

# Eating Habit Lifestyle and Physiological Changes of the Aged in Ghana: A Case of Nkawie in the Ashanti Region

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## Abstract

Aging is accompanied by eating habits, lifestyles and physiological changes acquired earlier in life, though genetic factors and other environmental factors. A survey research design was used for this study. The target population for the study was the aged which included both males and females at Nkawie in the Atwima Nwabiagya District of the Ashanti Region who were 60 years and above, and were made up of both literates and illiterates. Stratified and convenience sampling techniques were used to select one hundred (100) aged people in the study area. The main instrument used for the data collection was a semi-structured questionnaire. The data collected were entered and analysed using the Statistical Package for Social Sciences (SPSS) and descriptive statistic of means, frequency distribution and percentages. The study concluded that, nutrition in relation to the physiological changes and the health status of the aged affect their eating habits and lifestyle. The study recommended that, the aged should be assisted to eat foods that are familiar, especially ethnic foods that are known by the family as this could bring nostalgic feelings to comfort them.

## Keywords

Eating Habit, Lifestyle, Physiological, Aged, Cigarette Alcohol

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## 1. Introduction

The paper is structured into five (5) main sections namely; the Introduction, review of the literature, methodology and the Conclusion and recommendation. The first section introduces the structure of the paper, the context and aims and objectives of the paper. The methodology section which follows review of the literature presents a broad description of the methodology and procedures adopted in the conduct of the study. Findings and Discussions from the study are presented in the section following the methodology and conclusion, also highlighting some recommendations of the discussions, follows as the last section.

Ageing process through good eating habits and healthy lifestyles acquired earlier in life, though genetic factors and other environmental factors may play a significant role in one's life [1]. Proper nutrition is a basic concern for third age citizens because over the years some nutritional peculiarities may appear which must be resolved [2]. Therefore, it is important for seniors to get enough of these nutrients through diet and, if this is not possible, consult their doctor about taking multivitamin supplements that will help them cover daily needs [2]. More men than women perceived healthy eating and physical function to be unrelated, and prioritised healthy eating over physical function [3].

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Although lifespan has not changed, life expectancy has increased dramatically over the past century [4]. He reported that the implication will be an increased proportion of the aged population of which most of them may be weak and frail who need to be cared for. He reiterated that avoiding continually rising health care cost and maximising satisfaction with life requires postponing and minimising chronic illness which are mostly due to decrease in functioning of the various body organs and nutritional status one has built in life. Some current hypotheses on ageing suggest the following possible causes: errors in DNA copying accumulate, connective tissues stiffen, damage cell components build up, and electron-seeking free radical compounds break down cells parts. In addition, hormonal and immune systems do not function well as the autoimmune responses and high blood glucose damage key body compounds. He stated that researchers are also studying the possibility that excess energy intake may be a factor to premature death. However, he observed that diet can play a major role in solving some of these processes for mankind to benefit from increasing life expectancy [4].

Ageing is accompanied by several physiological and psychological changes in the organism of an individual (e.g., decreased sense of taste and smell, disruption of satiety, depression), which affect the nutritional intake. Unbalanced and highly caloric food had been preferable to healthy food in the last period. Leisure time is rather spent in front of the TV, tablet, detrimental to rational physical exercise, recreational sports or hiking. The family environment is very important and all our actions should be focused on continuous education about the risks of unhealthy food and a sedentary lifestyle [5]

The aged at Nkawie in the Atwima Nwabiagya District of Ashanti Region have for a long time had their fair share of nutritional problems. Most of them live in abject poverty with little or nothing to feed on. Their problems are compounded by chronic disabilities, loneliness, depression, loss of sight, and other physical factors which affect their nutritional habits. These factors have serious repercussions on their health and social status and in general, hasten their journey to the grave. Thus, for most people, old age is not a "golden age" because it is filled with physical and psychic pain. Nutrition plays a vital role in the ageing process and therefore the study of eating practices and their effects on the aged population at Nkawie in the Atwima Nwabiagya District of Ashanti Region is a step in the right direction. The purpose of this study was to examine the eating habit lifestyle and physiological changes of the aged in Nkawie in the Ashanti region of Ghana. The study sought to answer these research questions (1) How does the lifestyle of the aged at Nkawie affect their eating habit? (2) What are the effects of

physiological changes on the diet of the aged at Nkawie?

