Mental Health in Australia[*]

My subtitle if needed

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Abstract

First sentence. Second sentence. Third sentence. Fourth sentence.

1 Introduction

You can and should cross-reference sections and sub-sections. For instance, Section 2. R Markdown automatically makes the sections lower case and adds a dash to spaces to generate labels, for instance, Section **??**.

2 Data

This paper was written in R, a programming language for statistical computing (R Core Team 2020) and uses various R packages for data analysis and manipulation. These packages include readxl (Wickham and Bryan 2019) for reading the .xlsx file and tidyverse (Wickham et al. 2019) and dplyr (Wickham et al. 2021) for handling the data. The data itself was the 2020 Australia General Social Survey: Summary Results – Tables 3: Persons aged 15 years and over, Social Experiences–By Sex and Health Characteristics obtained from the Australian Bureau of Statistics (Australia 2020a). Since the data was an .xlsx file and contained three separate tables (Males, Females, and Persons) in a single sheet, we split the table in excel into three separate sheets. We also took the subheading in each table and created another column titled 'Section' in excel to make it easier to convert to a .csv file in R and manipulate the data.

2.1 Source and Methodology

The key features of the dataset we utilized for this analysis was procured by the Australian Bureau of Statistics, sending out the General Social Survey to Australian residents over the age of 15 over a period of 4 months from June to September 2020 (Australia 2020b). Since this survey was conducted at the start of the COVID-19 pandemic, all surveys were completed online or by a phone interview, excluding any opportunities for face-to-face interviews or paper copies. Sample recruitment was conducted randomly from rural to urban areas, choosing to target lower socio-economic areas and randomly selecting individuals in one household to complete the survey in these target areas. Unfortunately, data could not be collected for households residing in the most remote parts of the country. More than 5000 households completed this survey across Australia, with 3 764 completed online and 1 540 completed over the phone. This accounts for 60.5% response rate, and due to the nature of the pandemic, no face-to-face follow ups were conducted for non-responses,

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[*]Code and data are available at: https://github.com/ChristinaChanYing/Australian-Social-Determinants-of-Health

leading to an unusually high non-response rate of 37.9%. The rest of the surveys sent were either refused or partly-responded to.

With the key features of the methodology highlighted, we can further discuss its strengths and weaknesses. Since the survey targeted areas with lower socio-economic status (SES) to see how residents of these areas would be more vulnerable to socio-economic disadvantage, there are a number of key demographics that would be excluded. Namely, those that reside in non-private dwellings such as hospitals and nursing homes. If this is the case, exclusion of such households presents a bias to the survey and possibly skews survey results in some way because the dataset we chose from this social survey included questions about trust in the healthcare system and self-reported mental health conditions. If Australian residents that live in hospitals and nursing homes were excluded and could not share their lived experiences about the hospitals and nursing homes they lived in, then the dataset does not truly reflect an accurate sample of the population in which it is targeting and thus is a weakness to the report. Living in hospitals, nursing homes, and other non-private dwellings already indicate a sort of instability in individuals' housing conditions, which could indicate these socio-economic disadvantages. Additionally, due to the unfortunate timing of the survey at the start of the COVID-19 pandemic in 2020, the social survey had an unusually high percentage of non-responses due to the inability of the Bureau of Statistics to follow-up to non-responses in person. This means that survey is vulnerable to non-response bias where those who chose to participate may not necessarily represent the population from which they were sampled. Those who filled it out may have had access to the internet whereas those who did not fill out may not have had access to public services that allowed them to have access to the internet, such as a public library. This tradeoff presents a non-response bias that could be seen as a weakness to the dataset. However, the strength of this survey is evident in its disclosure of such limitations. They made clear that comparisons between this year and previous surveys should be done with care as this year is highly unusual. They also did a good job targeting their sample population towards a specific SES area so as to accurately reflect the aims of the study. If they had sampled all SES, high and low, then the responses may not have uncovered responses from individuals experiencing socio-economic disadvantages. Overall, the study's methodology was strong, sampling data from an accurate part of the population and presenting enough random sampling to remove as much bias as they can.

