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SURVEY OF VERMONT HOUSEHOLDS

IMPACTS OF COVID-19

UMassAmherst
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Citation:

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Outline

Report
SURVEY RESULTS

IMPACTS OF COVID-19 ON VERMONT HOUSEHOLDS

The UMass Amherst School of Public Policy's SUP Lab conducted a national online household survey from October 4, 2020 to February 18, 2021. The Vermont Women's Fund, the Vermont Commission on Women, Change The Story and Vermont Works for Women supported the distribution of the survey among Vermont households. 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. The survey includes questions in 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

The survey received 5,916 responses from 54 states and U.S. territories, including 507 responses from Vermont. A report with the results of the national survey is in preparation (Vicarelli et al., 2021).

Methodological considerations

The survey data collected is not a random sample of the Vermont population. When available, we provide demographic descriptive statistics drawn from the Vermont Census data to compare them with the demographic profile of our dataset.

In this survey we have used some questions that had been (or are being) used in other studies. Our goal is to compare results across time (before and during the COVID-19 pandemic) and across states in the US. Relevant references and comparative tables are provided when applicable.

INTRODUCTION AND DEMOGRAPHIC CHARACTERISTICS

While the dataset is not fully randomized, it still provides useful insights into the needs and priorities of households facing the COVID-19 public health crisis and its socio-economic implications. This section describes key demographic characteristics of the Vermont respondents in this survey. The respondents in our sample have higher average levels of education and income compared to the averages for the Vermont population.

- The vast majority (89%) of respondents self-identify as female, 8% as male, and the remaining 3% are spread across other gender identities[1]. (Table 1)

- Respondents are predominantly middle-aged with a median age of 45.1. The majority (58%) of respondents are 45 or older, with the largest age group represented being between the ages of 45-54, (27% of the all respondents). This age distribution is different from the age demographics collected by the US Census in Vermont in 2019, where the median age is 43.1, only 12.5% of respondents are in the 45-54 age range, and the most populated age range is between the ages of 55-64 with 15.2% of respondents. (US Census, 2019B). (Figure 1)

- Nearly half of the respondents live in rural areas (48%), the remainder live in suburban areas (20%), open countryside (18%), or urban areas (14%). (Table 2)

- 99% of respondents reported English as their first language. (Appendix Table 1)

- The majority of respondents (58%) are married, with a further 20% in relationships but unmarried. 11% of respondents are single and 9% divorced. 95% of respondents who are in a relationship stated that they live with a partner or spouse. (Table 3)

- The vast majority of respondents (94%) are white; less than 3% of respondents identified as black (1.6%), and all other racial-ethnic identities account for less than 1% of respondents each. This is closely in line with Vermont's census demographic information (U.S. Census, 2019C) (Table 4). Only 0.7% of respondents identify as latinx. (Appendix Table 2)

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[1] While he total number of respondents in the survey is 507, the total number of observations (responses) may differ from one question to another. Sometimes respondents opted not to answer.

- Most respondents identified as heterosexual (82%). 8% self-identified as bisexual, 3.9% as lesbian, 1.2% as gay, and a further 0.4% as pansexual[2]. (Table 5)

- Nearly a third of respondents hold a master's degree (33%), and 85% have a bachelor or higher degree. According to Census data only 38% of Vermont residents hold a bachelor degree or higher degree; this means that our sample is on average more highly educated compared to the Vermont average (U.S. Census, 2019C). (Table 6)

- 43% of respondents reported household incomes greater than $100,000, with an additional 26% reporting income between $60,000 and $100,000. 20% of respondents reported income between $30,000 and $60,000, and less than 8% reported income under $30,000. Census data from Vermont indicate that the median annual household income in Vermont was $61,973 in 2019, while the median household income for households in our survey is in the range of $90,000-$99,000 (U.S. Census, 2019C). In short, respondents in our survey are on average wealthier than the average Vermont household. (Figure 2 and Table 7)

- An important consideration deriving from the previous point: our findings might underestimate the actual magnitude of socio-economic impacts of the COVID-19 pandemic on the average Vermont household. Because of their higher income level, households in our survey may have faced less economic challenges than the average Vermont household.

- 62% of respondents said there were two people earning an income in their household, while another 30% responded that there was only one. (Table Appendix 4)

- The average number of people in respondents' households is 2.65, with 41% stating that there were two members in the household, while 45% indicated that there were more than two members, and the remaining 14% of households consisting of just one member. The average household size is slightly higher than the reported average according to the US census, which is 2.3. On the other hand, the proportion of one member households in the census data was greater than in our survey data, as they constituted 22.5% of the census respondents (U.S. Census, 2019A).

- 54% of respondents did not have any children under 18 living in their household. 21% of respondents had one child, another 20% had two, and only 5% had more than two children living in their household. (Appendix Table 6)

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[2] Here we provide figures with one decimal place because the minority groups considered include very few observations.

Table 1. Gender identity		
How do you describe yourself?	**Count**	**Percent**
Female	442	88.93%
Male	40	8.05%
Trans female/ Trans woman	0	0.00%
Trans male/ Trans man	3	0.60%
Genderqueer/ Gender non-conforming	11	2.21%
Different Identity	1	0.20%
Total	**497**	

Figure 1. Age distribution of survey respondents.

(n = 499)

Percent of responses

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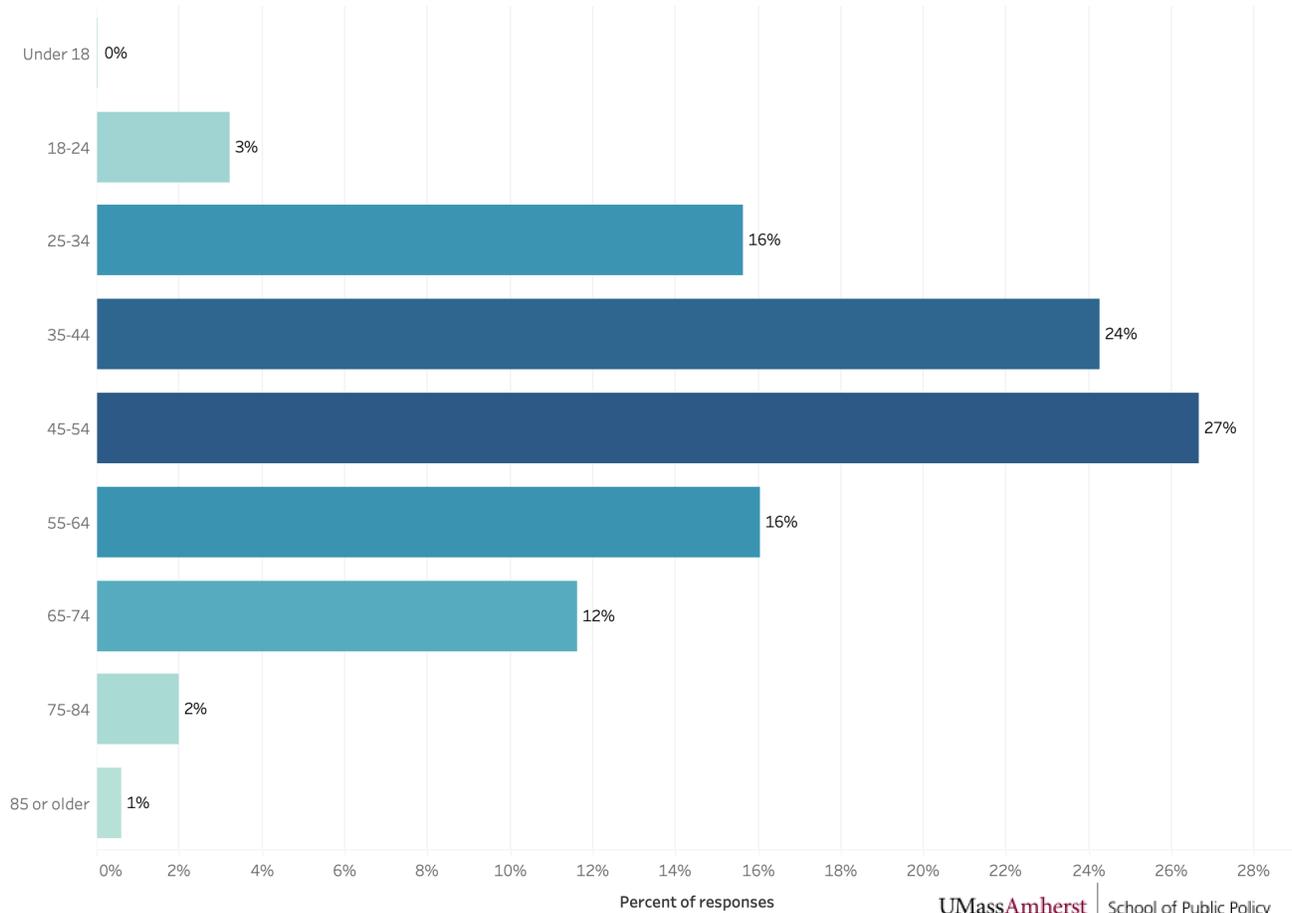
Table 2. Location		
How would you describe the area where you live?	**Count**	**Percent**
Urban	70	14%
Suburban, small town near a large city	102	20%
Rural	244	48%
Open countryside	89	18%
Total	**505**	

Table 3. Respondents' marital status		
	Count	**Percent**
Single	53	10.56%
In a relationship, not married	102	20.32%
Married	291	57.97%
Widowed	7	1.39%
Divorced	46	9.16%
Separated	3	0.60%
Total	**502**	

Table 4. Respondents' race/ethnicity (Check all that apply)			
	Count (Survey data)	**Percent (Survey data)**	**Percent US Census 2015-2019**
White	478	94.09%	94.20%
Black or African American	8	1.57%	1.40%
American Indian or Alaska Native	5	0.98%	0.40%
Asian	4	0.79%	1.90%
Native Hawaiian or Pacific Islander	0	0.00%	0.0%
Other	5	0.98%	-
Prefer not to Answer	8	1.57%	-
Total	**393**		

Note: 0.7% of the population identifies as latinx. This is closely in line with Vermont's census demographic information (U.S. Census, 2019C). (Appendix Table 2)

Table 5. Respondents' sexual orientation		
	Count	**Percent**
Heterosexual	401	82.34%
Gay	6	1.23%
Lesbian	19	3.90%
Queer	11	2.26%
Bisexual	39	8.01%
Pansexual	2	0.41%
Total	**487**	

Table 6. Respondents' level of education		
	Count	**Percent**
Some high school, no degree	1	0.20%
High school graduate	6	1.21%
Some college, no degree	47	9.46%
Associate degree	20	4.02%
Bachelor's degree	155	31.19%
Some graduate school	48	9.66%
Master's degree	163	32.80%
Professional degree	20	4.02%
Doctorate degree	36	7.24%
Other	1	0.20%
Total	**497**	

Table 7. Household income		
	Count	**Percent**
Less than $10,000	1	0.20%
$10,000 - $19,999	13	2.64%
$20,000 - $29,999	23	4.67%
$30,000 - $39,999	28	5.69%
$40,000 - $49,999	35	7.11%
$50,000 - $59,999	35	7.11%
$60,000 - $69,999	29	5.89%
$70,000 - $79,999	28	5.69%
$80,000 - $89,999	36	7.32%

$90,000 - $99,999	34	6.91%
$100,000 - $149,999	127	25.81%
$150,000-$199,999	42	8.54%
$200,000-$249,000	10	2.03%
$250,000-$299,000	13	2.64%
More than $300,000	17	3.46%
Prefer not to answer	21	4.27%
Total	**492**	

Figure 2. Households' Income Distribution
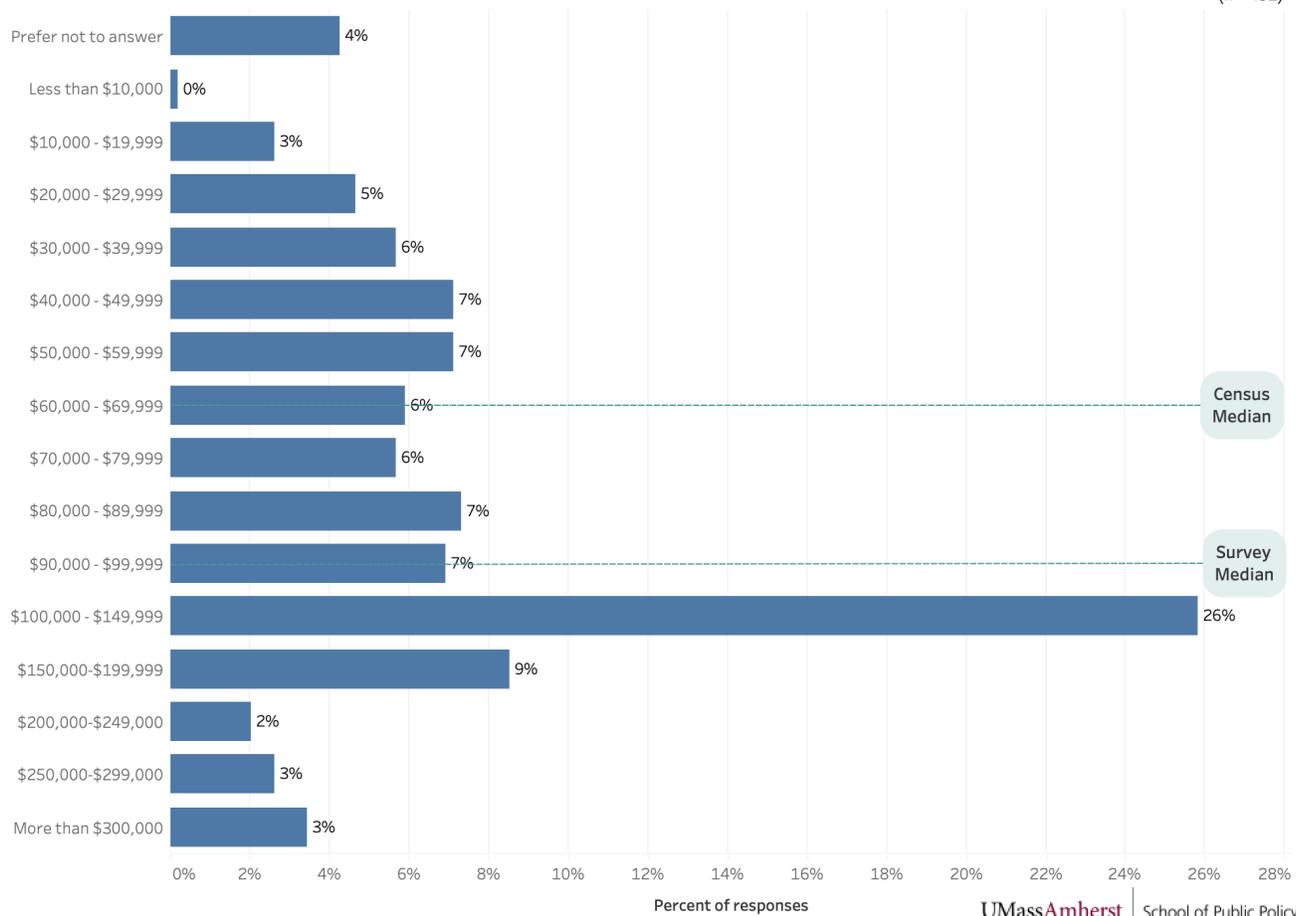
Note: Census data from Vermont indicate that the median annual household income in Vermont was $61,973 in 2019, while the median household income for households in our survey is in the range of $90,000-$99,000 (U.S. Census, 2019C).

1. EMPLOYMENT

- 63% of respondents reported that they were employed full-time at the time of the survey. An additional 10% reported part-time employment, while 8% reported they were self-employed, and 9% retired. (Table 8)

- 4.3% of respondents reported unemployment at the time of the survey, in line with the state unemployment rate of 4.3% for September of 2020 as reported by the Vermont Bureau of Labor, and slightly higher than the state rate of 3.2% in October of 2020 (Vermont Department of Labor, 2020). (Table 8)

- 4% of business owners reported that they were unemployed at the time of this survey.

