

Factors Influencing the Choice of food preference among the Geriatrics in Nyamira Sub-County, Kisii County, Kenya.

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Abstract

Background; The population of persons aged 60 years and above is increasing steadily from one million in 1989 to 1.9 million by 2009 and is projected to reach about 3 million people by year 2030. This has been attributed to the normal aging processes, medical conditions, and lifestyles in terms of nutritional status.

Purpose: This study aims to determine factors influencing the choice of food in accomplishing proper nutrition for geriatrics. **Methods;** A descriptive cross sectional study was used, where Nyamira Sub County was purposively selected. The study employed multi-stage sampling technique where the county was divided into sub-counties which were clustered into locations. Simple random sampling was used to select three wards then villages and randomly selected households to visit and interviewed 230 geriatrics where data was collected by use of face to face researcher administered questionnaire, focused group discussion guide and key informant guide. **Results;** the study found that (43%) of the respondents were male while (57%) were females. (51.3% were married and marital status was significantly related with nutritional status ($\chi^2=27.77, P<0.01$). Physiological factors such as disease conditions (13.9%), body changes as well as psychological factors such as culture (12.2%), economic status (56.1%), loneliness (13%) and bereavement (4.8%) influenced the choice of food.

Conclusion and Recommendation; factors that influenced choice of food included: physiological factors, psychological factors, personal preferences, and culture and high levels of poverty. The associated factors should be addressed through conducting regular medical check-ups and counselling sessions to ensure physical and mental stability which will lead to proper nutritional status and general well-being.

Key Words; Nutrition Status, Geriatric Nutrition, Dietary practices, Malnutrition, Mini Nutrition Assessment

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I. Introduction

Globally, the older populations in developing countries as a whole are growing more rapidly as compared to those in more developed nations, with projections that by 2020, about (70%) of those aged 60 years and above will live in developing countries. The major concern regarding this dramatic increase in the numbers and proportions of older adults, is the level of morbidity and associated reductions in functional ability in the geriatrics thus causing an economic burden in the health sector. Nutritional status in old age is therefore an important aspect in determining their health status.

In Sub-Saharan Africa, the geriatrics are not prioritized in the health and nutrition programs which primarily target children under five years, women (pregnant and lactating), and people living with HIV/AIDS (HelpAge International, 2007). Likewise, many countries lack support mechanisms such as formal social protection for this population (Ferreira, 2007).

Kenya has adopted the definition of geriatric people as those aged 60 years in conformism with United Nations and African Union definitions. The distribution varies across the forty seven counties with the highest concentration in Nyanza and Rift Valley provinces (KDHS 2009). Unlike other demographic groups, the nutritional needs of geriatrics in Kenya are neither clearly understood nor documented. The nutritional status of geriatrics is viewed as critical as that of mothers and children under five years of age and acknowledged as being vulnerable, yet their nutritional needs are not being adequately met.

It has been found out that many of the diseases suffered by older persons are as a result of dietary factors, some of which have been having impact since childhood. These dietary changes seem to affect risk-factor levels through life and have even greater impact on geriatrics. Among the aged, vitamin or mineral deficiencies occasionally do not develop abruptly, instead they evolve slowly over a period of time as a result of limited intake, impaired absorption, or excessive excretion (Amella, 2007). Marginal deficiency is characterized by gradual nutrient depletion and personal lack of well-being associated with impairment of certain biochemical

functions. The food consumption patterns and nutritional status are inter-related (Coulston, et al 2008). The nutritional status of the geriatrics is influenced by the food consumption patterns whereas the diversity of the diet is influenced by the distribution of the nutrients in particular foods (Ondigi, 2003). Ondigi further suggests that, increasing age and decreasing calorie requirements results in the consumption of less food and can lead to nutritional inadequacy.

In Nyamira County, majority of the population is migrating to the urban leaving the geriatrics lonely in the rural. Therefore, this means that they cannot adequately meet the RDA and due to their degenerating state, they become vulnerable to malnutrition as well as susceptible to many disease conditions (White, 2002).

In considering gender, women comprise the majority of the older population in almost all countries because they live longer than men (WHO Global Status Report on NCD, 2011). This trend evolves its own nutritional needs, emphases and patterns of malnutrition where women are at a greater risk due to their bone loss that accelerates after menopause as a result of inadequate calcium intake.

Therefore, improving the nutritional status through food consumption and diet diversity can lead to improved nutritional status of the geriatrics.