2.2   Questionnaire Details

The questionnaire collected data from approximately 5,300 households around Australia which is a generally good sample size. However, the survey did not cover people who live in "very remote parts of Australia" and "discrete Aboriginal and Torres Strait Islander communities." As such, this exclusion in the survey may have been either done to make the survey distribution or data collection process simpler or as a result of the bias against discrete aboriginals, Torres Strait Islanders, or ruralites in general. Given that this survey was completed online or via a telephone interview, it is unlikely that the first reason is responsible for this exclusion, especially given that there is a history of Australia's implicit racial bias against aboriginals and Torres Strait Islanders. Coverage of discrete aboriginals and Torres Strait Islanders would have been beneficial for our study since "[h]istorically they have been mistreated by healthcare institutions with inequitable care prevalent within emergency settings" (Quigley 2020).

One of the major drawbacks of this survey was that compared to their previous survey, this one had no face-to-face interviews. As such, the answers received may not be as accurate as previous years' questionnaires since the interviewer would be unable to capture the interviewee's verbal and non-verbal cues. Additionally, this has caused there to be a "higher than usual proportion of non-response (37.9%)" (Australia 2020b).

The questions asked had a good selection of options for the participant to choose from and often included more open-ended options such as "Other (please specify)" or "Not stated [Allow blank response/skip question functionality]" for people who may not fall into the other options. For instance, when asking for gender, the questionnaire had "male," "female," and "other" options for selection. While most of their questions had a good variety of answers to select from, there were some exclusions in the questions they asked. For example, while there are various questions relating to the participant's marital status, none were asking about their relationship status. This exclusion ignores the people who are in a serious relationship but do not wish to get married. This could lead to the survey missing some important information since being in a

serious relationship with another individual often has a similar effect on one's mental well-being to a married relationship.

The questions were explicit and easy to read and understand. Many of the questions included an example to ensure that the participant understood what the question was asking and that they know how to properly answer it. The questions also had a good flow and order to them. For instance, in "Module 7.2: Contact with Family and Friends (CWF)" they would start by asking "In the last 3 months have you seen family or friends who do not live with you in person?" then follow up with asking other questions relating to it such as "How often have you seen them in person in the last 3 months?" or "In the last 3 months, have you used any of these other types of contact with family or friends [CWF_WS1]?"

3 Results

4 Discussion

4.1 Stress and Anxiety

In comparison to the feelings of anxiety or stress, 700 females with mental health issues reported "Always" or "Often" to feeling stressed or rushed. This was much higher than males, in which only 300 participants felt consistent stressors or anxiety. Due to societal pressures and expectations, it is extremely likely that women would feel stressors, much more often than men would. According to The Guardian, Australian women encounter stress on a much higher level than men do. This is in regards to finances, family, and physical health (The Guardian Reference). Citizens with mental health conditions already experience difficulties from other day activities and events. The addition of a permanent illness will greatly affect the ways Australian men and women approach daily life.

There are many other factors that affect Australian citizens' experiences with stress and anxiety. This includes intersectionality of race, gender, ethnicity, and sexual orientation. In the survey, 2,168.4 people without mental illness and 538.9 people with mental illness reported experiencing some form of discrimination in the past 12 months. This justifies the fact that those with mental health conditions are not as likely to experience oppression because of their illness. For example, a white male with mental illness will have different experiences in navigating daily anxiety and stress than a black woman would. Women, LGBTQ+, and BIPOC experience systematic oppression in a white straight male dominated society. Those who do not identify with these groups may experience difficulties due to their mental illness, but will not face discimination because of their identity.

4.2 View on Healthcare

In this survey, we understand the differences between men and women who trust the healthcare system with and without mental health conditions. According to Figure 2, this is quite a drastic contrast. 995 women with mental health conditions reported that they have trust among most people, and men sat slightly lower, with 519.7 people. Men without mental illness are at 5,563, whereas women without are 5,343. The key question is why is the amount of trust so much higher in those without mental illness, than those with? Lack of trust in most people equates to common everyday services, including healthcare and treatment. In order to understand the lack of trust that those with mental illness or disabilities have regarding the healthcare system, we must look at history. Up until a few decades ago, the treatment of those with bipolar disorder, depression, anxiety, and other common illnesses, were through a myriad of inhumane theories and practices. In 2006, the Bureau of Justice Statistics reported that "705,600 mentally ill men were incarcerated in the state prison system, and another 78,800 were incarcerated in the federal prison system" (Dumper 2014).

