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Tertiary student hunger in Jamaica

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Abstract

Objective: The full academic potential of tertiary students in Jamaica is diminished by their struggles to secure tuition and non-tuition financial resources. Principal among student needs is the ability to consume regular healthy meals. This study among three tertiary institutions in Jamaica explored the dynamics that affect student food security and how this can harm student success. It also examined how frequently tertiary students worry about feeding themselves and the extent to which they restrict their food intake.

Methods: The analysis classified students as having low, moderate and severe hunger. Nine hundred and seventy-nine students completed the surveys through a quantitative method approach to collect data from students in different disciplines. To determine the factors related to hunger several demographic, socio-economic, living conditions and academic-related variables were examined.

Results: The study found that most of the students (38.3%) suffered from severe hunger followed by moderate hunger (33%) and the lowest proportion (29.3%) with no/mild hunger. More than 70% of students worried each month about not having enough food while 33% of the students sometimes do not eat for an entire day. Their physical and emotional readiness to study was compromised as 40% said hunger affected their academic work via a variety of reasons such as headaches, poor concentration, and missed classes. Importantly, the low-achieving students experienced the most hunger.

Conclusion: With data showing a strong link between food insecurity and student disengagement, the issue of hunger on campus represents a priority. The study concludes that administrators, counselors and the students themselves have critical roles to address hunger if tertiary institutions are to fully meet their educational mandate.

Keywords: Student Hunger; Food insecurity; Coping Strategies; Higher education

1. Introduction

Hunger begins with food insecurity which becomes prolonged and severe over time. The quiet and insidious spectre of food insecurity has affected many university and college students every year in different countries. The prevalence of food insecurity was investigated among 86,000 students from 123 US educational institutions [1]. It was found that 41% of university and 48% of two-year college students reported food insecurity. Across the University of California's 10-campus system a study found 42 percent reported they had "very low" or "low" food security due to limited resources. In 2018, the Wisconsin HOPE Lab administered a national survey on 43,000 students at 66 institutions of higher education found 36 percent of university students were food insecure in the 30 days preceding the survey [2]. Similar findings were reported from Malaysia [3], [4] to the USA where food insecurity affects 34%-59% of college students [5]. Further, a survey of students in 8 community colleges and 26 four-year colleges and universities estimated

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the prevalence of student food insecurity to be 48% [6]. Lack of financial resources has caused students to reduce their food intake and skip meals. With data showing a link between food insecurity and student success, the issue of hunger on campus represents a major area of concern for both students and administrators [7], [8], [9]. This concern leads to several critical questions about food insecurity and coping strategies. These studies show that the cost of higher education has increased over the years along with the cost of living - such as health care, housing, utilities among many others. This means that for the university student the daily budget demands for transportation, rent and textbooks compete with the food dollar. The needed enrolment of students from lower-income families places those students under greater financial stress to meet basic needs whether or not they obtain student loans. This study explored the dynamics of food insecurity and hunger and how they can harm students' academic performance at three tertiary institutions in Jamaica.

2. Material and methods

A quantitative survey was used to describe students' hunger status in three tertiary institutions: the University of Technology, Jamaica, the University of the Commonwealth Caribbean and Shortwood Teachers' college. A questionnaire was used to capture the dynamics that can affect students' state of hunger and gain insights into the mechanism through which food insecurity can harm student academic performance. The measures students take to pursue academic goals in the face of significant financial obstacles was also explored with the questionnaire.

About 300 students from each of the institutions were randomly selected to participate. Efforts were made to stratify by faculty in each institution. A pilot test of the questionnaire was done at different levels to assess clarity and understanding. The test results were used to modify the structure and content of questions, where necessary. To solicit maximum honesty and confidentiality the students were not required to give their names, identification numbers or any information that can be traced to them individually. After ethical clearances and permissions from the university authorities, coordinators from each institution were assigned to administer the questionnaire. The student responses were scrutinized for completeness and quality. Analysis was planned to reveal several descriptors of hunger.