II. Methodology

This was a community based cross sectional descriptive study. Both qualitative and quantitative data was collected through face to face researcher administered questionnaire, focused group discussion guide and key informant guide where discussions were conducted in three divisions. The study area was in Nyamira Sub-county, Nyamira County, Kenya which is among the counties with high prevalence of geriatrics. The study population included persons aged sixty years and above and were residents in the study area.

A sample of 230 participants was determined using Fisher et al., 1998. Data was collected through face to face researcher administered questionnaire, focused group discussion guide and key informant guide. Nutrition assessment was carried out using MNA tool, clinical assessment on age-related health problems was considered and dietary assessment using food frequency questionnaire. Anthropometric measurements included; height, weight and BMI in determining the malnutrition status of geriatrics.

Data was analysed using descriptive statistics aided by SPSS. Significance testing was done by use of Chi Square and qualitative data was analysed using content analysis and relevant themes derived. Anthropometric data was analysed using BMI cut-off of 18.5kg/m^2 for underweight. The geriatrics below age sixty were excluded and those who could not consent as well as the mentally handicapped. Data collected was cleaned, coded and analyzed using SPSS version 20 with (95%CI) and statistical significance set at $p < 0.05$. Chi – Square was used to establish relationship between the choice of food and the nutritional status.

Ethical clearance was sought from Kenyatta University ethics and research committee, research permit was also obtained from NACOSTI with application number PKU/366/I 340 and informed consent from the participants was sought as well as assured of confidentiality.

III. Results

In determining the factors that influenced the choice of food preference by the geriatrics in Nyamira Sub-county, Nyamira County, Kenya. The following socio-demographic factors analyzed generated the following findings.

3.1 Gender and Age

A total of 230 geriatrics above 60 years who were interviewed where (43%) were males and more than half of them (57%) being females. In terms of age, (30.4%) were aged 60-64, (21.7%) were aged 65-69, (25.7%) were aged 70-74 and above 74 were 22.2%). Majority of the geriatrics in all age groups comprised females (Figure 1 below).

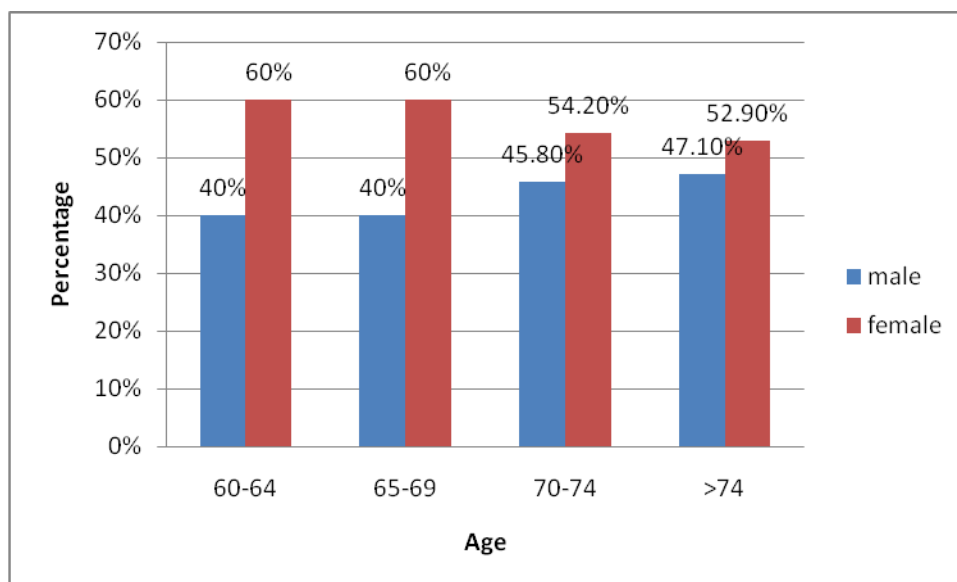


Figure 1: Gender/age of the respondents

3.2 Education level

The study sought to understand the educational level of the respondents. Thirty-seven percent of the geriatrics had no education at all, twenty-three percent had attended primary up to class four, those who completed primary were (18.7%), and those who completed secondary were (13.9%). A smaller percentage (3.5%) had tertiary education while (2.2%) had university education. Further analysis showed that there was a high significant relationship between the level of education and nutritional status ($P < 0.001$). This study found out that male had higher education levels across all the age groups compared to females as shown in Table 1.