Only until recently, considerations and understandings of mental illness in modern society have been considered. However, a history of societal neglect justifies the lack of trust which both male and female Australians with mental illness obtain.
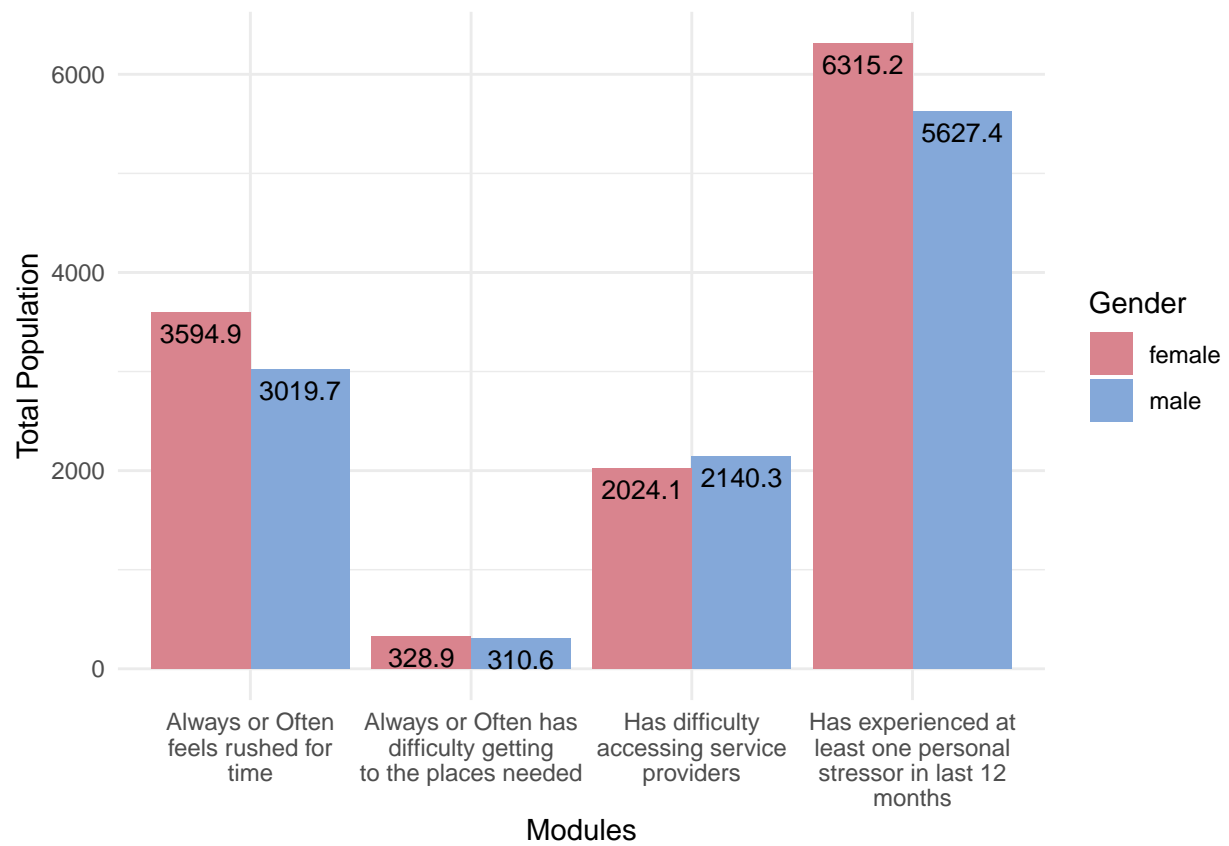
Figure 1: Male vs Female Stressors