## 2. Review of the Literature

Ageing is not something at age 55, 65 or 75 years, it is a process that begins with conception and continues throughout life. It is the inevitable accumulation of changes, with time that are associated with and responsible for an ever-increasing susceptibility to diseases and death [6]. As an organism becomes older, the number of cells decrease and the function of the remaining cells decline. Individuals with less cellular repair capacity will lose cells and consequently age more quickly. Individuals who inherit a low capacity to repair cellular damage may live long lives if they live in an environment with few factors that damage cells and also if they eat well and exercise regularly [6].

Ageing is universal to all living things and it is a process which is not understood. However, how long we live and remain healthy are affected by our genetic makeup and the environmental factors including nutrition and lifestyle activities in which we spend our years [7]. Ageing, is an inevitable, natural process programmed into the genes at conception but that people can adopt life style habits such as exercise, good nutrition to slow down the ageing process within the natural limits is set by heredity [8]. The goal of successful ageing is to increase not only life expectancy but the number of years of healthy life that an individual can expect.

Physical changes of ageing normally have adverse effect on the aged causing weight loss, diminished mental function, and decreased physical ability to function, social withdrawal and malnutrition [9]. However, physical activity and a diet adequate in nutrients and rich in photochemical may not only maintain energy needs but also uphold other functions such as a healthy immune response. Sound nutrition and other life factors influence the physical and physiological progress of ageing. They asserted that malnutrition in old age promote illness and death while sound nutrition is an important component in the prevention of some diseases and this extends the life style of an individual [10]. The role of food and nutrition often changes during ageing. Besides reducing risk of diseases and delaying death, diet plays a role in health and longevity by contributing to wellness. Wellness means having the energy and ability to do the things one wants to do and to feel in control of one's life. Good nutrition can help to "add life to years" and also add "years to life" [11].

Though ones' genetic make-up and the act of living a physically active life can slow the ageing process, good nutrition can retard and ease the ageing process in many significant ways through drastic manipulation of the diet during the middle age through old age [12]. Preventive health

practices such as healthy diet, daily exercise, stress management, and control of lifestyle habits such as smoking and drinking, can lengthen the lifespan and improve the quality of life as people age. Drinking plenty of fluids helps in maintaining healthy skin, good digestion and proper elimination of waste. Minimum amount of eight glasses of water should be consumed daily and this will help in proper circulation of blood. Alcohol, nicotine and caffeine all have potential damaging effects, and consumption should be limited or completely eliminated [12].

The physiological changes influence nutrition status, just as growth and development do in the earlier stages of the life cycle [13]. However, changes in physiological functions have important implication on the nutritional status of older adult. She added that the incomplete digestion and consequent reduced absorption of nutrients would result in nutrient deficiencies, regardless of the adequacy of nutrient intake [14]. Basically, normal ageing is associated with shifts in body composition and subsequent loss of physical resilience. Physiological system changes commonly associated with healthy ageing are described as changes in the function of cardiovascular system, endocrine system, gastrointestinal system, musculoskeletal system, nervous system, renal system, and respiratory system [11]. Reduced function in digestive tract, decreased secretion of digestive hormones, tooth loss, gum diseases, reduced salivary output, diminished function in sensory organs, and changes in body composition are examples of physiological changes of ageing that affect nutrition [7].

Physical changes of ageing normally have adverse effect on the aged causing weight loss, diminished mental function, and decreased physical ability to function, social withdrawal and malnutrition [9]. Indeed, conditions that affect eating patterns of the elderly most directly are sensory changes and psychosocial factors. They claimed that stress and anxiety affect digestive process through their influence on the autonomic nervous system and that increase in stress may inhibit salivary and gastric juice secretion [15].

