

Effects of COVID 19 on feeding habits among students of the Eldoret National Polytechnic residing outside college

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Published online: 9th September, 2023

Abstract

Changes in the dietary patterns of Kenyans have been attributed to urbanization and acculturation, which were further hit by the COVID-19 pandemic. Research conducted amongst young adult populations documented several examples of poor dietary patterns associated with urbanization which include skipping meals, following fad diets, greater consumption of snack foods and avoidance of certain food groups, particularly fruit and vegetable. Covid 19 pandemic affected food system and nutrition in diverse ways disrupting accessibility and availability of food since its onset in 2019. This pandemic resulted in lower incomes, loss of jobs and higher prices of food and food products leading to food insecurity and stalling the efforts towards attaining the sustainable development goal SDG 2 (no hunger). The aim of this study was to provide insight in addressing the effects of severe acute respiratory syndrome on feeding habits among the students of the Eldoret national polytechnic. Convenience sampling was used to get targeted respondents/participants. Descriptive survey method was used to collect data with the use of questionnaire as the data collection tool. The sample size of 115 was derived using from Krejcie and Morgan table. Categorical data was expressed using numbers; percentages and relationship between categorical variables was assessed using chi- square. Frequency tables, charts and graphs were used to present data. From the findings most of the students used gas burners as a source of fuel at 63.4% and bought food from street vendors, on cooking 70% stated that they preferred frying foods. On meal frequency 60% of the students stated that they skipped meals while 36.5 % said they ensured they took breakfast which they perceived as the most important meal of the day. It was concluded that time, purchasing power and emotional stability played a key role in determining feeding habits among students. There is need for nutrition intervention policies to relook at eating behavior which is determined by various factors.

Key words: Feeding habits, COVID -19, students, dietary patterns, food insecurity

Introduction

In December 2019, Covid 19 was transmitted from animals to humans at a sea food market known as Huanan in China and it spread quickly to the rest of the world leading to another outbreak of the pandemic that affected economy and food security widely (Wang C et al 2020).

The disease became a concern for public health and has led to economic and social crises. In the region of East Africa, the first case of COVID-19 was reported in Kenya on March 13, 2020, and the disease has continued to spread in the regions, with new infections reported every day since then. This stressful situations lead to boredom and anxiety as a result of continuous flow of information from the media about Covid 19,hence this crisis has led to people –eating refined foods and overeating of comforting foods (Yilmaz C 2020).This is a typical example of how Covid 19 is affecting feeding habits of different groups of people.

Outbreak of Covid 19 has affected food security which directly affects proper dietary intake which is a major determinant of proper development and growth of humans, increased physical and mental functions which is very essential in lives of students in order to maximize their potential (Yilmaz, 2020). Young adulthood, this is the times span covering people of aged 17-30 years of age from a nutritional point of view growth and development is not yet completed at this stage. Physical growth continues up to about 21years and bone growth continues to about the mid-to late twenties (Weigley et al., 1997).

A significant number of the students population entering the colleges are still in late adolescence and early adulthood in terms of growth phase. School environment can lead to frustrations lowliness and this can result to poor feeding habits like meal skipping, snacking instead of taking main meals and eating at fast food stores.

In Kenya, Ministry of Health and Education closed schools due to Covid 19. On resumption students were met by different challenges including decline in ability to buy healthy foods as a result of food inflation and decrease in economic power of most of the parents and guardians, Covid 19 affected the dietary habits and consumption of processed foods fruits and vegetables. People including students took the options of less expensive food items that are less nutritious and shifting to only necessary foods (MC, Kinsey 2020). The aim of this study was to establish extend in which Covid 19 has affected feeding habits of students, with a typical example of The Eldoret National Polytechnic.

Statement of the problem

Proper food habits such as: food selection, preparation and appropriate eating habits are factors that build good nutrition thus healthy lifestyle. However several factors become obstacles to attainment of the above. When individuals are not able to attain good nutrition they became prone to illnesses because of lowered immunity and compromised metabolisms causing decreased mental and physical performance. Since the onset of Covid 19 in December 2019 feeding habits of students have been compromised due to the crush programs in the institutions which directly affect time spend on food preparation and purchase and reduced purchasing due to food prices inflation owner. However very few studies have been undertaken to establish the eating habits of students in Kenya amid the Covid 19 pandemic. This study aimed at establishing the dietary changes that the pandemic has brought among the student's in TVET institutions, The Eldoret Polytechnic being the sample center.