The healthcare system can be trusted
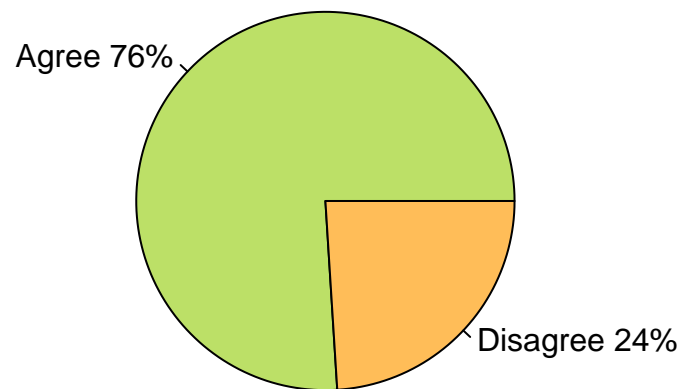
Agree 76%

Disagree 24%

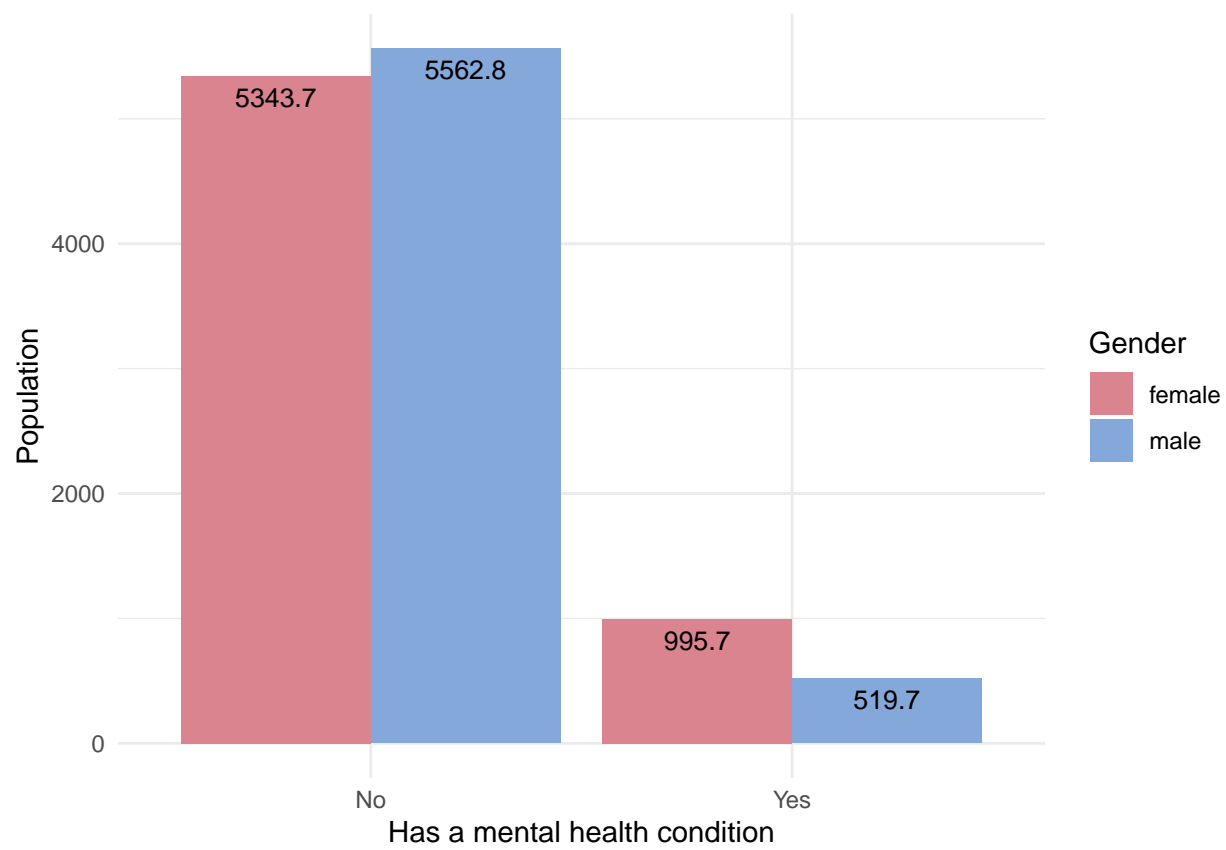Figure 2: Percent of Australians that agreed the healthcare system can be trusted in 2020

