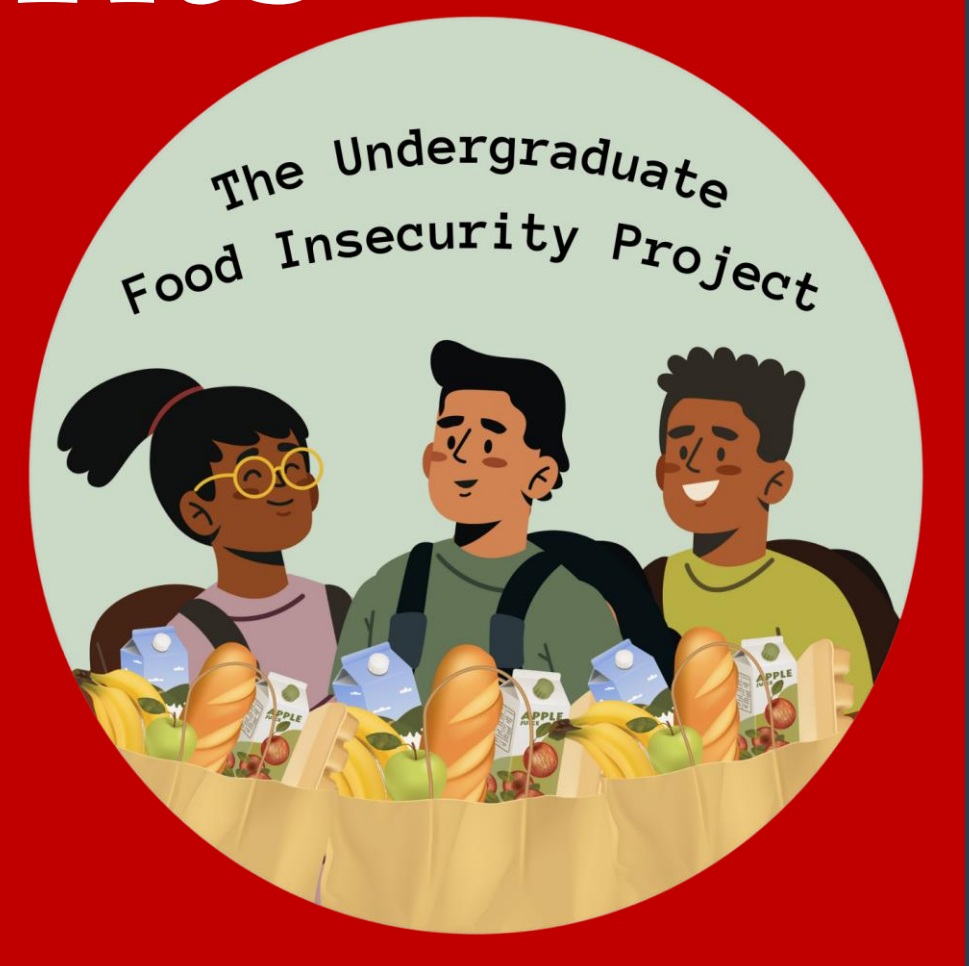


Starving while Studying: Food Insecurity among Undergraduate Students During the COVID-19 Pandemic in Canada: A Narrative Review



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Abstract



The COVID-19 pandemic has increased the barriers to achieving food security in Canada. Food insecurity, the insecure or inadequate access to food due to financial complications, is a major public health concern and an established marker of material deprivation. This research paper is a narrative literature review that aims to understand and address the impact of food insecurity on the mental health and well-being of undergraduate students during the COVID-19 pandemic. Furthermore, it is essential to understand if the impacts vary between undergraduate domestic and international students, and whether experiences of food insecurity among students varied by socioeconomic status. Peer-reviewed journal articles were examined from databases such as Medline and Scopus between March 2020 to 2023 and focus solely on higher education students. Preliminary findings showcase themes of food insecurity such as poor accessibility, the economic burden on food prices, and the degradation of mental health and well-being for undergraduate students. The next steps of this research will involve a detailed descriptive and qualitative thematic analyses of the literature to identify relevant themes, underlying knowledge gaps in the literature and future research priorities that will be undertaken by our team. Overall, this literature review will help to gain a deeper understanding of the impact food insecurity has on students, and the role the pandemic played in exposing which groups were impacted the most. This literature review will also guide future research priorities and actions to understand and address the impact of food insecurity on mental health and well-being of students beyond the pandemic.

