

Socio-economic impacts of COVID-19 on Massachusetts households: an empirical analysis

April 28, 2022

Presentation to the Massachusetts
Municipal Association

Citation: UMassAmherst
School of Public Policy

UMassAmherst
College of Social
& Behavioral Sciences
Economics

Suggested citation for the upcoming report:

Vicarelli, Marta, Ali Alsadadi, Meredith Canada, Yu Ya Htut Tin, Anna Gishin, Madeline Leue, Elizabeth Murphy, Aryen Shrestha, Yash Tyagi. 2022. “[Impacts of COVID-19 on US Households: a Survey Analysis](#).” School of Public Policy, University of Massachusetts Amherst, MA, USA.



Research team

Principal Investigator: Marta Vicarelli, Department of Economics and School of Public Policy

Our research team includes scholars from the University of Massachusetts, Indiana University and Amherst College.

- [Ali Alsadadi](#), Isenberg School of Management, University of Massachusetts Amherst
- [Meredith Canada](#) (MSW, MPA, LCSW), School of Social Work, Indiana University - Public Health Analyst for the Indiana Overdose Response Strategy, CDC Foundation | IN HIDTA
- [Yu Ya Htut Tin](#), Departments of Economics and Mathematics, University of Massachusetts Amherst
- [Anna Gishin](#), Department of Economics and Isenberg School of Management, University of Massachusetts Amherst
- [Madeline Leue](#), School of Public Policy, University of Massachusetts Amherst
- [Elizabeth Murphy](#), School of Public Policy, University of Massachusetts Amherst
- [Aryen Shrestha](#), Amherst College and Research Fellow at the University of Massachusetts Amherst
- [Yash Tyagi](#), Department of Economics and Isenberg School of Management, University of Massachusetts Amherst

Partner organizations

- Supported the distribution of the survey in Massachusetts



Partner organizations for national report



The Southwestern Indian Polytechnic Institute in New Mexico is currently reviewing our study to further distribute it among American Indian Nations.



Vermont



Tennessee



The Tri-State Food Bank serves 33 counties in the tri-state area which includes parts of Indiana, Kentucky, and Illinois.



THE WOMEN'S FUND
OF GREATER BIRMINGHAM

Alabama



Connecticut



Research Question

The purpose of this survey was to gather information about:

- the **challenges** households have been facing due to the COVID-19 public health crisis and its socio-economic fallout, and
- the **strategies** adopted to address these challenges.

Methodology

The UMass Amherst School of Public Policy's SUP Lab conducted an online survey from October 4, 2020 to February 18, 2021.

The voluntary online survey includes questions on eight areas:

1. Employment
2. Businesses
3. Household financial health
4. Labor productivity
5. Education and childcare
6. Physical and Mental health
7. Substance use
8. Preferred policy instruments and solutions

Results

Demographic characteristics

Figure 1. Age distribution of survey respondents

(n = 2551)

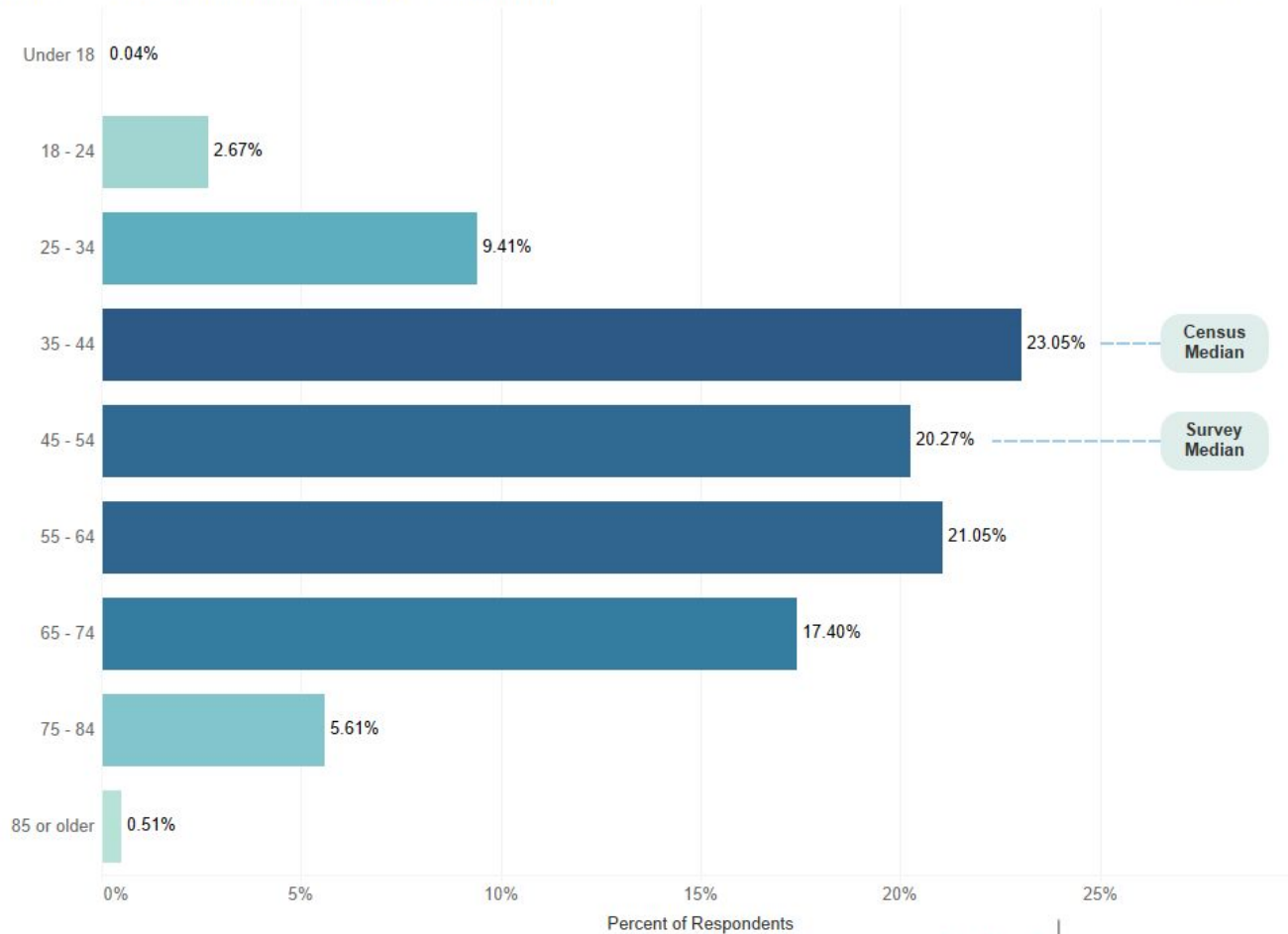
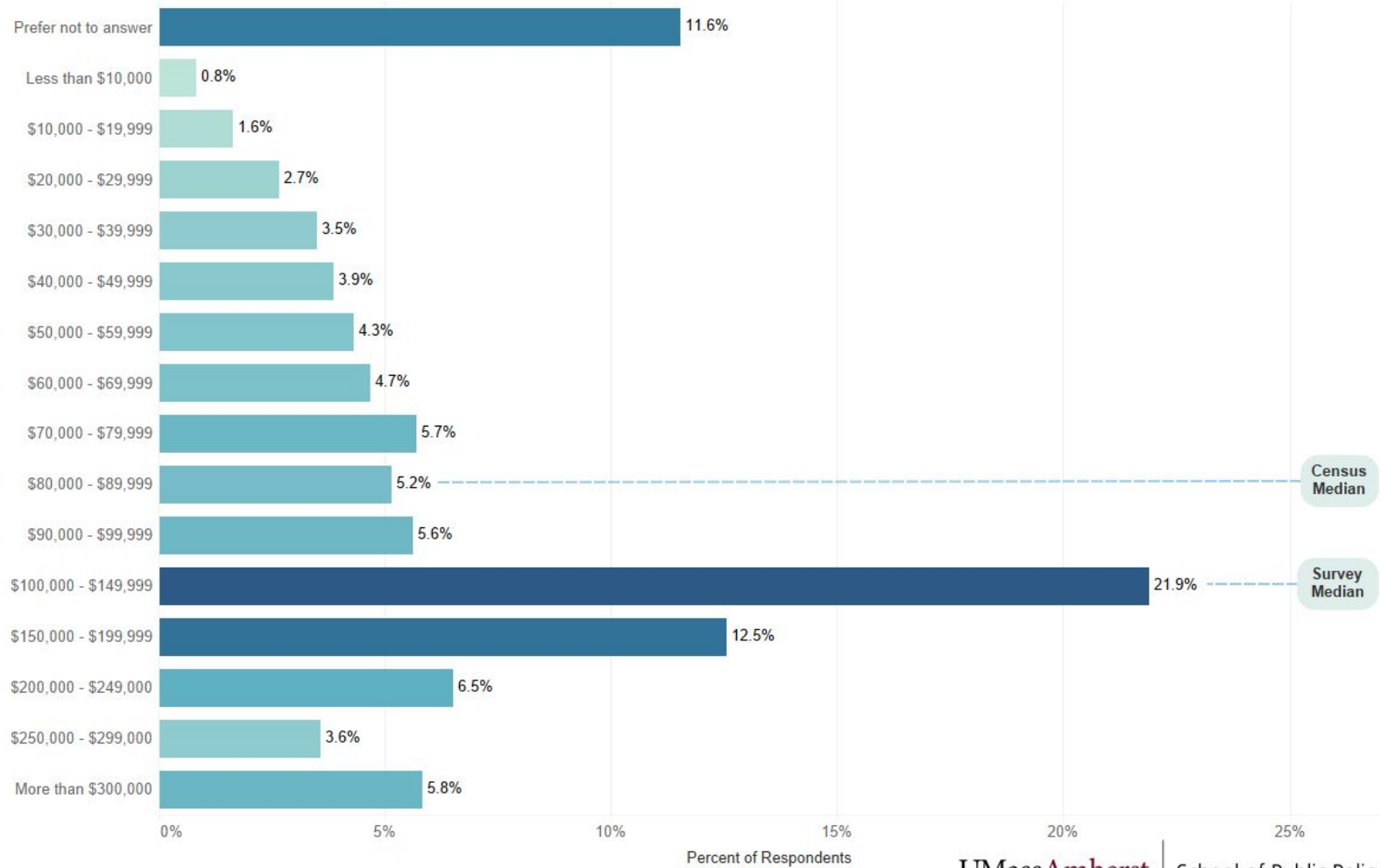


Figure 2. Household income distribution

(n = 2502)



Employment

Figure 4. By when do you expect to return full time to the physical workplace where you worked prior to COVID-19?

(n = 374)

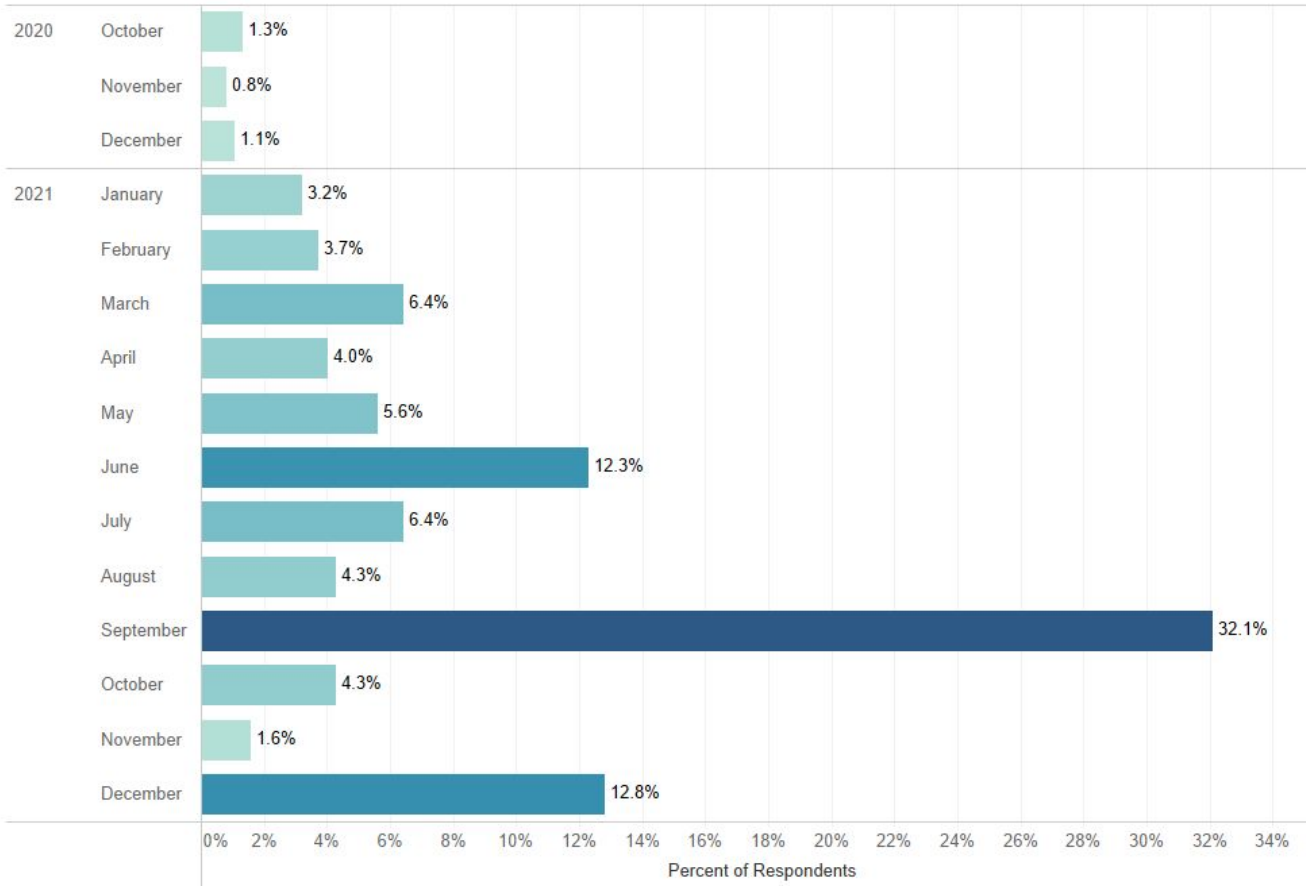
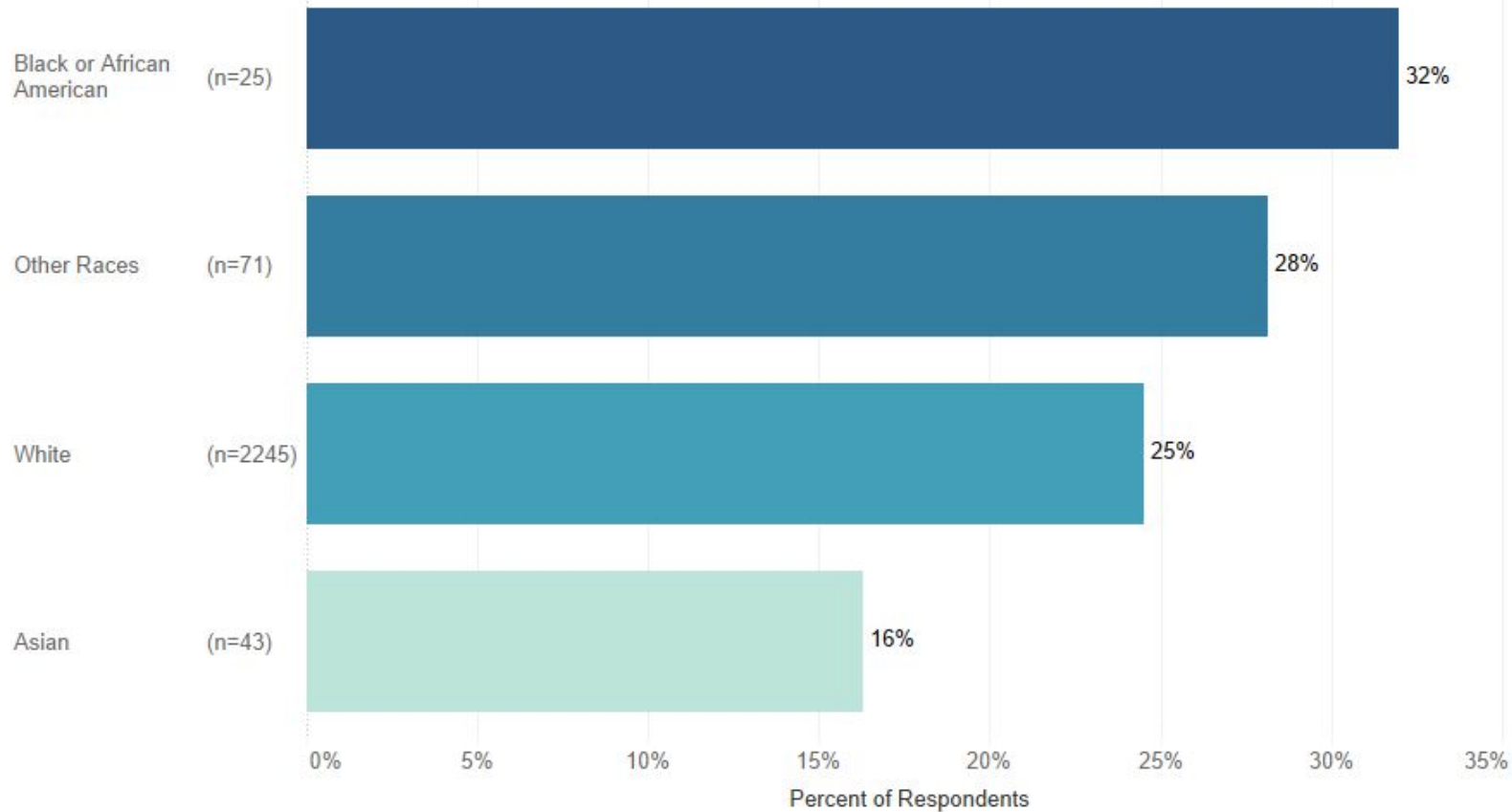