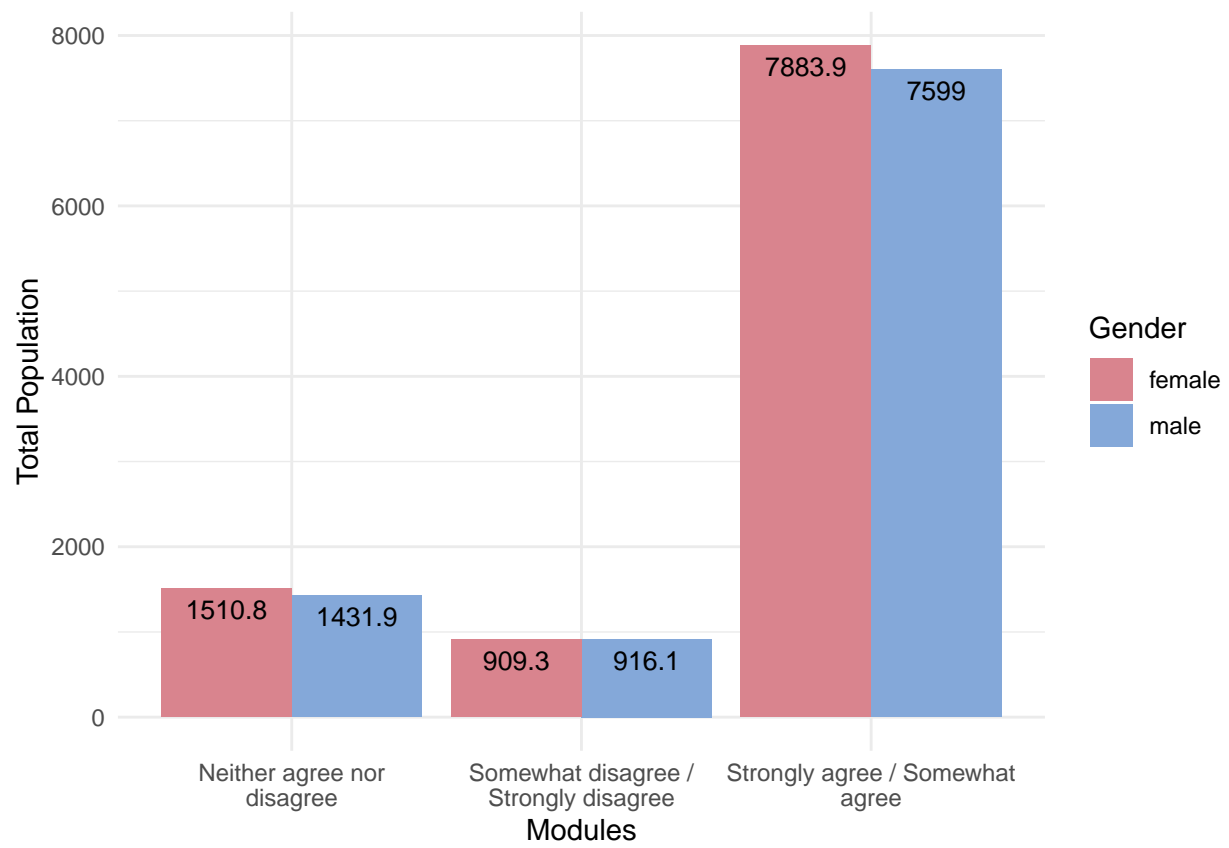Figure 3: People that strongly agrees most people can be trusted