Introduction



Background

- Food security is essential for everyone to have a healthy and active lifestyle.
- Food insecurity is defined as lack of physical, social, and economic access to safe, sufficient, and nutritious food to lead a healthy life^{1,2}
- Food insecurity is connected to financial constraints and a marker for material deprivation^{3,4}
- Pre-pandemic, food insecurity rates were higher among undergraduates students where 2 in 5 students were food insecure.
- During the pandemic, this rate has increased significantly⁵
- Food insecurity has a negative influence on the mental health and well-being of students, and on their academic performance⁵
- Undergraduate students across various Canadian universities are known to be at high risk of being food insecure⁶
 - 47% were found to be food insecure at Wilfrid Laurier University²
 - 42.3% were found to be food insecure at University of British Columbia²
 - 77.2% were found to be food insecure at Centennial College³

Introduction...



Rationale

In this narrative review, we seek to understand the impact of food insecurity on the mental health and well-being of Canadian students, and how the COVID-19 pandemic has played a critical role in exacerbating it. Food insecurity has been a potent determinant of health, and yet its impact on undergraduate students in Canada have been rarely explored.

Research Questions

- How did the COVID-19 pandemic impact the mental health and well-being of undergraduate students who experienced food insecurity?
- Did the impact of food insecurity on mental health and well-being vary for:
 - Domestic and international undergraduate students in Canada?
 - Undergraduate students who are disadvantaged and come from a low-socioeconomic status background?

Methodology



Objectives

- To understand the impact of food insecurity on the mental health and well-being of undergraduate students during the COVID-19 pandemic
- To understand if food insecurity varies between undergraduate domestic and international students
- To understand whether experiences of food insecurity among students varied by socioeconomic status

Search Strategy and Inclusion Criteria

The search for relevant literature for this narrative review was conducted using research databases and web search engines such as:

- MEDLINE
- EMBASE
- Cumulated Index to Nursing and Allied Health Literature (CINAHL)
- CAB Abstracts
- Scopus
- Education Resources and Information Center (ERIC)
- Canadian Business & Current Affairs (CBCA)
- Google Scholar
- Grey literature (only government documents and organization reports allowed)

