

University Students' Dietary Patterns: A Case of a University in Zimbabwe

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Abstract

University life is a challenging period especially for first year students who have to leave their familiar surroundings and settle in a new environment. The unfamiliar environment may have an impact on their personality, attitudes and behaviour. The purpose of this paper was to establish the dietary awareness and eating patterns of the young adults and how these affect their health since students should make informed decisions on their dietary patterns. The study is significant because a healthy body is able to maintain a healthy mind. A cross-sectional survey technique was adopted for this article. Semi-structured and validated questionnaire was used to collect data from forty respondents who were selected using the cluster random sampling. One nursing staff was interviewed. Data was analyzed using the Social Science Statistical Package (SPSS) and descriptive statistics used were frequencies and percentages. The findings revealed that most students lacked nutritional knowledge as reflected by their diet which lacked variety that was worsened by their purchasing points that had no variety. Students' dietary patterns had some missed meals due to busy schedules and lack of finances. It could be concluded that students were likely to suffer from micro-nutrient deficient related diseases, as they were not meeting their nutrient daily intake. The study suggests that catering departments in institutions ensure variety in their daily food supplies. Primary health care workers in educational institutions should also educate students on their nutritional needs.

Keywords: dietary pattern, diet, lifestyle, student, university life, nutritional awareness.

INTRODUCTION

Dietary patterns of adolescents and young adults has been widely studied and reported in the literature as being associated with obesity, frequent snacking and meal skipping particularly breakfast (Isa & Masuri, 2011). This study focused on the university students' nutritional awareness of food choices and eating patterns and how these influence the students' health. There is need to study the level of awareness of the student's nutritional needs through their diets especially in a very difficult economic situation in Zimbabwe (Kapungu, 2007, Zvobgo, 1999). Students may make poor food choices which may affect their health when they begin college, and this may continue through their tertiary life. The issue of continuity has been confirmed by previous researchers (Cruz, 2000; Soriano, Molto and Manes, 2000; Papadaki and Scott, 2002; Isa & Masuri, 2011). Data on dietary patterns of this particular group is scanty in Africa, particularly Zimbabwe. As a result, this study therefore looked into university students' nutritional awareness of food choices and eating patterns and how these influence the students' health in the Zimbabwean context.

Zimbabwe is a developing country with a heterogeneous socio-economic and multi-cultural society. A nutrition transition has been noticed, characterized by a change from traditional eating

patterns to those typical of Western life style. In some cases, a move from a traditional eating pattern to a more Westernised diet has had some undesirable effects on health status (Cruz, 2000). Food habits, while shaped by culture, are dynamic and susceptible to changes, through a process of acculturation, brought about by migration to a new place. Dietary changes are related to length of exposure to the new environment and extent of social contact with people of the new environment (Worthington-Roberts and Williams (2000). This transition has affected the pre-adulthood age (university students) since most of them have challenges to adapting to new environments, being university, college or work. The new environment has an impact on their personality, attitudes and behaviour hence their dietary habits (Papadaki, Hondros, Scott and Kapsokefalou, 2007). Eating behaviours of young adults can be influenced by both exogenous and endogenous factors hence their vulnerability to nutrition, thus the major motivation of this study.

Mismanagement of dietary patterns leads to nutritional disorders. The United Nations (UN) report on Urban Livelihood and Food and Nutrition (www.ifpri.org/pubs/abstract 2002) indicates that about two billion people, the world over are affected by malnutrition in one form or the other. This means that continuous investigation on dietary patterns and

assessment of nutritional status of vulnerable groups such as students at universities and colleges would help to solve some societal problems particularly those of under and over nutrition. Most studies have looked at the effect of long-term effects of poor dietary patterns and nutritional status of different age groups. Few studies have investigated the effect of short-term migration, or temporary translocation, on eating habits. Cruz (2000) points out that, studies of international students suggest that even a short-term stay in a foreign country can result in significant and often undesirable changes in eating patterns.

