# Psychological distress and its association with discretionary choices intake in Australian women of reproductive age during COVID-19

Nahal Habibi<sup>1,2</sup>, Jessica A Grieger<sup>1,2</sup>, Hung Vo<sup>3</sup>, Salman Sabir<sup>4</sup>, Sharleen L O'Reilly<sup>5</sup>, Cheryce Harrison<sup>6</sup>, Lisa J Moran<sup>1,6</sup>, Joanne Enticott<sup>6</sup>, Helena Teede<sup>6</sup>, Siew Lim<sup>6</sup>

<sup>1</sup> Robinson Research Institute, University of Adelaide, North Adelaide, SA 5005, Australia; <sup>2</sup> Adelaide Medical School, University of Adelaide, North 5005 Adelaide, South Australia 5005, Australia; <sup>3</sup> Austin Health, Performance Reporting and Decision Support, 145 Studley Road, Heidelberg, Victoria, Australia; <sup>4</sup> Ambulance Victoria; <sup>5</sup> UCD Institute of Food and Health and School of Agriculture and Food Science, University College Dublin, Belfield, Dublin 4, Ireland; <sup>6</sup> Monash Centre for Health Research and Implementation, Monash University, Clayton, VIC, Australia

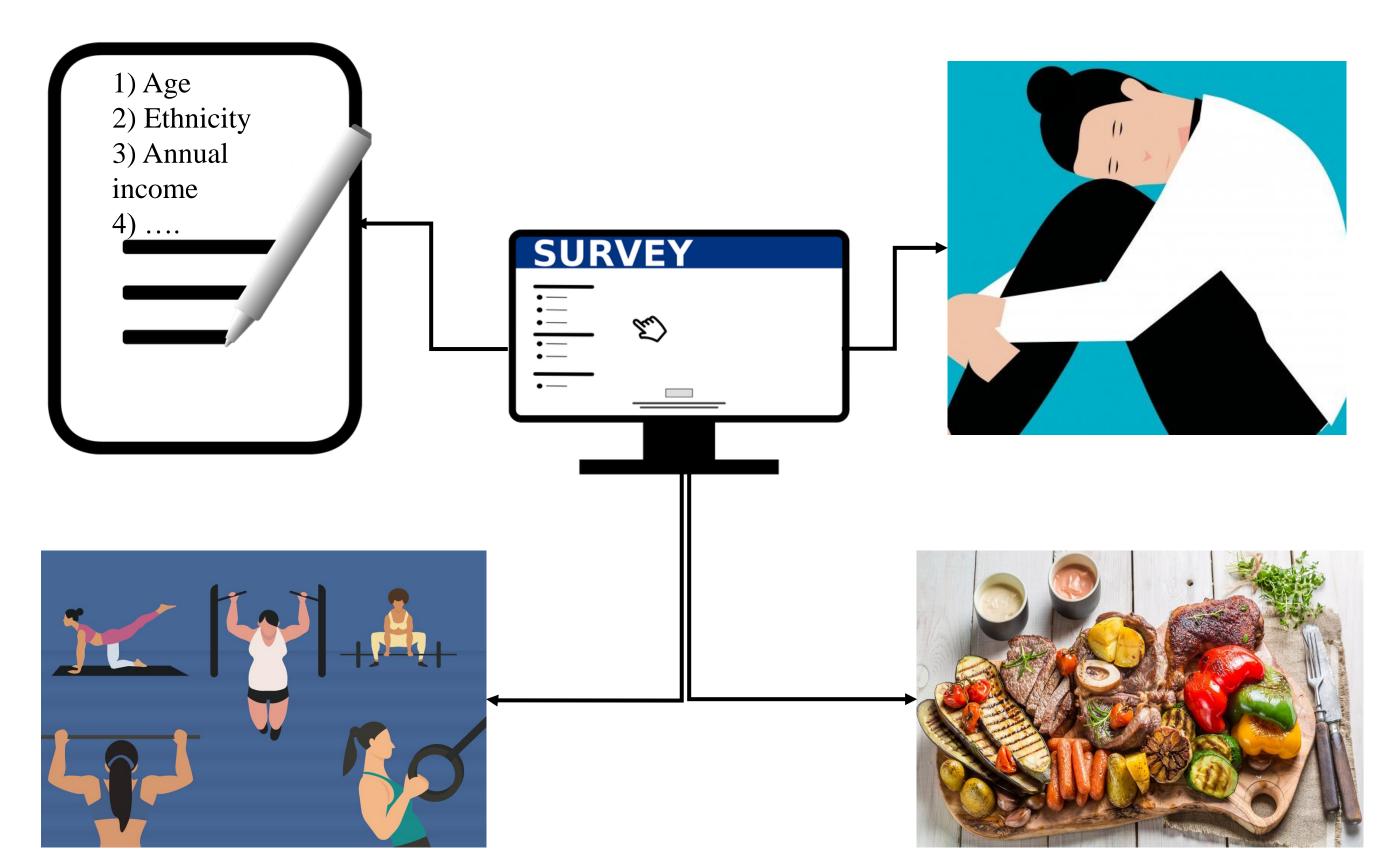
## Background

The COVID-19 pandemic has been disruptive to people's mental health and lifestyle including dietary intakes. Women are more impacted physically and psychologically by the COVID-19 pandemic compared to men (1,2). Changes in behavioural factors during the COVID-19 pandemic and lockdown include increased intake of total food consumption, decreased adherence to a healthy diet, and increased snacking (3). Additionally, food intake was reported to increase due to emotional eating, as a means of comfort and to feel better in response to anxious states, (4,5), with higher levels of the reported behaviour in females (4). This study aimed to explore psychological distress, lifestyle, and demographic factors and the relationship to discretionary choices, in women of reproductive age (18-50 years) during COVID-19 in Australia.

#### Method and materials

Study design, population, and socioeconomic characteristics

Reproductive aged women (18-50y) in Australia were invited to participate in an Australia wide cross-sectional study using data collected through an anonymous online survey between 15th October and 7th November 2020. The survey included multiple-choice or short answer questions to assess participants' socioeconomic characteristics. The level of lockdown restriction was determined based on metropolitan versus regional areas during the three months leading up to the survey (6).



Dietary intakes

Dietary survey questions were developed based on the Irish National COVID-19 Food Survey and adapted to the Australian settings using the Australian Guide to Healthy Eating to collect information on the consumption of sugar-sweetened beverages (SSB), alcohol and total discretionary foods.

Physical and sedentary activity

The Active Australia Survey, a validated questionnaire on physical activity and sedentary behaviour, was used to assess frequency of physical and sedentary activity (7).