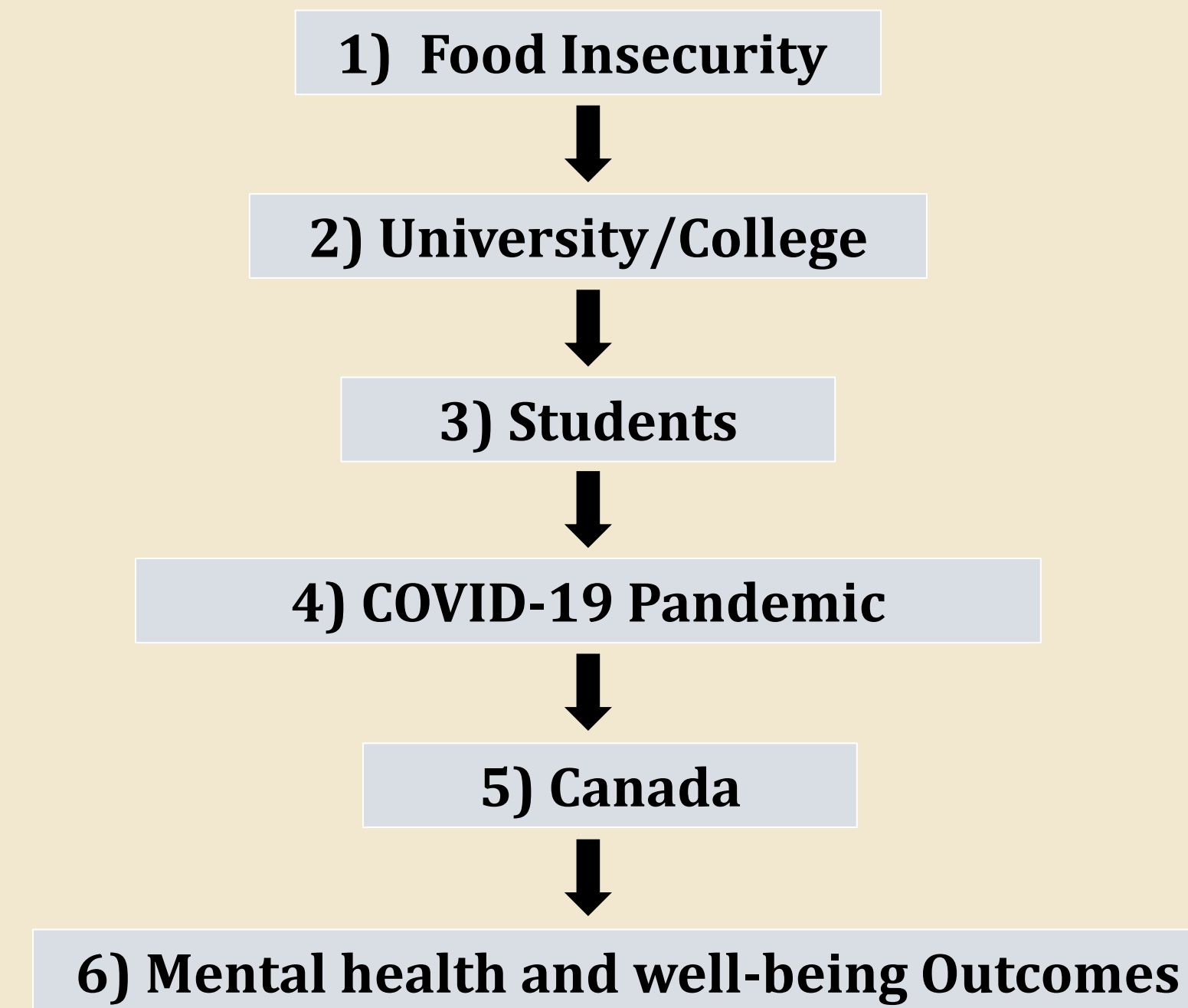
- The reference list cited within the articles were also used to find more relevant literature
- To be a part of this narrative literature review:
 - Most literature to be peer-reviewed
 - Include higher education students (undergraduates)
 - English or French
 - Human studies
 - March 2020-March 2023 (present)

Note: Any literature that are not on college and/or undergraduate students were excluded for the review

Methodology...



Search Specificity (Broad to Narrow Search)



Results



- Food insecurity directly impacts mental health, presents cognitive challenges, and hinders academic performance amongst undergraduate students, further exacerbated by the COVID-19 pandemic^{8,9}
- Figure 1 showcases how eating choices/habits were the most impacted during the pandemic at 38.4%, food accessibility at 20.5%, and food affordability at 15.1%¹