Dietary patterns are eating patterns, food preferences, and methods of preparation, cooking and serving food. Wardlow and Insel (2000) state that dietary patterns are also viewed as food habits, which include the types of food eaten as well as the number of meals eaten and when they are eaten. Dietary patterns are important as they reflect the types of foods available as well as the nutrient content taken by individuals or groups of people. Basically, specific nutrients are essential for human life and they are needed in varying amounts for human metabolism, growth, reproduction and other vital activities of life. American Dietetic Association (2004) suggests that dietary patterns should suit the age of an individual, his sex and activities so as to maintain a good health. Nutritional programs are usually targeted at specific vulnerable groups of people, who may have inadequate diets and low nutritional education. Allan and Gillespie (2001) note that the crucial groups include: the pregnant and lactating mothers, children, adolescent, young adults and the elderly. The students at universities and colleges are also in the vulnerable group. This is largely due to the transition from adolescent to young adulthood. It is also as a result of the change in the environment as they move from home to university, there their lifestyles changes. In Zimbabwe, students' dietary patterns may also have been affected by the introduction of university and college fees as well as the cafeteria system (Kapungu, 2007). In the pre-colonial era and soon after independence, the government was the major duty bearer of which students had free access to tertiary education (Zvobgo, 1999). Students are now more vulnerable because of the payment of tuition fees which has been aggravated by the economic hardships which the country has been facing since the early 1990s (UNICEF, Jan 2009). Dietary counseling and nutritional education is therefore essential in order to avoid mismanagement of dietary patterns. Students at universities should be assisted so that they eat the right food in relation to their nutrition requirements thereby developing correct dietary patterns.

The other motivation of this study came from the changes that take place in human development. They involve interplay of many processes that are

interwoven. Schickedanz, Schickednaz, Hansen and Forsyth (1993) state that these changes are complex because they are the product of several processes that include biological, cognitive, social and emotional development. The execution and progression of these processes is determined by the *individuals' diet* (adequate nutrition). Nutrition is the basic determinant for optimum human development and it influences the execution of the other developmental processes (Worthington-Roberts & Williams, 2000; Beck, 2005). The development of all these processes takes place at the same time and within the context of good nutrition for optimum development.

These changes depend on the biological environment of nutrition (how an individual is fed and nutrient use in the body). What is eaten has much to do with individual's health, how active one is, his or her vitality and how long one will live (fitness and health). Human development is the pattern of movement or change that begins at conception and continues throughout the life cycle. Central to optimum development is the provision of good nutrition (Wardlow and Insel, 2000). Good nutrition means good development of these processes. Maslow (1964) cited in Read, Gardner and Mahler (1992) states that food is the physiological need which creates and maintains life. We are what we eat. Dietary intakes and eating patterns of students are of special interest because young adulthood is a critical age of child bearing and it sets the stage for lifestyles that influence later health. Young adults are vulnerable to aberrant eating patterns so they are at risk for nutrient inadequacies and dietary excesses of selected nutrients.

Dietary patterns being based on food habits and beliefs, it is generally known that ethnic, religious, regional and cultural factors influence the way people eat. Murcott (1998) posits that psychologists have long been interested in dietary patterns and their determinants. The following factors were cited as influencing dietary patterns; socio-economic factors, physical factors, social factors, psychological factors and physiological factors. Zimbabwean university students, due to various circumstances which include the change of environment, the introduction of university fees and the cafeteria system, limited resources, busy schedules, peer pressure and availability of junk foods may have compromised diets. The problem is that, with such circumstances, one cannot tell whether students are well nourished and healthy or not as Cruz (2007) states, these conditions or state of affairs may bring about significant and often undesirable changes in eating patterns. It is therefore necessary to assess and evaluate their dietary habits so as to establish if they are getting balanced diets to meet their developmental needs and to ensure good health.

SIGNIFICANCE OF THE STUDY

The study of university students' nutritional awareness of food choices and eating patterns and how these influence the students' health may be of uttermost significance in that its findings will help students know their stance in regard to health. Results will also assist students and sedentary workers employed at the university to observe correct nutritional practices. The study will also be of importance to the university students' body, university catering system and personnel involved in student wellness so that they plan in relation to students' nutritional and healthy needs. In addition, the results will also be an eye opener to nutritionists in designing nutrition programs for people with limited resources. It is also a base for further research in community nutrition.

PURPOSE OF THE STUDY

The purpose of this study was to establish university students' nutritional awareness of food choices and eating patterns and the extent to which these affect their health. Thus the intention was to assess their food intakes and explore their meal considerations. It also sought to find out whether students' dietary patterns have an impact on their health. The following two objectives therefore guided the study:

1. To establish the nutritional awareness of food choices and eating patterns of the students at the university.
2. To find out the influence of students' dietary patterns on their health.