Physiological changes that affect the diet of the aged include hormonal changes, decreased functioning of the gastrointestinal tract, decreases in the body mass, decline in bone mass, decline in immune and cognitive functions and decrease in the functions of the various senses and systems of the body [16]. Nutrition problems of older adults are related to the presence of chronic diseases and also the normal decreases in organ function that occur with time. These include loss of teeth, lessened sensitivity to taste and smell, changes in gastrointestinal tract function and deterioration in cardiovascular and bone health [4].

Physical changes such as decreased visual acuity, joint

problems, hand tremors and hearing problems, often occurring in combination may make the task of food preparation and eating difficult for the elderly [17]. A study opined that, stress and anxiety may inhibit salivary and gastric juice secretion which will in turn decrease nutrients digestion [15].

### 3. Methodology

The survey research design was used for this study. The total population of the District was 237,610 comprising 115,312 females and 122,298 males. However, the population of the elderly (60 years and above) in the District was 19,188 representing 8.07%, comprising 8,260 females and 10,928 males [18]. The target population for the study included all the aged people at Nkawie in the Atwima Nwabiagya District of the Ashanti Region who were 60 years and above, and were made up of males and females, literates and illiterates.

Stratified and convenience sampling techniques were used to select one hundred (100) aged people at Nkawie in the Atwima Nwabiagya District of the Ashanti Region for the study. Stratified random sampling was employed because it gives higher precision since every part of the population gets a better representation. Also, the population was heterogeneous and had definite strata or classes. The district was sub-divided into 5 strata. The questionnaire was pilot tested at Abuakwa; one of the suburbs of the regional capital to fine tune the questionnaire before it was used for the actual work. Fifty (50) illiterates of the aged group were assessed on their eating habits and life style using the questionnaire designed for the study from each stratum. The procedure was repeated for the aged literates. The researchers therefore interviewed 50 males and 50 females of which each group constituted 25 literates and 25 illiterates.

The main instrument used for the data collection was a semi-structured questionnaire. The questionnaire was administered personally to the respondents. Whereas some participants were able to complete the questionnaire themselves, others who could not write were assisted by filling in their responses. Respondents who needed further clarification were assisted to ensure that the questions were answered rightly. With the illiterate respondents, the researchers assisted them by interpreting the questionnaires from English language to a Ghanaian language (Twi). The total interview time for each subject varied between 30 minutes and 1 hour.

The data collected were entered and analysed using the Statistical Package for Social Sciences (SPSS) and descriptive statistic of means, frequency distribution and percentages. Data was considered in terms of meal frequency and the regular use (intake) of selected food items: breakfast, lunch, supper and snack and other selected food such as fruits, vegetables, meat

and poultry, dairy products, fish, cereals, roots and tubers, fats and oils and alcoholic and non-alcoholic beverages.

## 4. Findings and Discussions

### 4.1. Life Style of the Aged Affects Their Eating Behaviour

This section presents findings and discussions on the first research question – (1) How does the lifestyle of the aged at Nkwie affect their eating habit? Questionnaire was administered to ascertain the lifestyles of the aged respondents and their effects on eating behaviour. The investigation carried out centered on cigarette smoking, alcohol status and physical activities including standing, sitting, sleeping, brisk walking and aerobics.