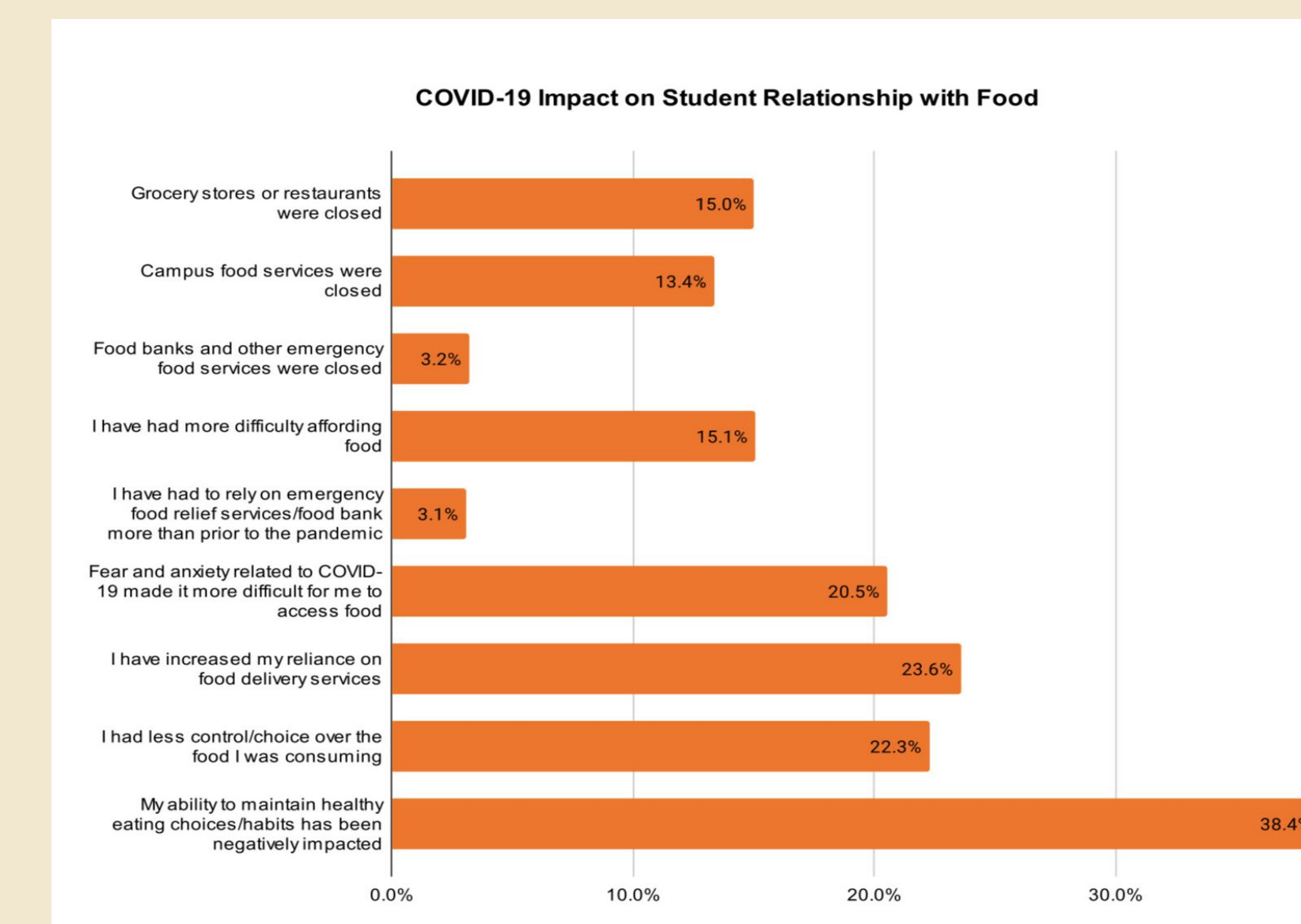


Figure 1: Graph showcases the percentage of students' relationship with food during the COVID-19 pandemic on Canadian campuses¹