- Among unemployed respondents, 62% reported being unemployed for more than 6 months. The next most common response was unemployment for 1 to 3 months (19%), followed by 4 to 5 months (11%). Only 5% reported being unemployed for under a month. (Table 9)

- Nearly 6% of respondents claimed to be actively looking for and applying for jobs.

- Of those who were searching for a job, only 12% reported receiving a job offer.

- About 27% of all respondents answered that they were considered essential workers (Table 10). 32% reported that someone in their family was an essential worker.

- 28% of respondents said that either they or a member of their household was a business owner.

- 52% of respondents reported working from home full-time at the time of the survey (45% of men and 47% of women), while another 20% of respondents reported working remotely but sometimes being expected to go to their physical workplace. The Department of Labor estimates of Vermont workers being able to work from home during the pandemic is lower and corresponds to 31% (Vermont Department of Labor, 2020). (Table 10)

- 29% of respondents expected to return to the physical workplace, where they worked prior to COVID-19, in September 2021. 22% expected to return in December 2021. These values were estimated before the spreading of the COVID-19 Delta variant in the US during summer 2021. (Figure 3)

Table 8. Current employment status		
	Count	**Percent**
Employed full-time	309	63.06%
Employed part-time	48	9.80%
Employed on unpaid leave	2	0.41%
Freelancer	6	1.22%
Contractor	4	0.82%
Self employed	38	7.76%
Not employed	21	4.29%
Stay at home spouse/partner	12	2.45%
Student	4	0.82%
Retired	46	9.39%
Prefer not to answer	0	0.00%
Total	**490**	

Table 9. Duration of unemployment		
	Count	**Percent**
Less than 1 month	2	5%
1-3 months	7	19%
3-4 months	0	0%
more than 6 months	23	62%
4-5 months	4	11%
5-6 months	1	3%
Total	**37**	

Figure 3. By when do you expect to return full time to the phyiscal workplace where you worked prior to COVID-19?

(n = 103)

Month	Percent
October 2020	2%
November 2020	0%
December 2020	0%
January 2021	1%
February 2021	1%
March 2021	5%
April 2021	5%
May 2021	4%
June 2021	9%
July 2021	9%
August 2021	5%
September 2021	29%
October 2021	7%
November 2021	2%
December 2021	22%

Percent of responses

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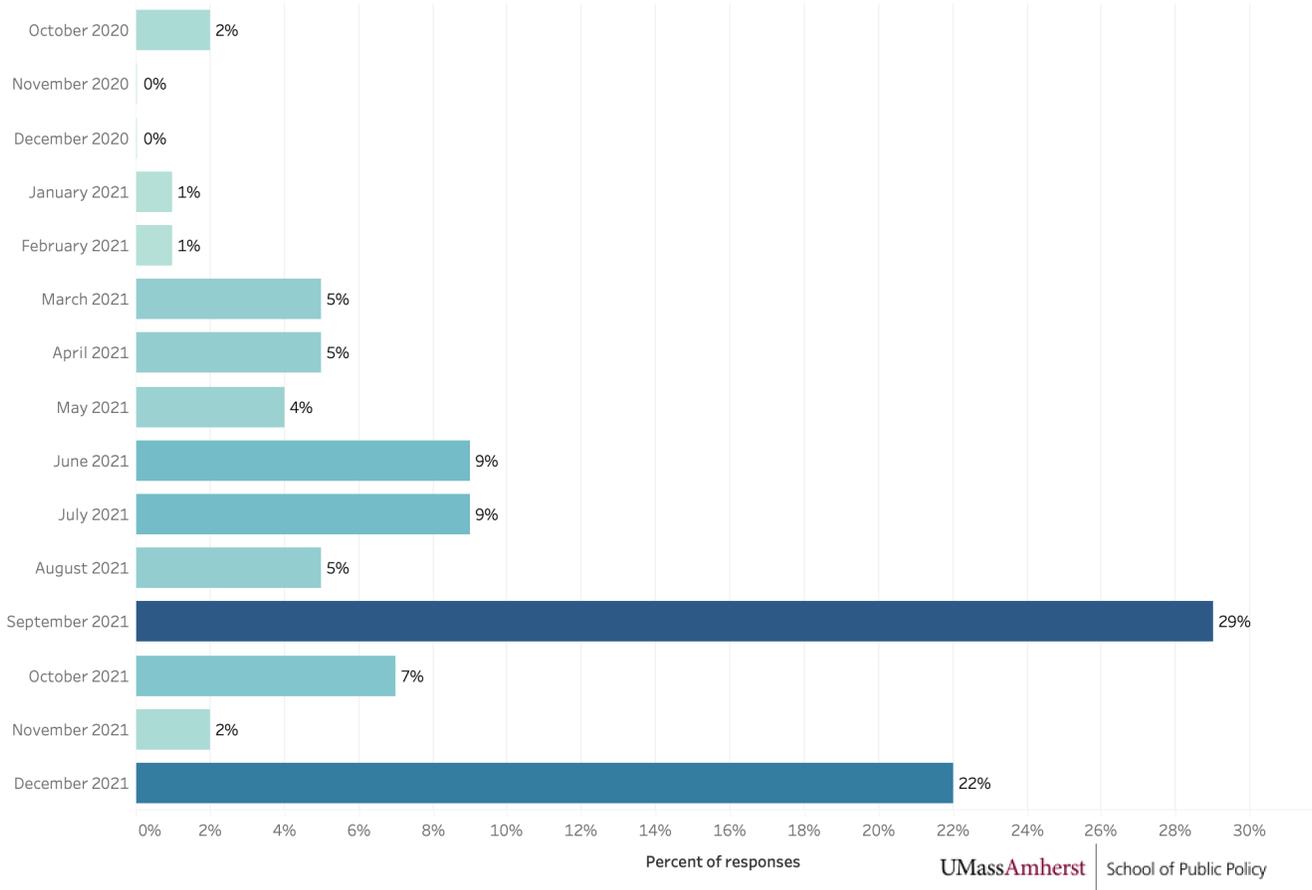
Table 10. Details about employment						
	Essential workers		**Working remotely full-time**		**Working both remotely and in person**	
	Count	Percent by category	Count	Percent by category	Count	Percent by category
Male	9	23%	14	35%	7	18%
Female	122	28%	189	43%	69	16%
Genderqueer/Gender non-conforming	3	27%	5	45%	5	45%
Different identity	0	0%	1	100%	0	0%
Trans male/Trans man	1	33%	0	0%	0	0%
Trans female/ Trans woman	0	0%	0	0%	0	0%
Total	**135**		**209**		**81**	

Note: 32.34% of respondents reported that someone in their family was an essential worker.

2. BUSINESSES

- 2% of business owners reported that their business had permanently closed due to the COVID-19 pandemic (after March 2020). (Table 11)

- 37% of business owners reported that their businesses remained open but operated differently in the time period between March 2020 and their responses to the survey[3], 30% reported that their business was open and operations had not changed. An additional 15% reported that their business had closed temporarily after the COVID-19 crisis began, but it was open at the time of the survey. (Table 11)

- 91% of polled business owners thought their business would be open in December or 2020, while 87% felt it would still be open later in April of 2021. (Table 12)

- 48% of respondents expected COVID-19-related disruption to businesses to end by December 2021. 18% indicated September 2021. (Figure 4) The average confidence reported by respondents about the answer to this question was 4.5, on a scale of 1 through 10, revealing great uncertainty about the evolution of the pandemic[4].

Table 11 - Business operations		
	Count	**Percentage**
Closed permanently after COVID-19 started	3	2%
It is still open but closed temporarily after the COVID-19 crisis started	21	15%
It is still open but operates differently compared to pre-COVID	50	37%
It has always been open since the COVID-19 crisis started	41	30%
Total	**115**	

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[3] October 2020 to February 2021.

[4] A survey-based study published in 2020 by Bartik et al. found that the median business owner expected the disruptions to businesses to last well into midsummer 2020, as 50% of respondents believed that the crisis would last at least until the middle of June 2020.

Table 12. Expectations about business operations							
	Yes		No		Not sure		
	Count	Percent	Count	Percent	Count	Percent	Total
Expect business will still be open in Dec, 2020	20	91%	1	5%	1	5%	**22**
Expect business will still be open in April 2021	111	87%	3	2%	14	11%	**128**

Figure 4. By what date do you think COVID-19-related disruptions to businesses and other socio-economic activities will end?

(n = 499)
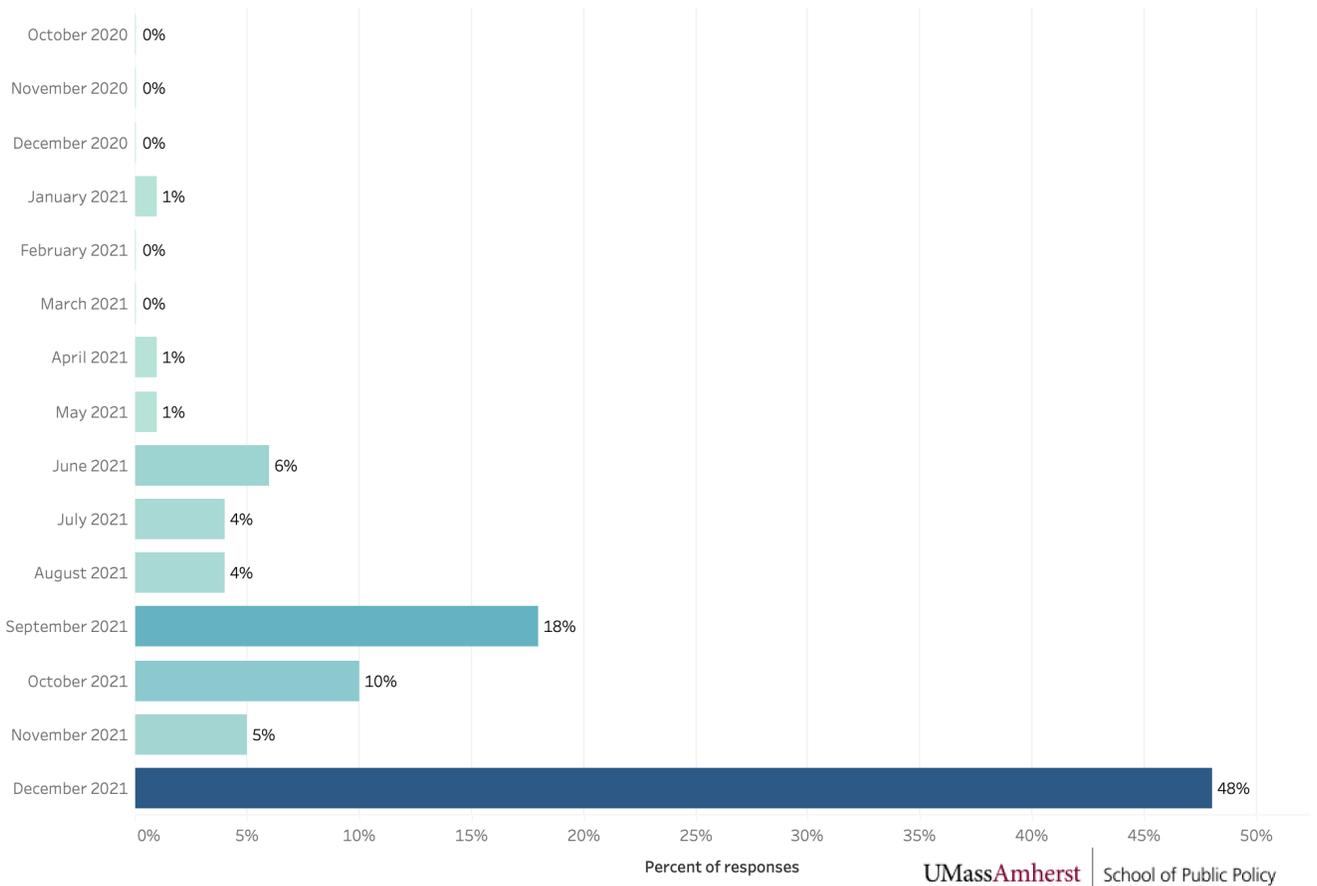
Note: The average confidence reported by respondents about the answer to this question was 4.5, on a scale of 1 through 10.

3. HOUSEHOLD AND FINANCIAL HEALTH

- 34% saw decreases in overall household income. 52% of respondents stated that their income remained roughly the same during the pandemic. Roughly 13% of respondents saw an increase in overall income. (Table 13)

- 32% respondents reported an increase in household spending to meet essential needs, while 25% of respondents reported a decrease; the remainder of respondents (42%) indicated no change in their household spendings. (Table 13)

- 31% of respondents reported reduced household savings; 40% of respondents saw savings remain the same (Table 13)

- 20% of respondents stated they had become financially dependent on their partner during the COVID-19 pandemic and 8% said they had relied on family or community members for financial support. (Table 14)

Table 13. Household Finances						
	Household income from employment and other sources		Household spending to meet essential needs		Household savings	
	Count	Percent	Count	Percent	Count	Percent
Increased	62	13%	148	32%	130	28%
Decreased	159	34%	117	25%	145	31%
Remained about the same	241	52%	195	42%	186	40%
Total	**462**		**460**		**461**	

Table 14. Financial dependence and informal insurance networks						
	Do you feel you are currently financially dependent on your partner due to the COVID-19 crisis?		Are you concerned that you might become financially dependent on your partner if the COVID-19 crisis persists?		Have you started being financially supported by family or community members (outside of your household) because of the COVID-19 crisis?	
	Count	Percent	Count	Percent	Count	Percent
Yes	68	20%	46	19%	38	8%
No	275	80%	190	81%	424	92%
Total	343		236		462	

4. LABOR PRODUCTIVITY

- Nearly 54% of respondents reported that they had kept their job but were less productive. In comparison, 39% of respondents reported the same about their partners. (Figure 5)

- 18% of respondents indicated that they kept their job but were working fewer hours. In comparison, 29% of respondents reported that their partners kept their job but were working fewer hours. (Figure 5)

- 7% of respondents reported losing their job since March 2020, while 11% reported their partners losing jobs. (Figure 5)

- Because the majority of respondents are straight women, comparison of data on productivity, reduced hours, and job loss between partners may indicate possible differences in outcomes for men and women.

- 33% of respondents who reported COVID-19 related issues affecting their professional lives attributed them to disruptions in education and childcare. However, the percentage goes up to 79% when considering only respondents with children.

- More than 30% of parents with one or more daycare and preschool aged children reported being extremely affected by disruptions to childcare. In comparison, among parents with at least one kindergarten aged child, 55% reported their productivity being extremely affected by disruptions to childcare (this larger percentage may be explained by the fact that parents in this group may have younger children too). (Figure 6)

- Respondents with middle-school and high-school aged children reported the least disruption from loss of childcare; only 17% indicated being affected a lot (Q131). (Figure 6)

Labor Distribution Within the Household

- We investigated household labor distribution between partners. In heterosexual couples, women consistently reported that they did more household labor than their male partners. Male respondents (despite being a small sample of 8) confirmed this trend by indicating that their female partner did more in their household. Considering different household labor areas, this imbalance was most visible in relation to *managing children's schedules* and *supervising remote learning capabilities*. The time investment was more evenly split among partners for *playing/doing activities with children*. (Figure 7)

- We also compared household labor distribution for heterosexual vs homosexual couples. Female respondents with a female partner (homosexual couples) reported sharing household labor more evenly with their partner compared to female respondents with a male partner (heterosexual couples). (Figure 8)

Expectations about Labor Productivity if COVID-19 Persists

- About 54% of respondents with children indicated that they would be able to keep their job but they would be less productive if childcare and education disruptions continue beyond Dec 2020. 29% indicated that they would need to start working fewer hours, while 10% would need to change job, 4% would take an unpaid leave and 2% would need to stop working. (Figure 9a)

- There may be differences in projected productivity for men vs women. Among female respondents with a male partner 56% of respondents stated they would likely keep their jobs but would be less productive, and 61% indicated that their male partner would likely keep their jobs but would be less productive. (Figure 9b)

Figure 5. How have COVID-19 disruptions affected your professional life and the professional life of your partner?

