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Prevalence of Food Insecurity among University Students in Uasin Gishu County, Kenya

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Abstract

Key words: *Food security, food insecurity, factors and university students.*

The dynamics of a shrinking economy in Kenya, reduced government capitation to universities, the rising cost of tuition and other systemic changes have exposed university students to hardships including food insecurity. These rising costs coupled with the clamour for access and acquisition of higher education in the face of limited financial capabilities have had far-reaching implications for university students on their campus life in terms of their emotional, social, economic, physical and academic well-being. The average college life for a university student is rapidly changing, whether living on or off campus. There is need to device strategies for mitigating the situation. Based on selected tenets of theory of change, this study investigated the prevalence of food insecurity among students in Moi University and University of Eldoret, and the effects on their academic performance with a view to proposing models for effective improvement. A survey design was employed. The target population comprised of students, deans of students, students' counsellors and students' leaders. The deans of students, students' counsellors and students' leaders were purposively selected. Random sampling was used to select 4,400 students constituting 10% of the total population of students in the two universities. Questionnaires and interviews were used to collect data. The data were analysed using descriptive and inferential statistics. It was found that there was prevalence of food insecurity among university students. The food insecurity situation was as a result of financial insecurity brought about by poor family backgrounds and inadequate Higher Education Loans Board (HELB) disbursements. It was concluded that the food insecurity scenario negatively affected the retention and academic performance of university students. It was recommended that universities should expand and enhance the work-study programmes, provide subsidized catering services, institutionalize student support services, engage charitable organizations to support students, seek part-time employment opportunities for needy students and continuous provision of financial counselling services to students.

1.0 Introduction to the Study

Globally, factors that affect food security include population density, changes in climate patterns, urban developments and terrorist threats (Havas & Salman, 2011). There exist great differences in food access between developed and developing nations due to differences in incomes (Havas & Salman, 2011; Hazell & Wood, 2008). It is a global wish that a zero hunger target is realized among individuals in the most affected regions of Africa, South Asia and South Pacific Islands (WHO, 2010). Food insecurity is the lack of nutritionally adequate and safe food or limited or uncertain ability to acquire acceptable foods in socially acceptable ways. This is brought about by circumstantial and economic barriers that present challenges that limit access to sufficient and nutritious food by populations (Jansen et al, 2014). The Food Insecurity Report (2017) and the Global Report on Food Crises (2017) indicate that Africa tops the Global Hunger Index. The global food security crisis has had negative health impacts on the lives of millions of people such as learning inability (WHO, 2011). Food insecurity is an obstacle that threatens both physical and mental well-being of those affected. A number of reports have outlined the potential impact of food insecurity on university students' educational outcomes, social and psychological well-being. A study on food insecurity among students at the University of Free State found that severe food insecurity contributed to the high attrition rate of university students (WHO, 2015). Universities in South Africa attribute 40% of academic failure of students to hunger and not having access to enough nutritionally adequate and safe food could be one of the reasons why more than 50% of students never graduate. This is because hunger inhibits students' ability to learn and retain what has been learned. A hungry stomach defeats the mind's stability to think and exposes an individual to psycho-social vulnerabilities (Kolanisi, 2017). Hunger among students results in high rates of failure, drop-out rates and staying long in the academic system.

According to the Global Hunger index (2018), Kenya has serious levels of hunger and it is among 45 countries out of 119 countries ranked in the world as still grappling with food insecurity. This report indicates that for every three Kenyans, one is grappling with severe food insecurity and poor nutrition. Food insecurity leads to malnutrition, developmental delays, cognitive delays, disabilities, inability to mentally focus and living in constant stress and uncertainty. In Kenya, food security is one of the priority areas of focus as espoused by the President's Big Four Agenda. The Kenya Government is committed to achieving equity in education including higher education. Food insecurity is a threat to higher education students' completion rates. It is against this background that this study investigated food insecurity in the two selected universities in Uasin Gishu County.

The objectives of this study were to: investigate the prevalence of food insecurity among university students in selected universities; establish factors contributing to food insecurity among university students; and the effects of food insecurity on university students' academic performance.

2.0 Literature Review

2.1 Food Insecurity

Food security fails to exist whenever a person is not able to access not only enough food but nutritious food all the times that meets dietary requirements in terms of minerals, calories and proteins that can support healthy and active life (Baker *et al.,* 2019; Palmer & Groppo, 2002; Barrett, 2010; World Bank, 1986; Abu & Soom, 2016). In the same way, when an individual faces uncertain capability to obtain acceptable foods in socially acceptable ways, then that individual is faced with food insecurity (Chaparro *et al.*, 2009; Fyall *et al*., 2019). Directly, food security is connected to health and nutrition (Havas & Salman, 2011). This is a big issue among nations both low and middle income countries as well as sections of developed nations (Baker *et al*.,2019; Chaparro *et al*., 2009; Fyall *et al*., 2019). Africa, South Asia and South Pacific Islands are the most affected in terms of food security (WHO, 2010).