Objective

To establish the effects of feeding habits of students at The Eldoret National Polytechnic residing outside college.

Significance of the study

Informed choices when purchasing, preparing and eating food are essential for good nutritional status. This study identified effects of Covid 19 on the feeding habits of students residing outside college; students had been identified as specific risk groups for nutrient deficiencies due to poor feeding habits. Therefore information gathered during this study was used as foundation for recommendation for nutrition education programs in order to improve student's feeding habits by addressing food habits obstacles. This was an attempt to improve compliance with dietary guidelines like Recommended Dietary Allowance (RDAs).It will be archived by generating dietary advice that is scientifically sound ,practical, culturally sensitive and consistent hence improved feeding habits and reduce risk of lifestyle diseases therefore leading to improved class and extra curriculum performance in TVET Institutions.

Literature review

Any disease that is pandemic in nature has a direct impact on households, governments and all types of businesses through diverse ways which include increased hospital expenditure, high cost of running businesses and inflated food prices .Restrictions which included

lockdown and curfews have further affected all stages of food supply including production from the farm and industry impacting directly on distribution and utilization therefore negatively affecting feeding habits of individuals (Bene, 2020). Due to food shocks, food prices automatically rose with those of the most nutritious foods rising tremendously. UN-Habitat & WFP (2020) reported that food prices had increased in the region from 8-10% between the month of April 2019 and April 2020 and this was attributed to the outbreak of Covid 19. Fresh produce like vegetables and different types of fruits, meat and meat products, dairy and dairy products have crazily increased due to disrupted process of food supply. Covid 19 has affected socio economic status of individuals globally leading to variation of food choices and eating habits, it is the major determining factor for feeding habits among individual's students being the most affected. Feeding habits is a major determining factor of good health of and quality life. According to Bene (2020), the ability to afford nutritious foods especially fruits and vegetables during this pandemic has become a major challenge because people have shifted to convenient and majorly unhealthy food because they find it very cheap. This has got a direct effect on nutrition and health status which results into compromised immunity, reducing the ability of the body to fight Covid 19 infection and its complications. With exposure to the disease and a compromised immunity as a result of poor dietary habits the ability of the students to attend all the lectures and attain optimum performance is compromised.

Additionally (Carroll et al 2020) stated that anxiety and stress has led to change in eating habits and food choices amongst individuals and household. In stressful situations with a typical state of Covid 19 people tend to opt for energy rich carbohydrates, sugars, fats and oils. Consumption of energy dense foods leads to the release of the hormone serotonin which acts a stress reliever or antidepressant in a crisis (De Renzo et al, 2020). This in turn leads to development of lifestyle related conditions which include obesity, diabetes, hypertension and cardiovascular illnesses which can cause negative impact on students' academic lives.

Methodology

This cross-sectional study was used to establish the effects of Covid 19 on the feeding habits of The Eldoret National Polytechnic students, semi-structured and structured questionnaires, which entailed food security assessment tools (24-hour recall and food diary), purchasing power, which included the ability to purchase foods, prepare meals, and do shopping, and finally socio-demographic characteristics, which included age, sex, ethnicity, and marital

status. The sample size was 115 of which 101 was responded. This sample size was attained by using Krejcie and Morgan sample size reference table, Students residing outside college did not live with their parents were eligible for the study. The research process was approved by the Eldoret National polytechnic ethnic research committee and data collected remained confidential. To ascertain the degree to which the data collection instruments measured what they purported to measure, the instruments were validated. Food frequency questionnaire (FFQ) was used in this research to determine the frequency of diets eaten by the students during the previous seven days. Respondents were read a list of foods from several food groups, and they were asked to state the frequency of consuming the meals in the past week. The nutritional intakes and quantities were determined using a 24-hour dietary recall. The food quantity and fluids ingested by the students were estimated using calibrated household utensils; glasses, cups, and plates. (FANTA, 2014). To address the existing gap, data was analyzed using statistical packages for social sciences (SPSS). Categorical data was expressed using numbers; percentages and relationship between categorical variables was assessed using chi-square. Frequency tables was used for data presentation of categorical data while other findings will be presented using charts and graphs.