(n = 201)

	Respondent	Respondent's partner
Kept the job but became less productive	54%	39%
Kept the job but working fewer hours	18%	29%
Lost the job after March 2020	7%	11%
Changed the job	6%	10%
Took unpaid leave	6%	8%
Started a new job to financially support my family	5%	1%
Left the job	4%	2%

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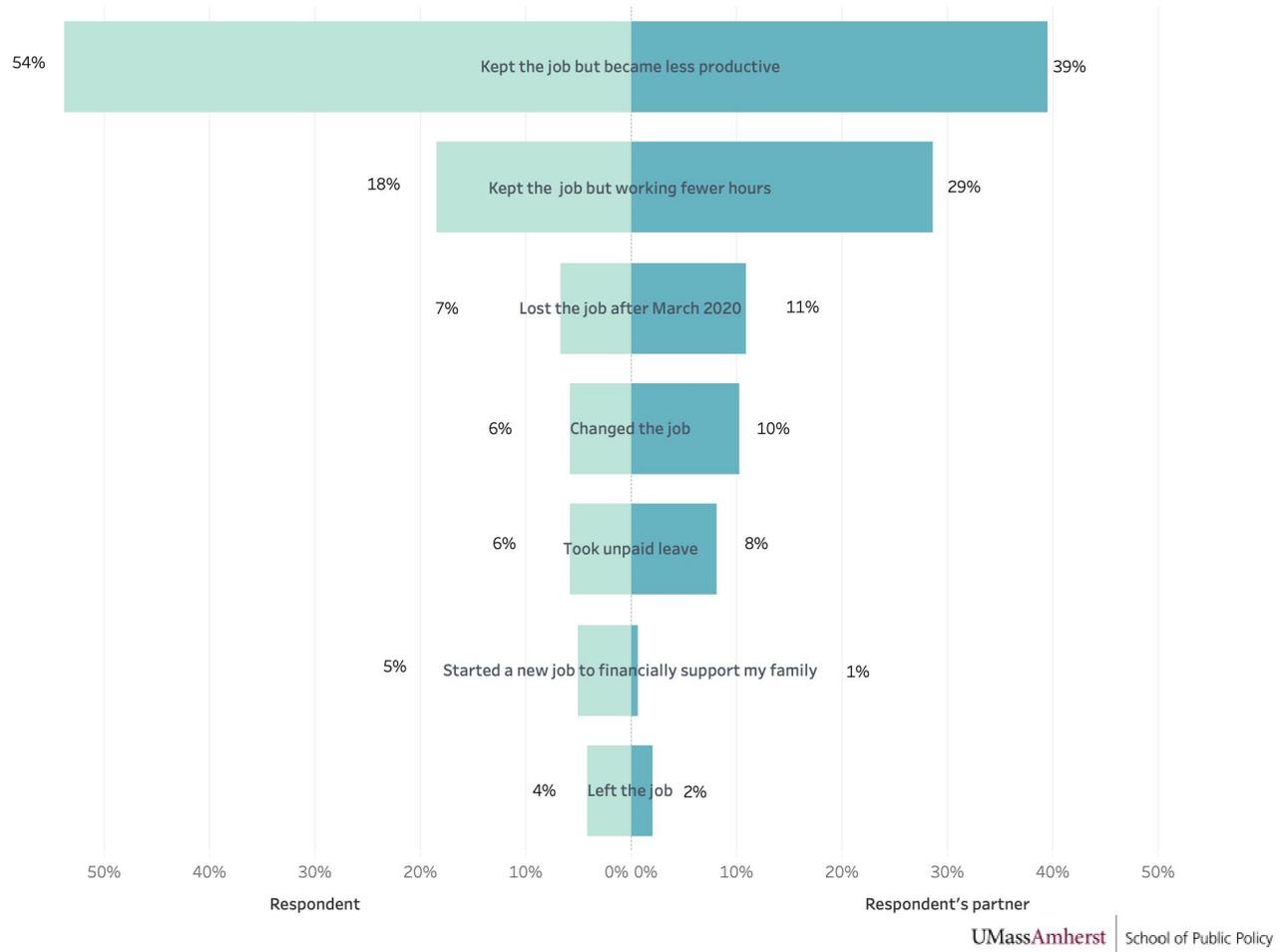
Note: this figure includes only respondents who have a partner.

Figure 6. How much do you think COVID-19's school and childcare disruptions have been affecting your work productivity?

(n = 213)

	Affected a lot	Quite affected	Somewhat affected	A little affected	Not at all affected
One or more daycare-aged children (aged 0-2.5 year old)	34%	38%	24%	3%	
One or more preschool-aged children (aged 2.5-5 year old)	33%	38%	24%	5%	
One or more more elementary school-aged children	16%	37%	30%	14%	3%
One or more kindergarten-aged children	55%	36%	9%		
One or more middle school-aged children	16%	28%	35%	21%	
One or more high-school-aged children	17%	25%	27%	24%	6%

Percent of responses

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

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Note: 79% of respondents with children who reported COVID-19 related disruptions to their professional lives attributed them to disruptions in education and childcare.

Figure 7. Who, between you and your partner, spends more time performing the following activities?
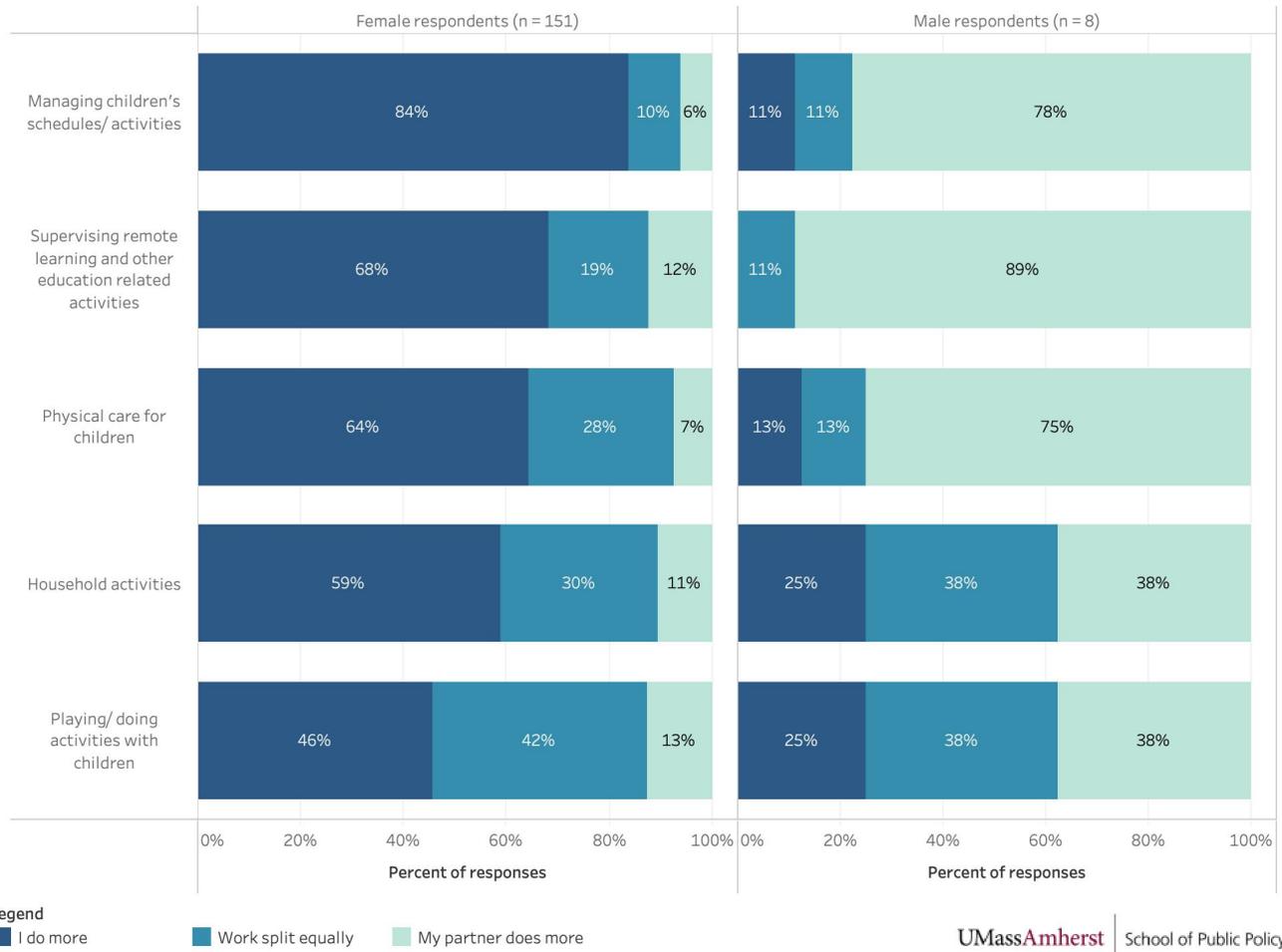
Note: 15 respondents did not indicate their partner's gender and they were therefore not included; 10 self-identified as female and the remaining were blanks. Of these 15 respondents: 6 self-identified as heterosexual, 2 as bisexual, and the remaining were blanks.

Figure 8. For female respondents, who, between you and your partner, spends more time performing the following activities?
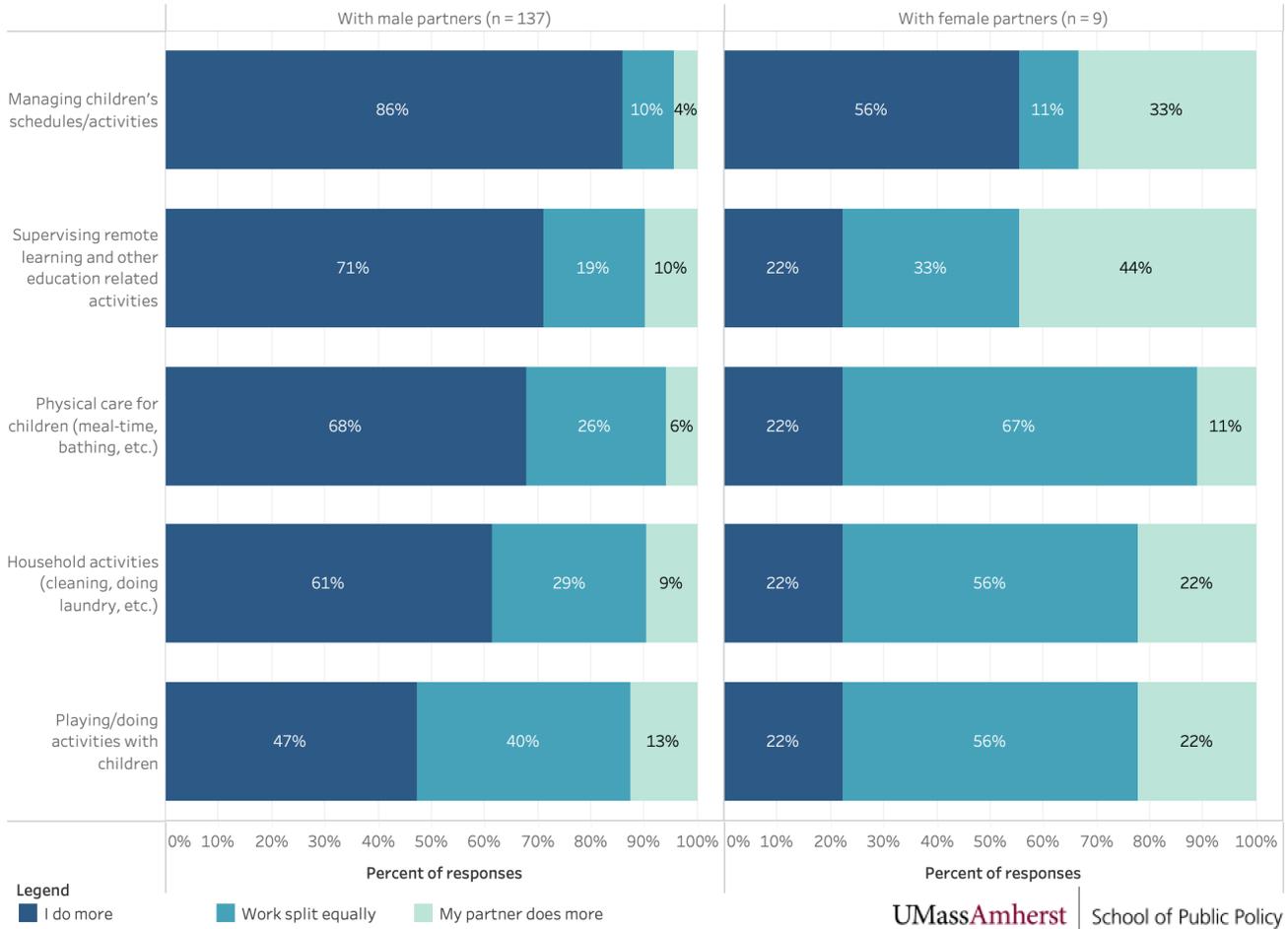
	With male partners (n = 137)	With female partners (n = 9)
Managing children's schedules/activities	86% · 10% · 4%	56% · 11% · 33%
Supervising remote learning and other education related activities	71% · 19% · 10%	22% · 33% · 44%
Physical care for children (meal-time, bathing, etc.)	68% · 26% · 6%	22% · 67% · 11%
Household activities (cleaning, doing laundry, etc.)	61% · 29% · 9%	22% · 56% · 22%
Playing/doing activities with children	47% · 40% · 13%	22% · 56% · 22%

Percent of responses

Legend
■ I do more ■ Work split equally ■ My partner does more

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Note: 15 respondents did not indicate their partner's gender and they were therefore not included; 10 self-identified as female and the remaining were blanks. Of these 15 respondents: 6 self-identified as heterosexual, 2 as bisexual, and the remaining were blanks.