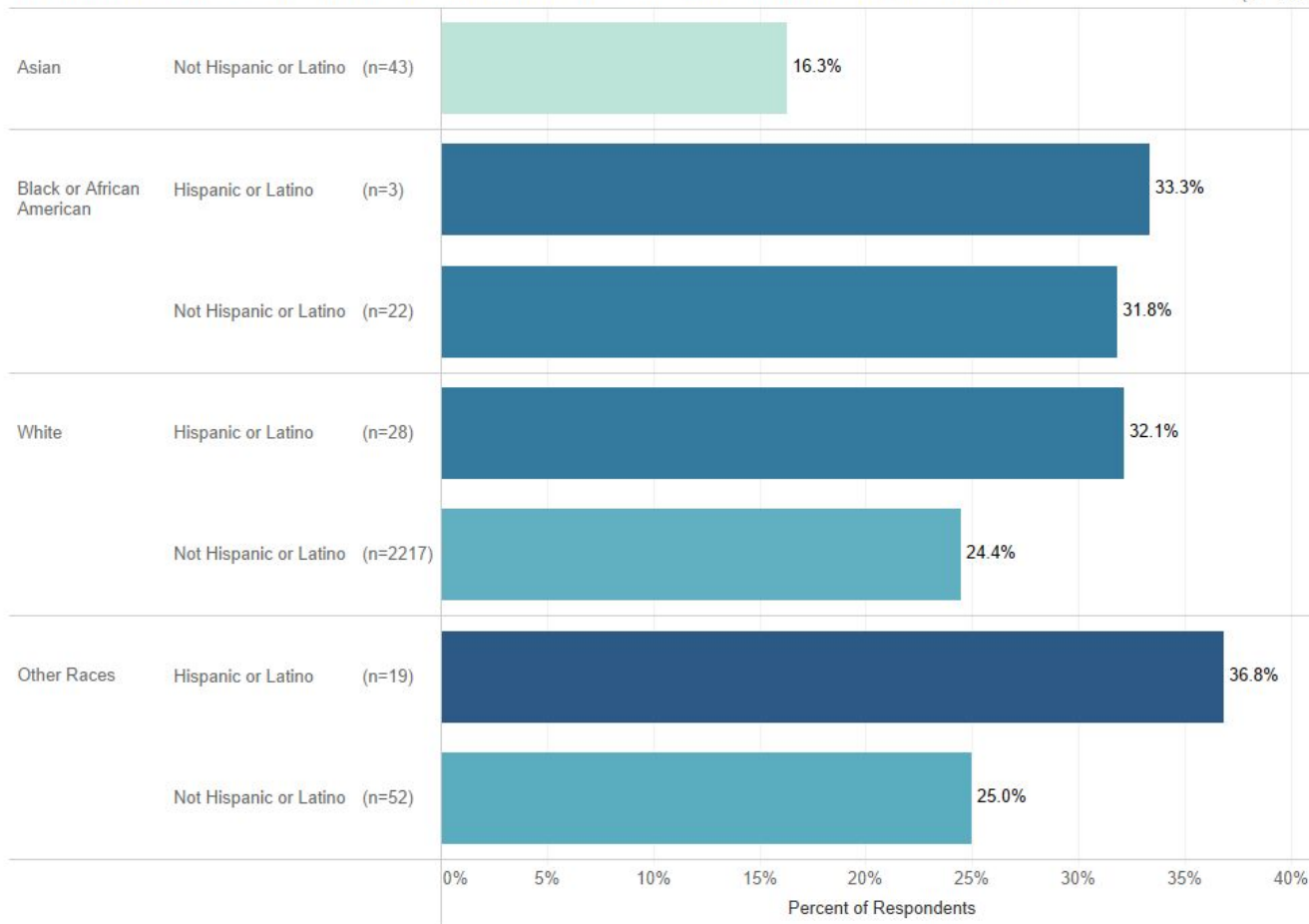
Figure 3. Percentage of essential workers (results shown by race)

(n = 2384)



Appendix Figure 2. Percentage of essential workers (results shown by race/ethnicity)

(n = 2384)



Preferred Policy Instruments

Q: Considering the current COVID-19 economic disruptions,
which **policies or resources** would be
most helpful for you and your family at this time?

Figure 6e. Considering the current COVID-19 economic disruptions, what policies or resources would be most helpful to you or your family during this time (check all that apply)? (By area where respondents live) (n = 1916)

By Location



Figure 6a. Considering the current COVID-19 economic disruptions, what policies or resources would be most helpful to you or your family during this time (check all that apply)? (By household income of respondents) (n = 1723)

By Income

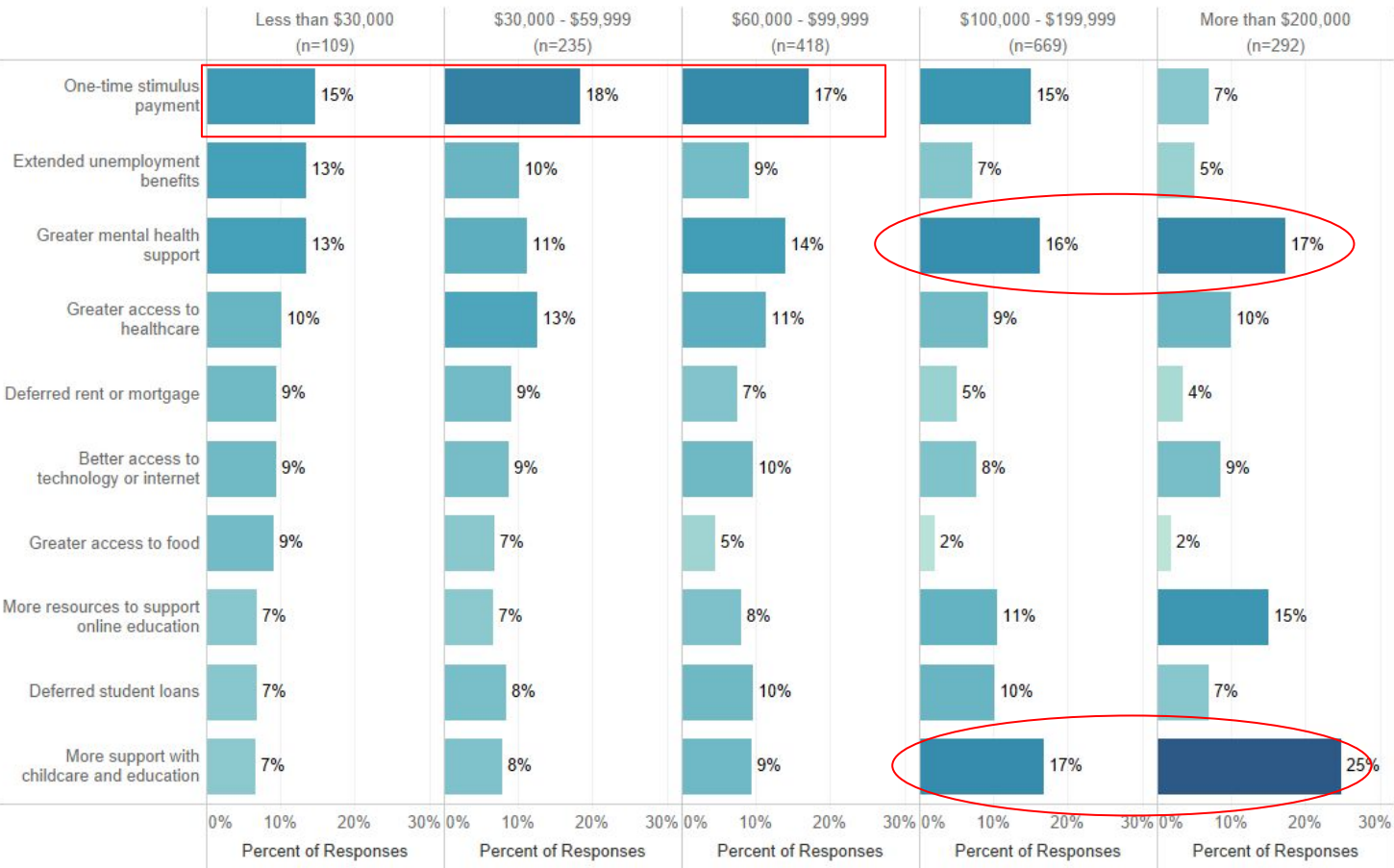
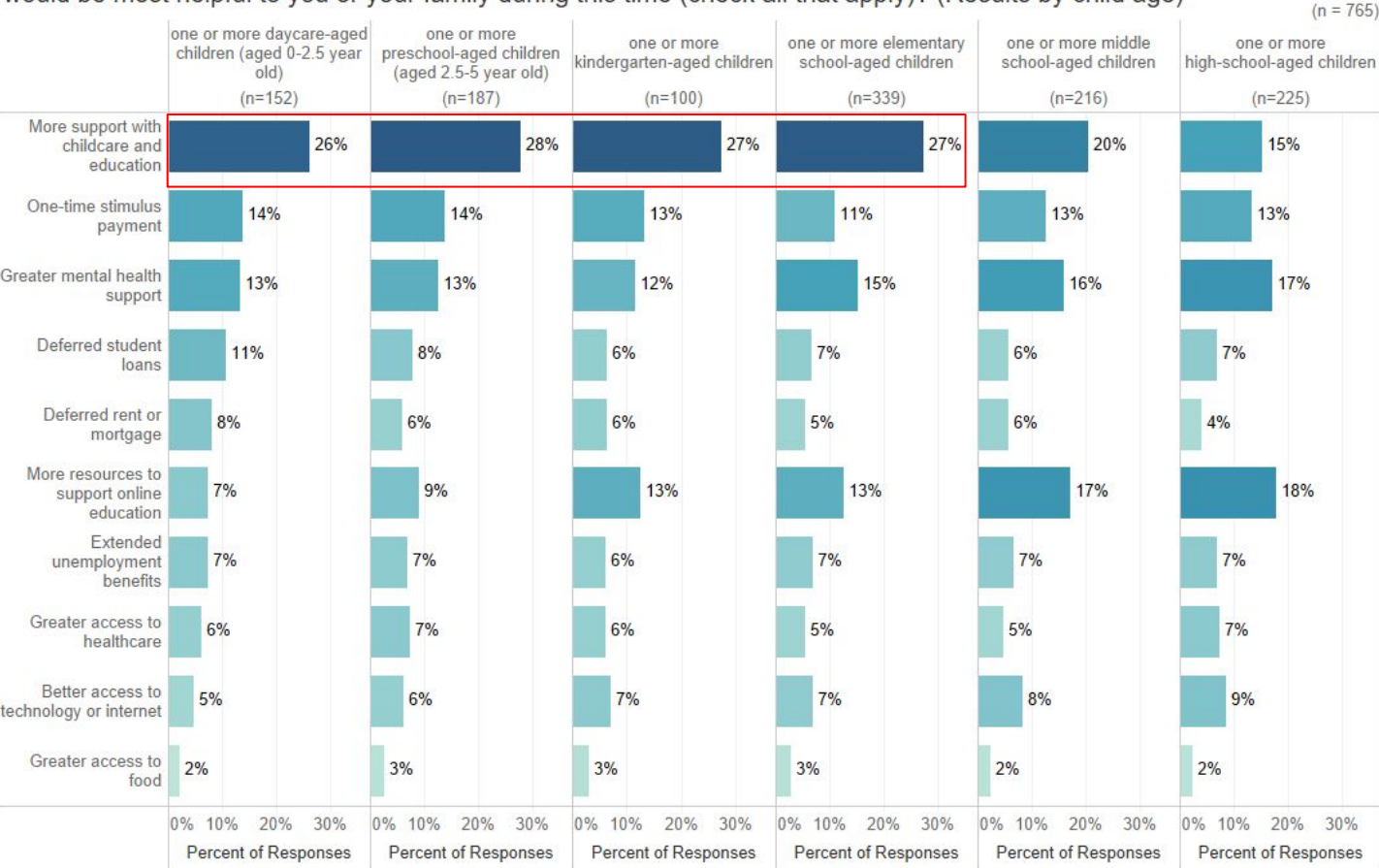


Figure 6c. Considering the current COVID-19 economic disruptions, what policies or resources would be most helpful to you or your family during this time (check all that apply)? (Results by race of respondents) (n = 1870)



By Race/ Ethnicity

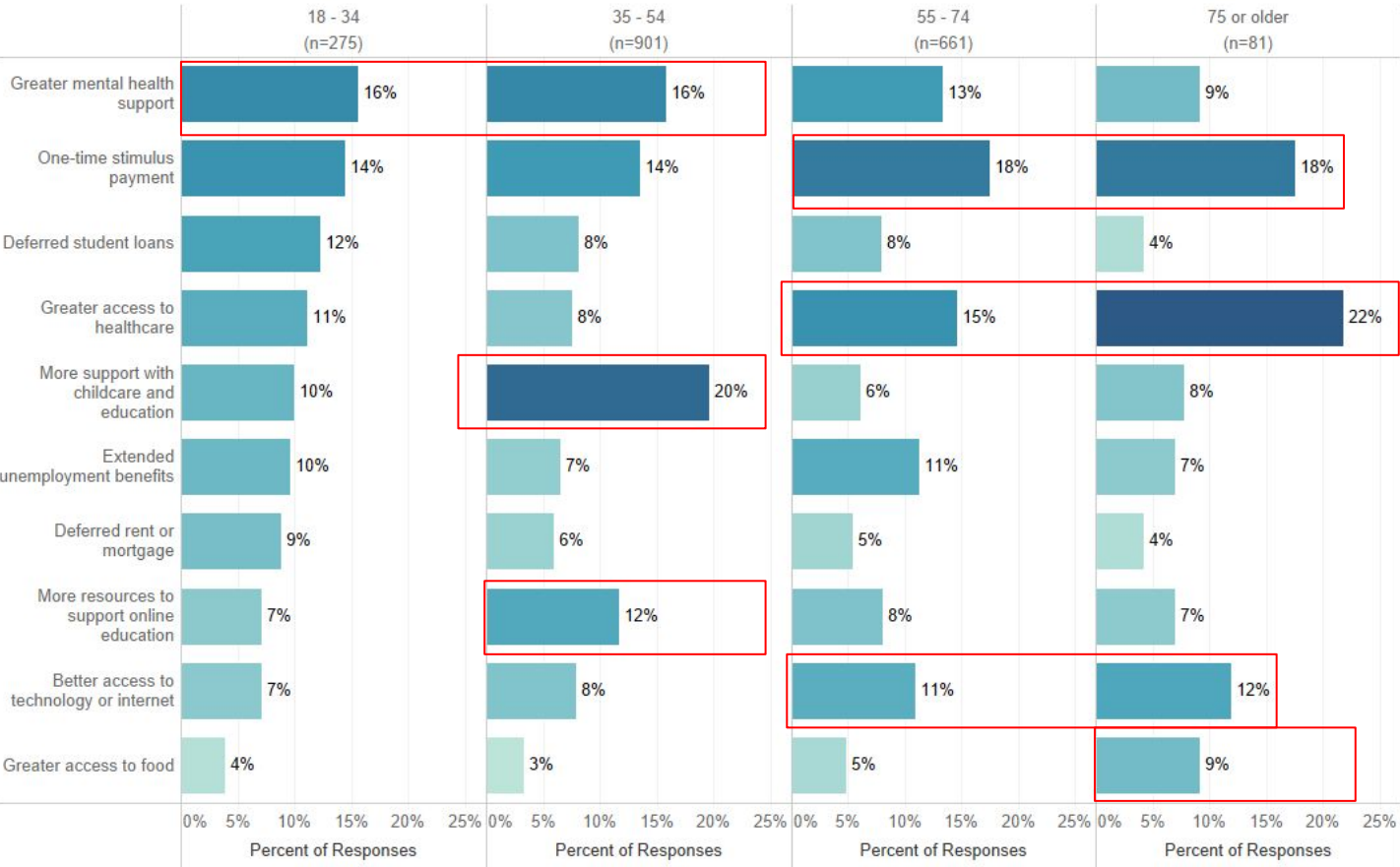
Figure 6d. For families with children, considering the current COVID-19 economic disruptions, what policies or resources would be most helpful to you or your family during this time (check all that apply)? (Results by child age)



By Children's Age

Figure 6f. Considering the current COVID-19 economic disruptions, what policies or resources would be most helpful to you or your family during this time? (Results by age group) (n = 1918)

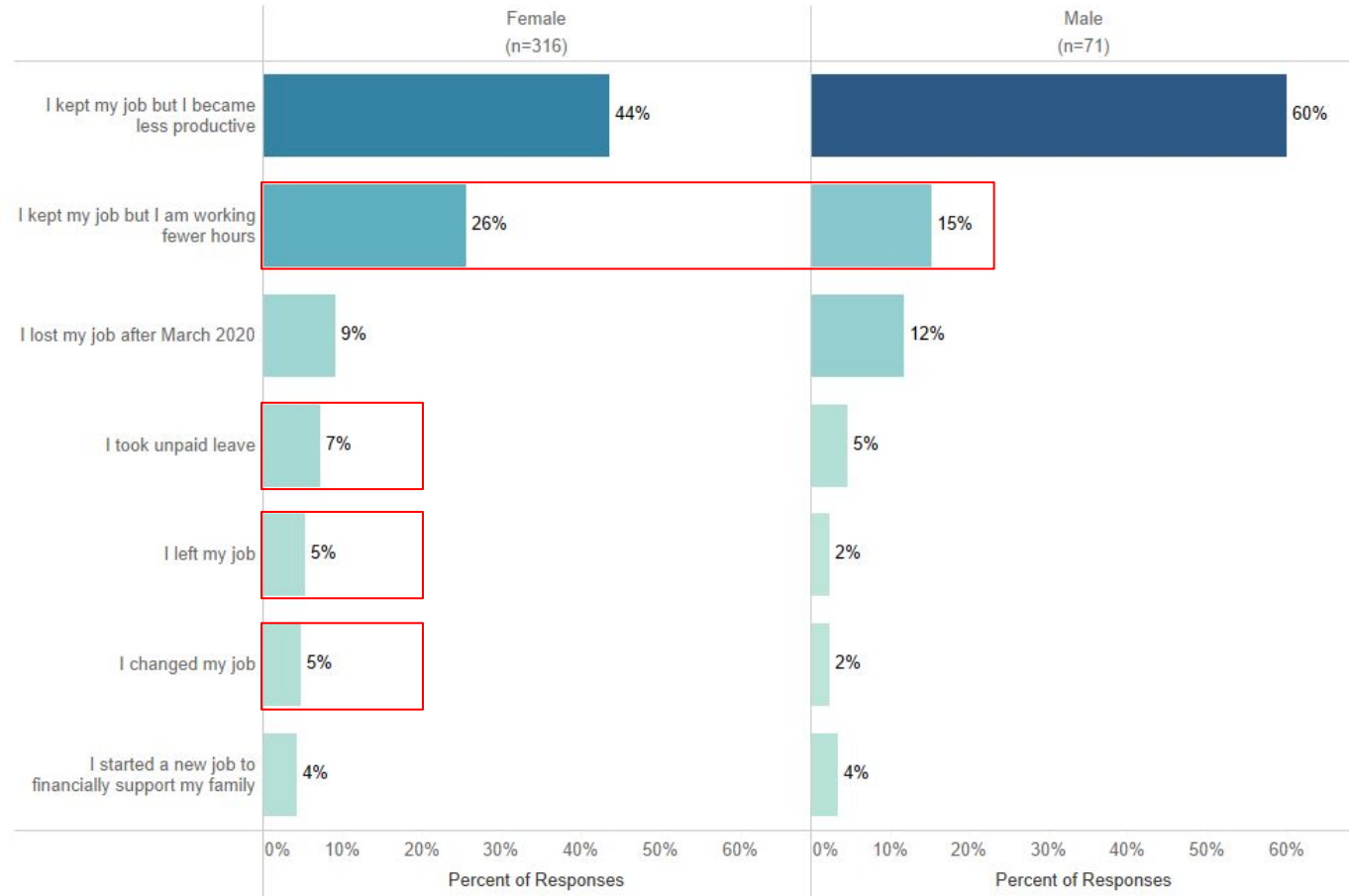
By Age group



PROFESSIONAL LIFE

Q: How have COVID-19 disruptions affected your professional life?