3. Results

In this Jamaica study of three tertiary institutions Figure 1 shows that 71.1% of students worried each month about not having enough food and 17.1% of them worried almost every day. Further, 69% of the students cut or skip meals sometime during the last month and 23.2% do so almost every day. Even worse, one-third of the students did not eat for a whole day sometime during the last month and 12.6% of them went hungry almost every day. Moreover, 8.7% of the hungry students seek help almost every day and likely curtail their opportunities to do academic work.

From the responses shown in Figure 1, students were given a score from 0 to 4 as shown in Table 1 to estimate their degree of hunger. Their hunger status was determined according to a combined score: Score of zero and 1 - no or mild hunger; Score of 2 = moderate hunger and scores of 3 and 4 = severe hunger.

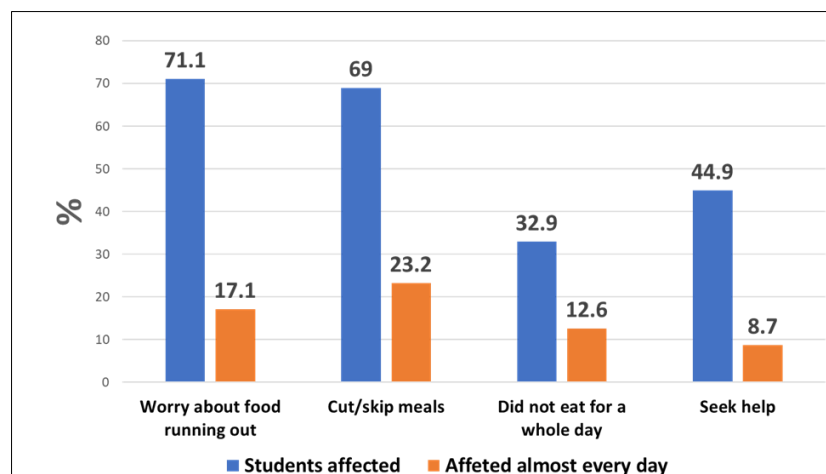


Figure 1 Food Insecurity in three tertiary institutions in Jamaica

Table 1 Scores to estimate the degree of hunger

	Never	1 or 2 times per month	Almost weekly	Almost every day
Worry about food running out	0	1	1	2
Cut/Skip meals	0	2	2	3
Go without food all day	0	3	4	4

0 & 1 = No and Mild hunger; 2= Moderate hunger; 3 & 4 = Severe hunger

Figure 2 shows that, with the three campuses combined, most of the students (38.3%) suffered from severe hunger followed by moderate hunger (33%) and the lowest proportion (29.3) with mild hunger. The degree of hunger varied greatly among the institutions. Students who were severely hungry were examined more closely.

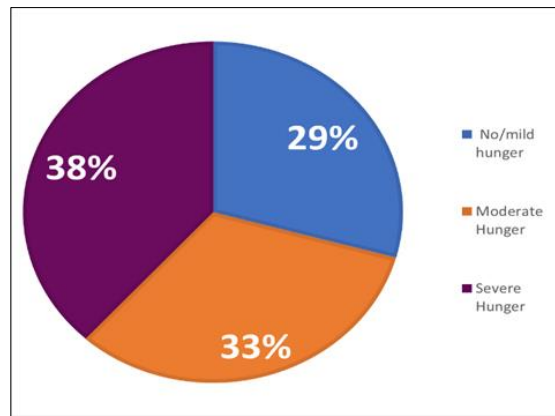


Figure 2 Prevalence of student hunger in Jamaica

Severe hunger in the three Jamaican institutions was significantly higher in the younger students aged <22 (42.5%) and 22-28 (40.9%) compared with those over 28 years of age (27.6%). Males reported more severe hunger (45%) than females (36.4%). Students working full-time experience less severe hunger (29.6%) than those working part time (42.0%) and those who do not have a job or not working (43.4%). Students who resided with friends and family reported less severe hunger (29-33%) than those residing elsewhere. The study found that many students who took out loans experienced severe hunger (52.6%). In contrast, students who financed their education by the support of their family experienced the least severe hunger (33.1%).