#### 4.1.1. Cigarette Smoking Among the Elderly

**Table 1.** Cigarette smoking among the elderly.

Number of Sticks of Cigarette	Male		Female		Total %
	Frequency	%	Frequency	%	
1 - 2 sticks	2	4	0	0	2
3- 4 sticks	3	6	0	0	3
5 - 6 sticks	1	2	0	0	1
one packet	1	2	0	0	1

Lifestyles of the aged respondents were also investigated. Few of the respondents (7%) smoked cigarette. It was observed that only male respondents smoked cigarette. No female respondent smoked cigarette. Four percent (4%) of the males smoked 1 – 2 sticks a day and the other 6% smoked 3 – 4 sticks a day, 2% smoked 5 – 6 sticks a day and other 2% smoked a day. The result has been represented in table 4.30. The results in this study

#### 4.1.2. Alcohol Intake Among Respondents

**Table 2.** Number of Times of Respondents drank alcohol.

How often respondents drank	Males		Females		Total
	Frequency	%	Frequency	%	
Occasions (funerals, parties, festivals, etc.)	10	20	5	10	15
Everyday	2	4	0	0	2
Once a while	3	6	1	2	4

Table 2 shows that 15% of the respondents (males and females) drank alcohol on occasions. Four percent male respondents drank alcohol every day. Four percent (4%) respondents (both males and females) drank alcohol once a while. Even though 42% of the respondents drank alcohol, the majority drank alcohol during occasions such as funeral, festivals, marriage and naming ceremonies. This finding

revealed that the percentage of cigarette smoking among the aged respondents were very minimal. It was observed that only 24% of the male respondents smoked cigarette. However, the average number of sticks smoked per day was between 3-4 sticks. The study posits that few number of the aged smoked cigarette, but they need to be counselled because it has health implications at that age. A research paper on Cigarette Smoking Among the Elderly: Disease Consequences and the Benefits of Cessation published in *American journal of health promotion* support the findings of this study that the disease consequence of smoking occurs disproportionately among the elderly because of the long duration of cumulative injury or change that underlies the bulk of tobacco-caused disease. Older smokers are less likely than younger smokers to attempt quitting, but they are more likely to be successful in the attempts that they do make to quit. Excess absolute rates of disease incidence and mortality due to smoking increase steadily with increasing age and duration of smoking, and there is little evidence to suggest that the disease consequences of smoking diminish among the elderly. Although cardiovascular disease is the most common cause of excess mortality among younger smokers, lung cancer is the largest cause of excess smoking-related mortality over the age of 60 years; and at older ages the excess death rate from chronic obstructive lung disease equals that for cardiovascular disease. Because of the dramatic increases in smoking-related excess mortality with advancing age, approximately 70% of the 400,000 or more deaths occur among those over age 60 years [17]. This implies that the aged discouraged in smoking to prevent intermittent infection.

disagrees with the statement made by [8] that alcoholism is prevalent among the elderly however, the statement could be true in relation to high alcohol intake among the aged in some cold countries as the extended family structures are not working and loneliness, depression, stress and grief could be contributing factors.

### 4.1.3. Physical Activity – 24 Hour Lifestyle Activity

**Table 3.** Physical activity: 24-hour lifestyle activity.

Physical Activity	Male		Female		Total
	Frequency	%	Frequency	%	
Standing					
< 2 hours	26	52	29	58	55
2 - 4 hours	17	34	17	34	34
5 - 8 hours	7	14	4	8	11
Sitting					
<2hrs	5	10	4	8	9
3-4hrs	14	28	12	24	26
5-10hrs	26	52	27	54	53
>10hrs	5	10	7	14	12
Sleeping					
< 5 hours	18	36	25	50	43
5 - 8 hours	19	38	16	32	35
9 - 10 hours	9	18	6	12	15
> 10 hours	4	8	3	6	7
Brisk Walking					
Yes	12	24	13	26	
No	38	72	37	74	75
Aerobics					
Yes	6	12	7	14	13
No	44	88	43	86	87

Table 3 revealed that majority of the aged could only stand for less than two hours in a day with only a few who could be on their feet for five to eight hours a day. The aged complained of tiredness, weaknesses in the skeletal system and dizziness when they stood for long hours. It was observed that the aged could not stand for long hours but rather spent most of the hours during the day sitting down. Concerning the number of hours, the aged slept in a day, they reported that they could sleep during the day more than at night; they woke up with the least noise. The average number of hours the aged respondents slept during 24 hours was between 5-8 hours a day. A question which was asked to ascertain whether the aged involved themselves in brisk walking revealed that only 25% of the aged involved themselves in brisk walking. Only 13% of the aged respondents did vigorous exercise with the majority always glued to their seats. This agrees with [11] that ageing is associated with shifts in body composure and subsequent loss of physical resilience. Common changes associated with healthy ageing include musculoskeletal, nervous and cardiovascular systems which may tend to reduce function in the digestive tract. Though the aged experience loss of much of their ability to perform strenuous activities, some aged individuals are excellent sports men and women. This posit that, the aged ability to involve in physical activity was poor.