Figure 9a. If disruptions to childcare and education associated to COVID-19 continue beyond Dec 2020, what impacts do you think this will have on your professional life (in order to support your children's learning or provide childcare)? Check all that apply:

(n = 145)

Category	Percent
Will keep my job but I will be less productive	54%
Will need to keep the job but will start working fewer hours	29%
Will need to change the job	10%
Will need to take an unpaid leave	4%
Will need to stop working	2%

Percent of responses

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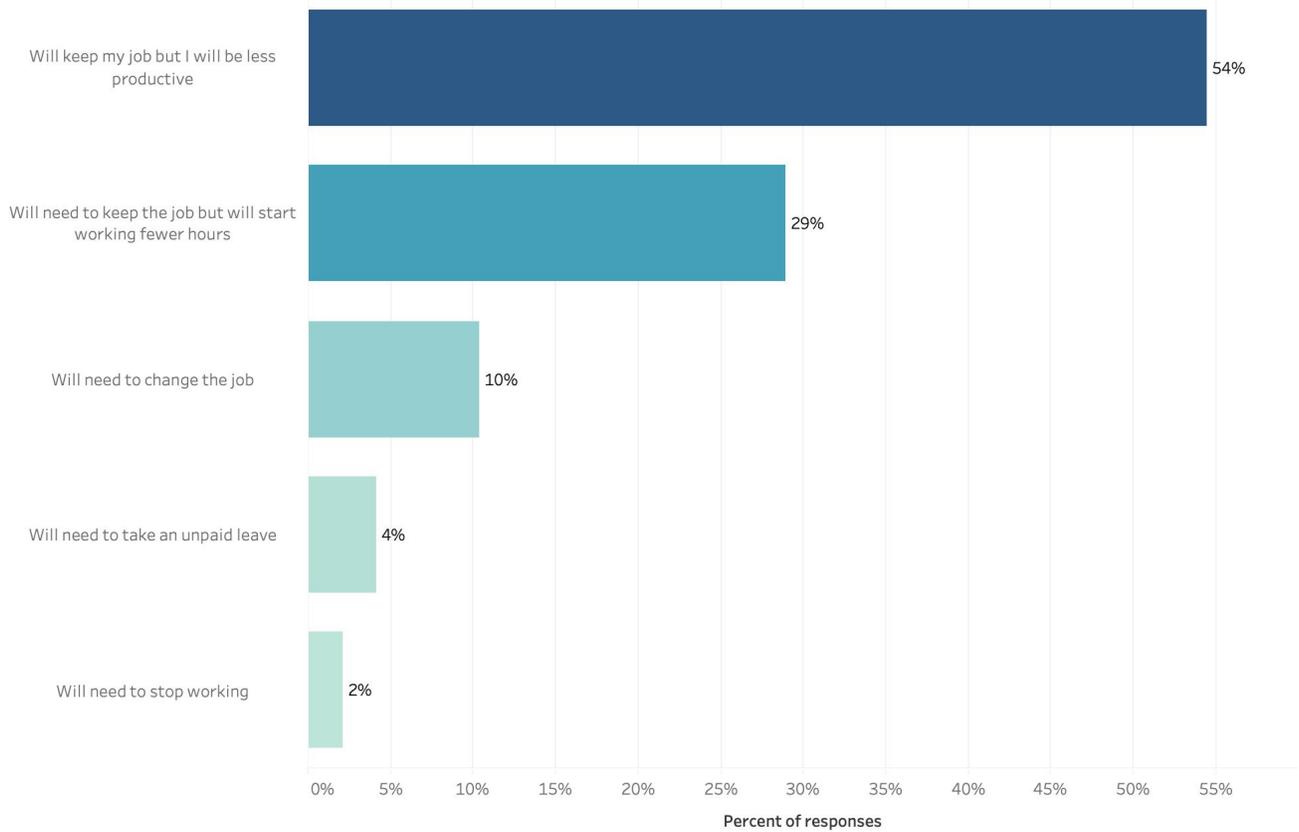
Figure 9b. (Female respondent with male partner)If disruptions to childcare and education associated to COVID-19 continue beyond Dec 2020, what impacts do you think this will have on you and your partner's professional life (in order to support your children's learning or provide childcare)? Check all that apply: (n = 49)

	Respondent's professional life projections	Respondent's partner professional life projections
Will keep my job but will be less productive	56%	61%
Will need to keep my job but will start working fewer hours	36%	27%
Will need to stop working	0%	7%
Will need to take an unpaid leave	2%	5%
Will need to change my job	7%	0%

Percent of responses (with male partners) — Percent of responses (with male partners)

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5. EDUCATION AND CHILDCARE

We assessed the level of parental concern in relation to children's academic achievements and socio-emotional development during the COVID-19 pandemic.

- Respondents with high-school and middle-school aged children demonstrated the most concern with 55% and 52%, respectively, reporting being quite to extremely concerned in their children's academic achievements. (Figure 10)

- The highest concern over social and emotional development was shown by parents with middle-school and high-school aged children however, parents with children of preschool-age and under showed nearly as much concern. (Figure 11)

- All respondents with preschool and kindergarten aged children reported their belief that their children's academic progress was hindered by the impacts of COVID-19. In comparison, 72% of respondents with elementary-aged children, 83% of those with middle-schoolers, and 65% of those with high-schoolers reported their belief that academic progress was hindered. (Figure 12)

- Thinking about a possible college education for their children, 35% of respondents believe that their children were penalized academically by the COVID-19 disruptions. Households with income $100,000 and above were twice as likely to report that their children were significantly, academically penalized for future college education prospects in comparison to households with income under $100,000.

Children Receiving Specialized Services

Children in the Early Intervention Program

- 67% of parents with children in Early Intervention reported that visits had moved to virtual platforms instead of being in-person, but continued on their regular schedule since the beginning of COVID-19.

- All parents of children in Early Intervention have reported their children continuing to progress toward their goals, but expressed some concern with potential negative impacts on their child's cognitive and physical development if COVID-19 persists through 2021.

Children Receiving Other Specialized Services

- 77% of parents with children receiving specialized instruction or therapy at school reported that these services have continued since March 2020.

- 50% of children with specialized services through school have seen these services continue on a regular schedule at the time of this survey, while 50% have seen a decrease in frequency.

- While 52% of parents with children receiving specialized services believe their child is progressing toward milestones defined in their service plan, 75% of parents believe their child has lost some of the skills they have worked to gain due to the impacts of COVID-19 on programming.

- Only 53% of parents with children receiving specialized services reported they were satisfied with what their child's school has done to address their children's needs in regards to services and therapy.

Figure 10. If the COVID-19 disruption persists into 2021, are you concerned about possible negative impacts on the academic achievements of your child(ren)?

(n = 194)

	Yes, extremely concerned	Yes, quite concerned	Yes, somewhat concerned	Not sure	No, not at all concerned
One or more daycare-aged children (aged 0-2.5 year old)	20%	9%	34%	3%	34%
One or more preschool-aged children (aged 2.5-5 year old)	31%	15%	35%		19%
One or more kindergarten-aged children	23%	23%	31%		23%
One or more more elementary school-aged children	16%	32%	39%		12%
One or more middle school-aged children	39%	16%	41%		5%
One or more high-school-aged children	34%	18%	39%		8%

Percent of responses

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

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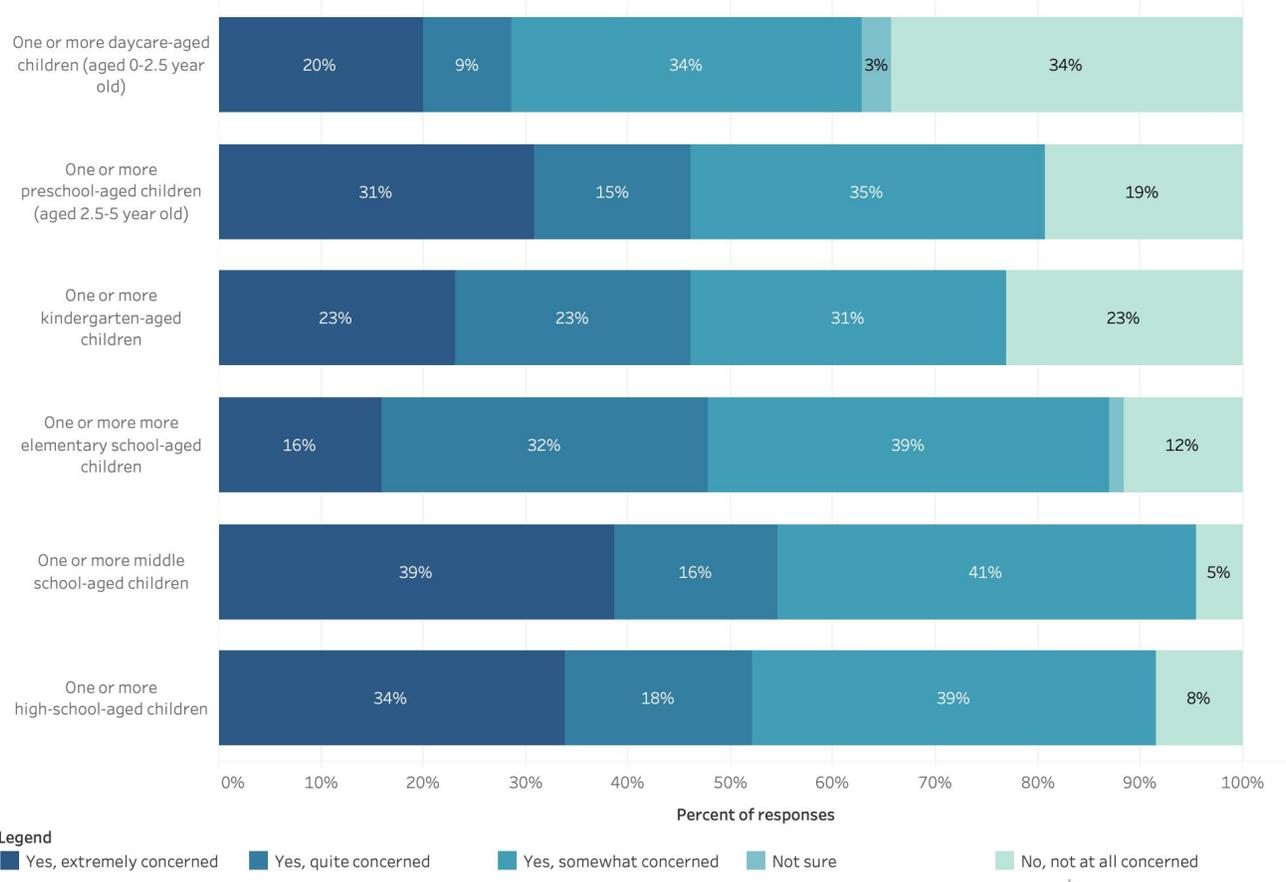Figure 11. If the COVID-19 disruption persists into 2021, are you concerned about possible negative impacts on the social and emotional development of your child(ren)?

(n = 199)

Legend

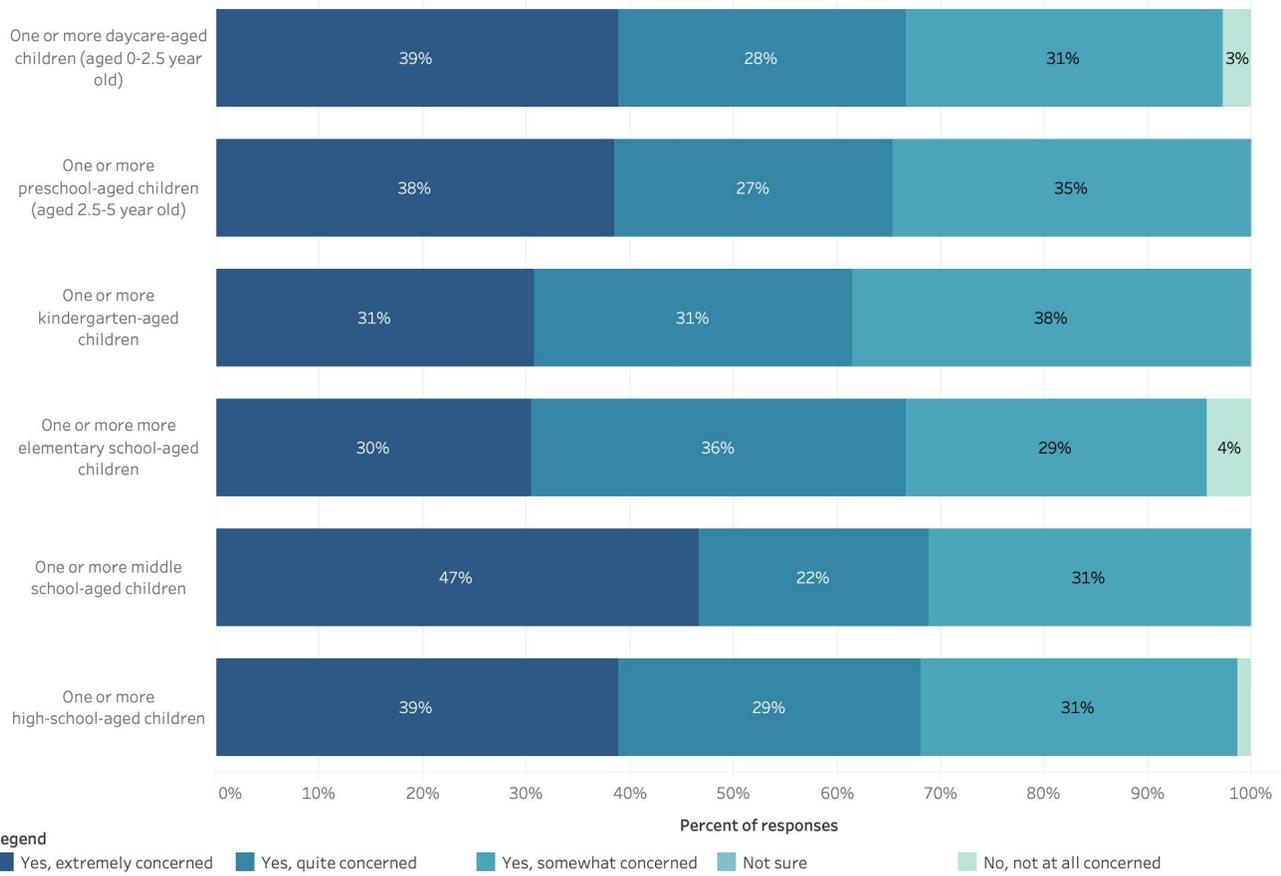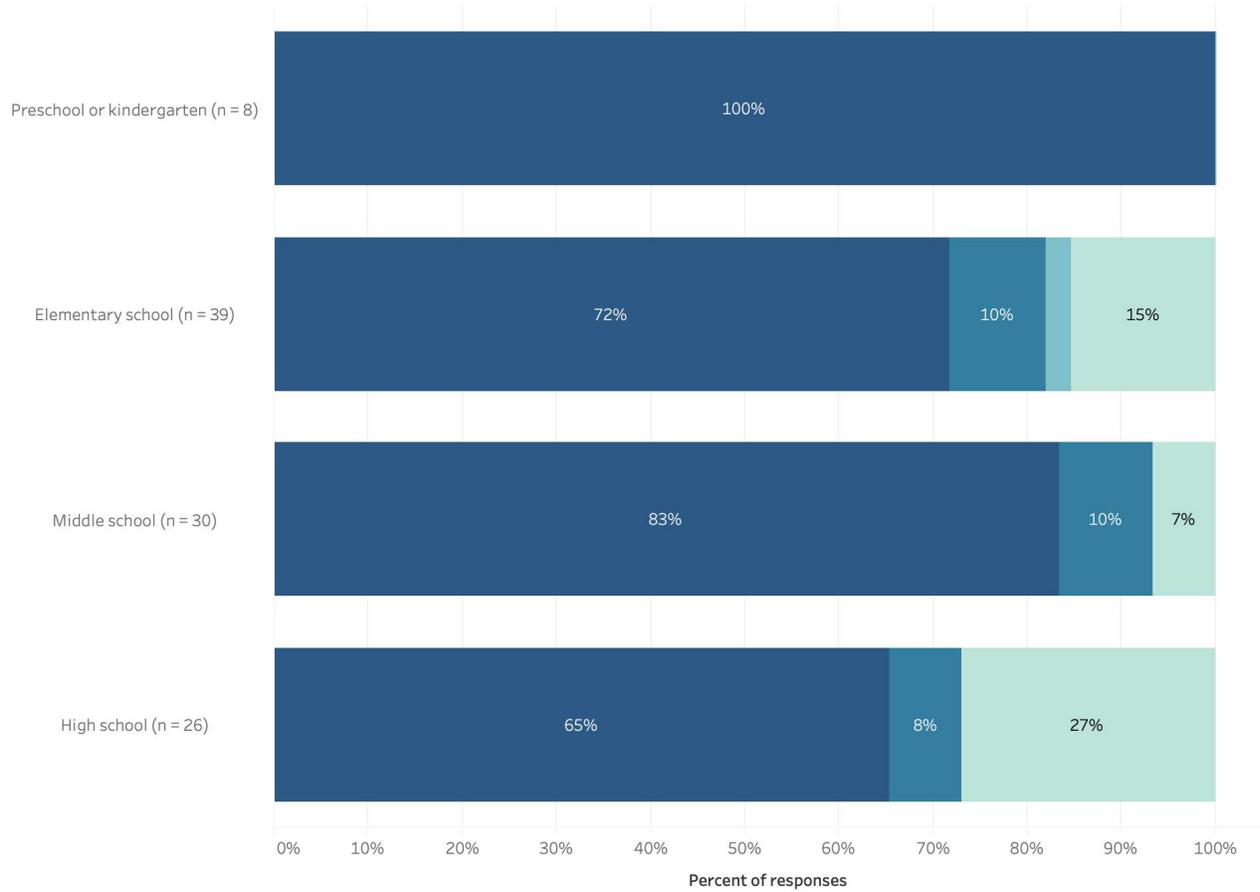■ Yes, extremely concerned   ■ Yes, quite concerned   ■ Yes, somewhat concerned   ■ Not sure   ■ No, not at all concerned

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

6. PHYSICAL AND MENTAL HEALTH

The health care system has been experiencing vast disruptions during the pandemic. We examined respondents' experience accessing health care since the beginning of the pandemic (March 2020):

- 76.5% of respondents reported that they have cancelled necessary health appointments.