## Psychological distress

Psychological distress level was assessed using the validated self-administered 10-item Kessler Psychological Distress Scale (K10) questionnaire.

#### Results

- A total of 1005 women were included in the study.
- Around 40% of the women reported to have a high level of psychological distress.
- About half of all women had higher intake of sugar-sweetened beverages (SSB) (> once/week) (46%) and alcohol (≥ 2 times/week) (49%) and 15% reported higher intake of discretionary foods (≥ 3 times/day).



- Women with high psychological distress (OR 1.96; 95% CI 1.32, 2.91), and those who gained weight during the pandemic (1.71; 1.10, 2.65), were more likely to consume discretionary foods ≥ 3 times/day.
- There was no association between psychological distress and SSB intake or alcohol; however, Australian, New Zealander, or Pacific Islander background (1.68; 1.21, 2.33) and more hours of sitting time (1.88; 1.07, 3.29) were associated with SSB consumption on most days/daily.
- Older age (1.70; 1.00, 2.89), higher household income (1.44; 1.08, 1.92), and moderate or high physical activity (1.75; 1.10, 2.80) were associated with alcohol intake on most weeks/daily.

### Conclusion

Whilst these findings were reported to occur during the COVID-19 pandemic, they similarly reflect consistent relationships outside such a circumstance. Public health strategies aimed at maintaining positive health-related behaviours to minimise psychological distress, and to optimise discretionary choices intake, particularly targeting vulnerable groups, are warranted. Further studies on changes in food intake and changes in psychological stress within Australia would be helpful.

## References

1.Connor, J., et al., Health risks and outcomes that disproportionately affect women during the Covid-19 pandemic: A review. Soc Sci Med, 2020. 2.Thibaut, F. and P.J.M. van Wijngaarden-Cremers, Women's Mental Health in the Time of Covid-19 Pandemic. Front Glob Womens Health, 2020. 3.Chew, H.S.J. and V. Lopez, Global Impact of COVID-19 on Weight and Weight-Related Behaviors in the Adult Population: A Scoping Review. Int J Environ Res Public Health, 2021. 18(4).

4.Di Renzo, L., et al., Psychological Aspects and Eating Habits during COVID-19 Home Confinement: Results of EHLC-COVID-19 Italian Online Survey. Nutrients, 2020. 12(7).

5. Scarmozzino, F. and F. Visioli, Covid-19 and the Subsequent Lockdown Modified Dietary Habits of Almost Half the Population in an Italian Sample. Foods, 2020. 9(5).

6. Victoria State Government., Identifying metro Melbourne restricted postcodes. Available from https://www.coronavirus.vic.gov.au/sites/default/files/2020-10/Metro-Melb-Postcodes-Factsheet.pdf. [accessed 30/05/2021].

7. Australian Government. Australian Institute of Health and Welfare. The Active Australia Survey: a guide and manual for implementation, analysis and reporting. 2003. Accessed on June 12, 2021. Available at: https://www.aihw.gov.au/reports/physical-activity/active-australia-survey/summary.

Contact
Dr Nahal Habibi
nahal.habibi@adelaide.edu.au
Nahal\_Habibi