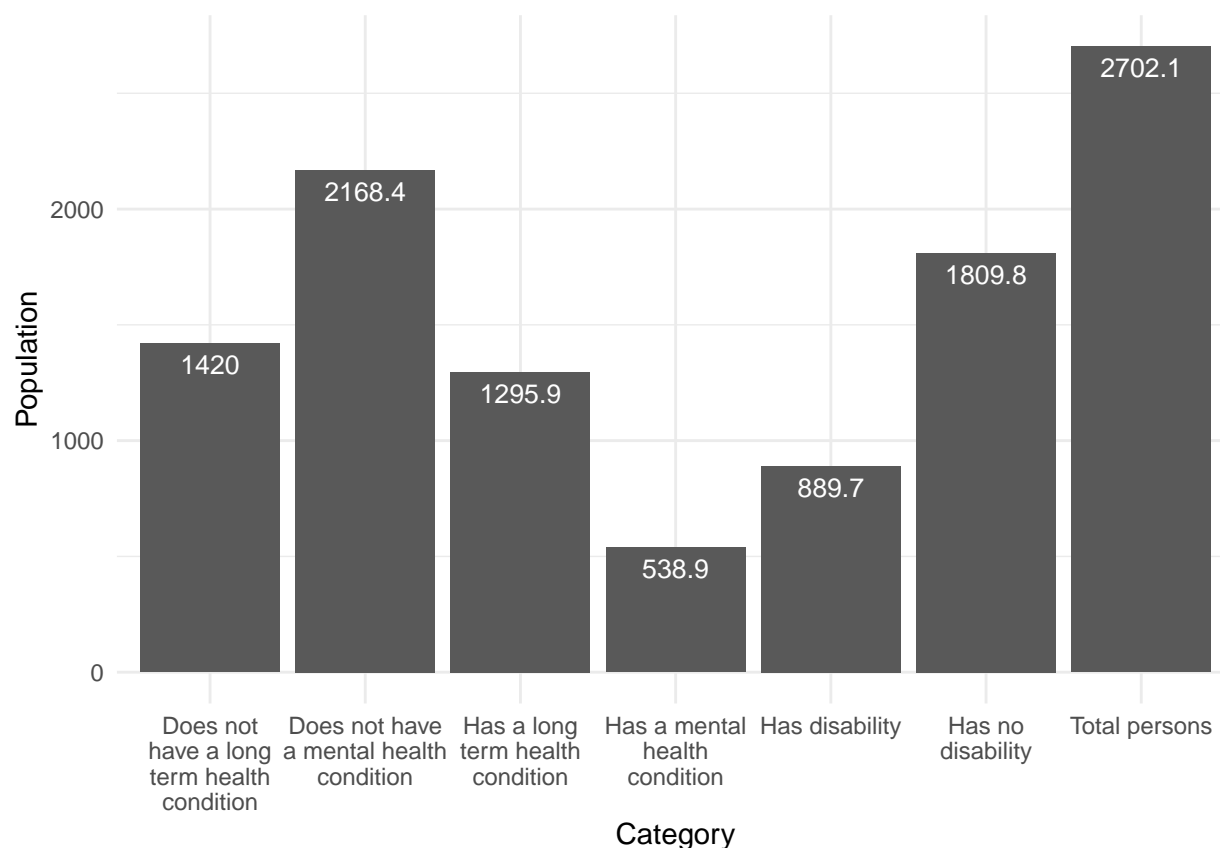Figure 4: Feels the healthcare system can be trusted

4.3 Socioeconomic Status

Figure 5: Has experienced discrimination in last 12 months

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Non-school qualifications are educational attainments other than those of pre-primary, primary or secondary education qualifications.

Talk more about it.

Also bills and their average (Figure 1). (Notice how you can change the height and width so they don't take the whole page?)

Talk way more about it.

$$Pr(\theta|y) = \frac{Pr(y|\theta)Pr(\theta)}{Pr(y)} \tag{1}$$

Equation (1) seems useful, eh?

Here's a dumb example of how to use some references: In paper we run our analysis in R (R Core Team 2020). We also use the `tidyverse` which was written by Press (2014) If we were interested in baseball data then Press (2014) could be useful.