METHODOLOGY

This research, which assessed and evaluated students' dietary patterns, a quantitative and cross sectional survey approach was employed because it enabled the researcher to yield data that could be statistically manipulated to various degrees of sophistication and at different levels, that is descriptive and inferential (Best & Kahn, 1993). Marshall and Rossman (2008) state that a quantitative approach is objective hence its use in nutritional researches as one can infer (statistically) from sample to population. Quantitative approaches focus on measurable attributes of a phenomenon hence its use in diets, measuring of the levels of nutritional knowledge as well as nutrient composition of meals. In this regard, it yields empirical data that is objective and value neutral (Cohen, Mannion & Morrison 2007; Best and Kahn, 1993). The design is also simple and clear such that the purpose of the study and its results are clear and understood by those involved in the research and those who will use the research findings.

Sample and Sampling Procedure

The target population was the students at the state university who were staying in the college campus (resident students). The sampling procedure used was the cluster random sampling. Hitchcock and Hughes

(1995) posit that cluster random sampling is more convenient when the population is very large hence represents a fair distribution of the subjects. Forty (40) students from four faculties were involved in the study and this sample represented ten percent (10%) of the targeted population. One nursing sister was interviewed so as to give an overview of the nutritional status of the college students. The intention here was to include as many subjects as possible to gather as much information as possible. Data from the respondents was collected using a questionnaire and an interview schedule. Questionnaire was the major tool which collected data from students and the interview was used to collect data from the nursing sister.

Pilot study

A pilot study was conducted to ensure validity and reliability and to enhance the statistical power of the instruments and of ensuring data handling processes. The researchers conducted one pilot test. Dooley (1990) and Leedy (1989) advise that instruments must be pilot tested before actual use to ensure that they will measure what they are intended to measure and that they are free from random error when used repeatedly. Ten students from the campus were used as guinea pigs, and were selected randomly. These students did not participate in the main study as recommended by Cohen, Mannion & Morrison (2007), who state that respondents may not take the study seriously in providing correct answers. The data collected indicated that with the amendments made, the questionnaire was clear and could be used to collect the data required for the research.

RESULTS AND FINDINGS

Demographic Characteristics of Respondents

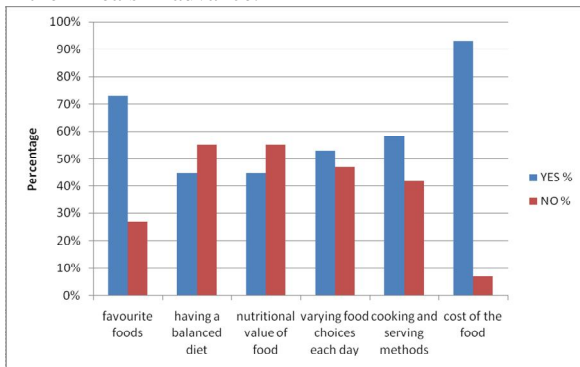
Of the forty (40) respondents, twenty-two (22) were male and eighteen (18) were females thus comprising fifty-five (55%) and forty-five percent (45%) respectively. This indicated that there was a good gender representation. Ninety-five percent (95%) of the respondents were in the twenty-twenty-five years (20-25) age group which represented the highest number while 5% were in the twenty-five plus (25+) age group. Fifty percent (50%) of the respondents represented the Science faculties and the other fifty percent (50%) represented the Arts faculties. This shows a fair representation in subject representation. . On the whole seventeen percent (17%) were affected by religious and ethnical beliefs on their food choices while eighty-three percent (83%) showed that they were not affected by ethnical and/or religious beliefs. Findings show that some students had limited food choices. On the whole most students sixty-five percent (65%) showed little or no knowledge of nutrition and diets, were twenty-five percent (25%) moderately knowledgeable and ten percent (10%) showed to be quite knowledgeable. Eighty-eight percent (88%) of the respondents had no chronic

diseases and twelve percent (12%) had chronic diseases meaning they had restricted diets. These findings show that only one quarter of the respondents have adequate nutritional knowledge.