Figure 8. For respondents with children: how have COVID-19 disruptions affected your professional life? (Results are shown by respondents' gender) (n = 387)



female respondents are more likely to indicate deliberate changes in their professional life to support the needs of their households

FINANCIAL DEPENDENCE

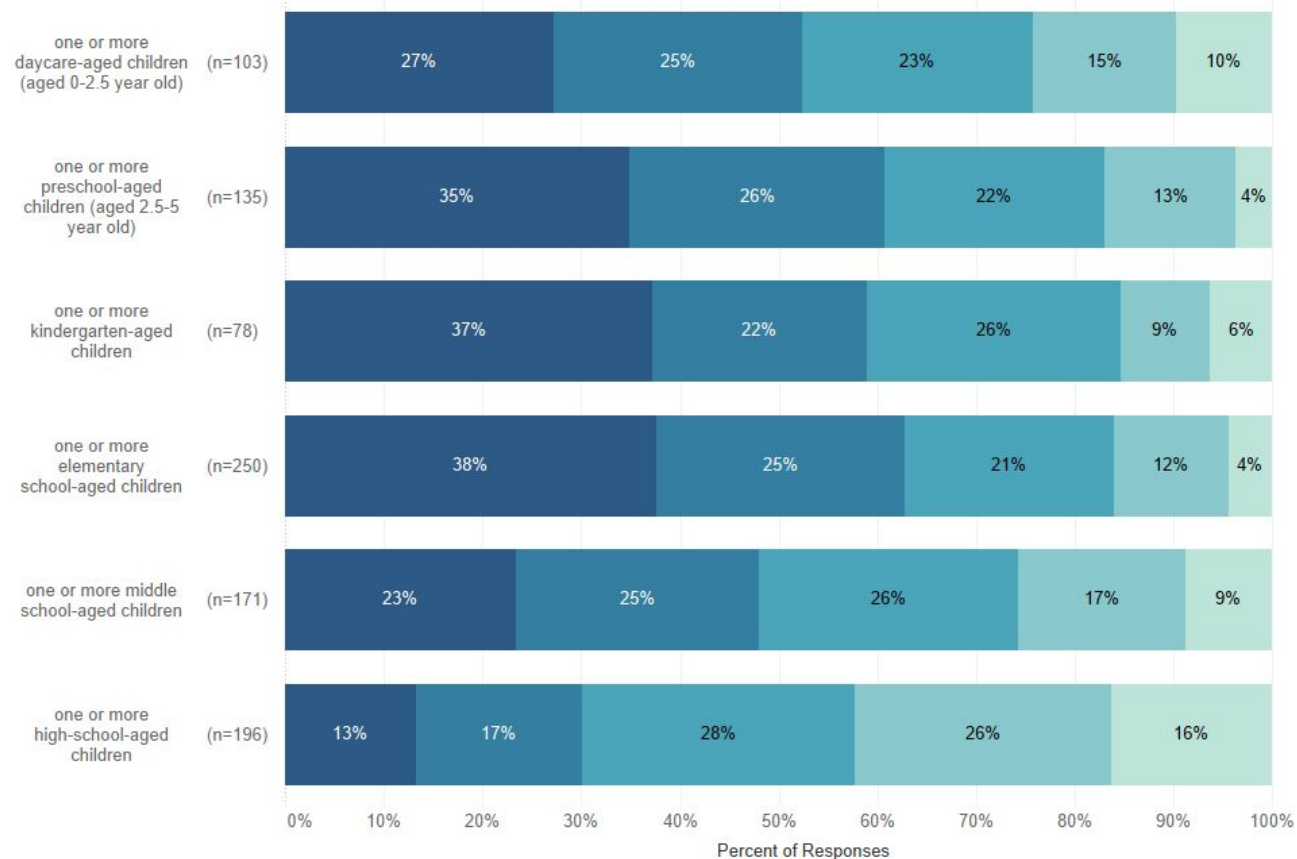
-
- Women appear more likely than men to have become financially dependent on their partners due to COVID-19 disruptions in their professional life.
- **25% of female respondents** and 13% of male reported being financially dependent on their partner due to the COVID-19 crisis.
- The group of respondents who feel financially dependent includes full time workers, stay at home partners or spouses, and part-time workers.

LABOR PRODUCTIVITY

Q: How much do you think COVID-19 childcare and education disruptions have been affecting your work productivity?

Figure 9. How much do you think COVID-19's school and childcare disruptions have been affecting your work productivity? (in households with children)

(n = 933)



Legend

Affected a lot
 Quite affected
 Somewhat affected
 A little affected
 Not at all affected

LABOR DISTRIBUTION WITHIN HOUSEHOLD

Q: Who between you and your partner spends more time performing the following activities?

Figure 10a. Who, between you and your partner, spends more time performing the following activities? (n = 817)



Women's intentional professional changes might be related to unequal distribution of household responsibilities

Legend

I do more

Work split equally

My partner does more

Figure 10b. For female respondents: who, between you and your partner, spends more time performing the following activities? (n = 556)



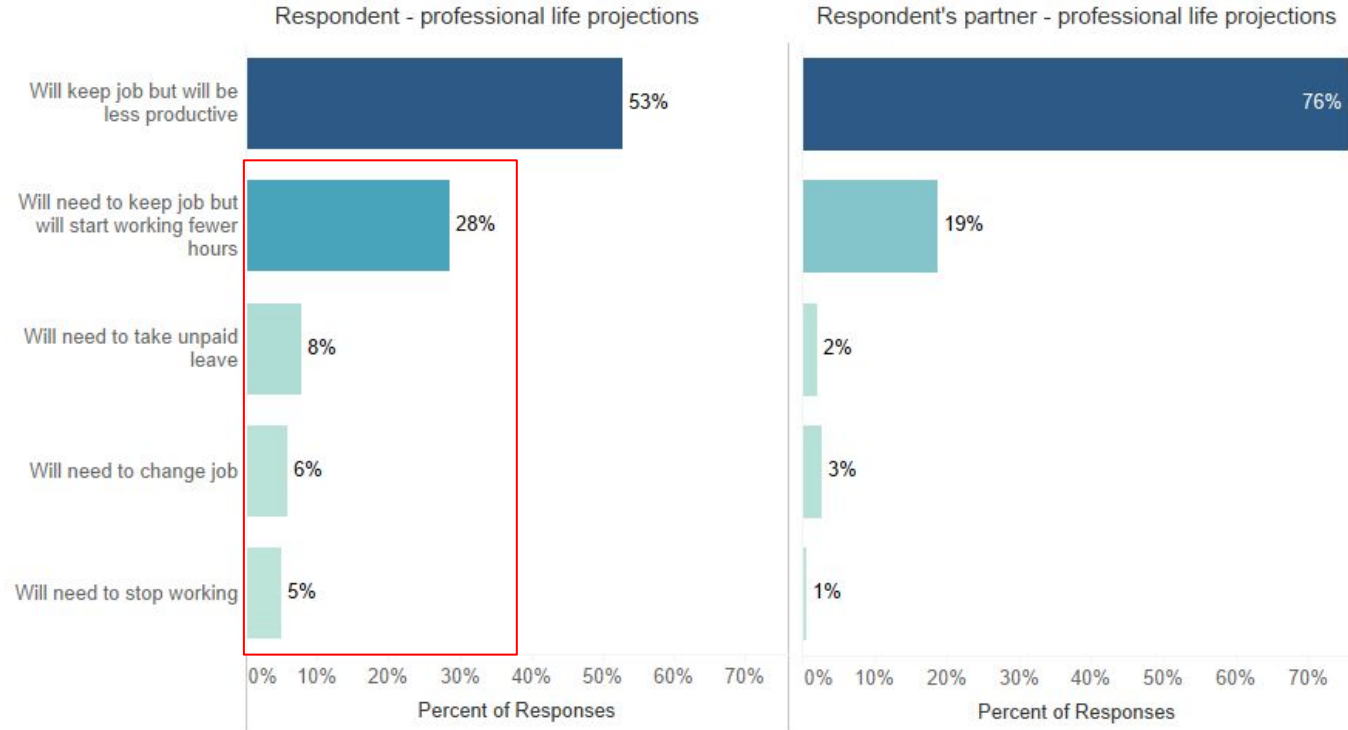
Responsibilities appear to be more evenly distributed in same-sex couples compared to heterosexual couples.

FUTURE PROFESSIONAL LIFE

Q: If COVID-19 disruptions persist who will they affect your professional life and the professional life of your partner?

Figure 11. **Female respondents with male partners:** If disruptions to childcare and education associated to COVID-19 continue beyond Dec 2020, what impacts do you think this will have on you and your partner's professional life (in order to support your children's learning or provide childcare)? Check all that apply:

(n = 235)



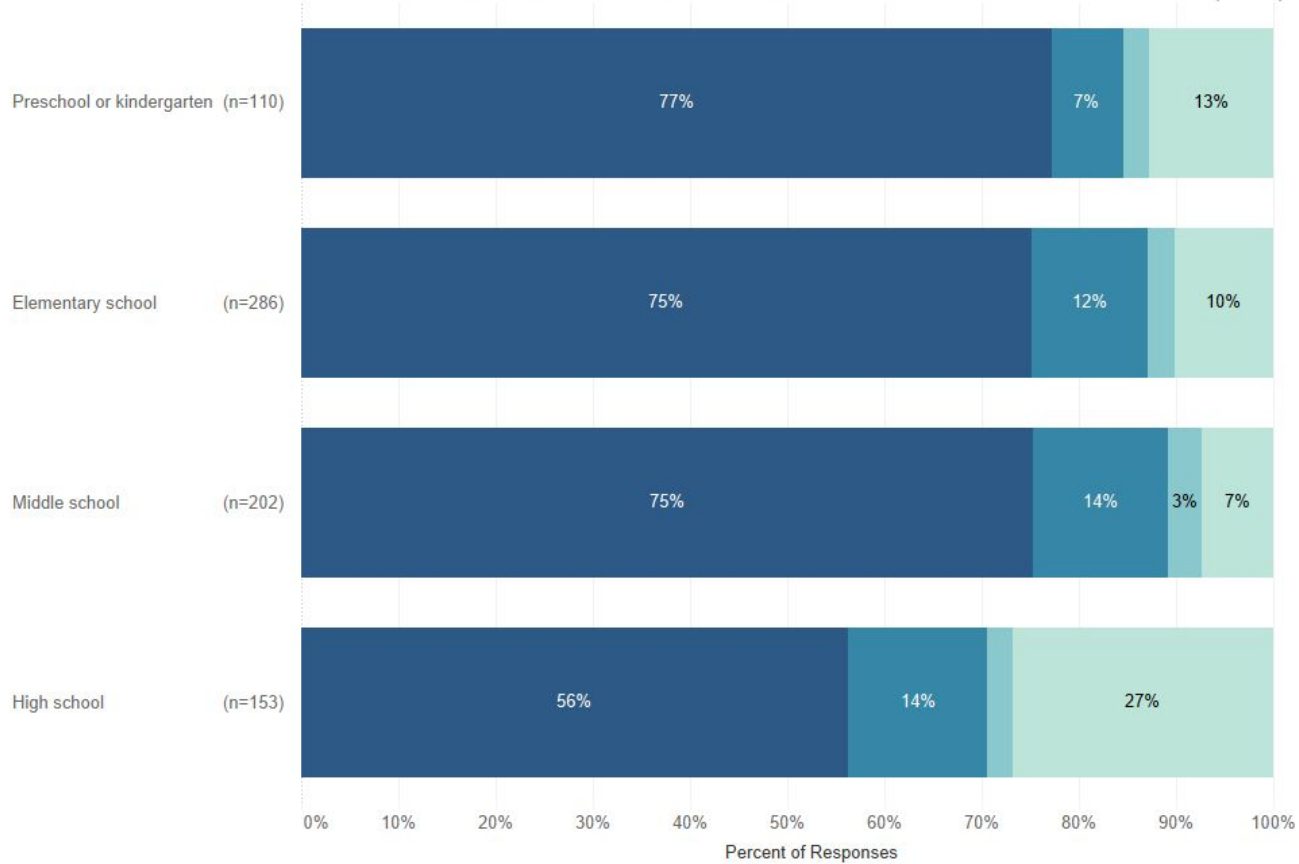
As above:

female respondents are more likely to indicate deliberate changes in their professional life to support the needs of their households

Education and Childcare

Figure 12. How much do you think your child(ren) progressed while learning remotely?

(n = 459)



Legend

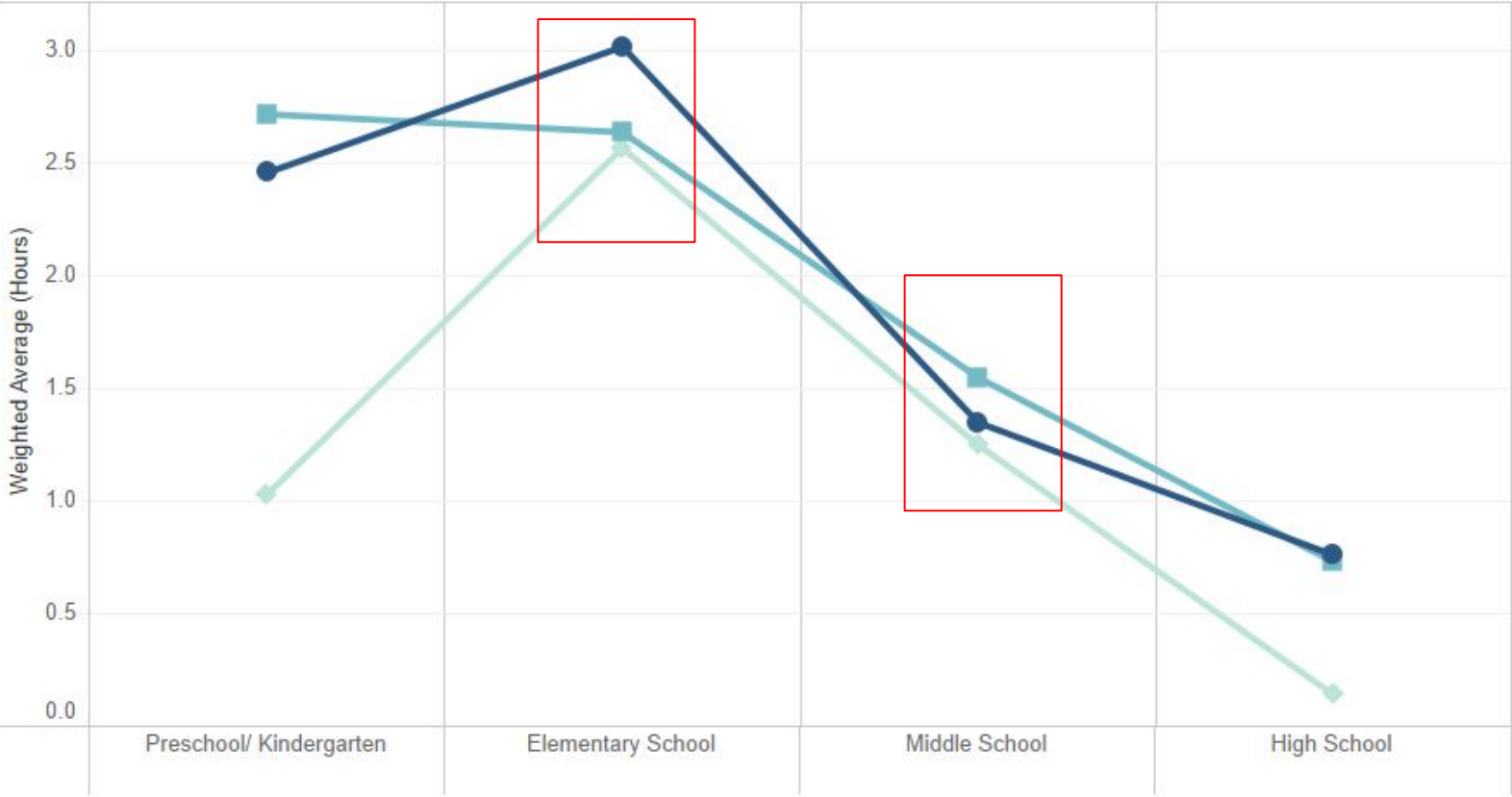
■ Less than if she/he was in school

■ As much as if she/he was in school

■ More than if she/he was in school

■ I am not sure

Figure 13d. For parents with children: how many hours per day did you spend on average monitoring the education of your children? (Results by children's level of education)



