“Everybody I Know Is Always Hungry ... But Nobody Asks Why”: University Students, Food Insecurity and Mental Health

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Abstract: Food insecurity is a substantial problem in Canadian university students. Multiple cross-sectional studies suggest that nearly a third of university students across Canada report food insecurity. Yet, little is understood about the experiences of food-insecure students and the impact of their experiences on their mental health. To address this, a multi-method study was conducted using quantitative and qualitative approaches to describe the prevalence, association and experience of food insecurity and mental health in undergraduate students. The current paper reports on the qualitative component, which described the lived experiences of food-insecure students, captured through face-to-face focus group interviews with participants (n = 6). The themes included (1) contributing factors to food insecurity; (2) consequences of food insecurity; and (3) students’ responses/attempts to cope with food insecurity. The findings illuminated student voices, added depth to quantitative results, and made the experience of food insecurity more visible at the undergraduate level. Additional research is needed to understand students’ diverse experiences across the university community and to inform programs to support students.

Keywords: food insecurity; food security; mental health; university students; student health; food justice; hunger

1. Introduction

Food insecurity—the inability to acquire or consume an adequate quality of diet or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so [1]—is a substantial public health problem in university students [2]. A series of cross-sectional studies conducted internationally suggest that a concerning proportion of university students report food insecurity [3–8]. In Canada, the existing literature on food insecurity in university students is limited. However, recent studies have suggested that nearly a third of Canadian university students are affected by food insecurity [9–12]. Food insecurity is associated with poor physical and mental health outcomes and lower academic performance [2–4,9–11,13]. Yet, little is understood about how university students experience food insecurity. Currently, the majority of studies have examined food insecurity in university students using a quantitative approach [2–13]. Although these findings have contributed to the growing body of knowledge describing the burden of the problem in this population, they have not captured the depth of the students’ lived experiences with food insecurity.

In response to this gap, in 2017, a multi-method study was conducted at the University of Ontario Institute of Technology (UOIT) in Oshawa, Canada, to investigate food insecurity and mental health in university students enrolled in the faculties of Health Sciences (FHS) and Education...
(FEd). A multi-method study is described as research that incorporates “all the various combinations of methods that include in a substantive way more than one data collection procedure” [14,15]. This method was proposed to facilitate a deeper understanding of food insecurity and mental health in this population. The quantitative component encompassed a cross-sectional study using valid and reliable tools, including the Household Food Security Module to measure food insecurity and the Depression, Anxiety, and Stress Scale-21 to measure psychological distress [16,17]. Eight hundred and eighty-two undergraduate students in FHS and FEd were recruited and the results revealed that food insecurity was pervasive and positively associated with moderate–extremely severe psychological distress amongst these students [18].

The qualitative component was informed by phenomenology [19]. The purpose of this phenomenology-informed study was to gain critical insights into the lived experiences of undergraduate students at UOIT who are affected by food insecurity, including whether and how it relates to their mental health [20,21]. Phenomenology is grounded in describing the shared meaning that individuals assign to their experiences [19]. At this stage of the work, the analysis focused on the individual experience of the phenomena (the relationship between food insecurity and mental health) and the research team did not develop a composite description of the essence of the experience for all of the individuals in the study. This paper focuses on describing the key findings from the qualitative component of the multi-method study.

2. Materials and Method

This multi-method study (approved by the UOIT Research Ethics Board, REB #14515) was quantitatively-driven. However, the qualitative component was designed a priori to acquire first-hand narratives of the students’ experiences with food insecurity and mental health. The participants were recruited using purposive sampling [22] (eligibility criteria included: enrollment in an undergraduate program in the FHS or FEd, 18 years of age or older, and first-hand experiences with food insecurity). All participants provided informed consent. Active and passive strategies were used to recruit participants, including recruitment in undergraduate classes, and the placement of informational posters in FHS and FEd buildings and student lounges. Students who expressed interest via email or telephone were subsequently screened through email or phone correspondence to confirm their fulfillment of the eligibility criteria (specifically, to confirm first-hand experiences with food insecurity). Figure 1 depicts the recruitment processes for both components of the multi-method study.