Findings

From the study 47% of the respondents were female students while 53% were male students, 30% of the sample size said they spend between Ksh 100-499 on purchasing food while the highest at 40% said they spend between Ksh 500-999 on weekly basis. Most of them used gas burners as source of fuel at 63.4%. Most of the students bought food from street vendors, on cooking 70% stated that they preferred frying as their favorite method for cooking, while boiling was the least used. On meal frequency, 60% of the students stated that they skipped meals, while 36.5% said they ensured they took breakfast, which was perceived as the most important meal of the lunchtime meals. On feeding habits 18% said they over eat and eat fatty foods like chips when happy and 12% responded that they did the same when sad. The study revealed that 74.8% of the respondents said that they did not have any storage facility like fridges and hotpots hence they cook food for a single meal, 7.1% of the respondents said they kept foods in plastic containers and put them on cold floor. 6.1% of the respondents said they stored food in the refrigerators. The study found that 74.8% of the students who responded to this question said they did not have a special diet, while 10.4% said they did have a special diet, which included low sugar diet, rich milk diet.

The findings showed that 64.3% of the respondents said that a balanced diet contains all nutrients that are needed by the body while equal percentages of 0.9 said that it enables a person have ideal body mass, and consists of three meals in a day consumed at regular intervals per day. The study revealed that 13.9% gave no response to that question. The study showed that 38.3% of the respondents said that if someone eats three meals in a day they are perceived to have eaten adequate meals, followed by 23.5 % who said they will termed to have good eating habits.

In order limit minerals and vitamins lost during cooking, 60.0% said it is preserved by using little water as possible and cover while cooking, which was the consistent, followed by 11.3% who said by adding bicarbonate to the boiling water then followed by those who with a percentage of 8.7 said they soak vegetables in water before cooking and finally 7.0% who said they add salt to cooking water while the rest (2%) did not respond to the question. Those who said that the best way to ensure one is nourished is by use of basic food groups as a guide took the highest percentage of 59.1 followed by 13.95% who said eating regular meals helps one to be nourished. The study found that 9.6% said by reading popular nutrition magazines they are able to have good nutrition ideas, while 4.3% said you eat what you feel like at a particular time, lastly about 13.0% did not respond to this question.

Discussion

In the study, emotions played a key role in determining the feeding habits of students; being happy, sad, and anxious were the major emotions of concern during this COVID-19 error. Most of the students said it exposed them to anxiety and sadness leading to over eating and consumption of fatty foods suggesting that poor eating habits were developed during crisis. Most of the students used frying as their favorite cooking method because it does not take a longer time like boiling and gives out very nice end products. This subjected students to consuming less nutritious foods because most of nutrients are lost through loss of heat during frying. They also preferred cheaper foods because of the impact of Covid 19 on economy. Affordable foods are also less nutritious. This study also showed that students also opted for promotional foods that were mostly junk and less nutritious. They focused on purchasing food from the local vendors as opposed to going to the food market which affected their ability to get variety of fresh and nutritious foods. Most of the students skipped meals because they were not able to buy all the ingredients they required due to compromised purchasing power.

Conclusion

In conclusion, the results of this study suggested that students have several factors that affect their eating habits, leading to inadequate nutrient intake. These factors included: Time, religion, tribe psychological factors, cooking methods, nutrition knowledge, storage facility, accessibility of food stores and financial ability. These factors emerged to be the major reasons student skips meals, eat less nutritious food and store food poorly. And little time to cook from this study it is concluded that Covid 19 has subjected students to poor feeding habits which is majorly caused by decline in purchasing power, emotional instability and time.

Recommendations

- The high prevalence of poor eating habits among respondents demonstrates the need for effective and wide-reaching strategies aimed at modification of eating behavior for the improvement of health status currently and in the future. The need for a nutrition intervention is further exemplified by findings.
- Information channels that the target group is exposed to, for example magazines, television, and health services within an institution should be identified in order to be used as part of the strategy for accessibility of nutrition information. Nutrition education needs to be part of the broader framework of educational information accessible to the youth and children.
- The influence of identified shortcomings of nutritional knowledge on dietary intake need to be made apparent in order to incorporate nutrition knowledge relevant to the target group. Nutrition department should organize nutrition talks, seminars and workshops to sensitize students on significance of good food habits.

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