Learning setting

Remote

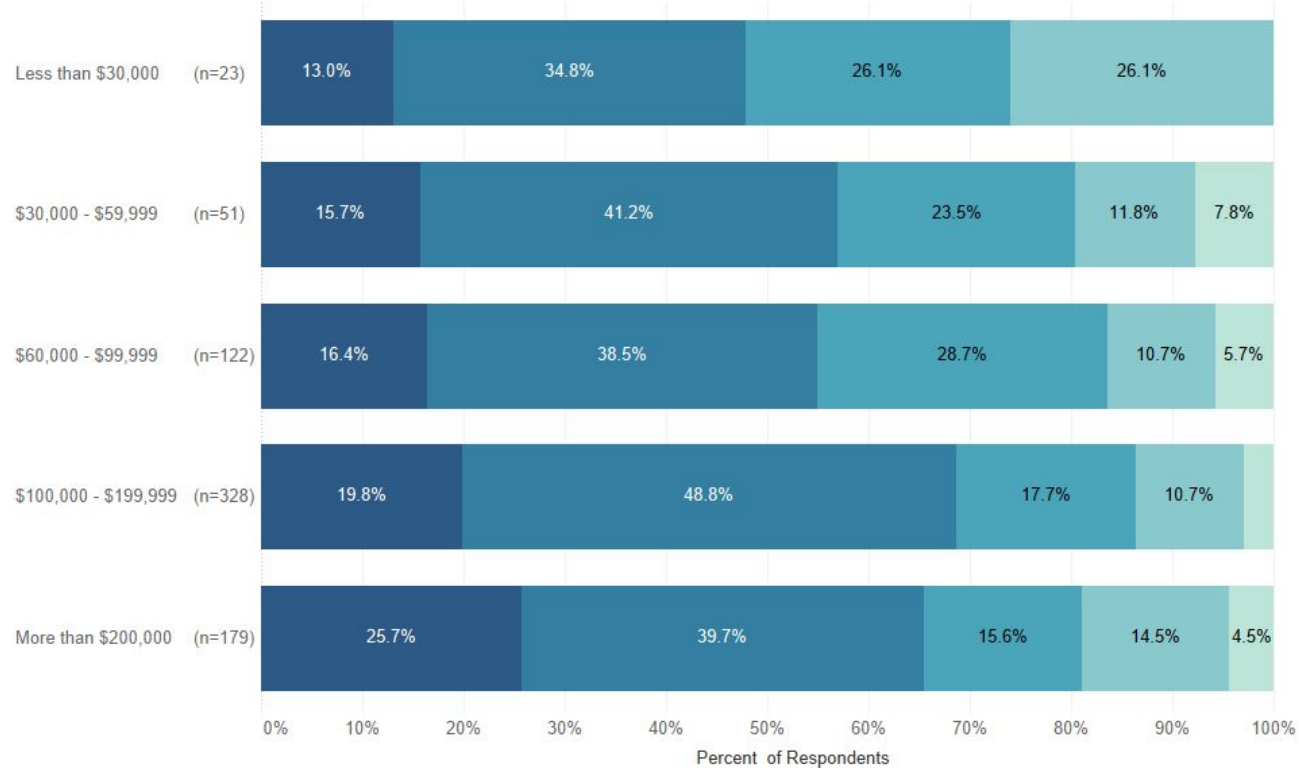
Hybrid

In-person

Figure 14. Overall, do you think you will be able to support your child(ren)'s learning if their school adopts a fully remote learning model or a hybrid learning model (partly in person and partly online) for the 2020-2021 academic year?

(n = 703)

Household income



Legend

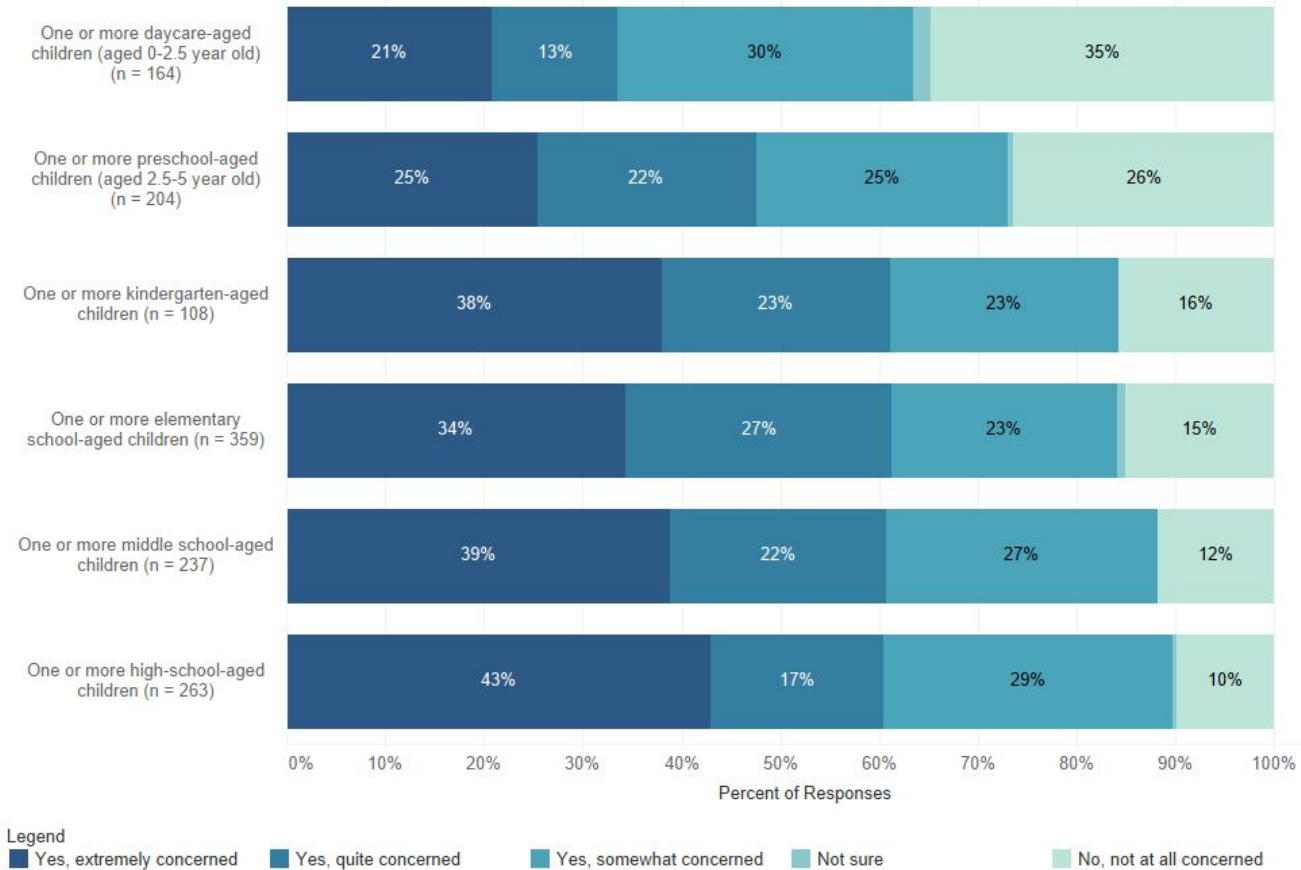
■ Yes, very confident
 ■ Yes, somewhat confident
 ■ Not very confident
 ■ Not at all confident
 ■ I don't know

Ability to support remote learning seem related to income

Q: If COVID-19 persist into 2021 are you concerned about the possible negative impacts on the **academic achievements** of your child(ren)?

Figure 15. If disruptions from the COVID-19 pandemic persist into 2021, are you concerned about possible negative impacts on the academic achievements of your child(ren)?

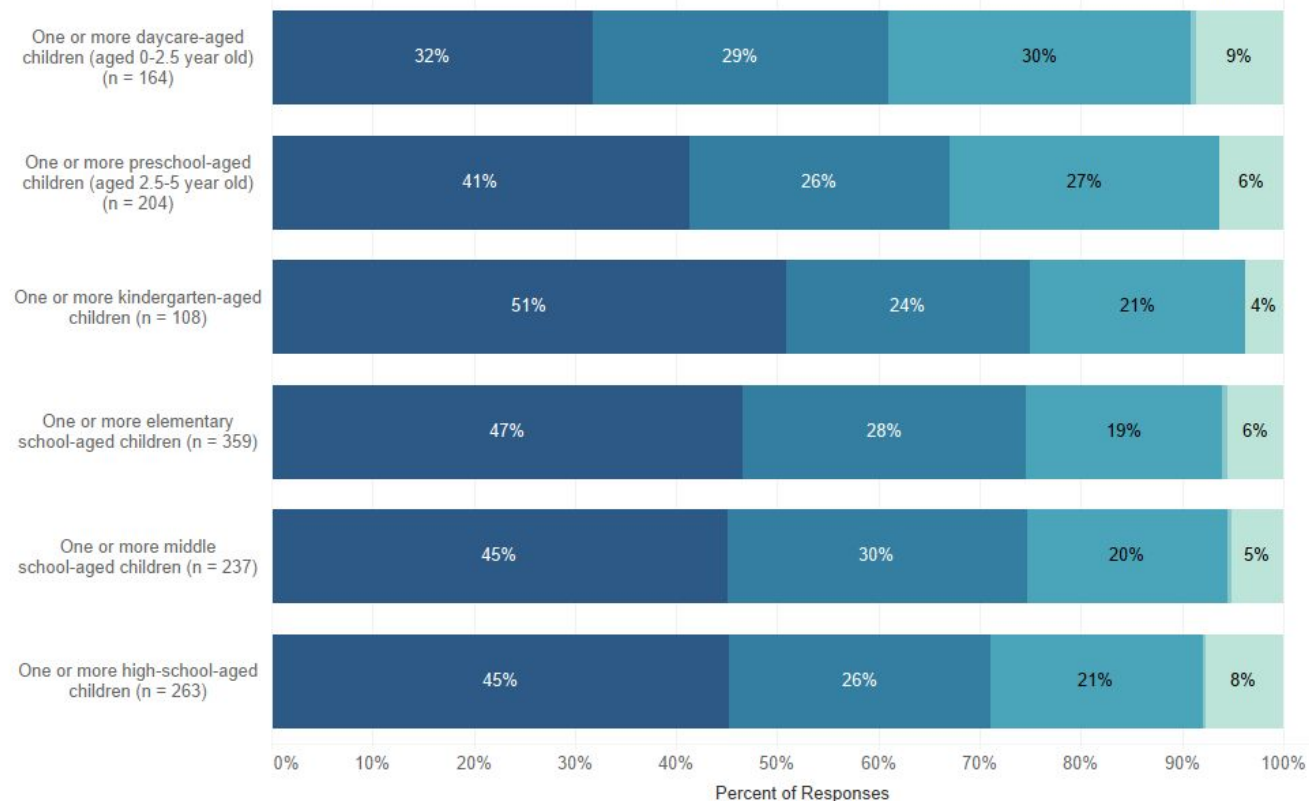
(n = 835)



Q: If COVID-19 persist into 2021
are you concerned about the possible negative impacts on the
socio-emotional development of your child(ren)?

Figure 16. If disruptions from the COVID-19 pandemic persist into 2021, are you concerned about possible negative impacts on the social and emotional development of your child(ren)?

(n = 838)



Legend

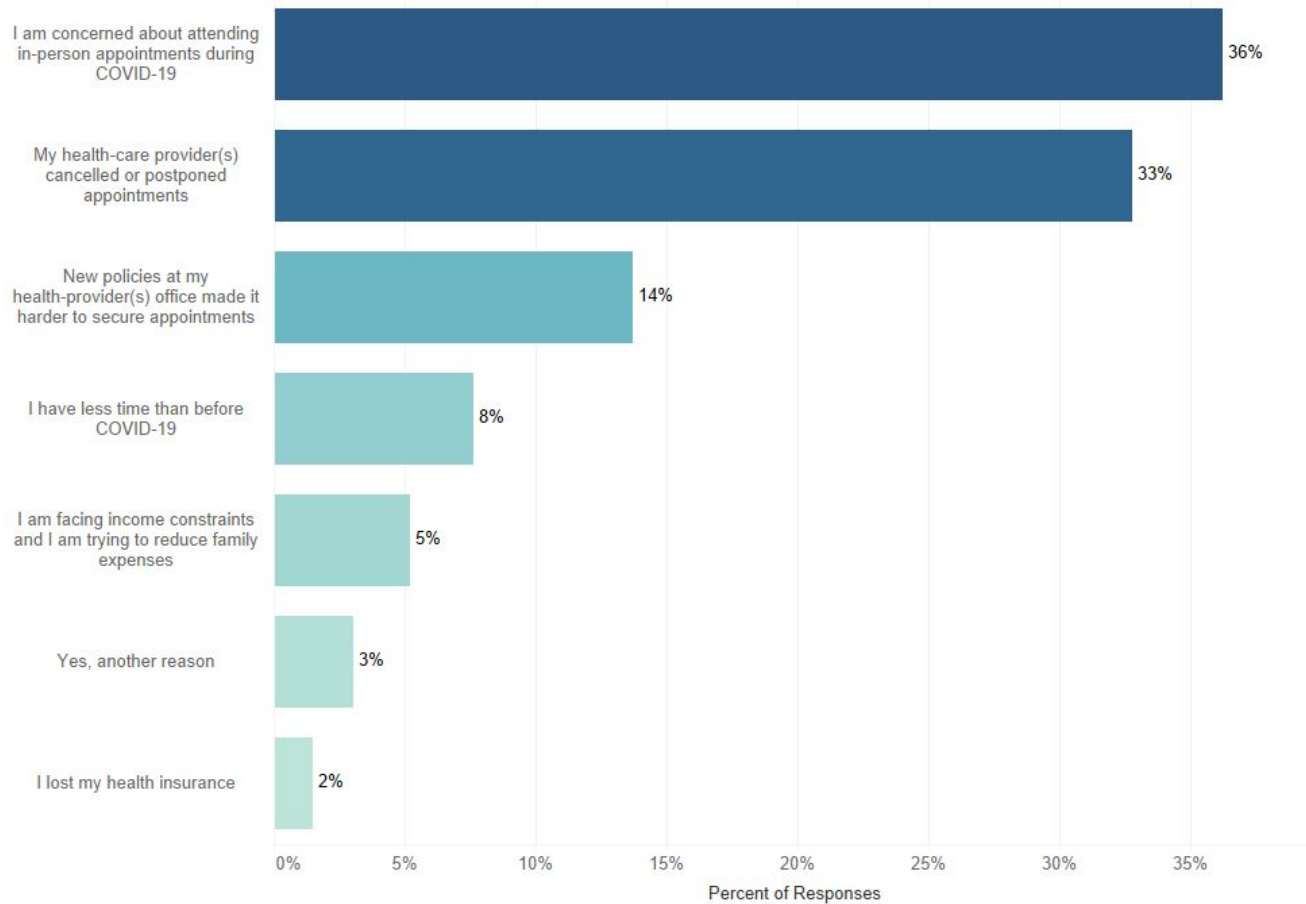
- Yes, extremely concerned
- Yes, quite concerned
- Yes, somewhat concerned
- Not sure
- No, not at all concerned

Physical and Mental Health

ACCESS TO HEALTHCARE

Figure 17. Why have you cancelled or postponed medical appointments? (Check all that apply)

(n = 1621)



MENTAL HEALTH

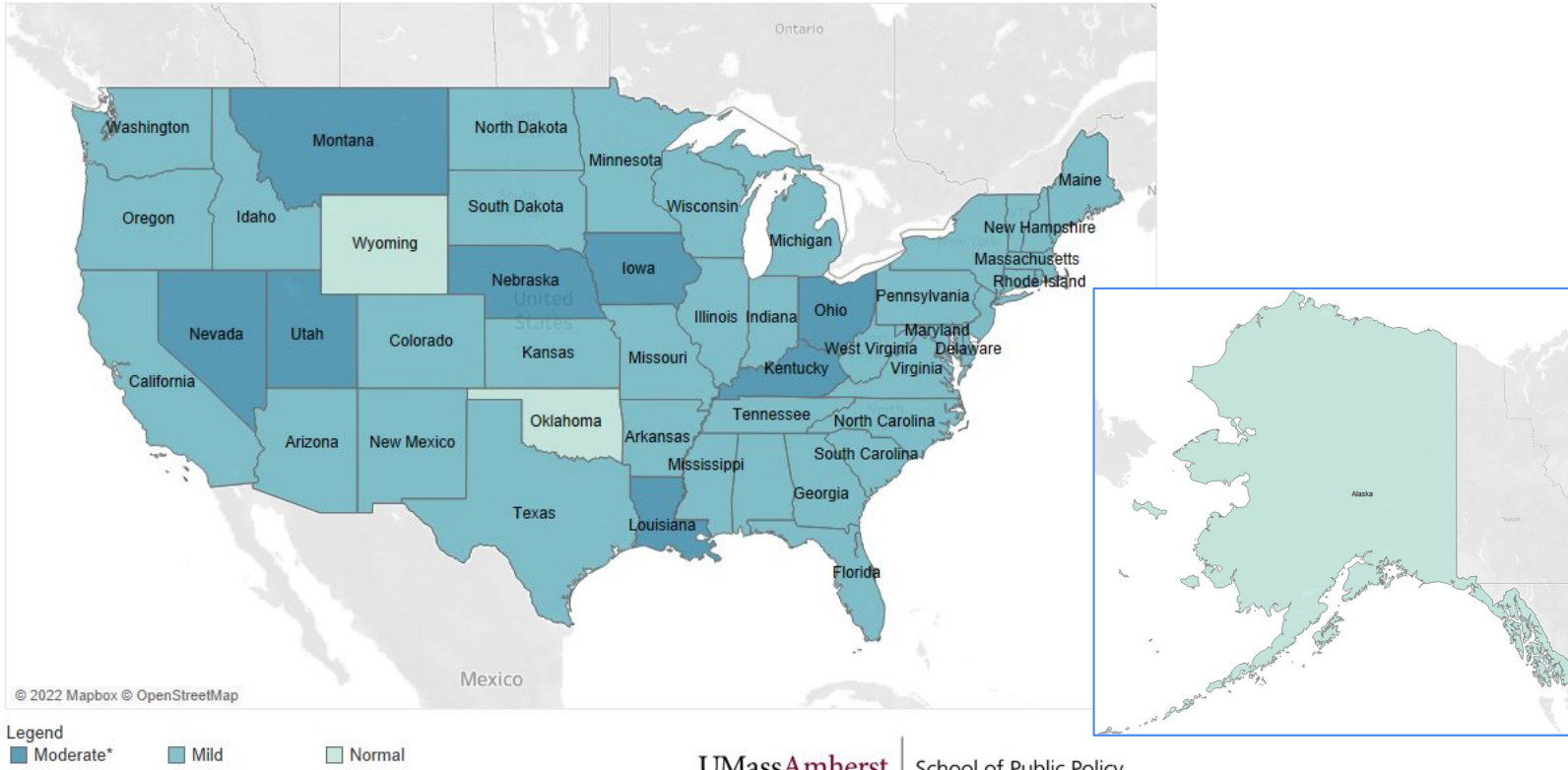
PHQ4 depression-anxiety indicator

The Patient Health Questionnaire-4 (**PHQ-4**)

- developed and validated by Kroenke, Spitzer, Williams, & Löwe, (2009)
- anxiety and depression assessment
- anxiety and depression are two of the most prevalent illnesses among the general population

Figure 18j. Average PHQ-4 Screening score for detecting depression and anxiety disorders. Results are presented by state.