Figure 1. Recruitment.
Focus group interviews were conducted face-to-face using a guide. The interview guide focused on students’ experiences with food insecurity and included questions about the quality and quantity of foods typically consumed daily, the strategies used to manage challenges related to food insecurity, and the impact of the experience on student mental health. The interview guide was pilot-tested to assess its feasibility. Probes and prompts were used to elicit more information, clarify responses, and moderate discussion between the participants [23]. One additional face-to-face interview was conducted with a student, in response to scheduling difficulties, using the same interview guide. All interviews were 60–90 min in duration and conducted in Fall of 2018, on campus, by the first author. Interviews were audio-recorded (using electronic recording devices) and transcribed verbatim. The first author reviewed all the transcripts against the original audio recording to ensure accuracy. Where necessary, verbatim quotes were edited to improve readability, and corrections to improve punctuation and grammar were made. Personal identifiers were removed and participant names were replaced with numerical identifications.

The first author and members of the research team implemented a series of well-established procedures to ensure methodological validity and rigor in qualitative research (i.e., credibility, transferability, dependability, and confirmability) [20], and to provide scientific justification of the study results [19,24,25]. Procedures included developing a rich, thick description; using the services of a professionally-trained transcriber; triangulating data sources within the multi-method study; conducting member checks with participants to ensure their experiences were accurately described and interpreted; regularly scheduling de-briefing sessions among members of the research team; establishing a common platform for coding, including the use of a shared codebook; and maintaining a reflexive journal to bracket and acknowledge researcher assumptions and biases [19,23–25]. Transcripts were analyzed through an interpretivist approach, including exploring and identifying shared meaning in the participants’ descriptions of their experiences [26]. Thematic analysis of the transcripts resulted in codes, which were then conceptually clustered to develop categories. The first author analyzed the transcripts independently, and subsequently discussed them with the members of the research team. Codes and narrative data from each category were reviewed to develop and summarize the most descriptive themes. NVivo11 was used to store the data and assist with the analysis [27].

3. Results

3.1. Demographic Results

Three sets of interviews were conducted with a total of six participants. As an intended sub-section of a larger study, the sample size for this qualitative component was deemed adequate. The participants included first- \( (n = 1) \), second- \( (n = 3) \), and third-year students \( (n = 2) \). Four of the six participants were male, and the experiences of male and female students converged. The demographic characteristics of the interview participants are described in Table 1.
Table 1. Demographic characteristics.

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<td><strong>Living Arrangement</strong></td>
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<td>Off-campus with family members</td>
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3.2. Thematic Findings

Three central themes emerged from the analysis: contributing factors to food insecurity, consequences of food insecurity, and responses/attempts to cope with or manage food insecurity. Verbatim quotes were provided using unique participant numbers, and the focus group that each participant attended is given following the participant number ("0.1" for group 1 or "0.2" for group 2). The individual interview was indicated with a "0.3". For example, P2.1 refers to participant 2 from focus group 1.

3.2.1. Contributing Factors to Food Insecurity

Financial Constraints

Participants described financial constraints as a primary contributing factor to food insecurity. Students emphasized that the rising cost of living expenses, the lack of stable resources, and the burden of outstanding debt intensified the strain of daily expenses. Participants described food-related expenses as a discretionary component of their budget, with fixed expenses such as tuition and rent taking priority. All participants saw financial constraints as a major barrier to accessing quality food, “We don’t really have the money for good food, so it’s kind of whatever’s cheap” (P1.1). There was an underlying notion that food insecurity is a norm in student life, “I’m familiar with the idea of the starving students . . . if you’re in school, you don’t have money . . . the student life is known as a not healthy food life”. (P2.1) This perception suggests that they have normalized their experience of food insecurity as a student’s “rite-of-passage” and thus are reluctant to reach out for support.