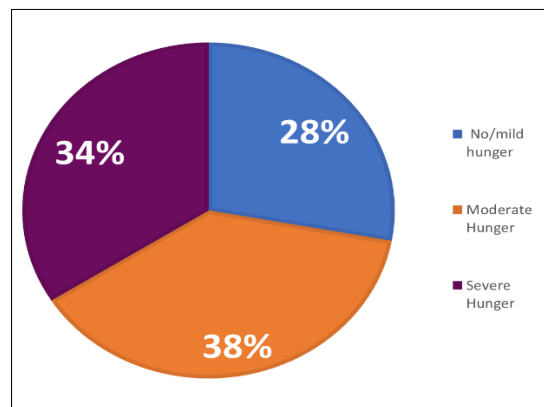


Figure 3 Obesity in students by hunger status

Figure 3 shows non-significant differences in obesity by hunger status even though obesity was less in the no hunger group.

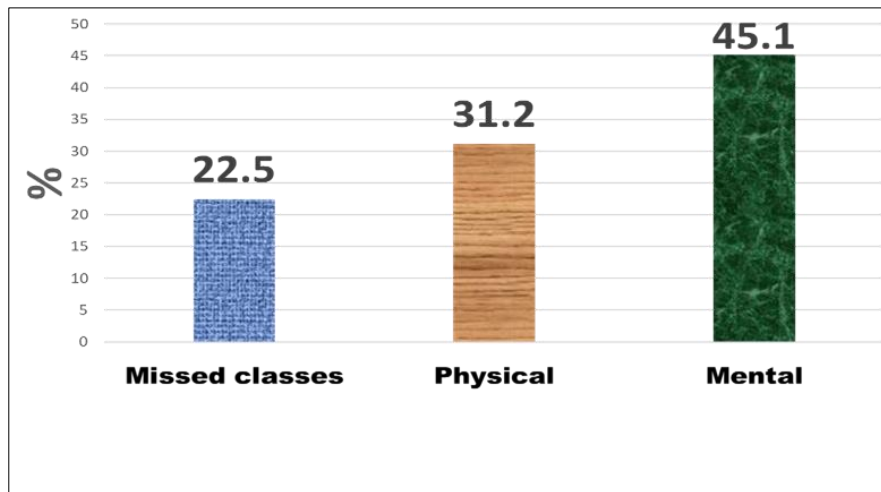


Figure 4 Severe hunger and its effect on academic work

Figure 4 shows that of those whose academic work was affected 45.1% said the impact was mental- through stress. About 31.2% suffered physically through headaches and hunger while 22.5% reported missing classes, assignments, and examinations.

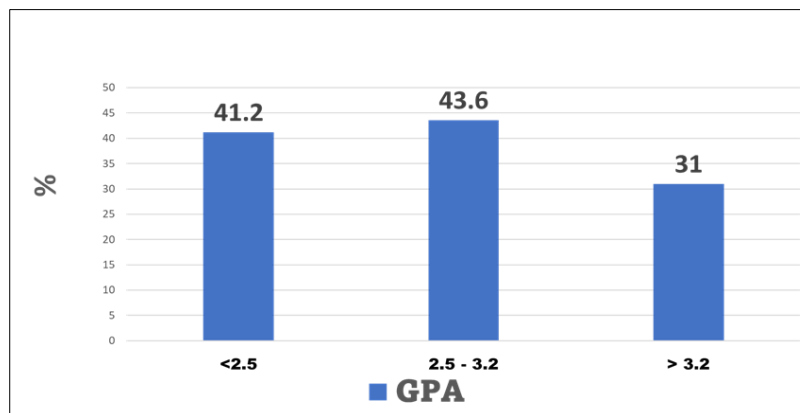


Figure 5 Severe hunger by GPA level of students in Jamaica

Figure 5 indicates that students with high GPAs experienced significantly less hunger (31%) than those with lower grades.