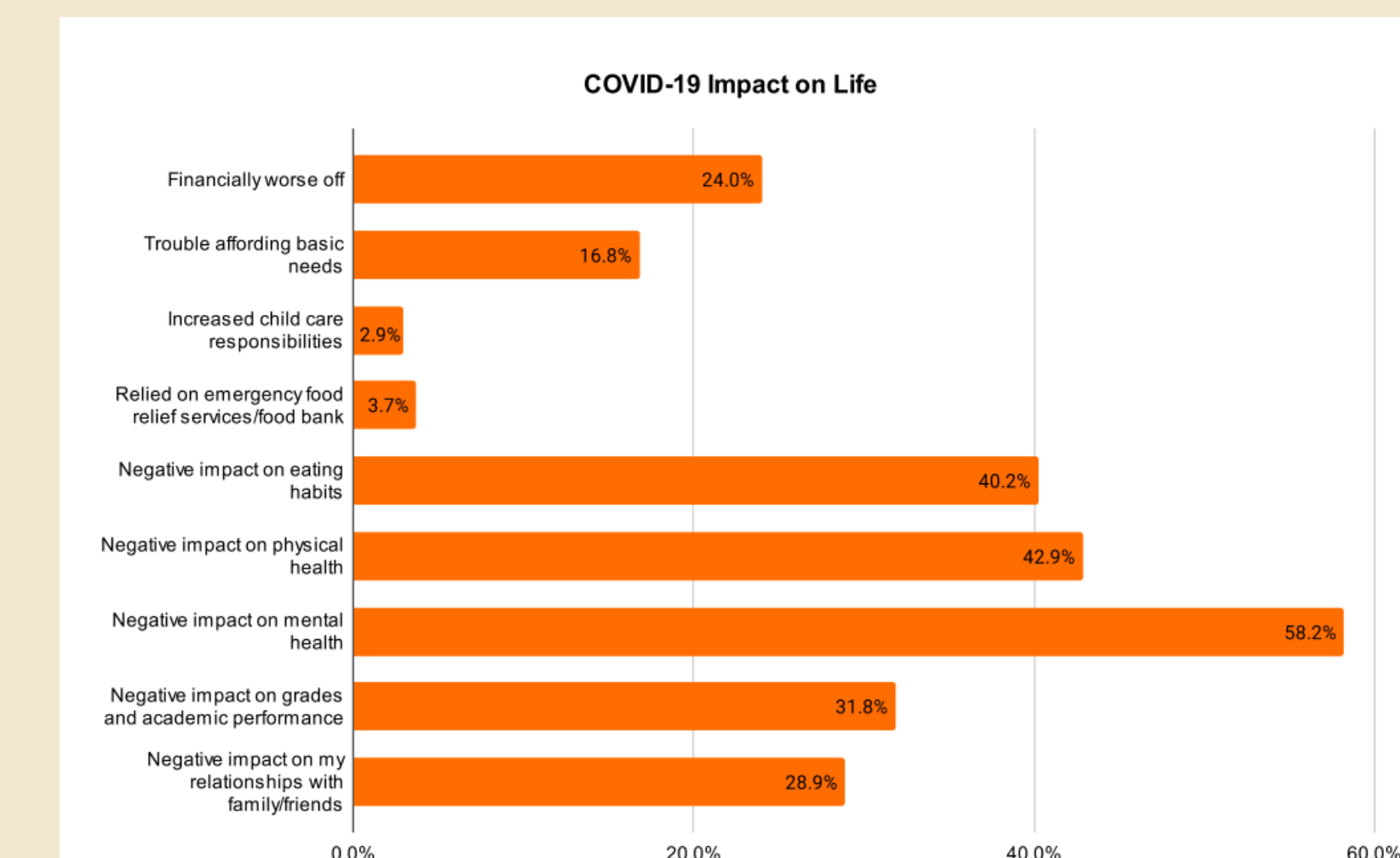


Figure 2: Graph showcases how COVID-19 played a critical role in impacting Students' life on Canadian campuses¹

Results...



- Figure 2 exposes how students' mental health was the most impacted during the pandemic at 58.2%, physical health at 42.9%, and negative impact on academic performance at 31.8%¹
- In over 5 Canadian campuses, about 1 in 5 students that were food insecure felt that food insecurity directly impacted their mental health¹⁰
- International post-secondary students on Canadian campuses face unique financial and non-financial barriers that lead to food insecurity, and that insufficient food intake negatively hinders their academic performance and mental health⁸
- Food insecurity has also been associated to various negative health outcomes which limit mental health and well-being progression among undergraduate students in Canada, before and during the pandemic, exposing them to diseases, illnesses, and other health conditions
 - Mental health and illness – stress, anxiety, depression – are notable outcomes among undergraduate students^{10,11,12,13,14,15}
 - Physical health – weight gain, diet change among undergraduate students^{16,17}
 - Substance abuse complications were also identified in some articles during preliminary screening
 - Academic performance is also an associated outcome among undergraduate students experiencing food insecurity, presented among many studies

Conclusion



- This narrative review is still in progress, however, based on current and preliminary data from various literature, food insecurity has shown to directly impact the mental health and well-being of undergraduate students in Canada
- Some existing literature has identified socioeconomic status playing a role in the experiences of food insecurity amongst undergraduate students

Strengths and Limitations

- Strengths
 - First future narrative review on Canadian undergraduate population
 - Population of focus often missed in research and policy making decisions
 - Narrative review would set the stage for future research to understand the impact of food insecurity among undergraduate students better in Canada
- Limitations
 - Weaknesses of a narrative review: existing scientific research scope on topic is severely limited (on COVID-19)

Next Steps

- To investigate if food insecurity varies between undergraduate domestic and international students
- Screen relevant literature in the context of Canada to understand the impact and severity of food insecurity among undergraduate students
- Screen for the social determinants of health indicators that are impacting undergraduate students experiencing food insecurity

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