- Of those who have cancelled appointments, 62% cited concerns about attending in-person appointments during COVID-19, while 53% reported health-care provider cancellations. An additional 29% indicated that new policies at their health care providers' offices complicated scheduling appointments, while 19% reported having less time to attend appointments than before the COVID-19 crisis. (Figure 13)

- Of those who have cancelled or postponed appointments, 14% reported facing income constraints and needing to reduce household spending as a motive for postponement or cancellation. (Figure 13)

- Nearly 4% of respondents reported missing appointments due to loss of health insurance. (Figure 13)

Patient Health Questionnaire-4 (PHQ4) on Anxiety and Depression

The Patient Health Questionnaire-4 (PHQ-4) is a clinical instrument developed and validated by Kroenke, Spitzer, Williams, & Löwe, (2009) to assess anxiety and depression, the two most prevalent mental illnesses among the US general population (Kroenke et al., 2009)

We administered the PHQ-4 in our survey to measure levels of anxiety and depression in respondents. As a robustness check, we also compared our Vermont survey results with national Census data, collected during the same time period when our Vermont survey data was collected (U.S. Census, 2021)[5].

- 29% of Vermont respondents in our survey received PHQ-4 scores that indicate moderate to severe anxiety and depression (18% and 11% respectively)[6]. (Table 15)

---

[5] The Census COVID surge data used for comparison in Table 15 is only available at the national level (and not at the state level) and it includes waves 16 through waves 22, from October 2020-February 2021.

[6] This was similar to the national sample of our survey population; 28.5% of respondents in our full national survey reported moderate or severe anxiety and depression (Vicarelli et al, 2021).

- We compared our results with the US Census Bureau's Household Pulse Survey (U.S. Census, 2021). According to the Census dataset 27% percent of individuals surveyed across the US reported either moderate or severe symptoms (14% and 13% respectively). (Table 15)

- Compared to the Census responses, VT respondents reported slightly milder and moderate depression and anxiety symptoms. 32% reported mild symptoms and 18% reported moderate symptoms. (Table 15)

We examined the PHQ-4 data for our Vermont survey respondents by location, marital status, age and income and we found the following results:

- Respondents in urban areas reported the highest levels of anxiety and depression, compared to suburban areas, rural areas and open countryside. 21% presented moderate symptoms and 13% presented severe symptoms. (Figure 14a)

- Divorced respondents reported the highest levels of anxiety and depression, 41% presented moderate to severe anxiety and depression. The next highest group was individuals in a relationship but not married (39%), followed by 33% of all single individuals. (Figure 14b)

- The age group with the highest level of moderate to severe anxiety and depression were 18-24 year-olds (39%), with each older demographic scoring slightly fewer moderate to severe scores, as follows: 37% of 25-34 year-olds scored moderate to severe, 31% of 35-44 year-olds, 30% of 45-54 year-olds, 22% of 55-64 year-olds, and 19% of 65-74 year-olds. (Figure 14c)

- Low income (and possible income constraints) appear to be related to high levels of depression and anxiety. This relationship is very clearly visible graphically in Figure 14d. The highest PHQ-4 scores (anxiety and depression levels) were reported by those in households making less than $30,000 a year, with each successive income bracket reporting lower anxiety and depression scores. 21% of those in households making less than $30,000 a year reported severe anxiety and depression, while only 5% of those in households making more than $100,000 a year reported severe scores. (Figure 14d)

Stress, Anxiety and Panic Attacks

- Survey respondents reported being most bothered by stress about work, followed by the health of a family member, the stress of taking care of children, and the stress of supervising children's progress with school. (Figure 15)

- 28.4% of respondents reported experiencing an anxiety or panic attack in the previous four weeks.

- The youngest age group, 18-24 year-olds, is the most likely to report having a panic attack in the previous 4 weeks (54%), compared to 46% of 25-34 year-olds, 43% of 35-44 year-olds, and 25% of 45-74 year-olds (Figure 16a)

- 48% of those who are unmarried but in a relationship reported having a panic attack in the previous 4 weeks, compared to 38% of single or divorced respondents and 26% of married respondents. (Figure 16b)

We asked if the attacks started or got worse after March 2020:

- Within different age groups, individuals aged 25-34 had the highest proportion of panic attacks (35%) that started or worsened since March 2020. The next highest group were respondents aged 18-24 (31%) followed by individuals aged 35-44 (26%). (Figure 17a)

- Individuals living in the suburbs reported the highest rate of panic attacks (28%) that started or worsened since March 2020, followed by those living in urban locations (21%). (Figure 17b)

- Individuals in a relationship but not married accounted for one-third of all individuals who reported panic attacks that started or worsened since 2020. 23% of single individuals were the second most affected group. These figures may be partially explained by lack of support system during isolation at home. (Figure 17c)

Figure 13. Why have you cancelled or postponed medical appointments? (Check all that apply)

(n = 337)

Reason	Percent
I am concerned about attending in-person appointments during COVID-19	62%
My health-care provider(s) cancelled or postponed appointments	53%
New policies at my health-provider(s) office made it harder to secure appointments	29%
I have less time than before COVID-19	19%
I am facing income constraints and I am trying to reduce family expenses	14%
Yes, another reason	6%
I lost my health insurance	4%

Percent of responses

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Table 15. PHQ-4: depression and anxiety scores				
	Census COVID Pulse		Vermont	
	Count	Percent	Count	Percent
Normal	203,361	45.8%	128	38.7%
Mild	119,876	27%	107	32.3%
Moderate	61,826	13.9%	61	18.4%
Severe	58,729	13.2%	35	10.6%
Total	443,792		331	

Note: The Patient Health Questionnaire-4 (PHQ-4) is a four-item composite measure that combines the PHQ-2 and the General Anxiety Disorder-2 (GAD-2) (Kroenke, Spitzer, Williams, & Löwe, 2009). The PHQ-4 is a valid and reliable instrument that indicates the presence of anxiety and depression. This table compares US Census COVID surge data (U.S. Census, 2021) with our Vermont results. The Census COVID surge data used for comparison in this table is not available at the state level and includes waves 16 through waves 22, from October 2020-February 2021.

Figure 14a. PHQ-4 Screening scale for detecting depression and anxiety disorders.
Results are presented by location where respondents live.

(n = 331)

Location	Severe	Moderate	Mild	Normal
Open countryside (n = 56)	7%	16%	23%	54%
Rural (n = 169)	12%	20%	32%	37%
Suburban (n = 59)	8%	15%	42%	34%
Urban (n = 47)	13%	21%	32%	34%

Percent of responses

Legend
- Severe
- Moderate
- Mild
- Normal

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Figure 14b. PHQ-4 Screening scale for detecting depression and anxiety disorders. Results are presented by marital status of respondents.

(n = 325)

Marital Status	Severe	Moderate	Mild	Normal
Divorced (n = 27)	11%	30%	26%	33%
In a relationship, not married (n = 71)	21%	18%	35%	25%
Married (n = 187)	5%	17%	33%	45%
Single (n = 40)	15%	18%	33%	35%

Percent of responses

Legend
Severe   Moderate   Mild   Normal

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Figure 14c. PHQ-4 Screening scale for detecting depression and anxiety disorders. Results are presented by age of respondents. (n = 330)

Age group	Severe	Moderate	Mild	Normal
18-24 (n = 13)	8%	31%	54%	8%
25-34 (n =55)	15%	22%	35%	29%
35-44 (n = 76)	13%	18%	36%	33%
45-54 (n = 90)	8%	22%	34%	36%
55-64 (n = 53)	11%	11%	25%	53%
65-74 (n = 36)	8%	11%	25%	56%
75-84 (n = 5)				100%
85 or older (n = 2)	50%			50%

Percent of responses

Legend
■ Severe ■ Moderate ■ Mild ■ Normal

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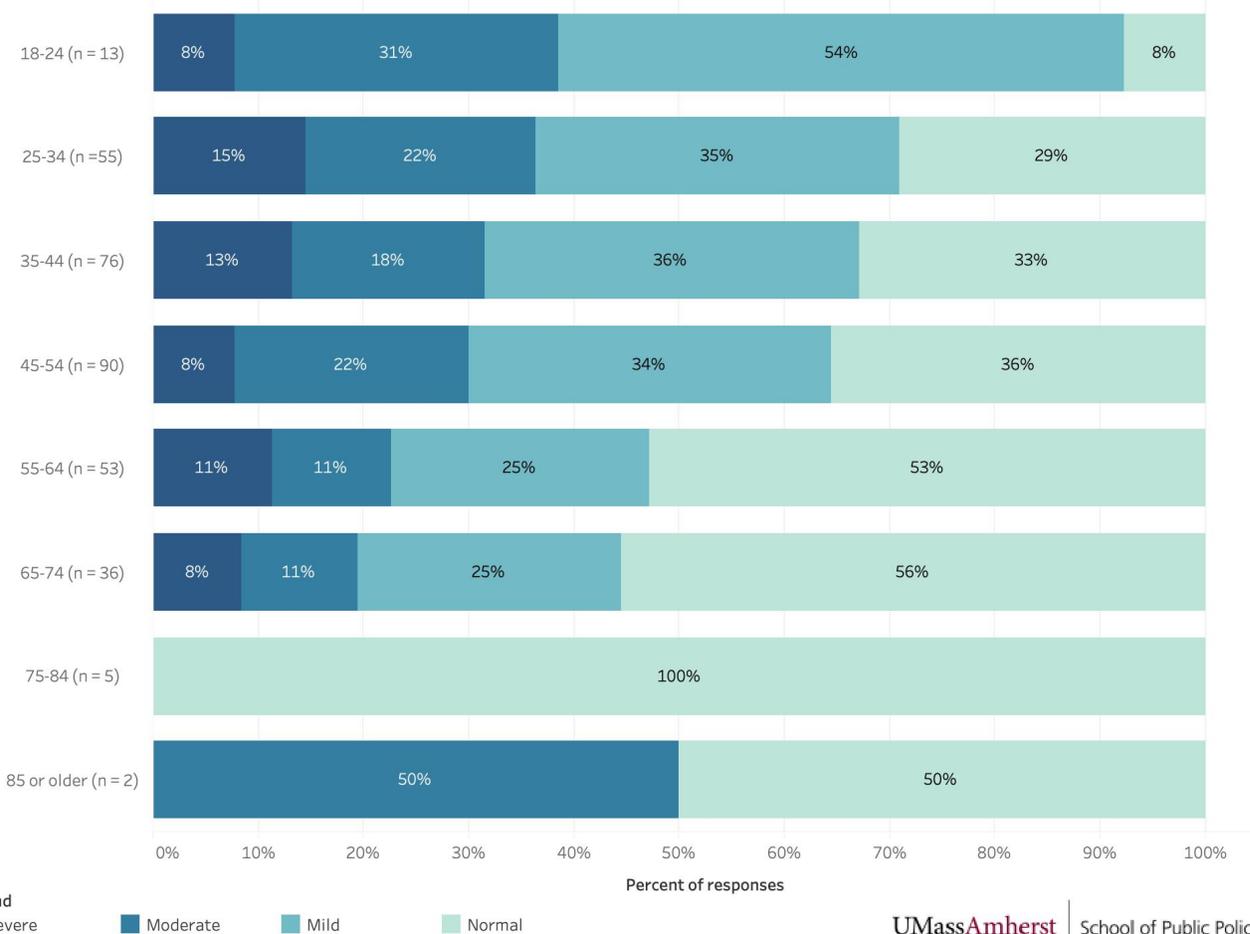
Figure 14d. PHQ-4 Screening scale for detecting depression and anxiety disorders. Results are presented by income level.
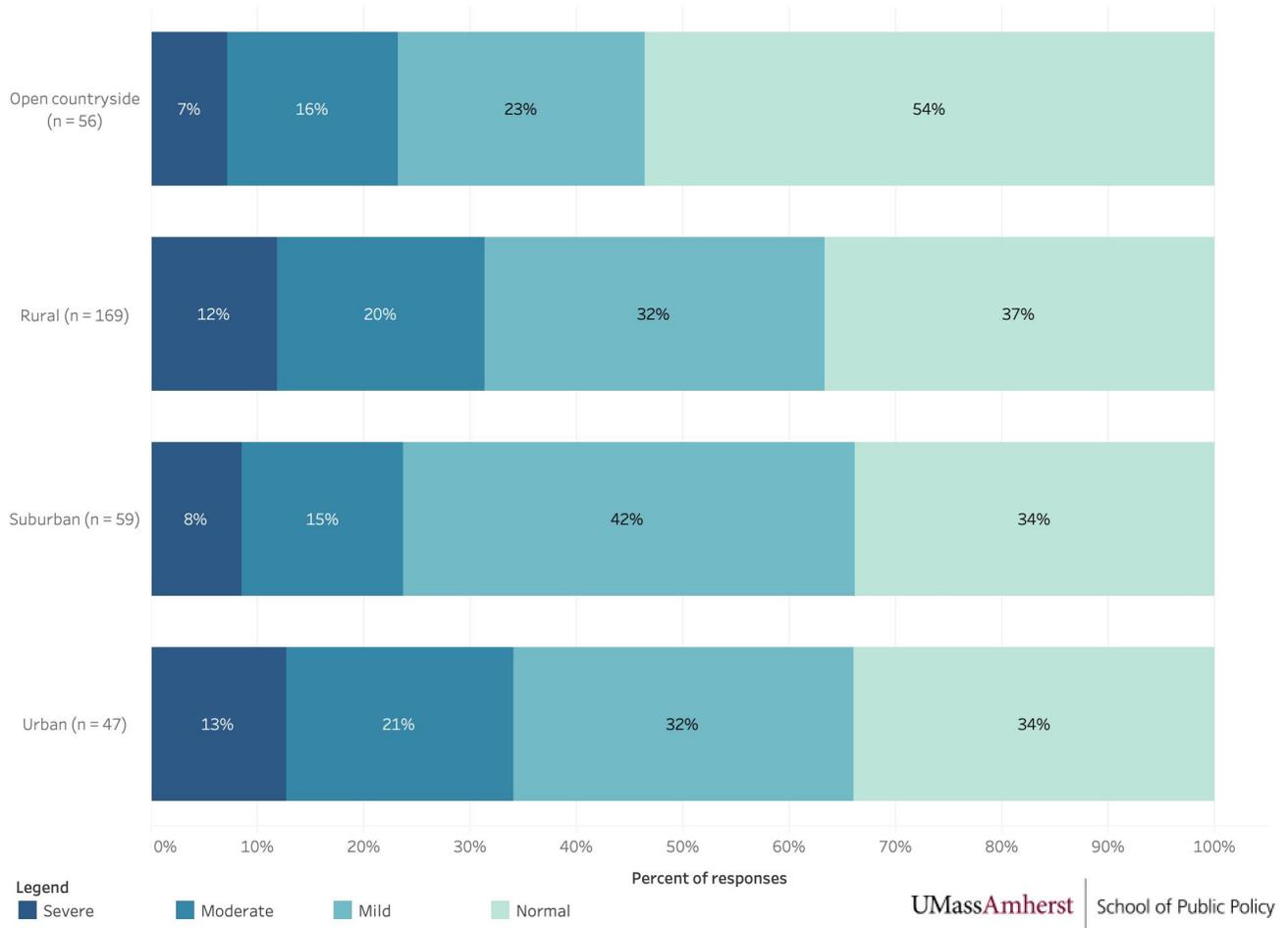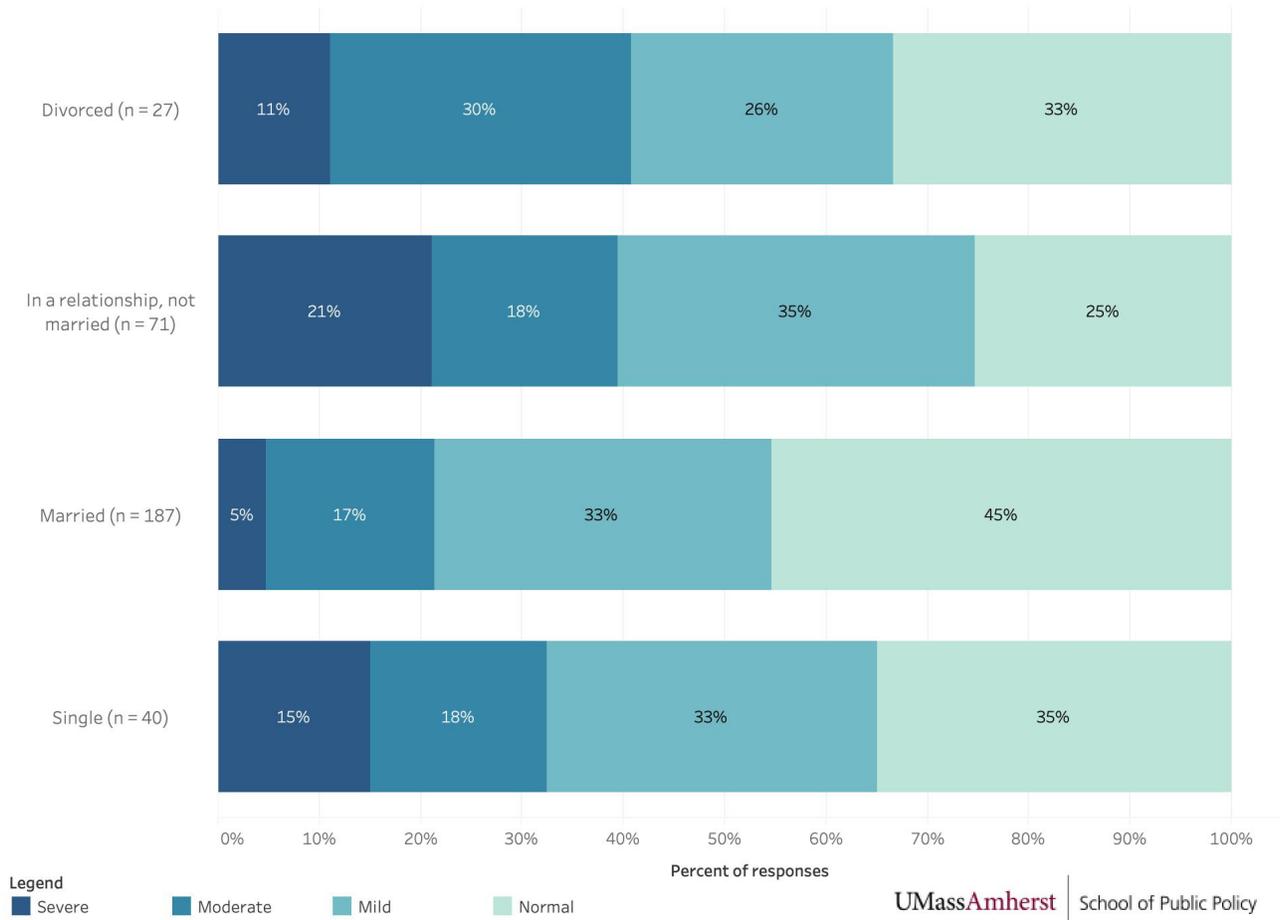
(n = 319)