4. Discussion

Socio-economic inequity exists within every society, but this should not deter low-income students from maximizing their intellectual potential. How then can policy makers and program managers of tertiary education address the burgeoning challenges of food insecurity and hunger on campuses? First, it is imperative for these decision-makers to understand who is food insecure and why. Several studies emphasize that food insecurity is a complex issue for college students [10], [11]. For example, this study found that students who were more than 28 years old experienced less hunger. Other studies indicate a reverse pattern. They show that students who are younger than 20 years are less likely to be food insecure than students older than 30 [12]. This study found significantly more males (45.5%) than females (36.4%) with severe hunger. Several other studies have found gender differences in food insecurity for college students. Marato [7] found male community college students were less likely to be food insecure than female students with 58% of the female students being food insecure versus 53% of the males. In 2019, Ukebu [13] showed that the association of gender with food insecurity was not significant. Several other studies emphasize that age and gender *per se* are not the main issue. For example, a study of 42 public colleges and universities in Wisconsin [14] highlighted that students that grew up in food insecure homes self-identify as a racial/ethnic minority, live off-campus, and attend college in an urban

area are significantly more likely to report the lowest level of food security, often associated with hunger. Spaid [15] also reported that women over 20 years were almost three times more likely to be food insecure than younger women.

This study revealed that 71.1% of students worry about not having enough food. This is alarming but not uncommon. Many college students across USA also worry that food will run out [16] and 12% of college students say they sometimes or often go an entire day without eating because of inadequate finances [1]. In another study at the New Jersey Public University, about 1 in 10 students reported that they “did not eat for a whole day” because money was short, and some, several times over the last 30 days [17]. A study of university students in Northern Ireland found that 46% of them sometimes worry that food will run out due to a lack of money [18]. A University of Maryland-College Park study found nearly 20% of students were concerned about their ability to access nutritious food. In two public universities in Malaysia showed that 84% of students worried that food would finish before they got money to buy more [3].

The rising food insecurity among higher education students is attributed in large part to the increase in the cost of living and the rise in tuition and compulsory fees [4]. This study found that students not working and those taking loans were most affected. Most students in the USA pay for food by working a part-time or work study job (35%) or with help from family (35%) [19]. Students on financial aid were also found to face even more obstacles than their peers. They are more likely than students not on financial aid to report that they go a whole day without eating at least occasionally (13% vs 8%). This confirms that students are not able to afford food and hence skip meals to pay for educational expenses [4,20]. In Nigeria, a study in two universities found that 45% of students went hungry or cut down on their food consumption to save money. Even higher rates were found at a university in South Africa as some students skip meals to pay for accommodation [21].

Again, this finding is not unusual elsewhere. Miller [5] found that 34-59% of college students were food insecure, and these students spend much time seeking food aid. In Canada, a study [22] found an increasing number of students seeking food assistance from the Campus Food Bank Society at the University of Alberta. Additionally, Van den Burg [23] reported that more than 50% of the students at University of the Free State, South Africa asked someone else for food. In Jamaica, although many students seek financial aid, they are still food insecure because the aid received is not adequate to support their additional needs. Similarly, Davidson [24] reported that students who received financial aid are more likely to be food insecure than those who did not. The study did not explore the reasons for this finding, but it is known that people in greatest general need apply for these loans and the loans cover tuition only. All the non-tuition expenses compete with the food dollar for priority. Those needs and expenses of university students are vital and a study in Oregon showed that employed students were more likely to experience food insecurity, which suggests that employment does not ensure that students’ financial demands of attending university will be met [22].

While this study showed a positive relationship between working students and food security, Dubick [6] reported that most food insecure students are working and receiving financial aid. This could mean that students not working or receiving financial aid are financially secure and do not need the support. Though working and studying appears to provide better support to students to satisfy their needs, not all students reap the same benefits. Further, some types of employment do not provide enough income to allow students to satisfy their major needs. This study did not explore whether working students were able to cover their expenses.

