungry in the afternoon. This means that they are given little or no money when they are going to school and those who are boarders, the food given to them at the dining are not adequate enough to satisfy them. It was also found that the food given to the students in the boarding houses lack valuable nutrient as it is often without meat, fish, eggs and milk. This can affect their health physically, mentally and emotionally. In a situation where students are underfed, it can influence their academic performance. According to Powell *et al* (1998) when children go hungry behaviours and academic performance are affected. Liu *et al*, (2003) assets malnutrition is directly linked to cognitive deficits because of negative effects on brain development. This assertion from Powell *et al*, (1998) and Liu *et al*, (2003) confirm that under-nutrition can affect the academic performance of students.

**Conclusion**

The teenagers in the family and in the nation as a whole are of vital importance to the national development. Teenagers who fall amongst the school going group, that is Junior High School and Senior High School are the group most vulnerable to nourishment. The major reasons are that apart from their ignorance about the nutritional implications of food types, they exhibit natural craving for food packed with empty or hidden calories. Besides, they appear to eat based on what their perceived peer group is eating. The teenagers in this studies base their choice on finance and availability of food. This means that whatever food item they lay hands on they will eat, regardless the nutritive value of the food. Each and every one is expected to eat balanced meal for proper growth devoid of deficiency. But where meal lacks one or more nutrients it has its associated disease. It is therefore important that all the teenagers should be given balanced meal to avoid diseases. It is also important that teenagers are given balanced meal, because balanced meal does not only support growth and development but also help in the learning processes. It was revealed in the discussions that the way the teenagers choose food also has health implications. When the teenagers are in their homes they eat carbohydrates more than other nutrients. In the same way when they are outside their homes, they also eat carbohydrates dominated foods. When meal contains more carbohydrates can cause over-weight, lead to obesity and its related diseases such as high blood pressure, hypertension etc.

Some teenagers also responded that they become hungry in the afternoons. This by implication, show they are not given enough money when going to school. Thosein the boarding schools are also not fed well or food given to them is inadequate and lack vital nutrients. This can affect the teenagers' physically, emotionally, psychologically, spiritually and academically. In conclusion, it beholds on all stakeholders, the Ghana government, teachers, members of Parliament, chiefs, Assembly members, parents etc. to see to the welfare of the children within the Adansi North Assembly especially the teenagers since the future of the District depends on them.

**Recommendation**

Based on the results from the study the following recommendations have been made by the researchers.

- Organisation of workshops on good nutrition

Ghana Education Service, District Assembly, Food and Drugs Authority and other stakeholders should organise seminars and workshops on good nutritional habit and food choice to enlighten students on the negative effect on unhealthy eating and high intake of drug supplements to support diet.

- National nutritional Programmes should be organised for teenagers in the district
- Parents should be educated on healthy nutrition
- Counselling centres should be opened at all schools
- Government intervention

The Ghana Government should develop policy to improve the quality of food giving to students in the boarding houses.

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