### Effects of Food Insecurity During the COVID-19 Pandemic on the Mental Health of International Students Living in Canada

Lennisha Nagalingam<sup>1</sup>, Sohnia Sansanwal, BSc, MSc(c)<sup>2</sup>

<sup>1</sup>McMaster University

<sup>2</sup>McMaster University, Department of Health, Evidence, and Impact

# WHAT IS FOOD INSECURITY? WHAT DOES IT LOOK LIKE IN CANADA?

Food insecurity is predominantly thought to be an issue of the Global South; however, it also remains a challenge in developed countries such as Canada. Food insecurity is defined by the Food and Agriculture Organization (FAO) as, "[lacking] regular access to enough safe and nutritious food for normal growth and development and an active and healthy life" [1]. The circumstances can range from mild, moderate, or severe: this can be from not being certain of when your next meal will be versus going days without food [1]. What may be surprising to many is that by this definition, university students often fall into these circumstances, particularly non-White ethnic minorities, low-income individuals, those receiving financial aid and often forgotten, international students [2]. A study done in an American University found that food insecurity was prevalent among 10-75% of students compared to the national average of 10% [2]. Although no statistics on the prevalence in international students were given in this paper, they were highlighted as being at a higher risk [2].

#### **BARRIERS TO FOOD ACCESS**

Both Canadian international and resident Canadian students face similar barriers to procuring food. A key barrier for both groups is financial constraints as university students face many expenses such as tuition, textbooks, and housing [3]. This was exacerbated during COVID-19 as there was a drop in employment rates across the country due to lockdowns and the closure of non-essential businesses [2]. In fact, it is estimated that employment rates decreased 15% from February to April 2020 [4], impacting the financial circumstances of many students. Even before COVID-19, financial constraints have negatively impacted the quality of foods students' access, with many often turning to cheaper and unhealthy options over nutrient packed foods that are outside of a student's budget [2, 3].

For students who were able to move back to their families during the pandemic, it was reported that with the closure of universities, many students went home over concerns of the rising spread of COVID-19, an inability to afford their student housing or due to loss of employment [2, 3]. Those who left their student homes to return to a more stable housing situation with their families or loved ones, experienced increased food security. This was due to many having decreased responsibility for procuring food, as well as consuming more home cooked meals [3]. One study from the Iowa State University, found there was a 44% increase in the number of students living with their families in 2020, and that these students were less likely to experience food insecurity than students living on their own [3]. Of those who moved home, the rate of food insecurity was 17% during the pandemic, a drop from 24-28% before the pandemic [3]. This experience differs from international students, many of whom were unable to return to their home countries due to border closures [3]. Often,

these international students needed to stay in their student residences and provide meals for themselves. Students often do not have the time or cooking skills to prepare home cooked meals. thus resulting the higher in consumption of less nutritious, fast-food meals [3]. As well, even though employment rates began increasing in July 2020, as international students, they can only work 20 hours per week due to their study permit in all universities [4, 5].

One aspect to food security that gets overlooked is that the food being consumed must not only be nutritious and affordable but also culturally appropriate [5]. Depending on the area a student is living in and what their ethnicity is, it may be difficult to find their traditional foods in Canadian grocery stores that also managed to stay open during lockdown.

## EFFECTS OF POOR FOOD SECURITY ON MENTAL HEALTH PRIOR TO COVID-19

It is well researched how insufficient intake of nutrients can lead to poor health in a multitude of avenues, however there are also psychosocial repercussions of food insecurity [2, 6]. Being food insecure can be a risk factor for depression, anxiety, and stress [5, 6]. An article from Cambridge University found that this can be due to the inability to consume cultural foods or negative feelings such as helplessness or alienation stemming from not being able to provide for themselves [5, 6].

Prior to the COVID-19 pandemic there has been little research into the mental health impacts of poor food security on students who live with their parents. On top of mental health issues that can be caused by poor food security, food insecurity may also reduce academic performance, creating a cycle that further exacerbates mental health issues. [2, 5].

#### EFFECTS OF POOR FOOD SECURITY ON MENTAL HEALTH AFTER THE ONSET OF COVID-19

For students who are food insecure while living on campus, having the ability to move back in with family in a food secure environment can have a positive impact on overall health and wellbeing. As mentioned before. these students may be alleviated of the responsibility and stress of procuring food [3]. While there has been no recent research specifically addressing the connection between mental health and food insecurity during the pandemic, it has been speculated that improved food security associated with moving home with family may have contributed to a reduction in risk for mental health issues [3]. Other ways in which the pandemic may have exacerbated the cycle of mental health and food insecurity includes increased food prices, inconvenient store hours that do not align with class schedules, and barriers to returning to their home countries and families [3].

#### **PROPOSED SOLUTIONS**

Within the current scope of the issue, there is a knowledge gap with respect to international students and food insecurity during the COVID-19 pandemic and its effects on mental health. Thus, further research and discussion into its effects are necessary to create policies to address the issue.

One study has pointed out how even though some universities have food programs such as food banks and pantries, international students do not use them due to stigma [5]. Thus, Canadians universities need to encourage discussion on campus about the struggle of food insecurity alongside being required to have food programs in place. This can increase the effectiveness of food banks on campus and potentially decrease food insecurity.

### OPINION EDITORIAL

An issue with leaving universities to create and manage these programs on their own is that there is no organization to hold them accountable to ensure that students needs are being effectively addressed and prioritized. Thus, the government should also play a role, in creating policies that enforce accountability and provide support to students.

#### References

1. FAO. Hunger [Internet]. Food and Agriculture Organization of the United Nations. [cited 2023 Mar 31]. Available from: <u>http://www.fao.org/hunger/en/</u>

2. Mialki K, House LA, Mathews AE, Shelnutt KP. Covid-19 and College Students: Food Security Status before and after the Onset of a Pandemic. Nutrients. 2021 Feb;13(2):628.

3. Davitt ED, Heer MM, Winham DM, Knoblauch ST, Shelley MC. Effects of COVID-19 on University Student Food Security. Nutrients. 2021 Jun;13(6):1932.

4. Men F, Tarasuk V. Food Insecurity amid the COVID-19 Pandemic: Food Charity, Government Assistance, and Employment. Canadian Public Policy. 2021 Jun;47(2):202– 30.

5. Amoyaw J, Pandey M, Maina G, Li Y, Nkrumah DO. Food insecurity among postsecondary international students: a scoping review protocol. BMJ Open. 2022 Oct 1;12(10):e060952.

6. Pourmotabbed A, Moradi S, Babaei A, Ghavami A, Mohammadi H, Jalili C, et al. Food insecurity and mental health: a systematic review and meta-analysis. Public Health Nutr. 2020 Jul;23(10):1778–90.