Table 1 Respondents' level of education

Level of Education	Frequency (f)	Percentage (%)	χ^2	DF	P value
No education	85	37	37.260	12	0.0001
Primary	96	41.7			
Secondary	36	15.6			
Tertiary	13	5.7			

3.3 Early and present occupation

This study established the relationship of the respondent's early occupation and present occupation. Forty-three percent of the geriatrics was currently farmers as compared to (32%) who were farmers in the early years. Many of the respondents (24%) were staying at home and depended on other people for providence while (11%) took care of their grandchildren. Twenty-one percent were managing small businesses while (1%) carried out skilled work in their old age (Figure 2).

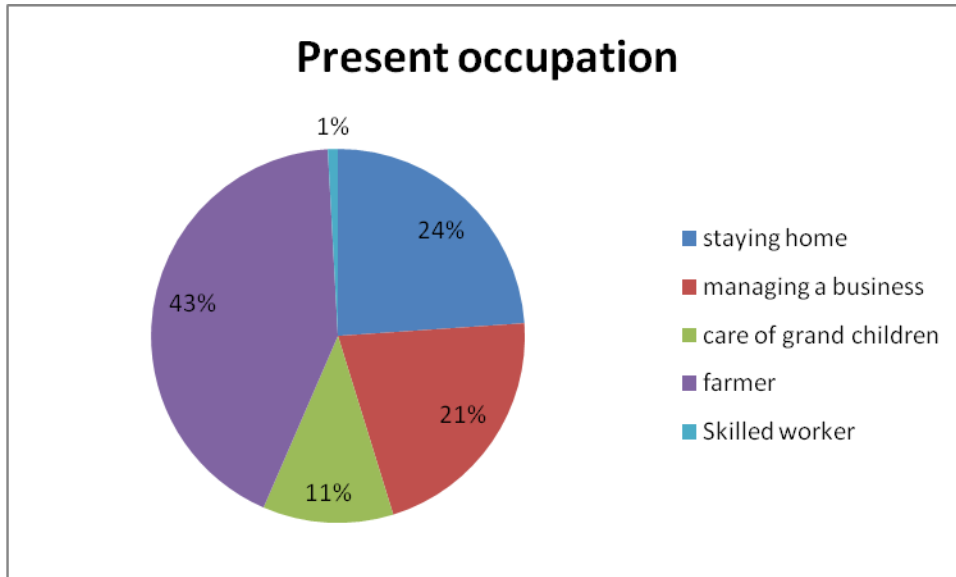


Figure 2: Respondent's present occupation

3.4 Relationship with Housemate

Almost forty percent stayed with their spouses, while (12%) stayed either with their siblings or alone. A greater percentage of geriatrics (33.9%) stayed with their grandchildren while a smaller percentage (2.2%) stayed with their friends (Table 3).