The normalization of food insecurity, particularly, the “starving student lifestyle” is a concept that is supported in the literature [28]. Consistent with previous work [29], in this study, participants described “healthy eating” as a luxury that they could not afford as a student, “You have to go to Wendy’s or Taco Bell, and it’s like ugh, this is garbage that we’re eating but you can get a lot of quantity for a low cost” (P1.1). Participants identified the presence of conflicting priorities, and described eating and food as a lower priority than school and extra-curricular commitments, “Eating is kind of, like, one of my last priorities . . . There’s other things I have to do . . . We’re eating the crappy food, we’re hating ourselves for it, but it’s all we can afford right now” (P5.2).
Insufficient Time

In conjunction with financial constraints, participants discussed insufficient time as a major roadblock that impedes their ability to access, prepare and consume a sufficient quality and quantity of food. Demanding schedules, time spent commuting to-and-from the university and the lack of transportation to food sources were all chief causes of time constraints faced by the participants. Participants described feeling inundated with all they have to do, “I can’t eat well, even if I wanted to, because of the time. I have to work, I have to pass studies, its stressful” (P6.3). In discussing food preparation skills, one participant spoke nostalgically of their passion for cooking, and described the ability to prepare a meal as a rare occurrence, “Not because we can’t cook. I’m a really good cook, and I can make some amazing dishes, but I don’t have the time or the energy to put into it” (P5.2). Feeling overwhelmed with demanding schedules and limited time, participants discussed the challenge of finding time to prepare and eat food, “Sometimes it’s a problem . . . if I have school and soccer, and sometimes they’re back-to-back, so if I play 6:30 to 7:30 PM, and 8:30 to 9:30 PM, it’s so hard to find time for eating” (P3.2) . . . “Things are so busy . . . .we barely slept, me and my friends. So from that you can see that food prep was not an option for us” (P2.1). This finding is consistent with the available literature that suggests that there are a series of unique burdens that students face [29]. Moreover, at UOIT, the majority of undergraduate students live off-campus [30]. Therefore, a significant amount of this population is made-up of students who face time-specific challenges in their commute to-and-from the campus.

Limited Access to Culturally Appropriate Foods

Limited access to culturally appropriate and traditional foods was identified by one participant as a contributing factor for food insecurity. The student described feeling alienated and longing to belong to a community, “I feel I’m a little distant . . . They don’t have much Asian foods in Oshawa...I kind of miss my culture food . . . like I’m away from my community . . . a community, it brings you together . . . .I’m forcing to fit into something . . . I wanna be myself, freely” (P6.3). The inability to access diversified food options on-campus made them feel cast-aside and ignored by the university, “Treating you as just a number. But it’s much more than that, you are a person, you have feelings, you have emotion” (P6.3). Though limited, there is literature that supports this finding, in that some students attributed their access to culturally appropriate foods as a significant source of emotional comfort [28].

3.2.2. Consequences of Food Insecurity

Failure

In this study, the inability to access food in socially acceptable ways was associated with a deep sense of failure, characterized by feelings of shame, frustration, and aloneness. Participants described feeling socially isolated, and personally responsible for their vulnerability. They identified stigma as a major barrier to seeking support, particularly hesitancy to access food banks, “To turn around and go to these programs, it almost feels like you’re failing and now you’re going to a food bank, like that is your failure” (P5.2). The finding that food-insecure individuals experience shame and attribute their experience of food insecurity to feelings of isolation and a reduced capacity to engage in social activities is supported by the literature [31,32].