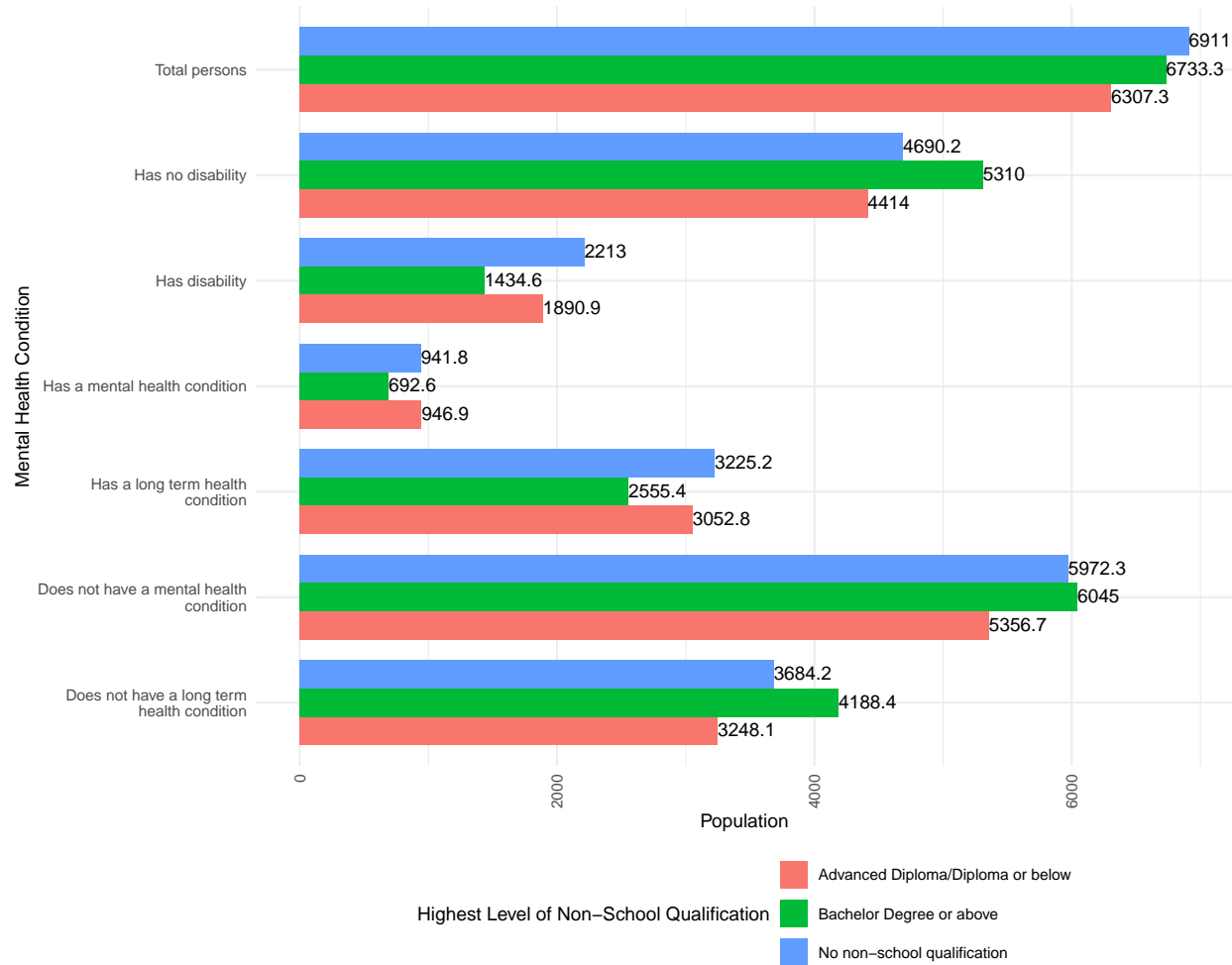We can use maths by including latex between dollar signs, for instance θ.

Figure 6: Mental Health Conditions vs. Level of highest non-school qualification

4.4   Weaknesses and next steps

Weaknesses and next steps should also be included.

Appendix

.1 Supplementary Survey

References

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