Legend

■ Severe   ■ Moderate   ■ Mild   ■ Normal
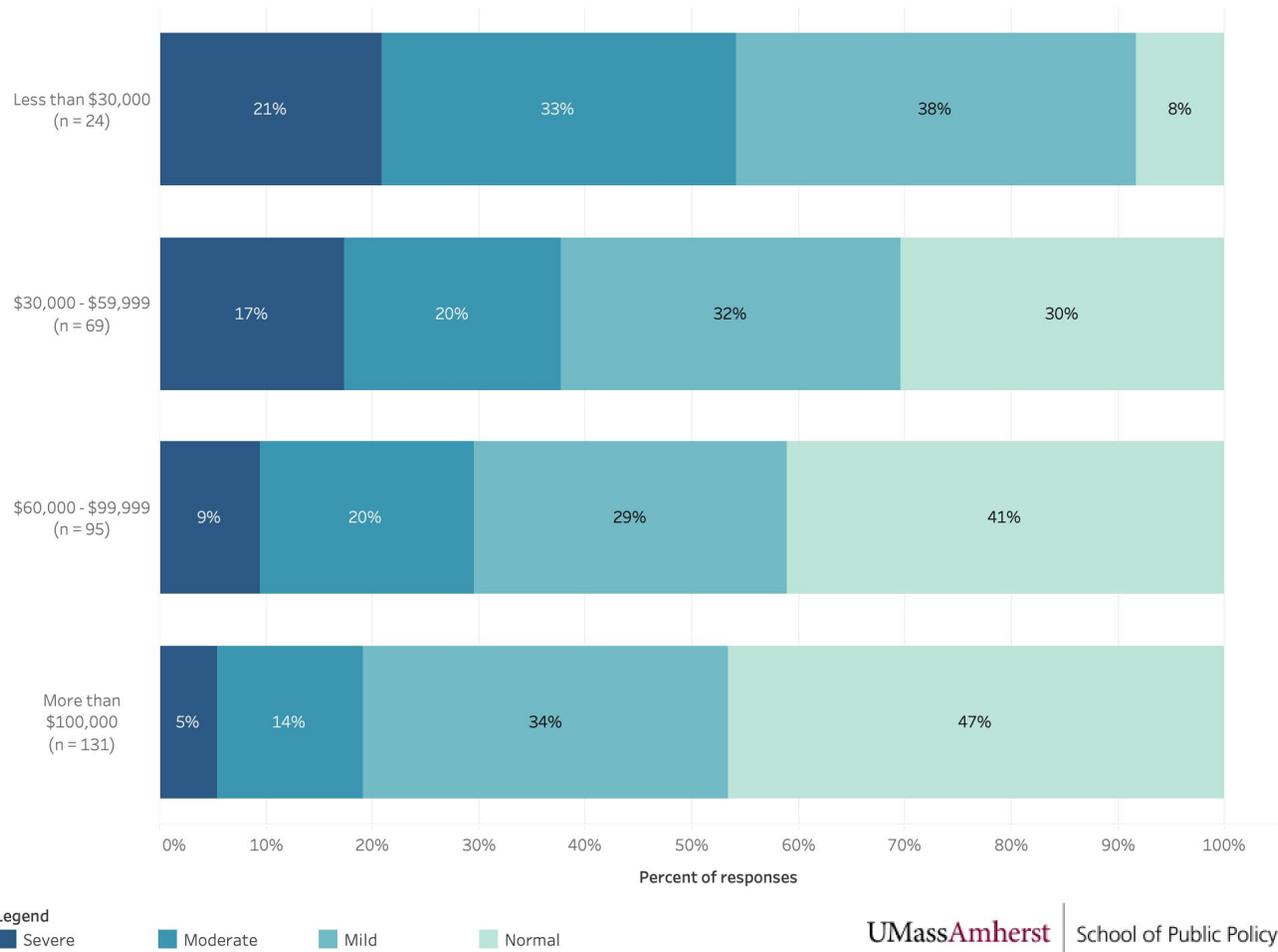
Figure 15. In the last 4 weeks, how much have you been bothered by any of the following problems?
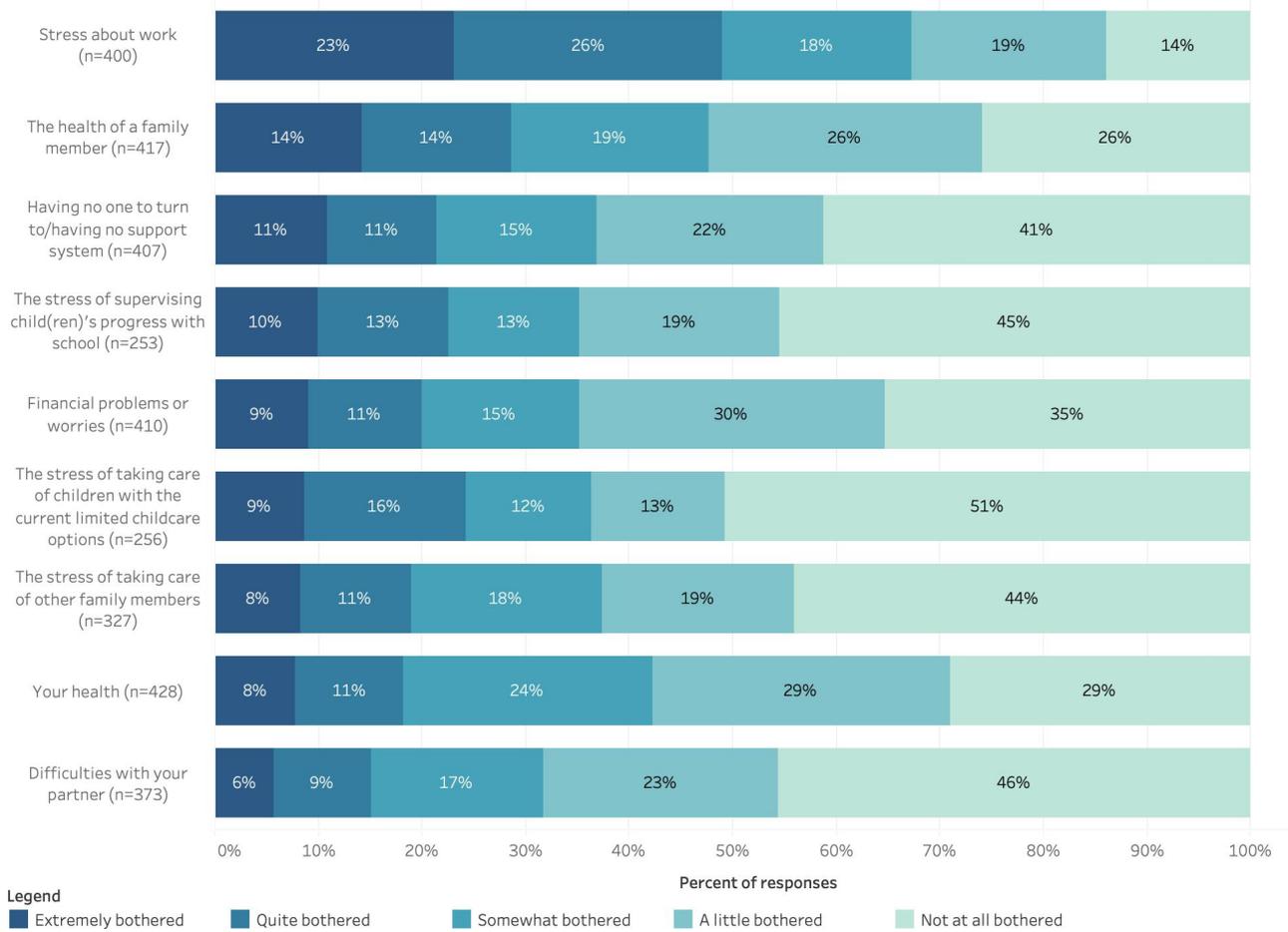
Figure 16a. Percentage of respondents who reported having an anxiety attack or panic attack in the last 4 weeks, by age.

(n = 144)

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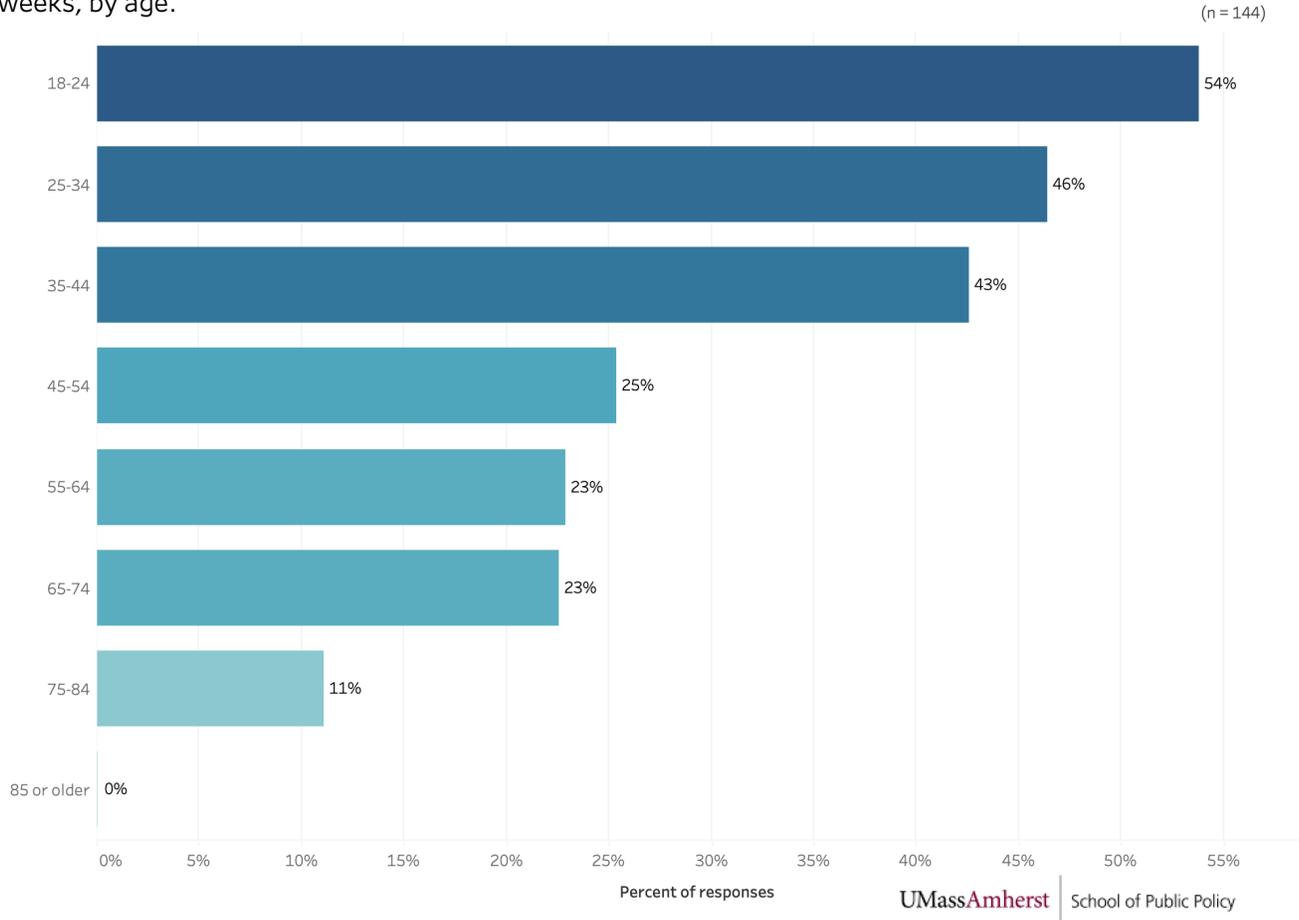
Figure 16b. Percentage of respondents who reported having an anxiety attack or panic attack in the last 4 weeks, by marital status.