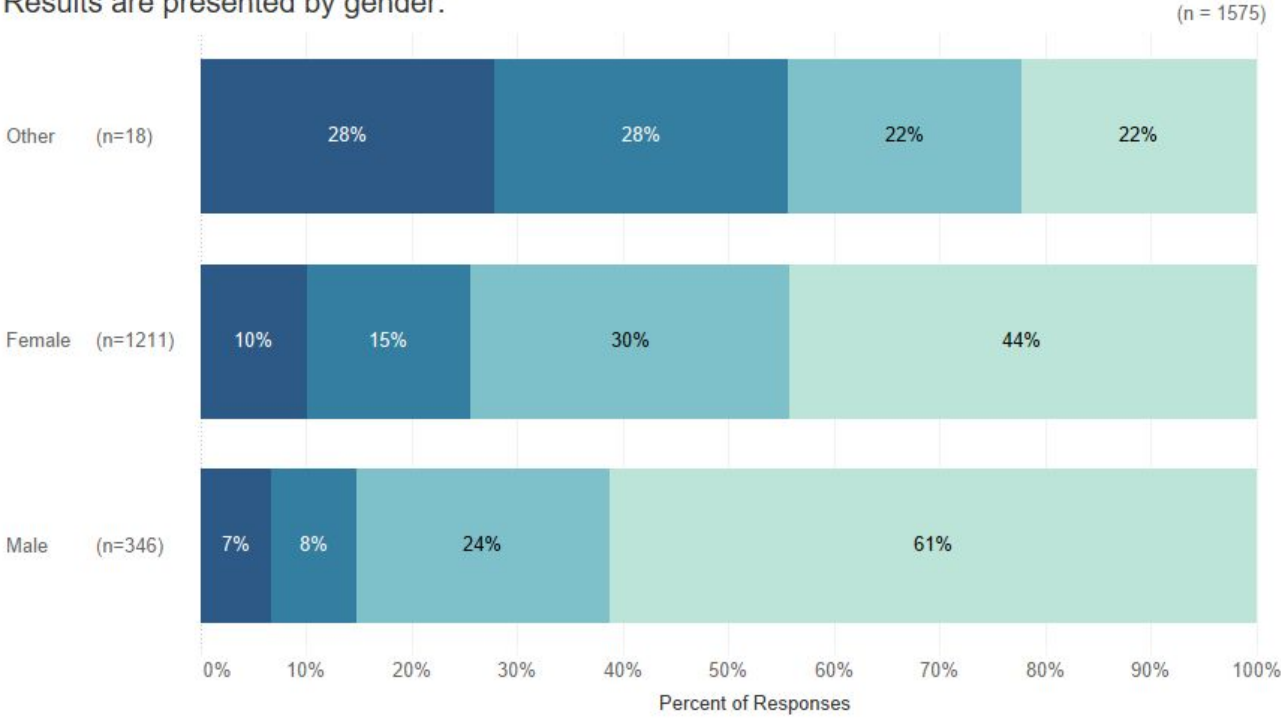
PHQ4



* "Moderate" indicates moderate depression and generalized anxiety disorders

Figure 18a. PHQ-4 Screening scale for detecting depression and anxiety disorders. Results are presented by gender.

By Gender

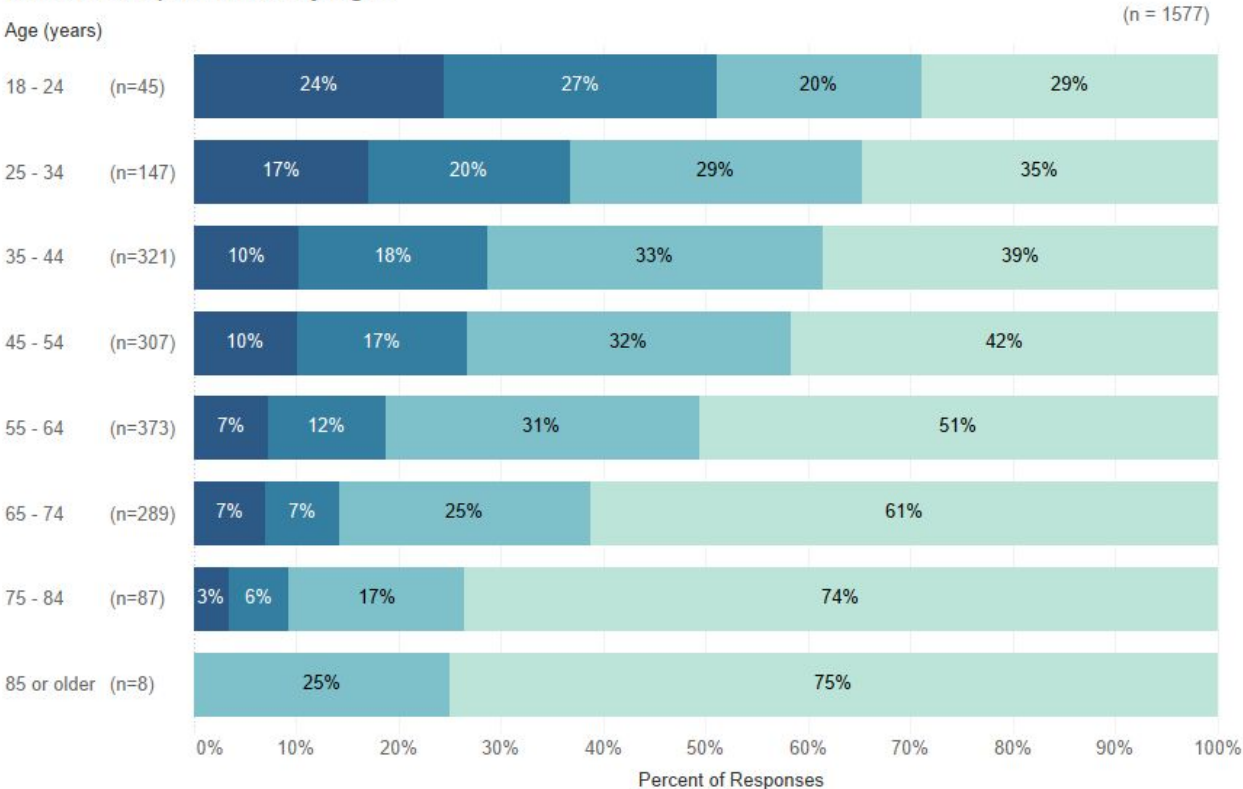


Legend ■ Severe* ■ Moderate ■ Mild ■ Normal

* "Severe" indicates severe depression and generalized anxiety disorders

Figure 18b. PHQ-4 Screening scale for detecting depression and anxiety disorders. Results are presented by age.

By Age

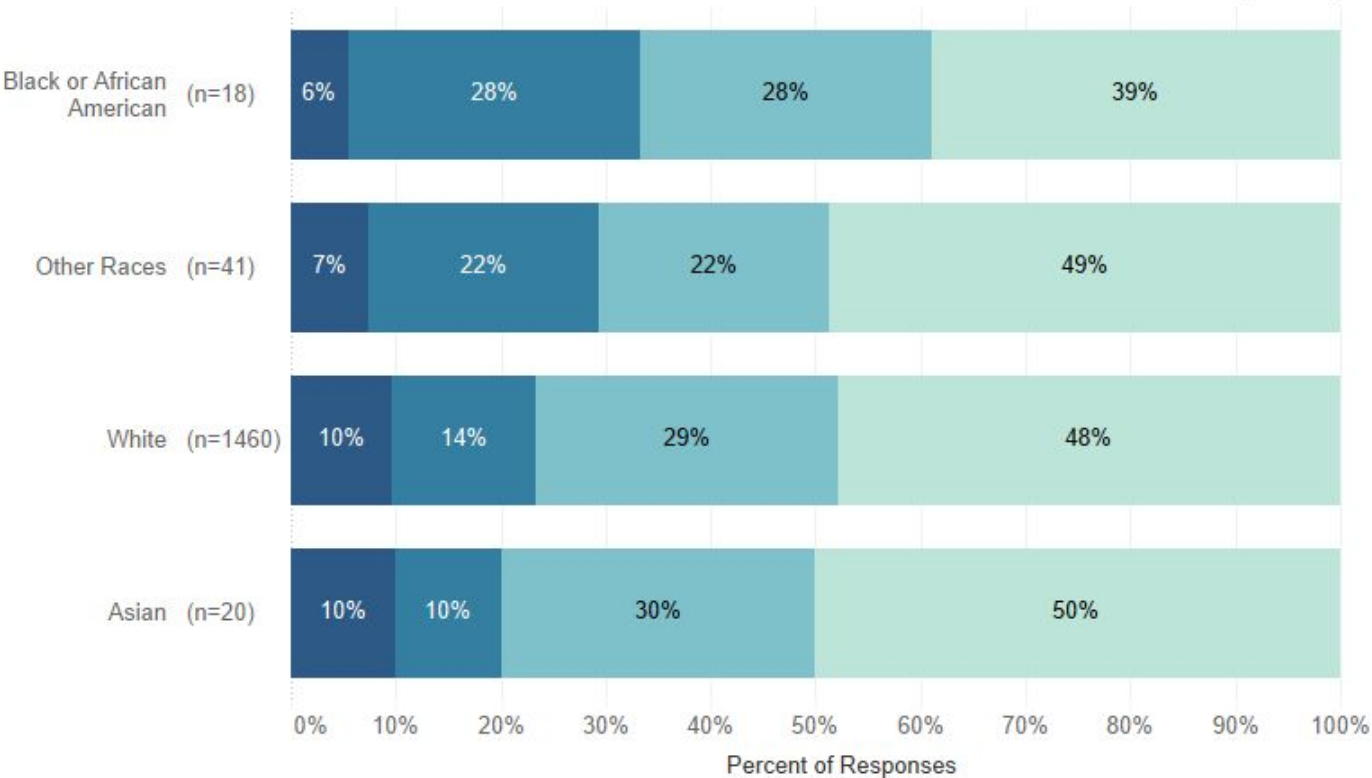


Legend
■ Severe*
 ■ Moderate
 ■ Mild
 ■ Normal

* "Severe" indicates severe depression and generalized anxiety disorders

Figure 18c. PHQ-4 Screening scale for detecting depression and anxiety disorders. Results are presented by race.

By Race



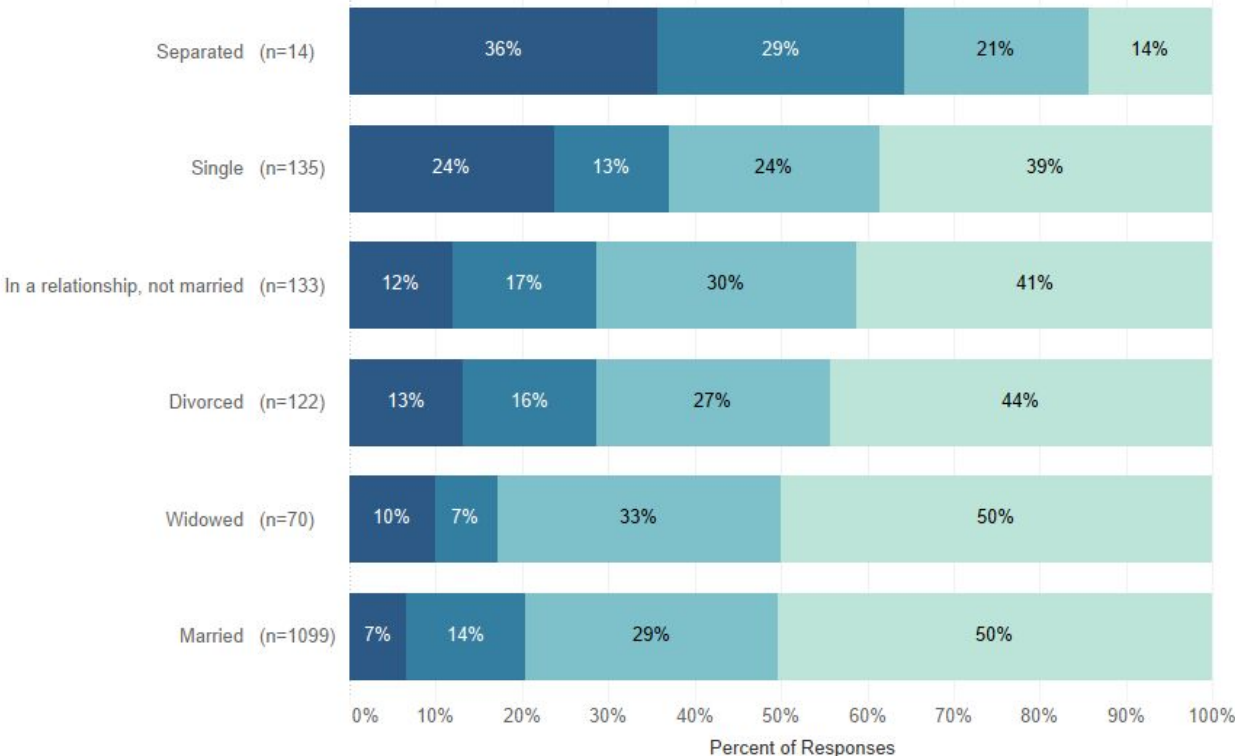
Legend
 ■ Severe* ■ Moderate ■ Mild ■ Normal

* "Severe" indicates severe depression and generalized anxiety disorders

Figure 18d. PHQ-4 Screening scale for detecting depression and anxiety disorders. Results are presented by marital status of respondents

(n = 1573)

By marital status



Legend
■ Severe* ■ Moderate ■ Mild ■ Normal

* "Severe" indicates severe depression and generalized anxiety disorders

Figure 18e. PHQ-4 Screening scale for detecting depression and anxiety disorders. Results are presented by household income level.

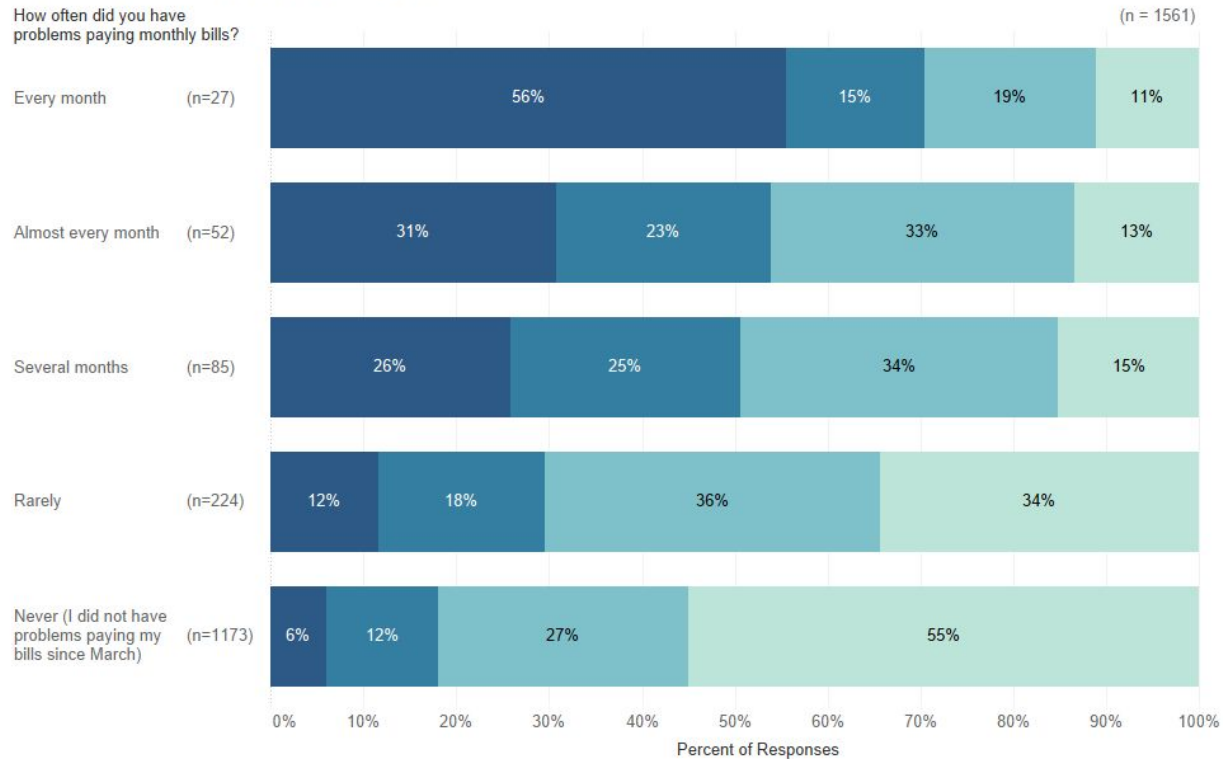


Legend
■ Severe* ■ Moderate ■ Mild ■ Normal

* "Severe" indicates severe depression and generalized anxiety disorders

By Income

Figure 18h. PHQ-4 screening scale for detecting depression and anxiety. Results are presented by frequency of difficulty in paying household bills for essential needs since March 2020 (i.e., housing, utilities, transport, groceries, health-care, child-care etc.).



