<https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00047-eng.htm>

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The survey aims to investigate how does COVID-19 affects different gender groups’ mental health. One Question I found interesting is about mental health issues with symptoms such as anxiety disorder with various gender groups. The target population of the survey are Canadians. The sampled population is the participants in crowdsources questionnaires named ‘Impacts of COVID-19 on Canadians’, which was posted on Statistics Canada’s website between April and May in 2020. The sample design is an online questionnaire, and the sampling method is Stratified Sampling. The sample size is 46000 residents of Canada. The observation unit is a participant of the questionnaire.

One of the results drawn from the survey is that symptoms consistent with an anxiety disorder are more likely to be reported by female participants. This result is not generalizable to the target population due to the sample design, where the respondents were not chosen by probability sampling. To be specific, samples are not randomly chosen based on the known probability but self-selected instead.

Errors of Non-observation: Selection bias

The survey is not accessible for those who have limited access to the internet such as the elders. While lack of samples from a certain age group is likely to make the sample unrepresentative. One way to overcome this hurdle is to make physical copies of the survey and mail them to the senior communities.

Errors of observation: Measurement Error

The title of the online questionnaire is ‘Impacts of COVID-19 on Canadians – Your mental health’, which is likely to be misleading due to the wording. For example, the word ‘impact’ is likely to imply that Covid-19 caused a negative effect on all the Canadian’s mental health, while the truth is some people are likely to enjoy the quarantine caused by the COVID-19, where they can stay at home and avoid social interaction. To improve this, titles like ‘How does Covid-19 affect Canadians’ mental health’ can be used to replace the former one.