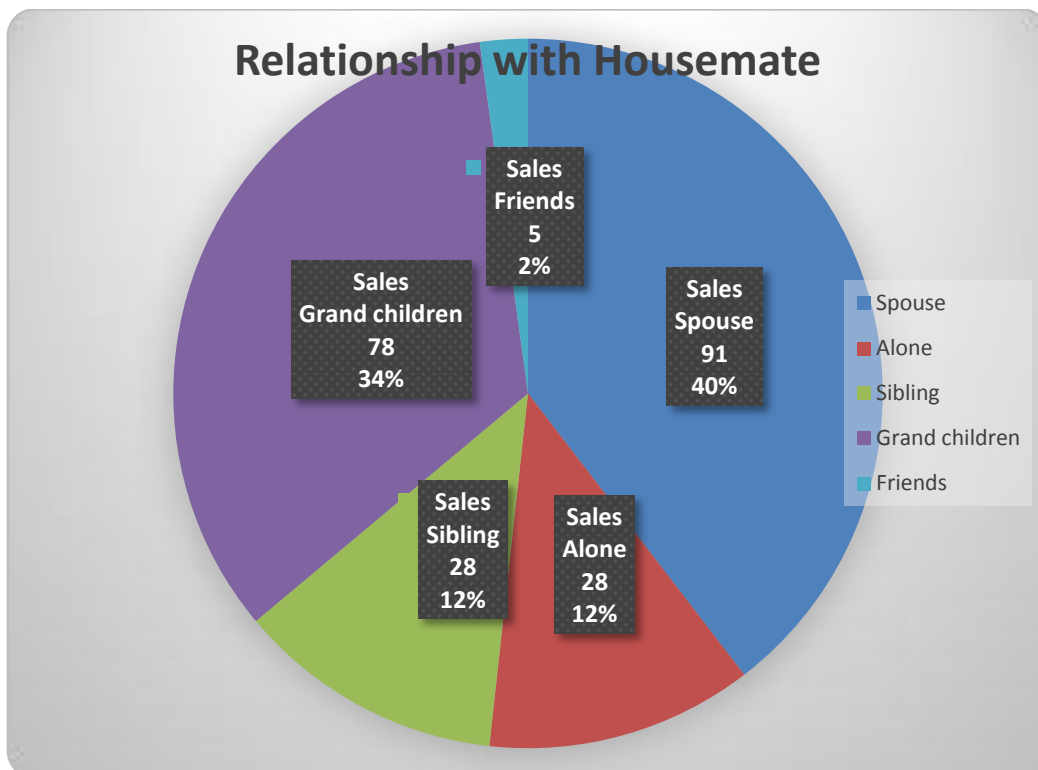


Figure 3: Relationship with present housemate

3.5 Factors influencing choice of food

Physiological factors such as disease conditions, body changes that they had experienced were considered as well as psychological factors such as culture, economic status, loneliness and bereavement.

3.5.1 Physiological factors

More than half of the respondents (58%) had dental problems, twenty-three percent had loss of appetite, those who were disabled were (14%) and twelve percent had loss of taste (table2).

Table 2: Physiological factors

Physiological factors	Frequencies (f)	Percentage (%)
Loss of appetite	23	53
Physical disability	14	33
Loss of taste	12	27
Dental problem	134	58

3.5.2 Disease conditions

The commonly experienced disease conditions were assessed to establish the health status in determining nutritional status. Arthritis (41.7%) and diabetes (30.9%) were common (Table 3) below.

Table 3: Disease conditions affecting respondents

Disease conditions	Frequencies (f)	Percentage (%)
Diabetes	71	30.9
Blood pressure	82	35.7
Heart conditions	24	10.4
arthritis	96	41.7
osteoporosis	21	9.1

3.5.3 Psychosocial Factors

More than half of the respondents (56%) reported economic factors was major in determining food choice, five percent chose according to what they preferred and other factors had almost similar percentages as illustrated in figure 4 below.

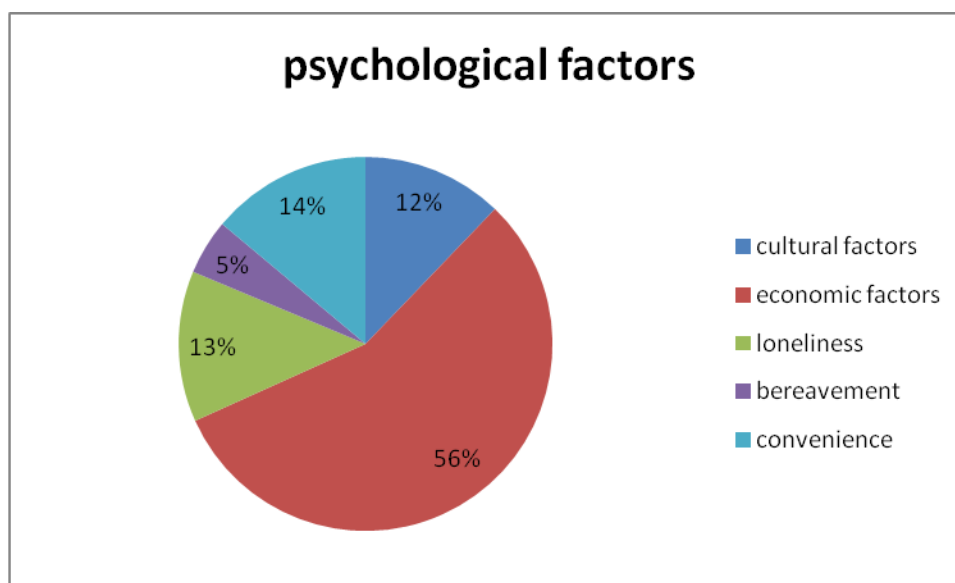


Figure 4: Psychological factors influencing choice of food

4.5.2.1. Factors that determine choice of food as per FGDs

The following factors were considered to affect how the geriatrics chose food in the focused group discussions. Some of the responses were;

Theme 1: Personal preferences and culture

The respondents explained preference as eating what they felt to eat at that moment and culture as what was considered an abomination to the society. One respondent explained;

“We choose food considering personal preferences and what is available at that moment. Cultural factors for instance women forbidden to eat chicken and eggs are also contributing factors” (FNO3).