According to Maslow [25], individuals are “dominated by physiological needs”, such as the need for food. implies that students may struggle to achieve academic excellence and fully respond to the demands of higher education when they are severely food insecure [23]. Another study found that 36% and 34% of students reported that their academic and/or athletic performance, respectively, had been affected by hunger [26]. Many scholars have showed that food insecurity is linked with adverse outcomes including poorer academic achievement and attainment, undermining investments in higher education [7,8,9,10,27]. Hence food insecurity is a major concern which should be addressed to ensure that students’ ability to succeed is not compromised by their inability to satisfy their hunger.

This study demonstrated that students that were less food insecure had the highest GPA. This finding was similar to a study [7] which stated that food insecure students were more likely than food secure students to report a lower GPA (2.0–2.49) versus a higher GPA (3.5–4.0). Hickey [26] reported that the majority of hungry students - 36%, had a GPA between 2.6 and 3.0, whereas, of those that did not report hunger, 41% had GPAs between 3.0 and 3.5. Furthermore, Woerden [28] earlier found that food-insecure students had a significantly lower GPA than food-secure students. Although such nonexperimental study cannot deduce that food insecurity causes poorer academic performance, it certainly strengthens the association between these variables and provides an impetus for researchers to continue to explore the experiences of food insecure college students. If, in fact, food insecurity is a hindrance to optimal academic performance, students’ struggles with food might also be impacting college retention and completion rates.

4.1. Ownership by Administrators

If tertiary education is to migrate from an elitist-type approach and expand and include talented students from all sections of society there needs to be a recognition that (i) increasing numbers of students will be food insecure and (ii) there will be need for a better understanding of the characteristics and circumstances of these students.

Further, if the objective of higher education is to capture the full talents of students then universities must be concerned about issues such as hunger which impair academic performance just as lack of laboratory equipment or experienced lecturers.

In accepting part-ownership of the hunger problem, administrators need to present the challenge as a way of protecting the investment in education and this will help to destigmatize any intervention approach.

Learning how to identify students in need should not be beyond the remit of tertiary institutions. Processes should be put in place to detect warning signs such as students who sleep in the library and linger on campus. Orientation sessions each year should inform students how and where to seek assistance in times of need without being stigmatized.

The large number of students who are food insecure should allow for networks to be built for joint proposals to relevant entities who are empathetic and willing to invest in such ventures.

Restructuring some of the four-year programs towards shorter, relevant skill-based courses could not only meet the current labor demands of industry today, but also allow students to afford the shorter programs without going hungry.

Supporting a student-run store on campus, sponsored by the food industry, which offers more affordable food commodities, can reduce the stigma among needy students.

4.2. Ownership by Counsellors

The gravity of the hunger problem should prompt an expansion of the counselling units of tertiary institutions. Students with food deficits silently endure acute levels of stress. Stigma, unwillingness to seek help and poor time management to secure food combine to drive the stress which results in hours of lost schoolwork and sleep. Mental health services that as sensitive to the special needs of hungry students would be helpful to rebuff the challenge over time. The counselling unit can be more useful if there is a timely response to students in crisis. Confidential emails and hotlines should be available to students, staff and others who are best able to intervene on behalf of at-risk students

4.3. Ownership by Students

Students need to take responsibility by more carefully planning about how they spend their limited resources on food. Although food insecure students in general know how to live and spend frugally, often they do not know on which foods to spend. It is possible to spend less and eat more. But the real goal is to spend less and eat more healthily. A major action therefore is to increase their knowledge about the content of food, its nutritional value and food preparation (whether self-prepared or purchased). Nutrition-sensitive spending can help students to better withstand their food insecurity challenges. At orientation, all students should be encouraged to build knowledge and skills related to nutrition, meal planning and preparation as these can reduce cost, improve health and boost the much-needed energy for the mental tasks ahead.

5. Conclusion

Traditionally, hunger on campus was perceived to be a minor problem. This study shows how widespread it is. Although individuals and families must take the major financial responsibility for progress through a tertiary institution, this paper concludes that ownership for food insecurity should be shared by other entities as well.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare no conflict of interest.

Statement of informed consent

This study was approved by the Ethics Committee of the University of Technology, Jamaica. All participants willingly gave consent to be interviewed after the details of the study were explained to them.

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