Recent research has indicated that food insecurity has been on the increase among university students from both developed and developing countries even though students may have sources of money (Fyall *et al.*, 2019 & Goldrick-Rab *et al.,* 2018). This is attributed to economic hardships that force students to change diets, interrupt their eating as well as reduce the amount of food taken (USDA, 2019). Changes in food prices are also root causes of instability in food availability and accessibility as well as food insecurity (Brinkman & Hendrix, 2011). Food insecurity among university students affects their academic performance and well-being. Majority of University students hail from humble backgrounds with scarce resources at their disposal and they depend on loans and well-wishers. This situation causes challenges in behaviour and attention, tardiness and absenteeism from lectures, psycho-social dysfunction and therefore poor academic performance, repeating of classes and even suspension of studies (Murphy *et al*., 1998; Jyoti *et al*., 2005; Kleinmann *et al*., 1998; Winicki & Jemison, 2003; Alaimo *et al*., 2001).

A study in Malasya on prevalence of food insecurity among university students found that more than half (54%) face food insecurity (Bakar et al, 2019). The factors that were found to be significantly related to this situation included time constraints/management, expenditure on books, income of the guardians, type of scholarships, academic programmes and miscellaneous items. Suleiman et al (2013) also found that 67% of students' population in higher learning institutions were food insecure. Turnbull-Fortune & Badri (2014) investigated the degree of knowledge, awareness, safety practice and behaviour of university and secondary students towards foods in Trinidad. They found that among the female, there was a higher percentage in secondary schools than in universities of the students who observe food safety practices and behaviours. A cross-sectional survey among University of Hawaii students revealed that 21% of university students were food insecure while 24% were facing risk of being food insecure (Chaparro et al, 2009). These included students living on - and off – campus. A study among students in the three campuses of Washington University on food insecurity and housing challenges found that 26% of students were facing food insecurity (Fyall et al, 2019).

From the foregoing, it is evident that food insecurity is a reality in both developed countries as well as developing countries. There are many factors that may be contributory to this state of affairs. This provided the justification and motivation for the current study.

3.0Research Design and Methodology

This study employed mixed method research design using qualitative and quantitative approaches of inquiry. Questionnaires, interview schedules, FGD and document analyses were used to collect both qualitative and quantitative data.

Random sampling was used to select students while purposive sampling was employed to select the Deans of Students and students' counsellors. Probability proportional to size (PPS) was applied to students. The questionnaires were distributed to students in a random manner.

The sample size was determined using the Cochran's formula as n = $\frac{Z^2{}_{\alpha/2} * P * Q}{d^2}$ where α = 5% is the level of significance, p = proportion of students facing food insecurity, Q = 1-p, Z is the value from standard normal distribution that corresponds to the specified a-value, d = the margin error and n is the sample size. Data collected were analysed using R and Statistical Package for Social Sciences (SPSS). Both descriptive and inferential statistics were used in the analysis.

4.0 Findings

4.1 Prevalence of Food Insecurity among University Students

Responses to the question whether or not university students were food secure, revealed that 51.6% were food insecure while 47.9% were food secure. This implied that majority of students did not have enough or were not sure of the consistency in food supply while at campus. On the question of the number of meals they took per day, it was found that 46.2% of students skipped one or two meals per day. This means that such students started their day without breakfast and/or skipped lunch in a day. The data collected through interview revealed that there was no data on students who were food insecure because students preferred to keep their food insecurity struggles private. This finding agrees with the Fyall et al (2019) and Godrick-Rab et al (2018) who found that food insecurity among university students has been on the increase for both developed and developing countries. Chaparro et al (2009) in a cross-sectional survey among University of Hawaii students found that 21% of them were food insecure while Fyall et al (2019) found that 26% of Washington University students were food insecure.

On the question of whether students had the luxury of food choice, it was found that 65.8% of students took any food available without regard to the nutritional value. They ate any available food that they could afford. This has the potential of affecting their health in general and mental health in particular due to the fact that human beings need foods rich in carbohydrates, proteins and vitamins to provide nutritional balance for healthy bodies.

4.2 Factors contributing to Food Insecurity, Financial Support and Cost of Living for University Students

From the data analysed, it was found that 19.4% of university students agreed that there were factors which contributed to food insecurity, 48.5% denied that there were factors that contributed to food insecurity and 19.4% abstained from responding to this item. On the

factors that contributed to food insecurity, 29.4% of students attributed this to financial instability while 70.6% of the students did not respond to this item, implying that there could be other factors that contributed to food insecurity. Data from the study indicated that some of the factors that contributed to food insecurity included poor family backgrounds (53.8%), poor expenditure habits (44.5%), unmanageable cost of living (44.8%), inadequate salary/wages (47.1%) and inadequate loan amounts disbursed (52.0%) contributed to food insecurity. The poor family backgrounds and inadequate loan disbursed stood out as the highest attributors to food insecurity. USDA (2019) attributes food insecurity to economic hardships that force students to change diets, interrupt their eating as well as reduce the amounts of food taken. On the other hand, Brinkman & Hendrix (2011) identified changes in food prices as one of the root causes of instability in food availability and accessibility while increase in food prices causes food insecurity.

