

Reduced fresh fruit and vegetable consumption during COVID-19 pandemic in pregnant women

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Background

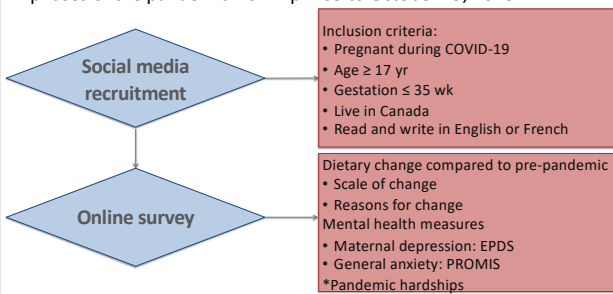
- Fresh fruit and vegetable consumption is associated with general health including psychological wellbeing such as depression and anxiety [1]
- COVID-19 pandemic impacted eating habits in many population [2,3]
- It is unknown whether the COVID-19 pandemic affected the access to fresh fruit and vegetables in pregnant women and whether the potential changes in fruit and vegetable intake is associated with their mental health

Objectives

- To assess changes in the consumption of fresh fruit and vegetables during the pandemic in Canadian pregnant women
- To determine whether the changes in fresh fruit and vegetable consumption is associated with maternal depression and anxiety

Methods

- This is a sub-analysis of the Pregnancy During the Pandemic (PdP) Study
- Participants (n = 4164) were recruited through social media
- Data used in this study were collected through online survey at the early phases of the pandemic from April 05 to October 19, 2020



*Pandemic hardships including job loss, change of household income, change of savings, isolation

Results

- Reduced fresh fruit and vegetable consumption was reported by 24.3% of pregnant individuals (Table 1).
- The top reason for reduced fruit and vegetable intake was “Cannot go grocery shopping frequently” (63.8%) followed by “Change in craving” (37.3%) (Fig 1)
- Pregnant women who had reduced fruit and vegetable consumption during the COVID-19 pandemic reported higher depression and anxiety symptoms (Fig 2)

Table 1. Changes in fresh fruit and vegetable consumption in pregnant women during the COVID-19 pandemic.

Change	n	Percent
Increased	1808	44.3
I eat much more	449	10.8
I eat more	1359	33.5
Same	1297	31.1
I eat about the same	1297	31.1
Decreased	1019	24.3
I eat less	893	21.4
I eat much less	126	3.0

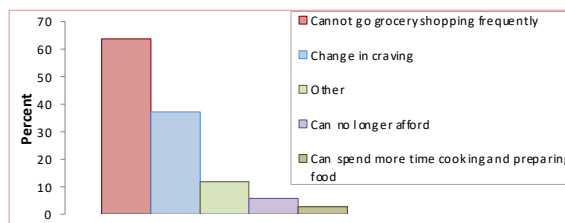


Fig 1. Reasons for change in pregnant individuals who reported reduced fresh fruit and vegetable consumption during the COVID-19 pandemic.

Results

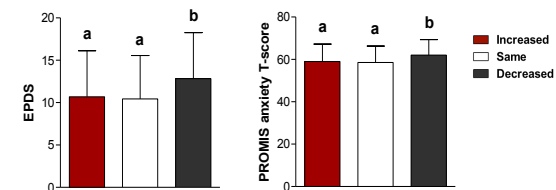


Fig 2. Depression and anxiety symptom in pregnant women with fresh fruit and vegetable consumption increased, decreased or unchanged (same) during the COVID-19 pandemic. Statistical differences between groups were determined using ANCOVA with adjustment of individual variables of pandemic hardships. Bars with different letters are statistically different from each other ($p < 0.05$).

Discussion

- The COVID-19 pandemic has made access to healthy food difficult for some pregnant women
- Decreased fresh fruit and vegetable consumption was associated with higher anxiety and depression symptoms in pregnant women
- Supports are needed to ensure the access of essential healthy food for vulnerable populations

1. Gtsbska et al. Fruit and vegetable intake and mental health in adults: A systematic review, *Nutrients* 2020 1;12(1):115.
2. Di Renzo et al. Eating habits and lifestyle changes during COVID-19 lockdown: an Italian survey, *J Transl Med*, 2020 Jun 8;18(1):229
3. Giacalone et al. Reported Changes in Dietary Habits During the COVID-19 Lockdown in the Danish Population: The Danish COVIDiet Study, *Front Nutr* 2020 Dec 8;7: 592112.