### 4.2. Effects of Physiological Changes in Relation to the Diet of the Aged

This section also present findings and discussions on research question two (2) What are the effects of physiological

changes on the diet of the aged at Nkawie? As ageing progresses, inevitable changes in each of the body's organs contribute to body's declining function. These physiological changes influences nutrition status, just as growth and development do in the earlier stages of the life cycle. Physiological changes including dentition problems, how to handle food, loss of sight, hearing impairment, problems with sense of smell and loss of appetite were investigated.

**Table 4.** Physical Factors that affect choice of food (Respondents chose more than one option).

Physical Factors	Male		Female	
	Frequency	%	Frequency	%
Dental Problems	36	72	40	80
How to handle the food	6	12	3	6
Loss of sight	10	20	6	12
Hearing impairment	5	10	11	22
Problem with sense of smell and taste	22	44	30	60
Almost all the above	3	6	3	6

Respondents were faced with varied physical factors affecting the choice of food. Table 4 shows the frequency at which these factors affected choice of food by them. Seventy-six percent (76%) respondents (male and female) indicated that dental problems affect their choice of food, 52% complained of the problem with sense of smell and taste, 16% indicated that they had problem with loss of sight and another 16% also reported of hearing impairment. Nine percent (9%) of respondents complained about how to handle the food while 5% indicated that they suffered from all the physical factors indicated above. The results of the study showed that more than half of the aged reported of dentition

problems including tooth loss, dental caries and bleeding gum which made chewing difficult or painful and this condition could affect food choices and eating habits. The dental problems limited their food selections to soft foods which they could swallow easily.

About half of the respondents complained of the problem with poor sense of smell and taste. The interference with sense of taste and smell affected the enjoyment of food. Some of the aged respondents indicated that they sometimes ate for eating sake and not for nourishment or enjoyment. Some of the aged respondents complained about loss of sight which rendered them immobile. The situation had affected their ability to go for shopping, cooking and cleaning up.

A few aged respondents complained about changes in their sense of taste, smell, touch, sight, hearing, and dentition which affected their appetite and the motivation to cook and even eat. The study confirms the report by [18] that physical changes including decreased visual acuity, joint problems, hand tremors, hearing impairment, loss of sense of smell and taste which, often occurred in combination made the task of food preparation and eating difficult for the elderly.

## 5. Conclusion and Recommendation

The study that, revealed good nutrition suppresses the earlier onset of old age diseases which are mostly nutritional related and can make one age faster than the normal ageing process. Chronic disabilities, loneliness, poverty, depression, loss of sight, diminished sense of taste, hearing impairment and other physical disabilities affect the eating habits of the aged which tend to have detrimental effects on the nutritional status of the elderly. The study also concluded that, nutrition in relation to the physiological changes and the health status of the aged taking into consideration their eating habits and the various challenges affecting their lifestyle.

The aged should be given the needed support and companionship at home and in the communities in which they live. It is therefore recommended that, the aged should be assisted to eat foods that are familiar, especially ethnic foods that are known by the family as this could bring nostalgic feelings to comfort them. It is also recommended that, collectively, the society should provide social roles for the elderly to participate in not just for monetary reasons but for psychological reasons which is one of the factors affecting food habit of the aged. For example, some old women and old men could be encouraged to work in day care centre as paid or non-paid “Para – professionals”. This will help to reduce the incidence of loneliness, isolation and depression among the aged.

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