Theme 2: Poverty

This was considered as the available money to buy food and the land available for farming. One respondent stated the following:

“The level of poverty contributes a lot on how we choose food because if the money is not available then we may go hungry. The farms have also become so small that the harvested food is never enough until the next harvest season” (FNO1).

Theme 3: Diseases

The geriatric is vulnerable to many diseases that make them more susceptible to suppressed immunity. Some of the diseases are long term meaning they have to be on medication which limits the resources needed to acquire adequate diet as well as limit them on other diets.

One geriatric responded by saying;

“We are vulnerable to many disease conditions for instance diabetes, blood pressure that we are restricted on so many diets. The locally available food becomes insufficient hence we are left with a diet which is not balanced” (FNO8).

Another respondent further gave the following explanation:

“The level of stress is also on an increase thus we mostly eat foods which are not acidic and they are rare FNO2”.

IV. Discussion

Physiological factors were established to determine nutritional status. Therefore, dental problem was the major factors as compared to loss of appetite, being disabled, disease conditions and body changes. This made chewing and swallowing to be difficult as well as unable to consume hard foods leading to choosing certain types of food as compared to others. Vision was also a problem as they could not be able to see properly especially if they wanted to prepare food and cooking also become a challenge. Other studies conducted by (Rolfes *et al.*, 2006), have indicated that hearing, vision and body functions like digestion systems decline with age leading to choosing certain foods as compared to others. For instance, one could choose to eat a light meal that does not take time to cook and which is easily digestible without considering how balanced it is thus affecting the nutrition status.

Disease conditions such as diabetes, blood pressure, heart conditions, arthritis and osteoporosis determined the foods that the geriatrics chose. Some of these diseases have prescribed medications that lower appetite; others can cause nausea affecting taste leading to decreased food intake hence affecting nutritional status. This is similar to a study carried out by (Whitney *et al.*, 2005) which indicates a great interrelationship between nutrient absorption and use of medicine especially in the geriatrics.

Psychological factors such as culture, economic, loneliness, bereavement and convenience were assessed in determining nutritional status. Economic factor was found to be the major issue in buying food as many geriatrics engaged in low income activities. This is similar to a study done by (Whitney *et al.*, 2005) that found that many older adults have limited funds for food expenses and even transportation in acquiring that food. This may affect the quality of food choices leading to consumption of less nutrients thus leading to malnutrition. Cherchye, De Rock and Vermeulen (2008) argue that the issue of poverty is especially troublesome for the elderly since they have fewer possibilities to recover from a reduced income, and find it difficult to re-enter the labour market due to their age. The decrease in income after retirement and a lower life expectancy including inadequate mechanisms to cope from poverty tends to be more everlasting for the geriatrics (Bohman *et al.*, 2007).

Culture was also a determining factor where people believe on certain taboos that affect how they choose food or prohibits a certain group from consuming other foods. For instance, women were prohibited from eating chicken and eggs as a cultural practice limiting the protein intake, this coincides with a research done by (Rolfes *et al.*, 2006) which states that culture was a prohibiting factor in acquiring proper nutrition leading to poor nutritional status as there is need to increase the protein intake in old age.

Loneliness was a challenge in the old age as one cannot be able to carry out some of the chores especially when it comes to shopping, preparing the food and cooking. Loss of social contact was a problem for many older adults as well as retirement and loss of family and friends which led to loneliness. Communication and socialization was more important than living alone as suggested by (Whitney *et al.*, 2005) who found out that loneliness led to lower interest in shopping, cooking and eating hence inadequate nutrient intake leading to malnutrition.

Bereavement due to loss of a loved one or family member could lead to depression which has a lot of emotional disturbances especially in old age. This can cause serious disease conditions where medication is prescribed limiting intake of some foods. This led to deteriorated health and poor feeding habits affecting the nutritional status. Convenience was also a contributing factor where the geriatrics cooked food which was available at the moment and easy to cook.

V. Conclusion

The study concludes that factors that influenced the choice of food among the geriatrics included: physiological factors, psychological factors, personal preferences, culture and high level of poverty. Those that affected food intake include: dental problems, loss of appetite, loneliness, loss of taste and bereavement.

VI. Recommendation

The study recommends that the various factors that influence choice of food among the geriatrics should be addressed through conducting regular medical check-ups and counseling sessions to ensure physical and mental stability which will lead to increase in nutrient intake and general improvement in nutritional status.

Recommendation for Further Study

A study to investigate micronutrient malnutrition in the geriatrics, considering gender differences in nutrient intakes and deficiencies.

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