Eating Patterns, Food Choices and Considerations

Twenty (20) respondents indicated that they took two meals per day, fifteen (15) took three meals, four (4) took four meals per day and one (1) took one meal per day during week days. During weekends three (3) took one meal per day, seven (7) took two meals per day, twenty-four (24) took three meals per day, three (3) took four meals, two (2) took five meals per day and one (1) took seven meals per day. The results show that a larger number of respondents took two meals per day during the week and three meals per day during weekends. These findings indicate that most students did not get the recommended daily meals.

Ninety-three percent (93%) of the respondents favoured traditional like rice and chicken, beef stew and sadza and seven percent (7%) favoured fast foods. Considering how often they took their favourite foods, the following findings were obtained: one (1) indicated that she took her favourite meal once per fourth night, four (4) could not get their favourite meals, twelve (12) ate their favourite meals once per week, one (1) ate their favourite meal thrice a week, four (4) ate their favourite meal four times a week, one (1) ate her favourite meal five times a week, one (1) ate six times a week, seven (7) ate seven times and one (1) ate fourteen times a week. The findings indicate that more than half of the respondents could not get their favourite meals frequently. Thirty (30) respondents, which represented seventy-five percent (75%), indicated that they did not plan their meals while only ten (10), which is twenty-five percent (25%), planned their meals in advance. For those who planned in advance, four (4) indicated that they planned one day ahead, three (3) planned two (2) days ahead and the other three (3) planned one (1) week ahead. These findings indicate that the majority of the students did not plan their meals in advance.



n-40

Fig 1: What Respondents Considered When Deciding What to Eat

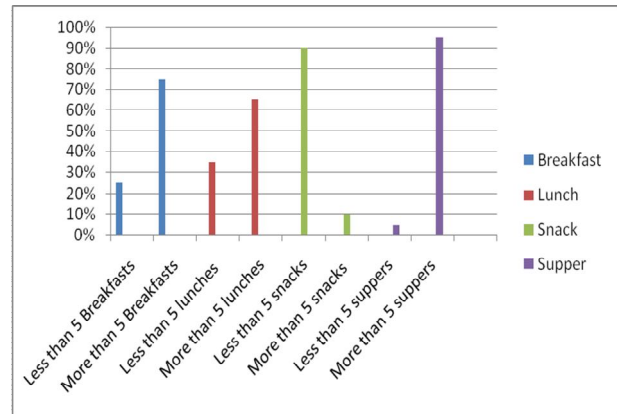
The results indicate that a very large number of students consider the cost of food and almost three quarters, also, consider their favourite foods. Results also show that slightly more than half of them did not considered having a balanced diet or nutritional value of foods.



n-40

Fig 2: What Affected Respondents' Decision on What to Eat

The results show that the majority of respondents were affected by lack of money and more than half were affected by lack of food items. Three-quarters of them were not affected by the availability of junk food; they just ate what was available.



n-40

Fig 3: Number of Meals

The data shows that most students have time to eat during the evening and they also try to have something in the morning.

The Impact of Students' Dietary Patterns on their Health

Data from the clinic showed that ninety percent (90%) of all the students who visited the clinic had clinical signs (physical signs) of malnutrition of more than five nutrients. The other ten percent (10%) had malnutrition of less than five nutrients. The common signs listed were scaling nostrils, red lips, sickness

and redness of the tongue, pale white eye, swelling and sponginess of gums, bleeding gums and skin dryness. Data from students' eating patterns, nutritional values of their meals and their lack of variety show some form of malnutrition, either under or over. The findings regarding the impact of students' dietary patterns indicate that students do not get all the nutrients in recommended daily quantities.

DISCUSSION OF FINDINGS

Demographic Characteristics of Respondents

Findings regarding nutritional knowledge, only about a third of the respondents were knowledgeable with the majority having minimum knowledge. These findings mean that the rest of the students were ignorant of what they should take and when. Austin et al (2004) assert that lack of knowledge may be used as an indicator of poor nutritional practices. Findings from the respondents profile also indicated that some were affected by religious and ethnical beliefs on their food choices as well as those who had chronic diseases had restricted diets.

Eating Patterns, Food Choices and Considerations

The results indicate that a larger number of respondents took two meals per day during the week and three meals per day during weekends. These findings indicate that most students did not get their daily nutrient requirements as it is recommended to take at least three meals a day so as to get adequate nutrients. Wardlow and Insel (2000) affirm that it is difficult to meet daily nutrient needs in two meals only.