Dissatisfaction with the University

Additionally, participants expressed dissatisfaction with the university and the food available on-campus. Due to the lack of affordable, healthy food options on-campus, participants felt they had been taken advantage of, and identified purchasing food on-campus as “a last resort”. Notably, they expressed resentment towards the university’s food services, “The economics are way off . . . I think they [food services] know that if we don’t have a choice we’re just going to buy it anyway”
(P5.2). One participant spoke of skipping meals if they were unable to pack a lunch from home, “If I’m on-campus I wouldn’t [buy food], I usually don’t prep my lunch … I’d skip it” (P2.1). Moreover, many expressed frustration with the lack of awareness of food assistance programs on-campus, and the university’s failure to provide support and options for vulnerable students. They agreed that visible and sustained support from the university could assist students in accessing healthy foods in a dignified manner, especially if programs were promoted en masse to avoid marginalizing vulnerable students.

3.2.3. Responses/Attempts to Cope with and Manage Food Insecurity

“I’m powering through”

A series of mechanisms and processes to cope with and manage food insecurity were discussed, including the related notions of “powering through” the student phase. Participants described a sense of anticipation for a better future. Many expressed feeling hopeful in the face of adversity, “Right now we just have to, you know, tighten our belts and we’ll get through these couple of years, and then when we’re on the other side we won’t have to worry about this anymore” (P5.2). Participants emphasized that they believed their present situation to be temporary, and discussed the prospect of a better life after university, “You just gotta get through the student phase … that’s when you can get back to being healthy I guess” (P2.1).

Acceptance

When discussing strategies to manage feelings of shame, frustration, and aloneness, participants stated that they avoid spending time thinking or talking about their challenges, “I don’t even have time to think about it, I just do it and I move on. Whatever the next thing is … I just move on, I just not think about it” (P1.1). Instead, they simply “accept it” as there is little that can be done to change their present situation, “There’s nothing I can do about it” (P2.1). The majority of participants identified a lack of power or control over their experience of food insecurity and described feelings of distress and loss of dignity, “It’s extremely stressful, and I would be lying if there wasn’t breakdowns every once in a while … I just don’t have time to think about it … I feel like there’s nothing I can do about it” (P5.2). The notion of powerlessness, lack of control over financial stability and loss of dignity, are supported in previous studies of students who experience food insecurity [28,29,31].

4. Discussion

4.1. Key Findings

The qualitative findings described in this paper converged with the quantitative findings of the overarching multi-method study, and suggest that food insecurity is a physically, emotionally and socially distressing experience for some university students [18]. In addition to their ongoing sacrifices in food intake, compromised food choices, and anxiety due to the lack of control over food procurement, students who experienced food insecurity described negative effects on their psychological and social well-being. They also expressed embarrassment, shame and reluctance to seek support out of fear of being stigmatized. Data saturation was reached based on the following qualitative methodological considerations [33]. Primarily, there was consistency among research team members regarding coding and key theme identification. Additionally, there was convergence of most key themes and categories across all three interviews, to the point where conducting additional interviews with FHS and FEd students would not have gleaned any new key themes. This study’s findings are supported in the literature and suggest that students are suffering in the short-term [2–13,28,29,31,34]. Nonetheless, additional research is required to investigate how these problems will impact their long-term health.
4.2. Significance of Findings

The years spent at university are often characterized as a challenging time period. Many students are faced with juggling new responsibilities and are expected to make important decisions often independent of family members and support systems [35,36]. As found in this study, during this vulnerable time, students’ eating habits may reflect restricted choices based on barriers to healthy eating, such as a lack of stable resources and support [37]. This study’s findings are consistent with other published studies, notably, that precarious finances play a significant role in shaping susceptibility to food insecurity [2–13,28,29,31]. Recognizing that many students are accessing loans and securing employment to fund their education, it appears that such funding sources do not fully protect them from experiencing food insecurity. As echoed in previous studies, students in this study described a prioritization of non-discretionary expenses such as tuition and rent. In response, their food budget was persistently made up of residual or “left over” funds [2–12,38,39]. Although little is known about how food insecurity directly affects academic standing in university students, the literature suggests that students who face financial hardships find it difficult to manage their academic responsibilities and are less likely to complete their programs [40]. The discussions with the students in this study revealed that they were engaging in their academic commitments and activities without adequate nourishment. Unsurprisingly, these students were identifying adverse effects for their mental health, and this may have very serious consequences for their success at university. Furthermore, the responses and processes that students adopt in the face of adversity, particularly during these formative years, may have long-term implications, including their ability to contribute to the workforce.