(n = 144)

Percent of responses

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44
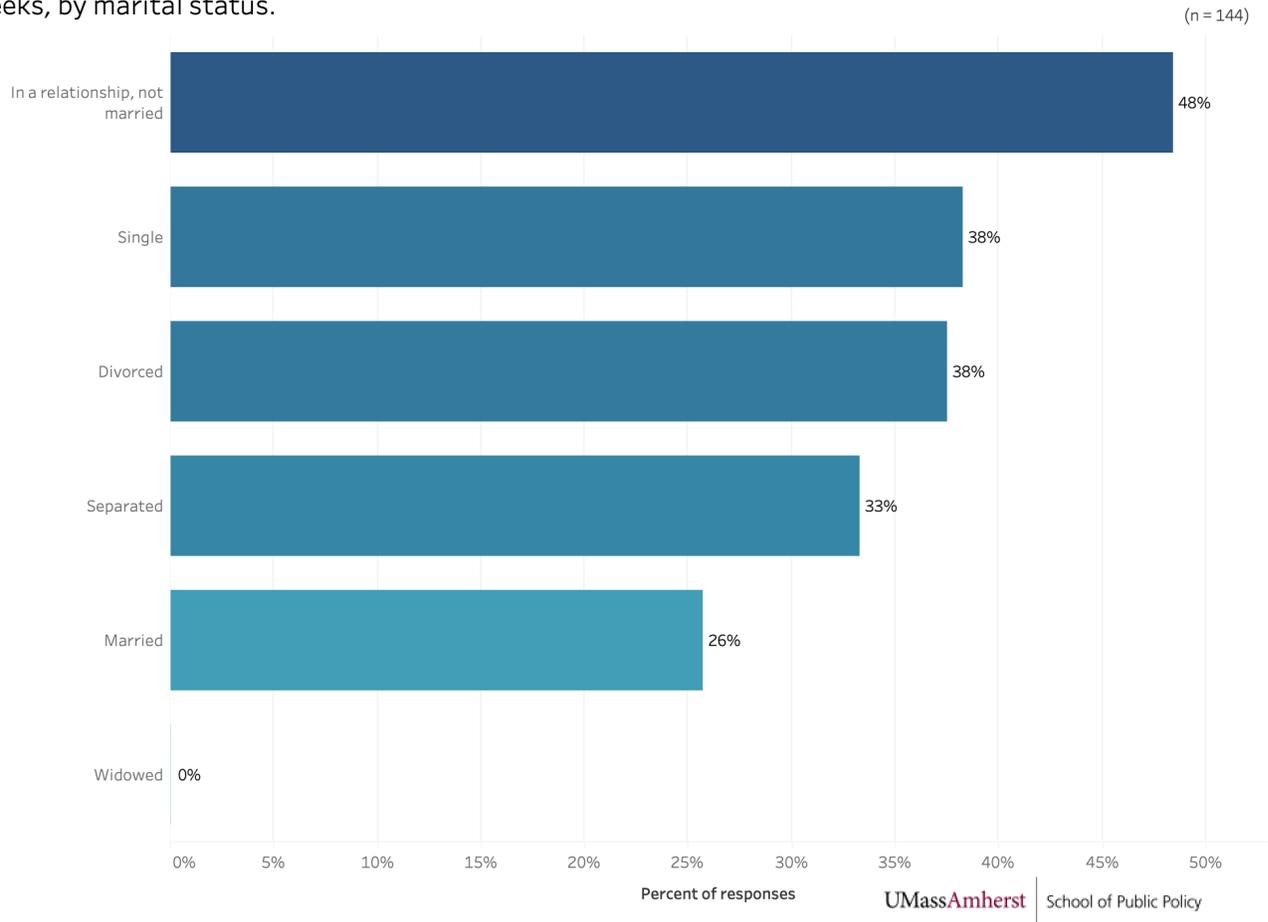
Figure 17a. Percentage of respondents (by age group) who reported experiencing panic attacks that started or worsened after March 2020.
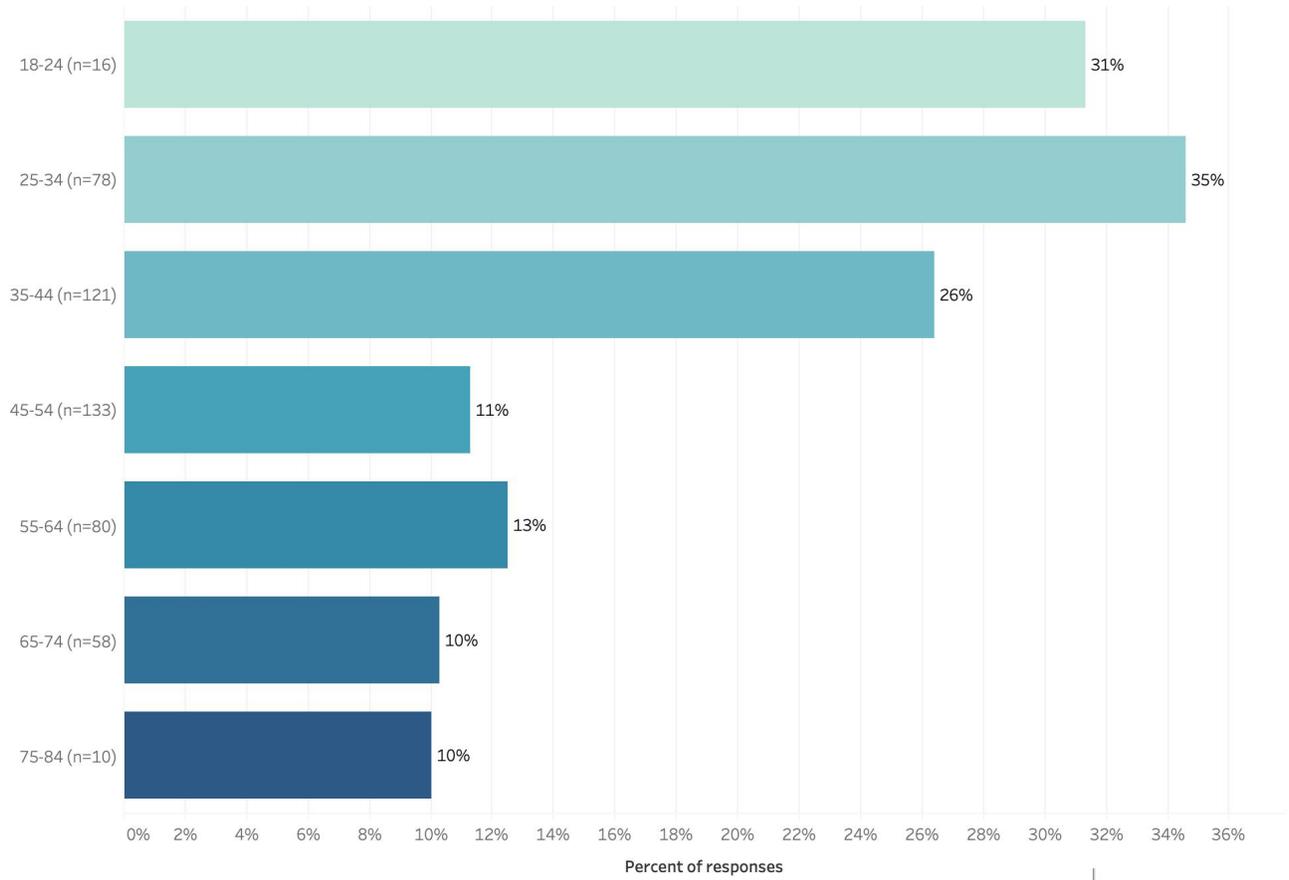
Figure 17b. Percentage of respondents who reported experiencing panic attacks that started or worsened after March 2020. Results are reported by area where the respondents live.

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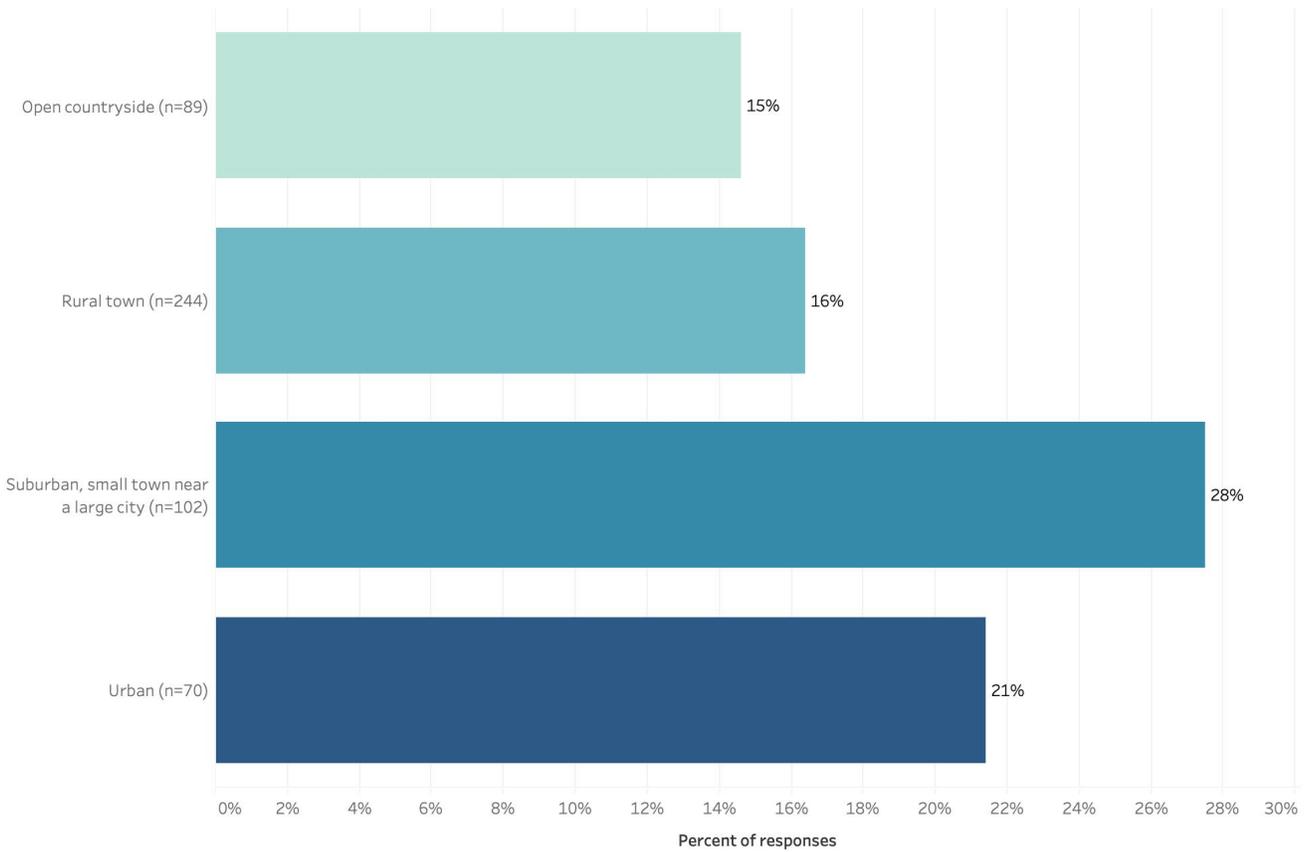
Figure 17c. Percentage of respondents (by marital status) who reported experiencing panic attacks that started or worsened after March 2020.

Percent of responses

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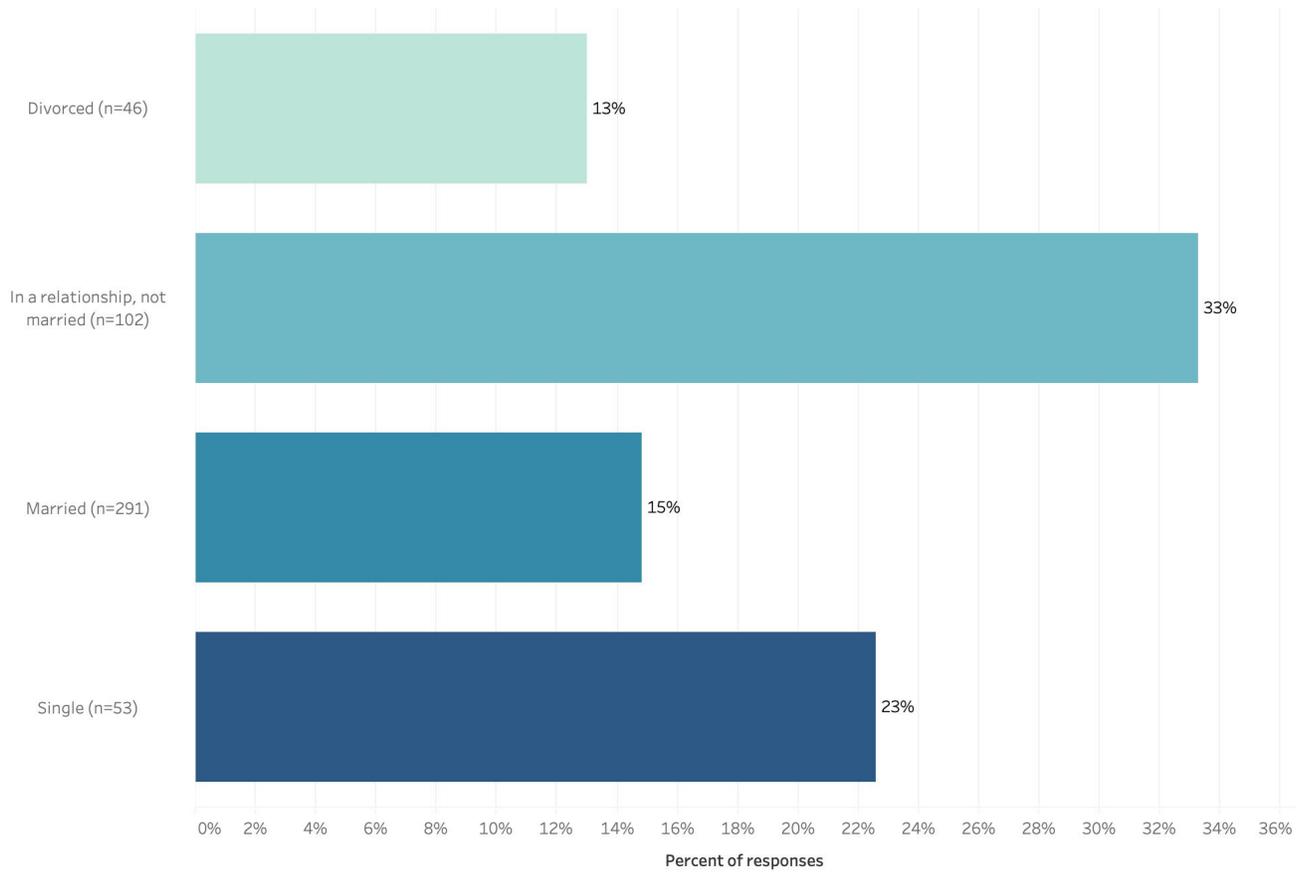
7. SUBSTANCE USE

We examined the use of alcohol and cannabis in Vermont during the pandemic:

- 41% of Vermont respondents, compared to 38% of all national survey respondents (Vicarelli et al. 2021), reported that their alcohol usage had increased since the beginning of the pandemic, while 15% reported a decrease in alcohol usage, and 44% reported no change. (Figure 18)

- 5% of Vermont respondents stated that they were quite to extremely concerned about their alcohol usage, while 54% reported they were unconcerned. (Figure 19)

- 48% of respondents reported that their cannabis usage had increased, while 12% reported a decrease. (Figure 18)

- Only 2% or Vermont respondents reported that hey were quite concerned about their cannabis usage, while 69% reported no concern. (Figure 19)

Figure 18. Since the COVID-19 outbreak, my substance (alcohol/cannabis) use has...