The findings regarding favourite meals indicate that more than half of the respondents could not get their favourite meals frequently. Austin et al (2004) and Hegarty (1995) state that lack of favourite meals means non-enjoyment of meals which may compromise nutrient intake. Those who got their favourite meals were those who favoured traditional meals, which they could get easily and these meals were cheaper but lacked variety and most of the dishes do not supply adequate nutrients.

On the question of planning meals in advance, the findings indicate that the majority of the students did not plan their meals in advance. Worthington-Roberts and Williams (2000) and Bennion (1994) state that it is very important to plan meals in advance so as to take note of the dietary needs and the recommended daily allowances.

The results indicate that a very large number of students consider the cost of food and almost three quarters, also, consider their favourite foods. This may mean those with less money may have compromised nutrient intake while those with a lot of money to spent on food may resort to junk food. Papadaki et al (2007) in their research found out that

most students who have a lot to spend on food, take junk meals and snack on junk snacks leading to obesity. Results also showed that slightly more than half of them did not consider having a balanced diet or nutritional value of foods so they just took what was available thus indicating poor nutritional practices. Findings regarding what students considered when deciding what to eat revealed that more than half did not consider to take balanced meals again indicating that they may lack some nutrients in their daily intakes (Papadaki et al, 2007; Murcott, 1998 and Cruz, 2000).

The results show that the majority of respondents were affected by lack of money and more than half were affected by lack of food items. Lack of money may lead to missed meals and intake of low nutritional value foods. The findings also established that most students had their diets restricted by scarcity which may be an indication of poor nutrient intakes. Three-quarters of them were not affected by the availability of junk food meaning they did not know the problems they may face due to taking junk food (Kinton et al, 2000 and Papadaki et al, 2007).

The data shows that most students had time to eat during the evening and they also tried to have something in the morning. This means that most students may not meet their daily nutrient requirement as it is argued by Papadaki et al, (2007) and Kremmyda, Papadaki, Hondrus, Kapsokefalou and Scott (2007) that it is very difficult to meet daily nutrient needs in one or two meals. Most nutritionists recommend five to six meals per day to ensure adequate nutrient intake (American Dietetic Association, 2004; Cruz, 2000).

Most students had something to eat nearly every meal but most of the meals were not nutritionally adequate. The breakfasts were particularly very poor nutritionally, which indicates that most of the students do not get enough daily nutrients. This is supported by Bennion (1994) who concludes that if someone misses a breakfast, lunch and supper could not make their daily calories.

The results indicate that students lacked some nutrients as their diets had limited variety. It is suggested that students have nutrients from different food sources so as to cater for adequate and proportional nutrient intake as stated by Tull (1996). Findings also show that the majority lacked vitamins and mineral elements. Kinton et al (2000) and Wardlow and Insel (2000) posit that having limited food choices may lead to lack of some essential nutrients. This was supported by the interview results which showed that almost all students who visited the clinic had some nutritional related disorders having physical signs of lack of micronutrients as

represented by The Manual of Clinic Dietetics (1992).

CONCLUSIONS

The main thrust of this study was to establish university students' nutritional awareness of food choices and eating patterns and how these influence the students' health. Almost three quarters of the students lacked nutritional knowledge which was visible in their diets which lacked vitamins and proteins but mostly carbohydrates. This conclusion is in line with the assertion by The Food and Nutrition Bulletin at www.un.edu/ (2004) that students make wrong food choices due to lack of knowledge and understanding of their dietary requirements. These findings imply that moving away from the family home and assuming responsibility for food preparation and purchasing for the first time affect dietary habits. The prevalence of physical signs of malnutrition indicate that university students were unhealthy therefore may negatively impact on their academic performance.

RECOMMENDATIONS

1. Catering departments in institutions should ensure variety in their daily food supplies.
2. Primary Health care workers in educational institutions should educate students on their nutritional needs and how to their nutritional status.
3. Nutritionists and dieticians should continuously assess nutritional awareness levels in the community and provide nutrition alertness services and nutritional counseling to students.
4. The Medical fraternity should give quarterly reports on the nutritional status of people who visit clinics and hospitals as it helps people to take nutrition seriously.

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