Moreover, discussions with students from the Faculty of Health Sciences and Faculty of Education suggested that there were some possible differences in student experiences between the two faculties. In the quantitative component of this multi-method study, the FEd students’ experiences of food insecurity were found to be less likely to be positively associated with psychological distress, in comparison to their FHS counterparts. Similarly, in the qualitative component of the study, the FEd participants identified the consequences of food insecurity as worse during their “undergraduate years”. Seemingly, FEd students, who must have successfully completed an undergraduate degree to be enrolled in the education program, report fewer difficulties in managing their food insecurity, as it relates to their mental health. This meaningful distinction that was mirrored in both components of this multi-method study provides insight into which students may be more vulnerable.

Finally, consistent with findings in other populations accessing food banks [41], participants in this study expressed a strong reluctance to make use of food banks. Food banks and food pantries operate on nearly every university campus in Canada. Nonetheless, some students discussed experiencing shame and stigma in accessing these services. Food banks are, evidently, unlikely to be a “catch-all” solution for food insecurity [42], as some students yearn to access food in a dignified and socially acceptable manner. Therefore, with adequate financial support, guidance and tools that may improve their access to food, this study suggests that some students value autonomy and capacity to make healthier choices without compromising their dignity.

4.3. Limitations

Focus group interviews typically include 6–8 participants [43]. However, challenges with recruitment led to fewer participants per group. Moreover, four of the six participants were male and only one participant was a first-year student. Conducting further interviews with additional students, including more female students, gender minorities, and first-year students, may illuminate unique findings.

5. Conclusions

Food insecurity is a considerable problem in university students. Although previous studies have suggested that students face several challenges in accessing adequate foods, there has been a limited
use of qualitative methods to describe the relationship between food insecurity and mental health in this population. Therefore, this study is a meaningful addition that provides depth and richness to the existing body of literature. Moreover, the findings described in this paper provide corroboration of previously identified factors associated with food insecurity in this group, and report the ways in which students describe psychological and social distress as it relates to their experience of food insecurity. It is anticipated that these findings may shape future research that could positively impact university programs and practices. Postsecondary institutions, faculty members, administrators, and ministries of higher education are well-positioned to develop a series of short- and long-term strategies to support students. First, they should advocate for improved funding options including increased grant opportunities, and oppose the raising of tuition and other costs associated with university education. Next, universities might consider providing subsidized grocery options to facilitate equitable access to food, as well as programming longer breaks in student schedules in response to concerns regarding time constraints for food preparation. Finally, institutions can work with health professionals, including dietitians, to design programs that assist students in developing important skills, including cooking and budgeting skills.

The anticipated impact of this research on policy is significant because performance at the post-secondary level can shape and impact long-term opportunities and the future of the workforce. The time students spend at university can be predictive of their socio-economic outcomes and the coping strategies developed during this pivotal period can fundamentally influence their ability to thrive as healthy and contributing members of society. Thus, a call to action for educational institutions to provide sufficient support during this key period—including university-wide programs and policies to facilitate equitable access to healthy food—is essential.

**Author Contributions:** N.H., E.V., and P.C. conceptualized the study; N.H., E.V., and L.J.C. designed and verified the methodology; N.H. performed the formal analysis; E.V., and L.J.C. verified the analytical methods; N.H. wrote the manuscript with support from E.V., and L.J.C.; E.V., and P.C. supervised the project; P.C. obtained the funding. All authors discussed results and provided critical feedback; all authors contributed to the final manuscript.

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