Legend
■ Severe*
■ Moderate
■ Mild
■ Normal

* "Severe" indicates severe depression and generalized anxiety disorders

Financial stability

Figure 18f. PHQ-4 Screening scale for detecting depression and anxiety disorders. Results are presented by location where respondents live.

By location



Legend
■ Severe* ■ Moderate ■ Mild ■ Normal
* "Severe" indicates severe depression and generalized anxiety disorders

Q: Sources of stress?

Figure 19a. For respondents with children: in the last 4 weeks, how much have you been bothered by any of the following problems? (n = 728)

Respondents with children

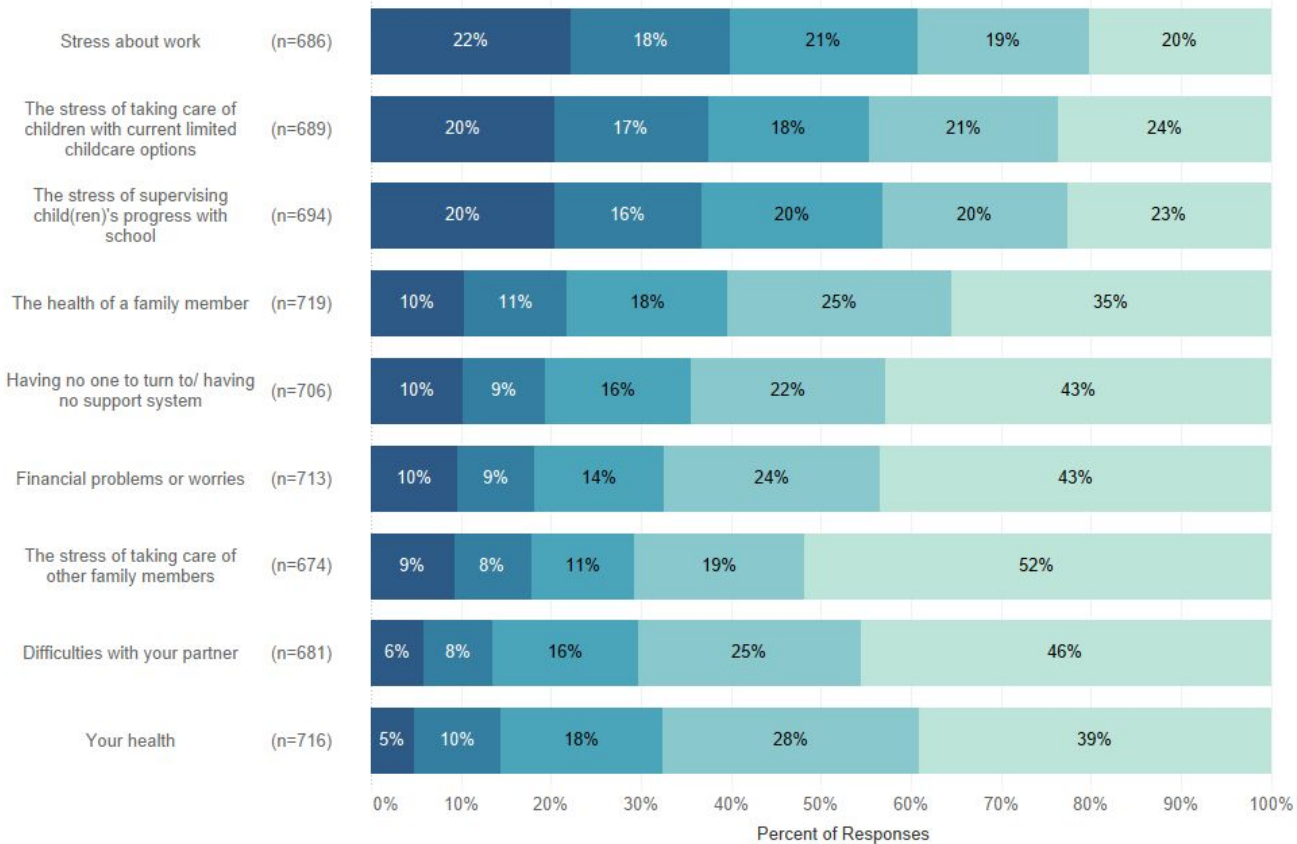
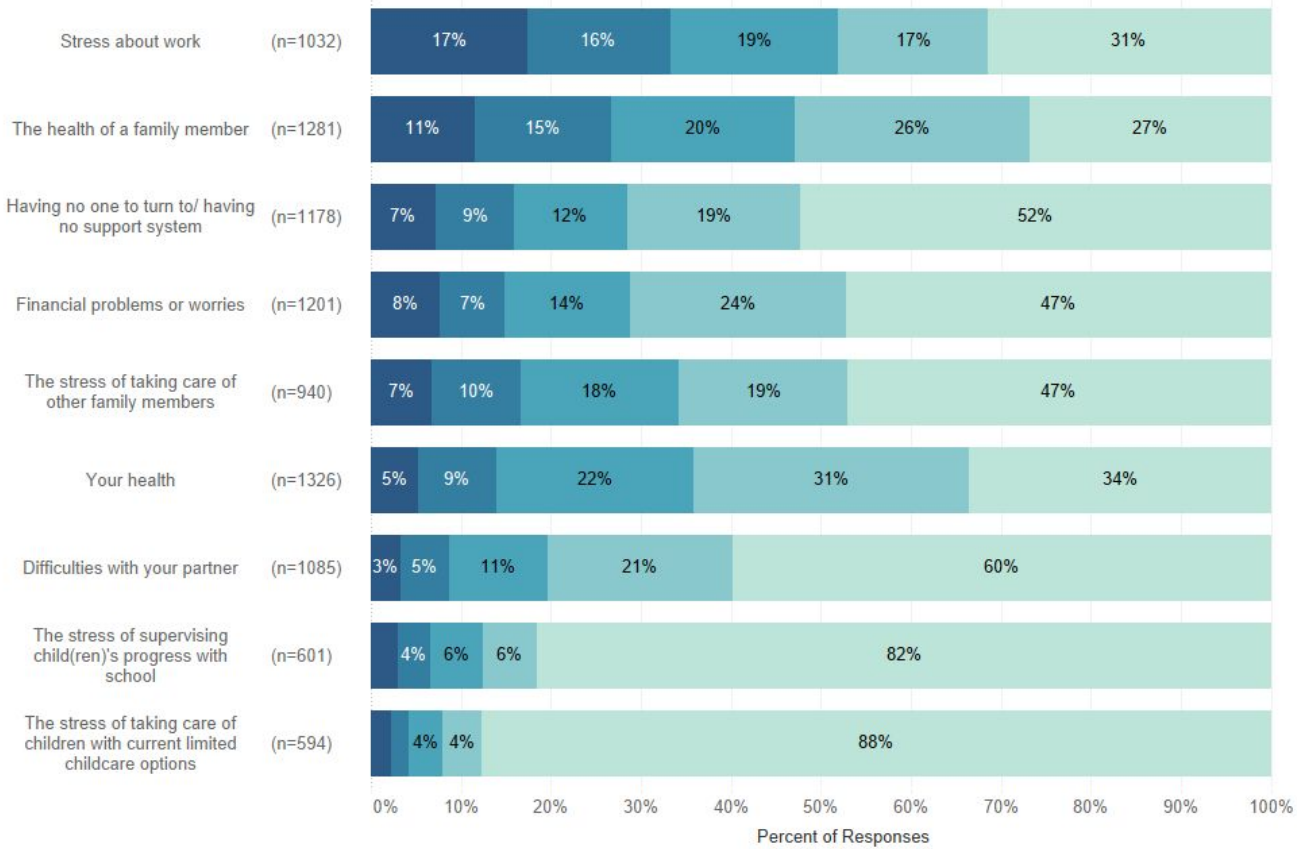


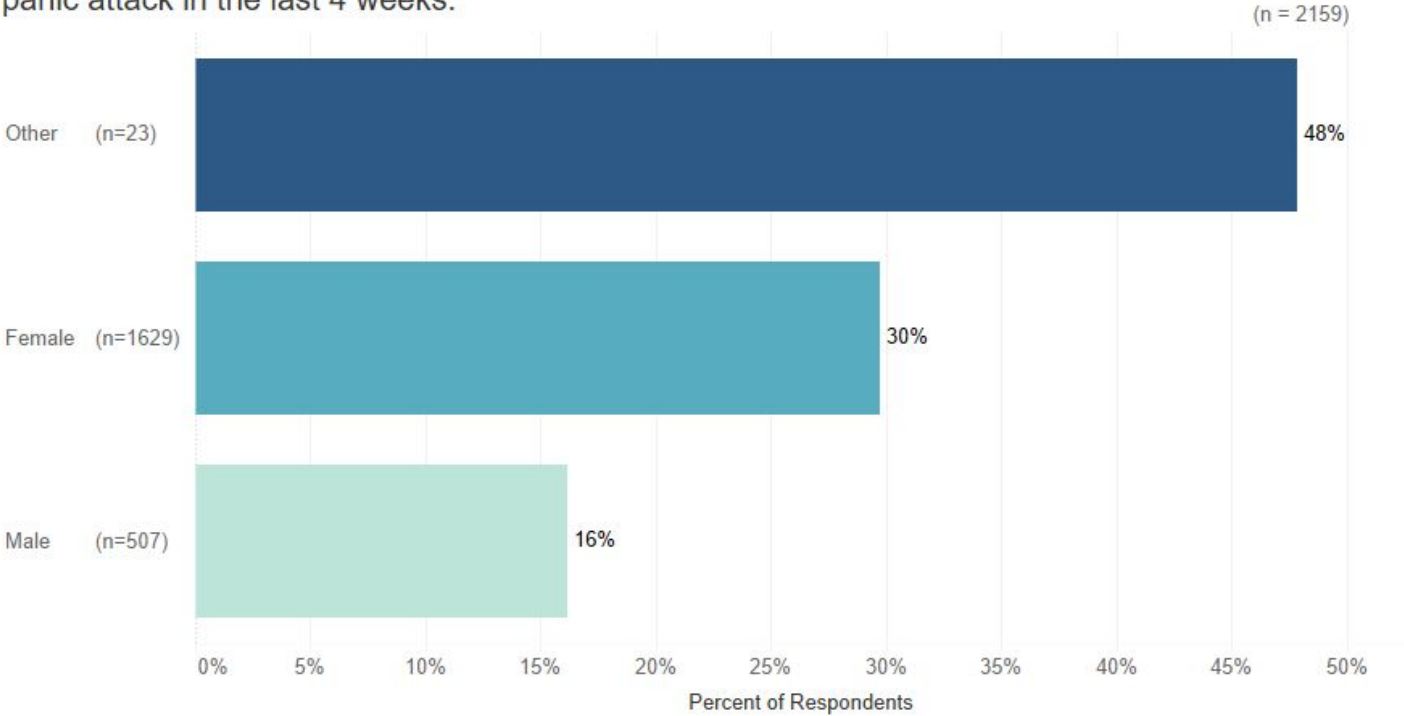
Figure 19b. For respondents without children: in the last 4 weeks, how much have you been bothered by any of the following problems? (n = 1342)

Respondents without children



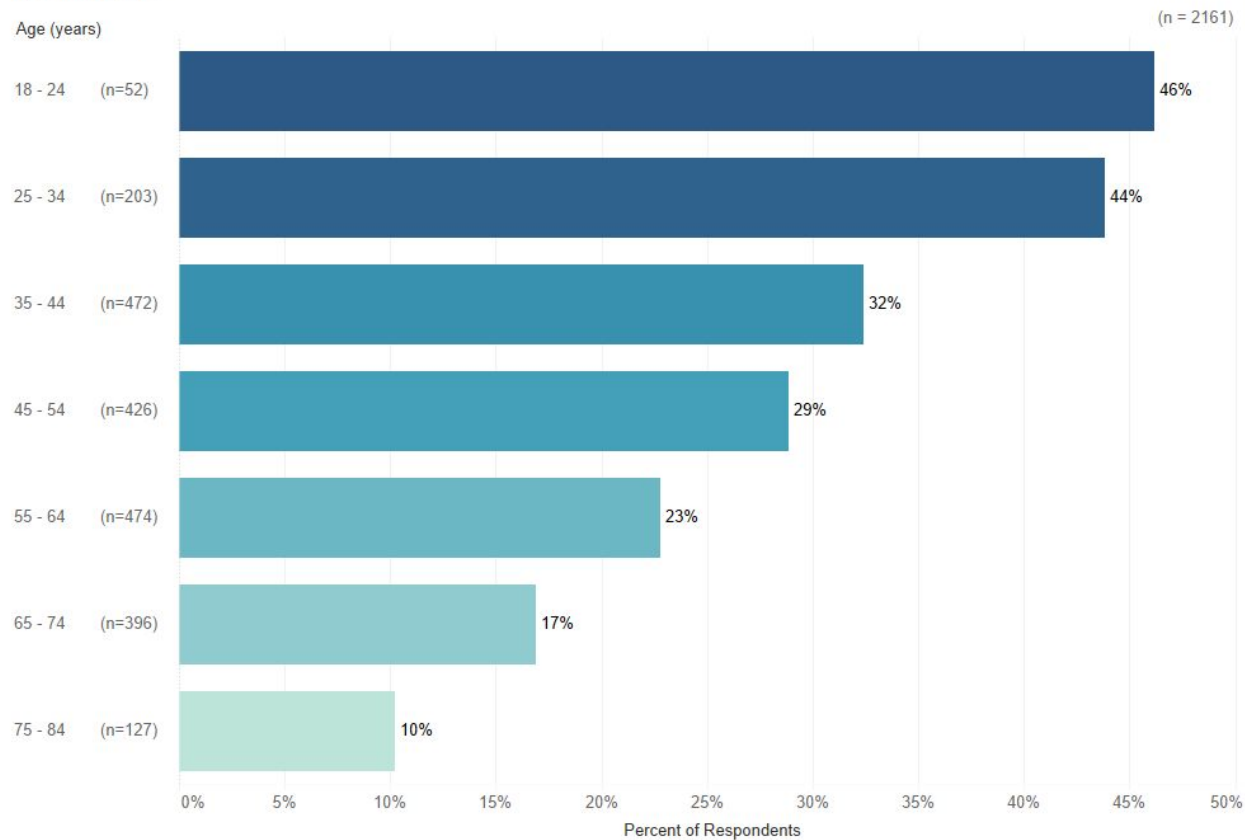
Anxiety and panic attacks

Figure 20a. Percentage of respondents (by gender) who reported having an anxiety attack or panic attack in the last 4 weeks.



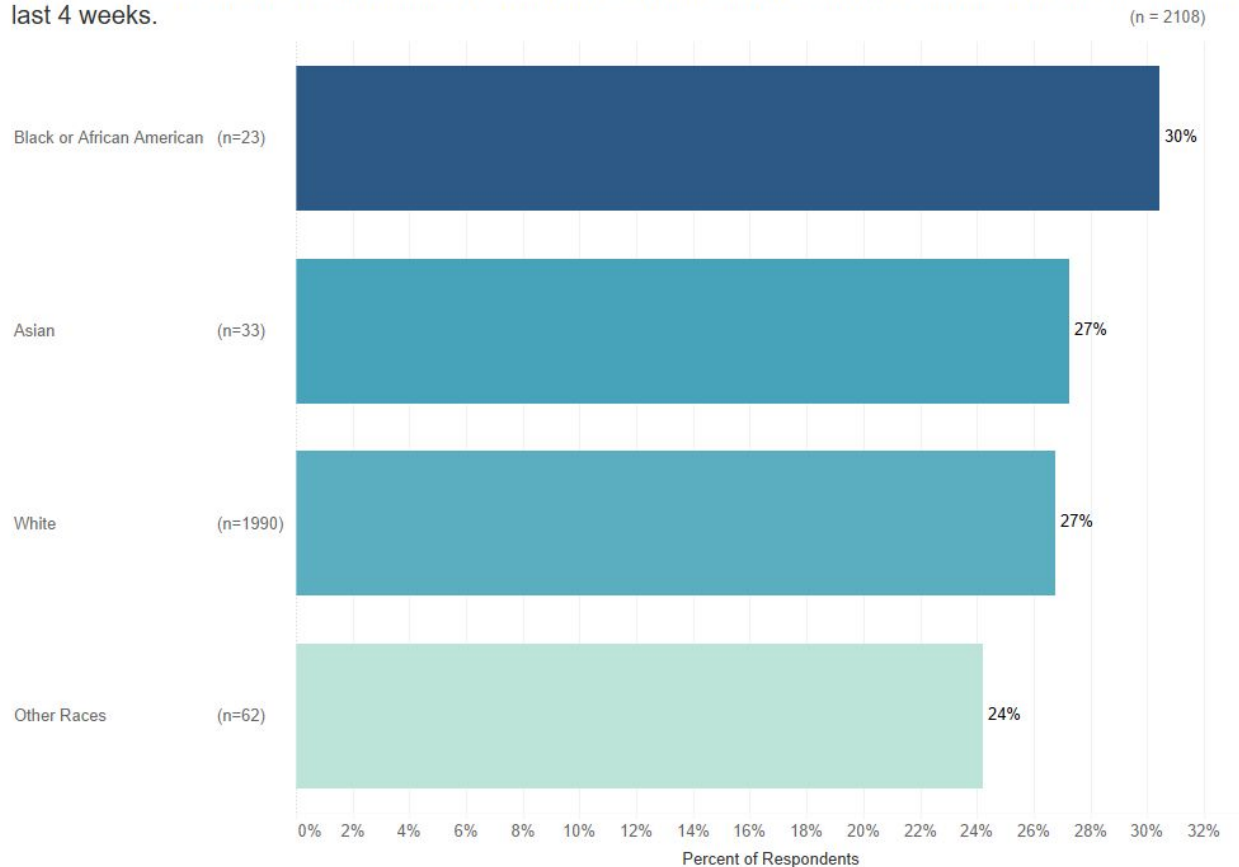
By
gender

Figure 20b. Percentage of respondents (by age) who reported having an anxiety attack or panic attack in the last 4 weeks.