On reliable sources of financial support, 57.9% of the students indicated they did not have reliable sources while 40.8% had reliable sources of financial support. There were students who had one, two or three sources of financial support. From the responses most students constituting 32.9% indicated they had only one source of financial support and 39.1% referred to loans as their source of income. Most students indicated that their source of income/loan was Higher Education Loans Board (HELB) represented by 69.6% and majority of the HELB applicants (41.5%) received between Kshs. 26,000 and Kshs. 40,000. Of the students who received HELB support, majority of the students (67.5%) spend it on purchasing necessities. Data from interview schedules revealed that over 80% of the students who applied for HELB received varied amounts depending on their levels of need as reflected in their application data. It was also found that beyond HELB, other sources of financial assistance to students included: Constituency Development Fund (CDF), bursaries, trusts, Equity Foundation, Absa and Kenya Wildlife Service.

On the cost of living at the universities, it was found that some students (11.2%) said it was not bad, most said it was moderate (56.3%), others said it was unfriendly/harsh (31.3%) and the rest did not respond to this item. On the specific time when life at campus was manageable for students, it was found that life was manageable at the beginning of the semester and the situation worsened towards the end of semester. On the coping mechanisms that the students adopted during the difficult times of the semester, it was found that 59.9% of the students had developed some coping mechanisms for survival. Some of the survival tactics included: freelance online writing (24.3%), menial jobs on and out of campus (27.4%), entrepreneurial engagements like running salons, cyber cafes (45.2%) while others engaged in social activities (arts, betting, gambling and gaming) constituting 30.5% and pool cooking to benefit from economies of scale (10%). It is noted that students' coping strategies were not mutually exclusive which means they tried their hands at several options at their disposal.

4.3 Effects of Food Insecurity on Students' Academic Performance

On the question as to whether food insecurity led to deferment of studies, 90.4% of students said this situation did not lead to deferment while 8.2% students indicated that students deferred studies due to food insecurity. It was also found that 46.2% of the respondents indicated that they knew some students who deferred their studies due to food insecurity.

From the interview data, it was found that about 5% of the students defer their studies due to food insecurity and other related reasons which is quite a substantial proportion of the total population of students. Data also indicated that students who defer studies do not expressly indicate food insecurity as the reason for deferment request.

In terms of whether or not the food insecurity status affected the academic performance of students, 56.2% of the students agreed that it did and negatively so (55.6%). In fact, 48.8% of the student respondents indicated that they were aware of students in their universities who failed to complete studies due to food insecurity. It was also found that 48.4% of the respondents indicated that their academic performance was indeed affected by their food insecurity status. Data from interviewed respondents indicated that most students who suffered food insecurity missed their lectures or if they attended, their concentration was poor leading to poor performance in their examinations. It was also found that food insecurity led to poor preparation for examinations leading to cheating in examinations which have serious repercussions including suspensions or even expulsions from universities. Other noted effects of food insecurity by the respondents include low esteem, anxiety and unhealthy relationships which are distractive to their academic life resulting in poor academic performance. This finding confirms what Bakar et al (2019) and Chaparro et al (2009) found that food insecurity is a challenge among university students and affects their academic performance. Other researchers also found that food insecurity among students causes challenges in behaviour and attention, tardiness and absenteeism, psycho-social dysfunction and low scores, repeating of classes and even suspension from studies (Murphy et al., 1998; Kleinmann et al.,1998; Jyoti et al., 2005; Winicki & Jemison, 2003 & Alaimo et al.,2001).

5.0 Conclusion and Recommendations

The study findings indicated that majority of students suffered from food insecurity and struggled during their stay in campus. The findings also revealed that there were factors that contributed to their food insecurity which included coming from financially humble family backgrounds, inadequate financial support and high cost of living. It was concluded that this situation affected the academic performance of students in the universities studied.

From the foregoing, the following recommendations were suggested:

i. Universities should expand and enhance their work-study programmes to assist the affected students to continue with their studies with an improved academic performance.
ii. Since Universities are non-profit organizations, plans to support students in their campus up-keep by providing subsidized catering services to encourage students to avoid deferring their studies and increase their completion rates.
iii. Universities need to institutionalize student support services such as endowment fund, trusts and kitties to support needy students to continue and complete their studies on schedule once they have been admitted.
iv. Efforts should be made to bring charitable organizations closer to the universities to enable needy students benefit from education support arrangements that such organizations have within their mandate.

v. Universities' career offices should liaise with potential local employers with opportunities to enable needy students access part-time jobs to facilitate earning reasonable up-keep payments for their services.
vi. Deans of Students' offices should provide financial counselling to students on a continuous basis to build their capacity on budgeting and financial management.

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