By age

Figure 20c. Percentage of respondents (by race) who reported having an anxiety attack or panic attack in the last 4 weeks.

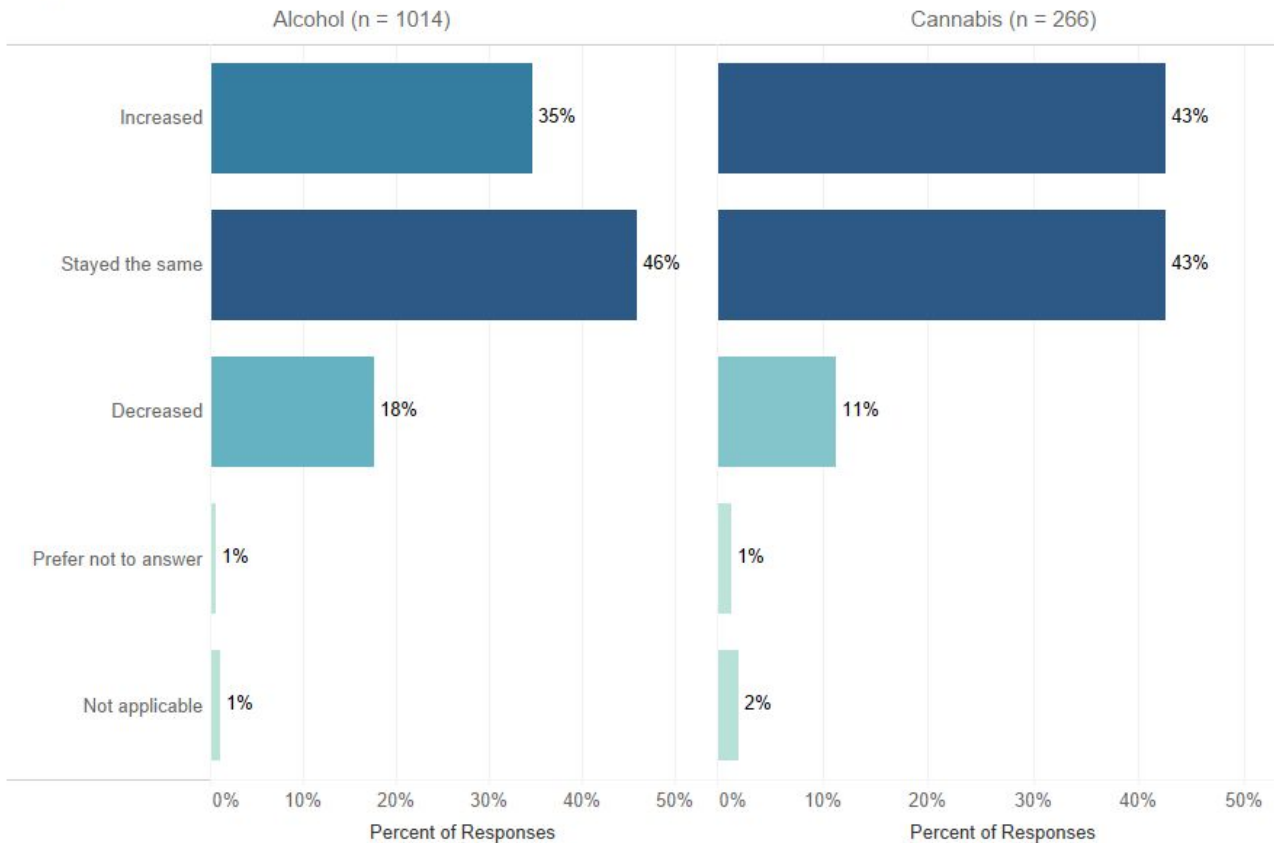


By race

SUBSTANCE USE

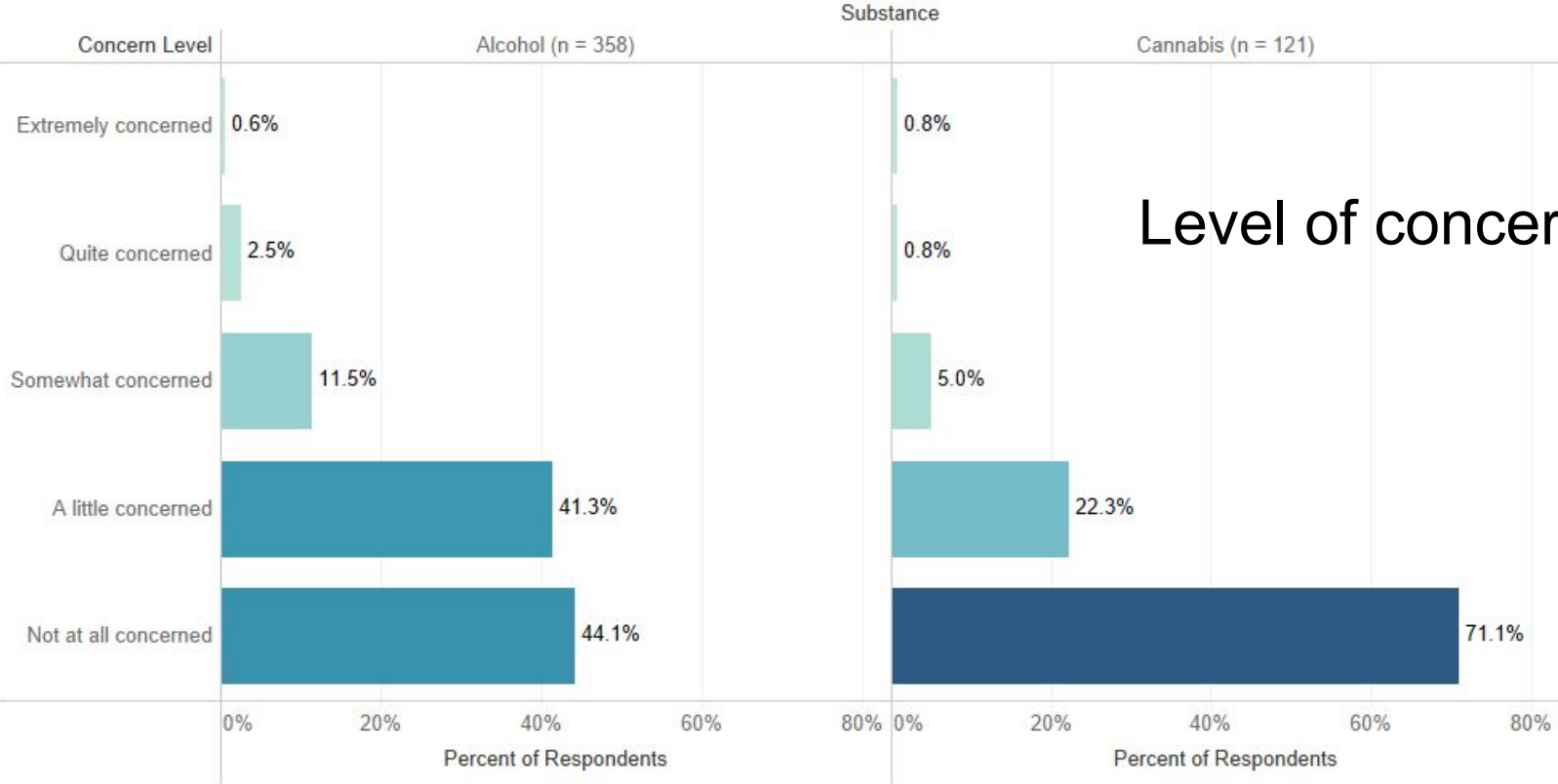
Q: Since the COVID-19 outbreak
my substance (alcohol/cannabis) use has...

Figure 21. Changes in substance (alcohol/cannabis) use since the COVID-19 outbreak.



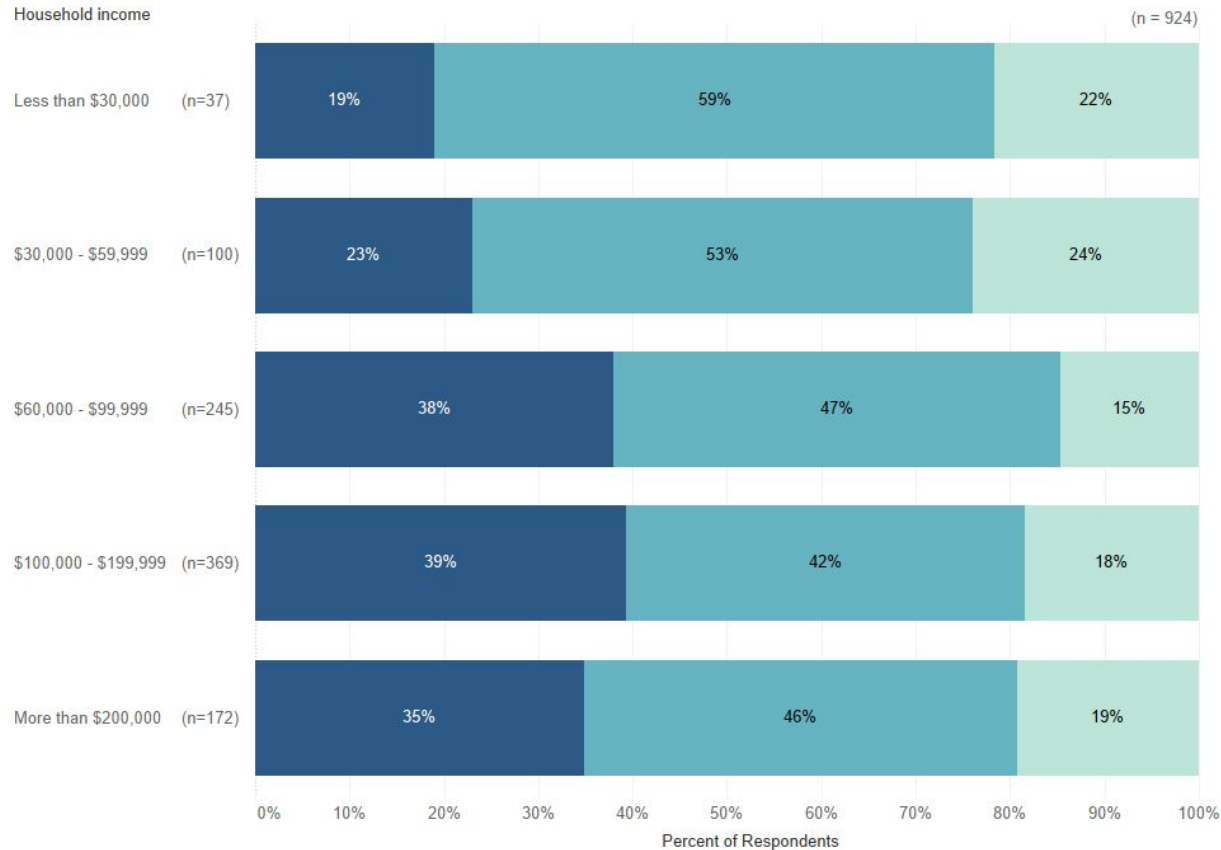
Substance use changes

Figure 22. For respondents who reported an increase in substance use: how concerned are you about your substance (alcohol/cannabis) use?



Level of concern

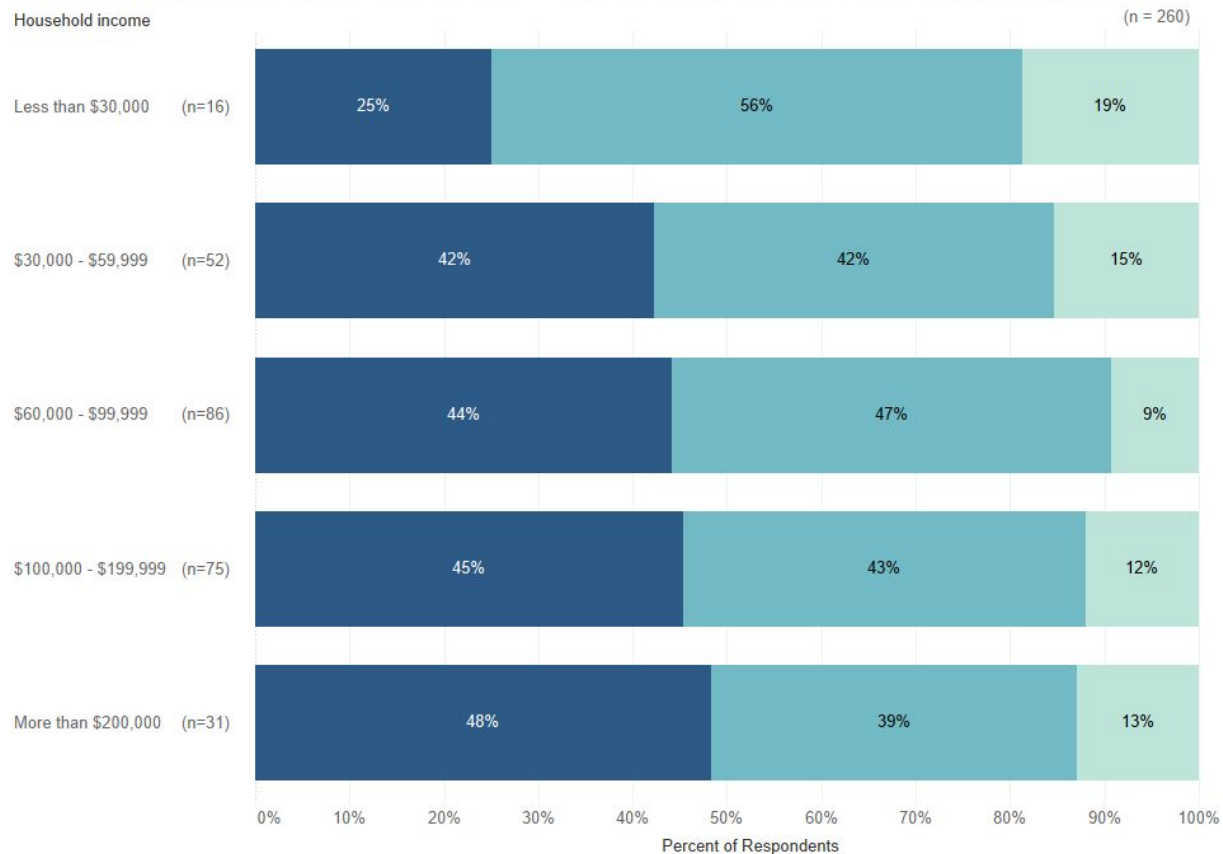
Figure 25. Changes in alcohol use since the COVID-19 outbreak (results by household income).



Alcohol Consumption and Income

Consumption seems to increase with income

Figure 26. Changes in cannabis use since the COVID-19 outbreak (results by household income).



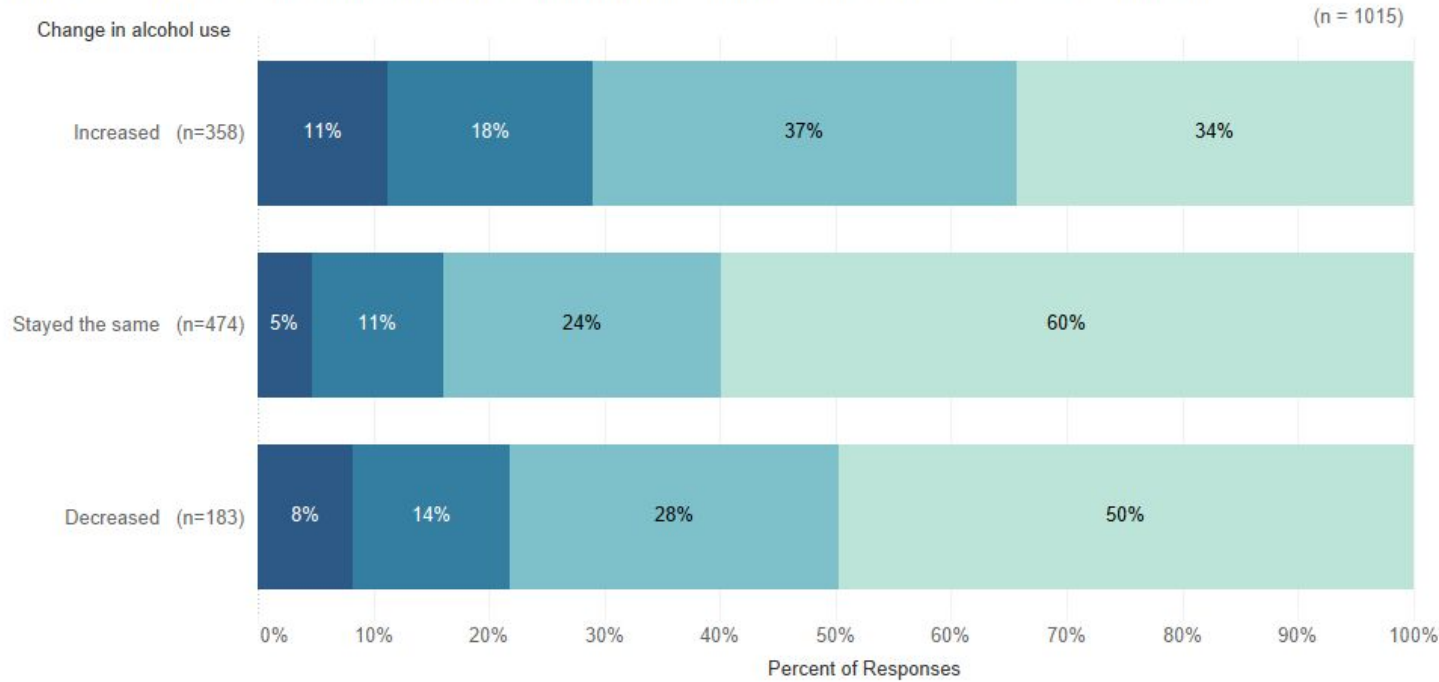
Legend: Cannabis use

■ Increased ■ Stayed the same ■ Decreased

Cannabis Consumption and Income

Alcohol PHQ4

Figure 23. PHQ-4 Screening scale by change in alcohol use since the COVID-19 outbreak.



Legend: PHQ-4 Screening scale
■ Severe* ■ Moderate ■ Mild ■ Normal

* "Severe" indicates severe depression and generalized anxiety disorders

Cannabis and PHQ4

Figure 24. PHQ-4 Screening scale by change in cannabis use since the COVID-19 outbreak.



Legend: PHQ-4 Screening scale
■ Severe* ■ Moderate ■ Mild ■ Normal

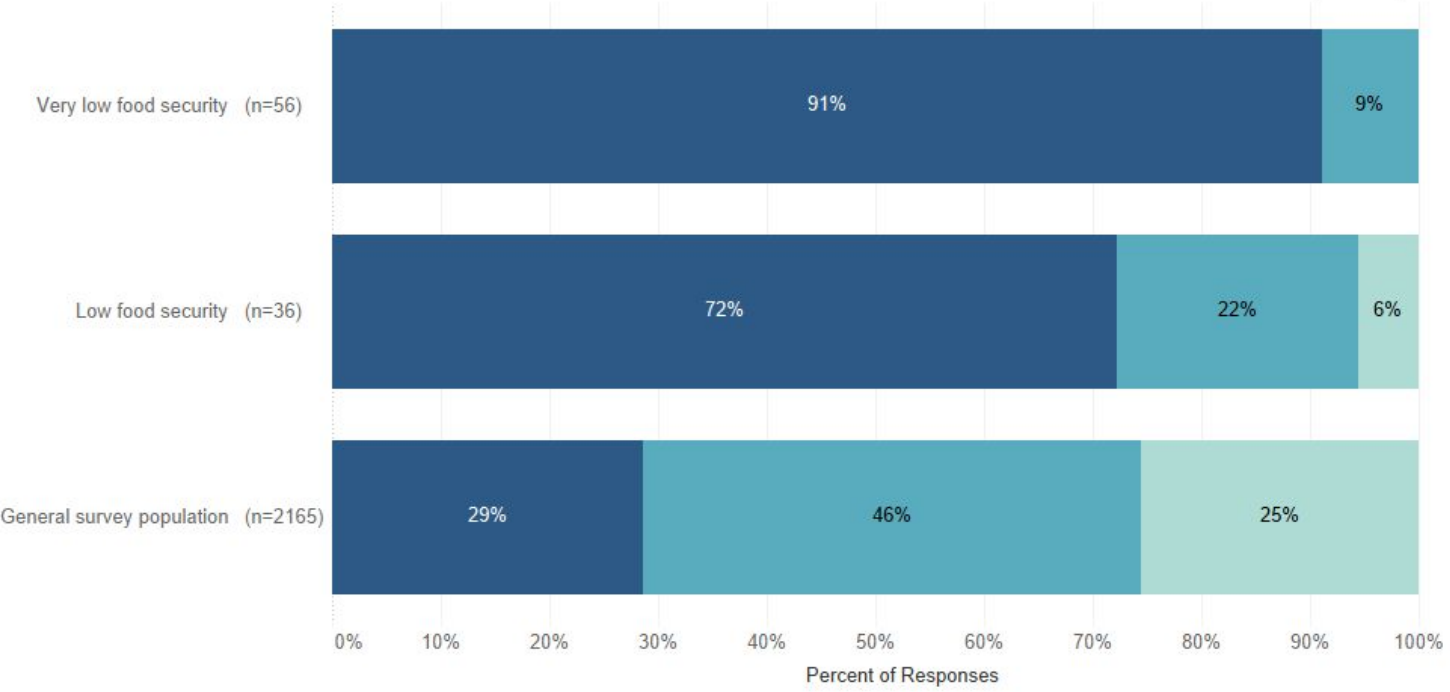
* "Severe" indicates severe depression and generalized anxiety disorders

FOOD SECURITY

Q: Since the COVID-19 outbreak...

Savings

Figure 27. Since the beginning of the COVID-19 pandemic, have your household savings decreased, increased or remained the same? (Results by food security status) (n = 2257)



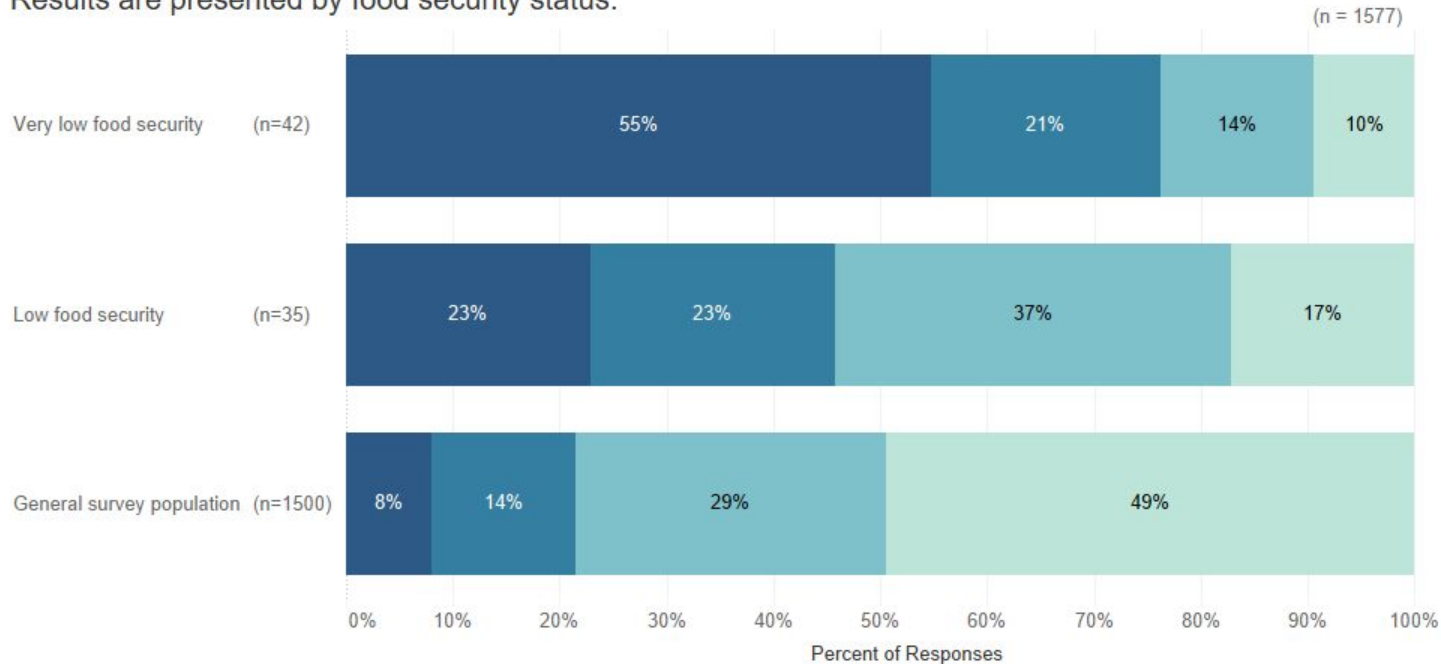
Strongly related to depletion in savings

Legend: Household savings
■ Decreased

■ Remained about the same ■ Increased

PHQ4

Figure 28. PHQ-4 Screening scale for detecting depression and anxiety disorders. Results are presented by food security status.



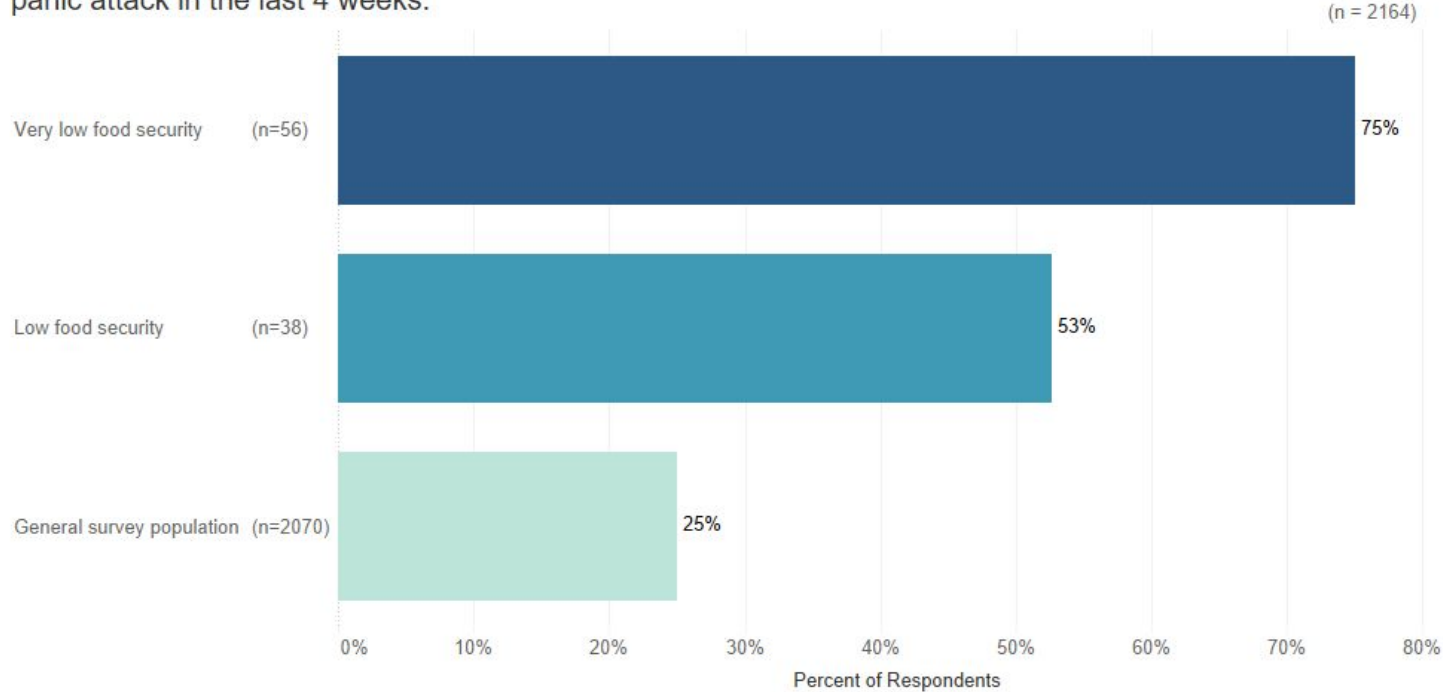
Strongly related to severe anxiety and depression symptoms

Legend: PHQ-4 Screening scale

Severe* Moderate Mild Normal

* "Severe" indicates severe depression and generalized anxiety disorders

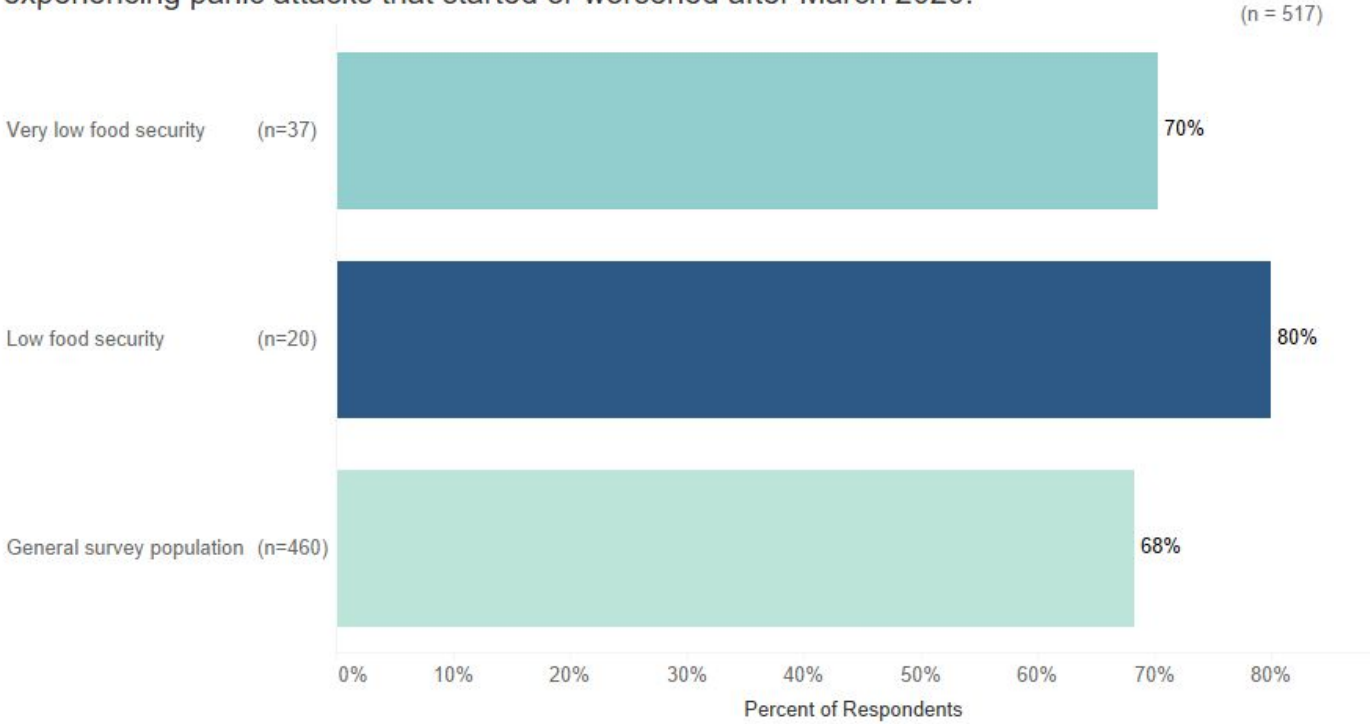
Figure 29. Percentage of respondents (by food security status) who reported having an anxiety attack or panic attack in the last 4 weeks.



Anxiety attacks and food security

Strongly related to severe anxiety and depression symptoms

Appendix Figure 9. Percentage of respondents (by food security status) who reported experiencing panic attacks that started or worsened after March 2020.

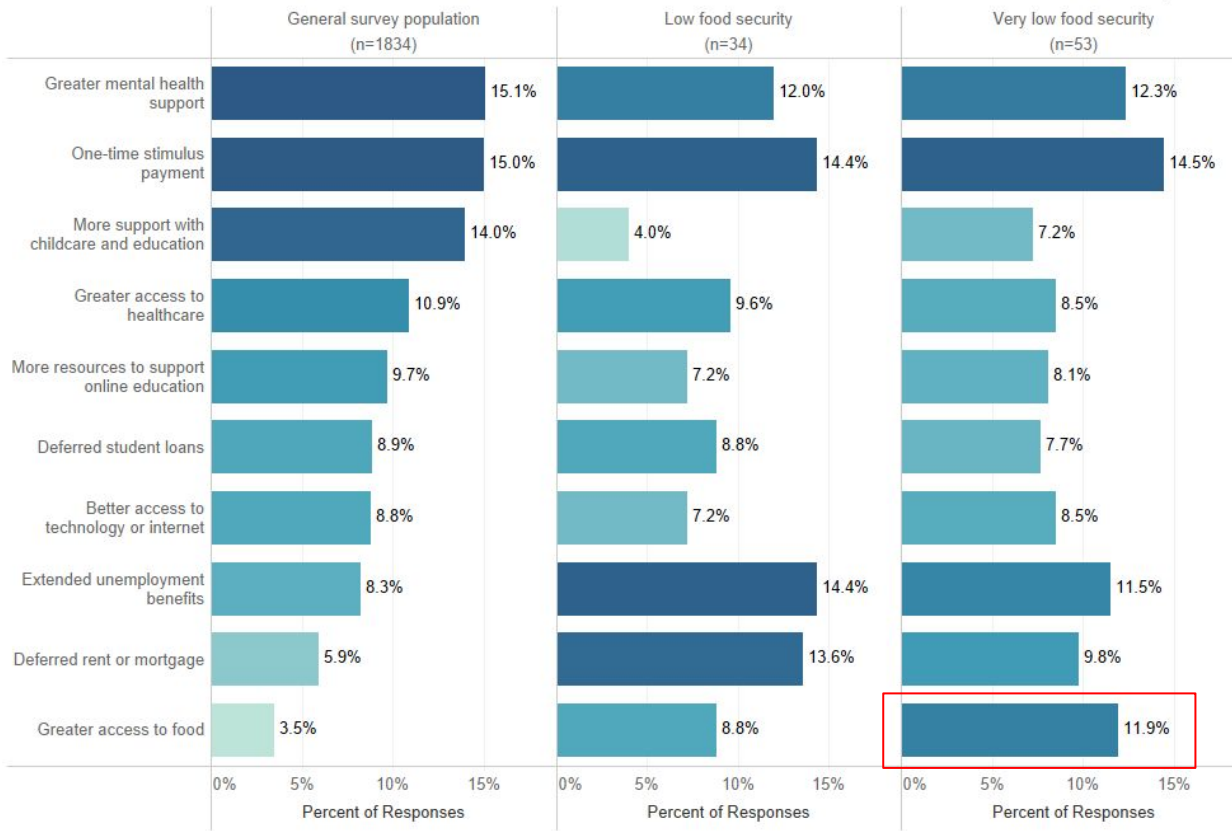


Appendix Figure 9

Panic attacks worsened



Figure 30. Considering the current COVID-19 economic disruptions, what policies or resources would be most helpful to you or your family during this time? (Results by food security status) (n = 1921)



Preferred policies and food security

Conclusions

Our detailed survey design allows us to examine [factors and mechanisms that might exacerbate impacts](#) (e.g., race/ethnicity, gender, type of employment, income, location), and the interconnection between the different types of impacts (e.g., income constraints and mental health).

Special focus is devoted to possible delays in children's academic and emotional development, negative mental health outcomes, and negative effects on women's employment.

If not addressed quickly, these socio-economic impacts will have lasting, and possibly irreversible, implications for the United States.

We hope that our results will inform the design of policies that address these impacts and support vulnerable groups.

Thank you