	Alcohol	Cannabis
Increased	41%	48%
Decreased	15%	12%
Stayed the same	44%	39%
Prefer not to answer	0%	1%

Percent of responses - Alcohol use (n = 223) Percent of responses - Cannabis use (n = 75)

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Figure 19. How concerned are you about your substance (alcohol/ cannabis) use?

8. PREFERRED POLICY INSTRUMENTS

We asked respondents what policies and/or resources would be most helpful to their household in coping with the COVID-19 crisis.

Preferred Policies by Income Level

- Respondents as a whole indicated one-time stimulus payments, greater access to mental health services, and greater access to technology as the policies that would most help them manage the impacts of COVID-19. However, policy preferences and priorities seem to differ across income levels. (Figure 20a)
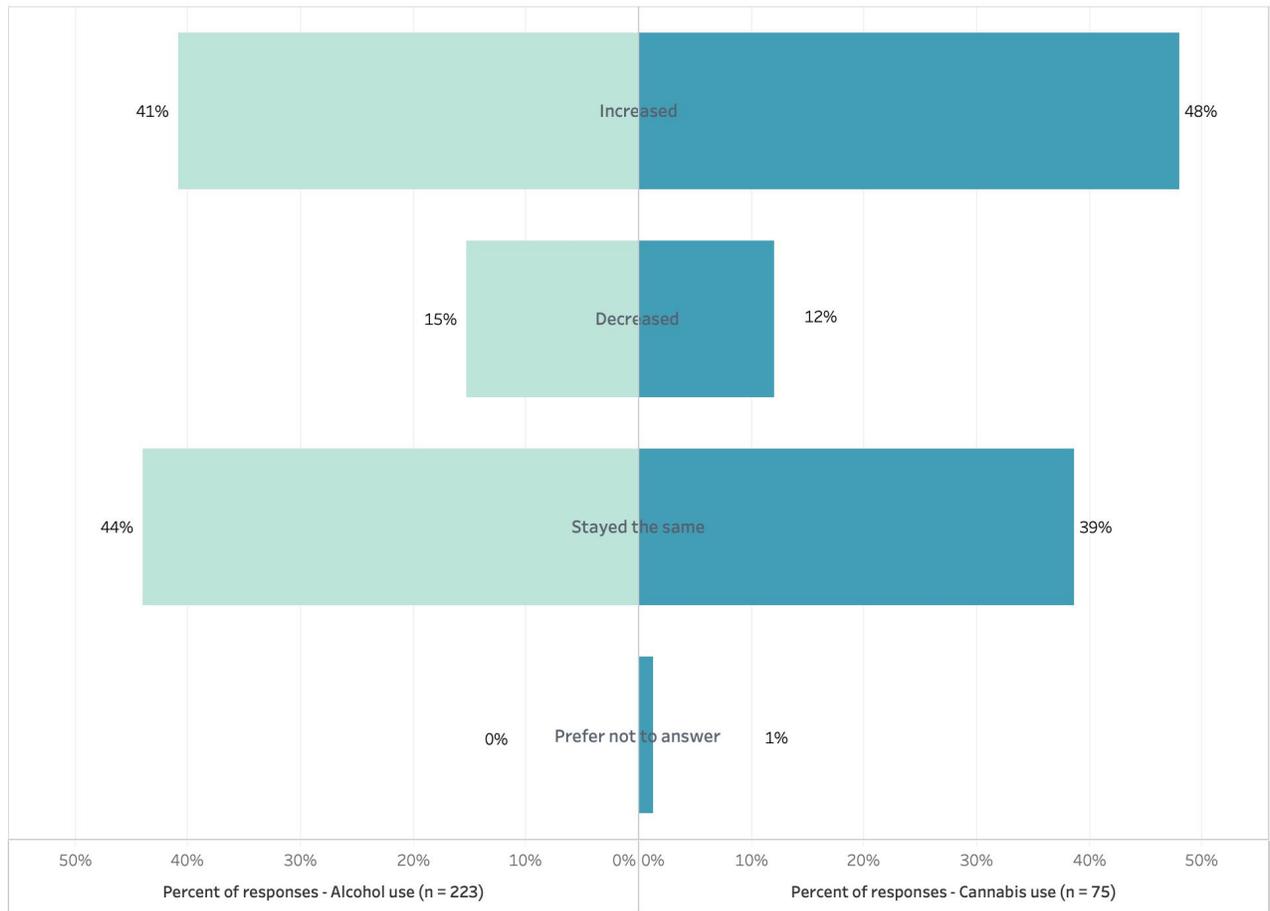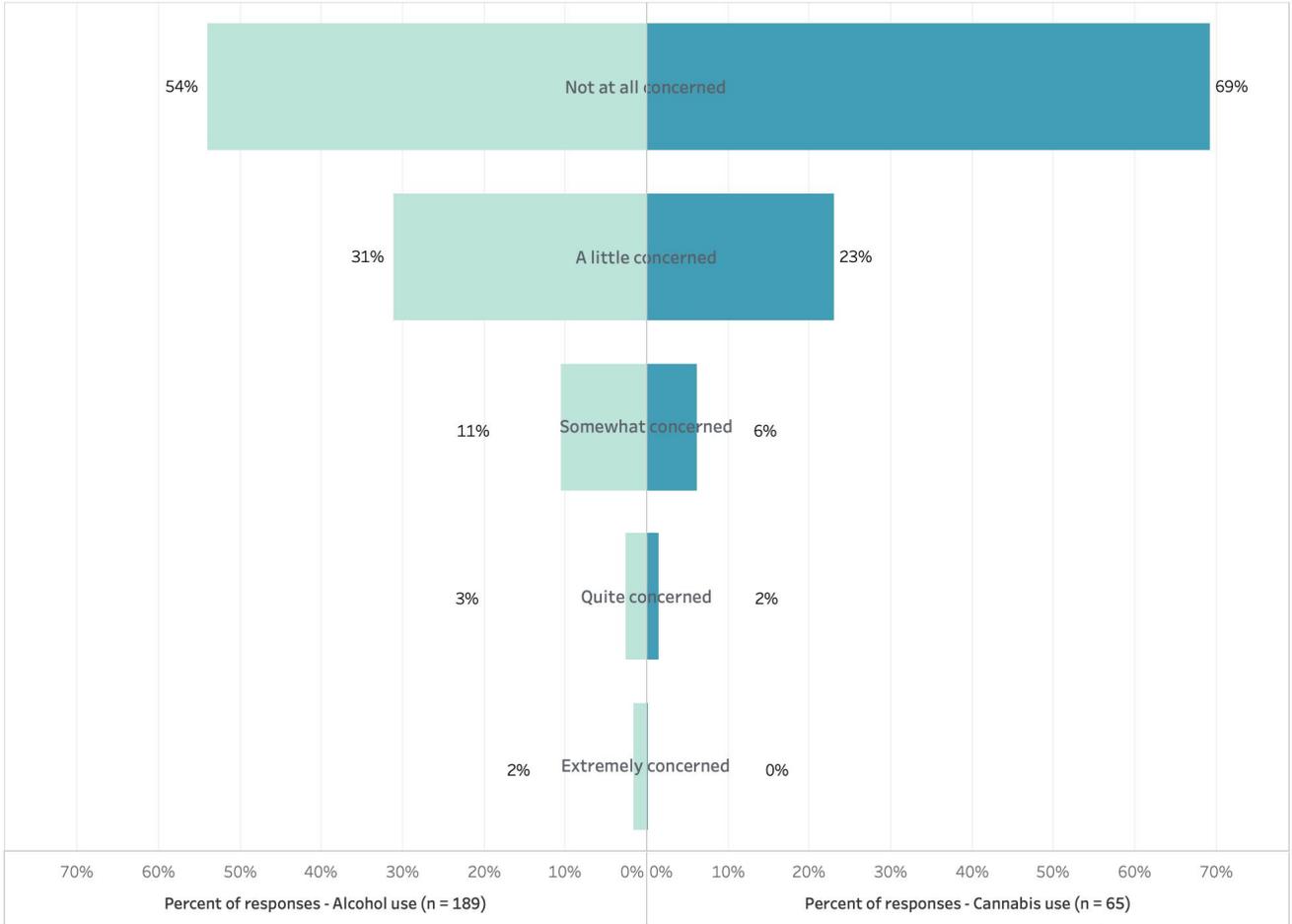
- Respondents with annual household income under $30,000 were more likely than other income groups to prefer deferred rent and mortgage and greater access to food and healthcare. They were as likely as others to indicate the need for deferred student loans. (Figure 20a)

- Those with annual household incomes between $30,000 and $60,000 were more likely than others to indicate extended unemployment benefits and better access to technology as important policy solutions. (Figure 20a)

- Respondents with annual household incomes between $60,000 and $100,000 were more likely than others to indicate the need for one-time stimulus payments and greater mental health support. (Figure 20a)

- Those with annual household incomes greater than $100,000 were more likely than others to indicate greater access to technology, more support with childcare, and mental health supports as top policy priorities. (Figure 20a)

- It is worth noting that mental health support, support with childcare and greater access to technology may be very important for lower income households too. However, households with lower income facing severe income constraints may be expose to additional survival needs such as food and housing security.

Preferred Policies for Families with Children

- Among respondents with children, those with one or more school-aged children were most likely to indicate the need for increased childcare support (23%). Respondents with high-schoolers were the least likely (11%). (Figure 20b)

- Among respondents with children, those with high-schoolers were most likely to indicate the need for mental-health supports (17%). Respondents with middle-schoolers reported the least need (12%). (Figure 20b)

Preferred Policies by Area

- Respondents in open countryside areas identified better access to technology or internet access as a top policy that would be of help. Our data suggests that respondents from Vermont were significantly more likely than national respondents to indicate the need for greater access to technological support. (Figure 20c)

- Respondents across all areas (from urban to open countryside) identified one-time stimulus payments as being a main priority for supportive policies. (Figure 20c)

- Greater mental health support was of high importance in suburban and urban areas. (Figure 20c)

Figure 20a. Considering the current COVID-19 economic disruptions, what policies or resources would be most helpful to you or your family during this time? (By income level of respondents)

	Less than $30,000 (n = 34)	$30,000 - $60,000 (n = 91)	$60,000-$100,000 (n = 113)	More than $100,000 (n = 178)
One-time stimulus payment	18.5%	19.1%	19.31%	15.3%
Greater mental health support	13.4%	13.7%	15.89%	15.0%
Greater access to food	11.8%	5.4%	4.05%	1.2%
Greater access to healthcare	11.8%	10.1%	9.35%	5.8%
Deferred student loans	10.9%	10.1%	10.90%	10.9%
Extended unemployment benefits	8.4%	9.7%	6.54%	5.6%
Deferred rent or mortgage	7.6%	6.5%	7.48%	4.1%
More support with childcare and education	6.7%	4.3%	9.66%	15.5%
Better access to technology or internet	5.9%	14.7%	11.53%	15.7%
More resources to support online education	5.0%	6.5%	5.30%	10.9%
	Percent of responses	Percent of responses	Percent of responses	Percent of responses

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Figure 20b. Considering the current COVID-19 economic disruptions, what policies or resources would be most helpful to you or your family during this time? (Results for families with children, by child age)

	One or more daycare-aged children (0-2.5 year old) (n = 36)	One or more preschool-aged children (2.5-5 year old) (n = 26)	One or more kindergarten-aged children (n = 13)	One or more more elementary school-aged children (n = 68)	One or more middle school-aged children (n = 45)	One or more high-school-aged children (n = 72)
More support with childcare and education	23%	25%	20%	23%	14%	11%
One-time stimulus payment	16%	15%	16%	16%	15%	16%
Better access to technology or internet	8%	10%	14%	13%	15%	12%
Greater mental health support	13%	14%	4%	13%	12%	17%
More resources to support online education	5%	4%	4%	12%	14%	13%
Deferred student loans	17%	10%	12%	7%	10%	8%
Extended unemployment benefits	5%	8%	12%	7%	2%	8%
Deferred rent or mortgage	5%	5%	8%	5%	8%	5%
Greater access to healthcare	5%	4%	4%	3%	5%	5%
Greater access to food	4%	5%	4%	1%	3%	5%

Percent of responses   Percent of responses   Percent of responses   Percent of responses   Percent of responses   Percent of responses

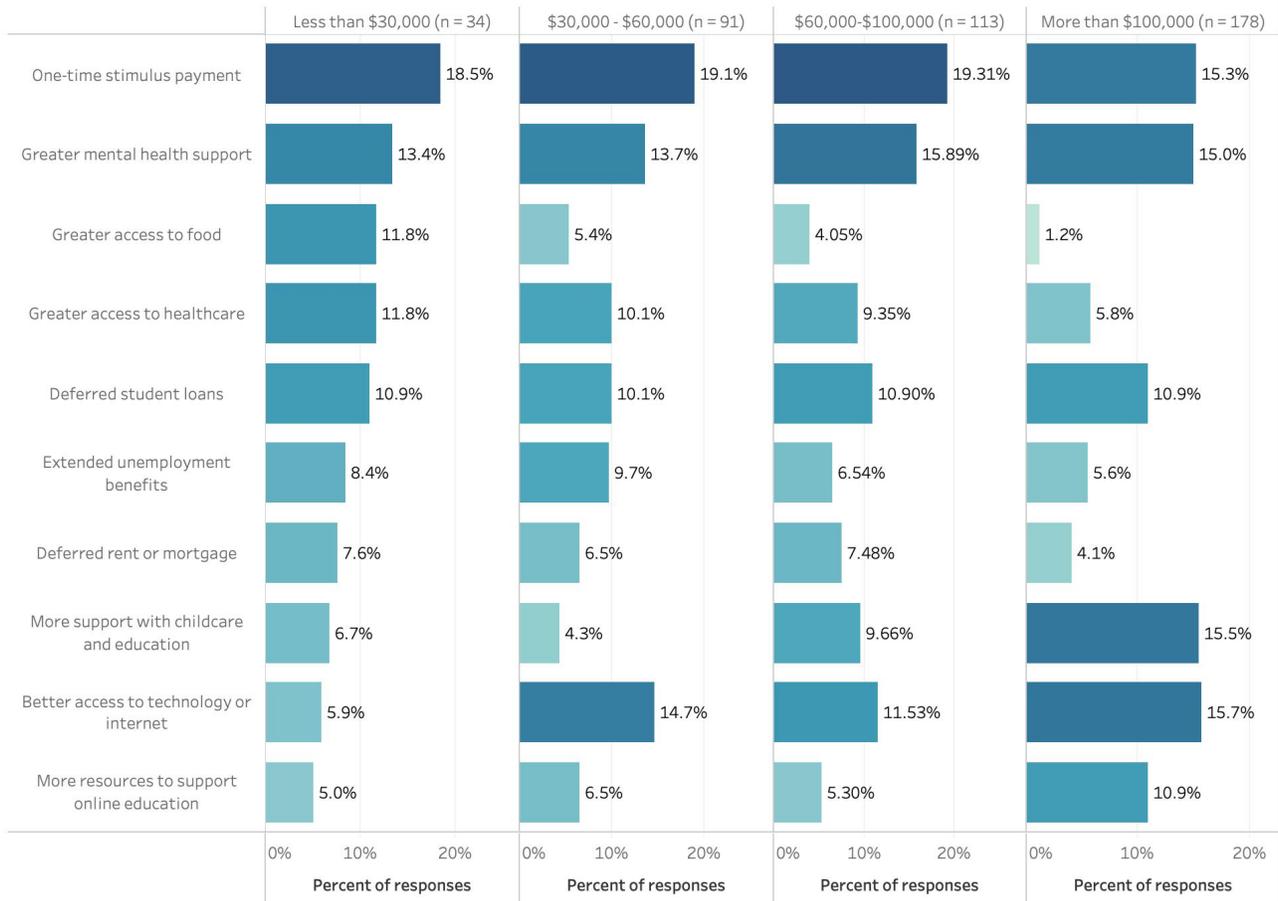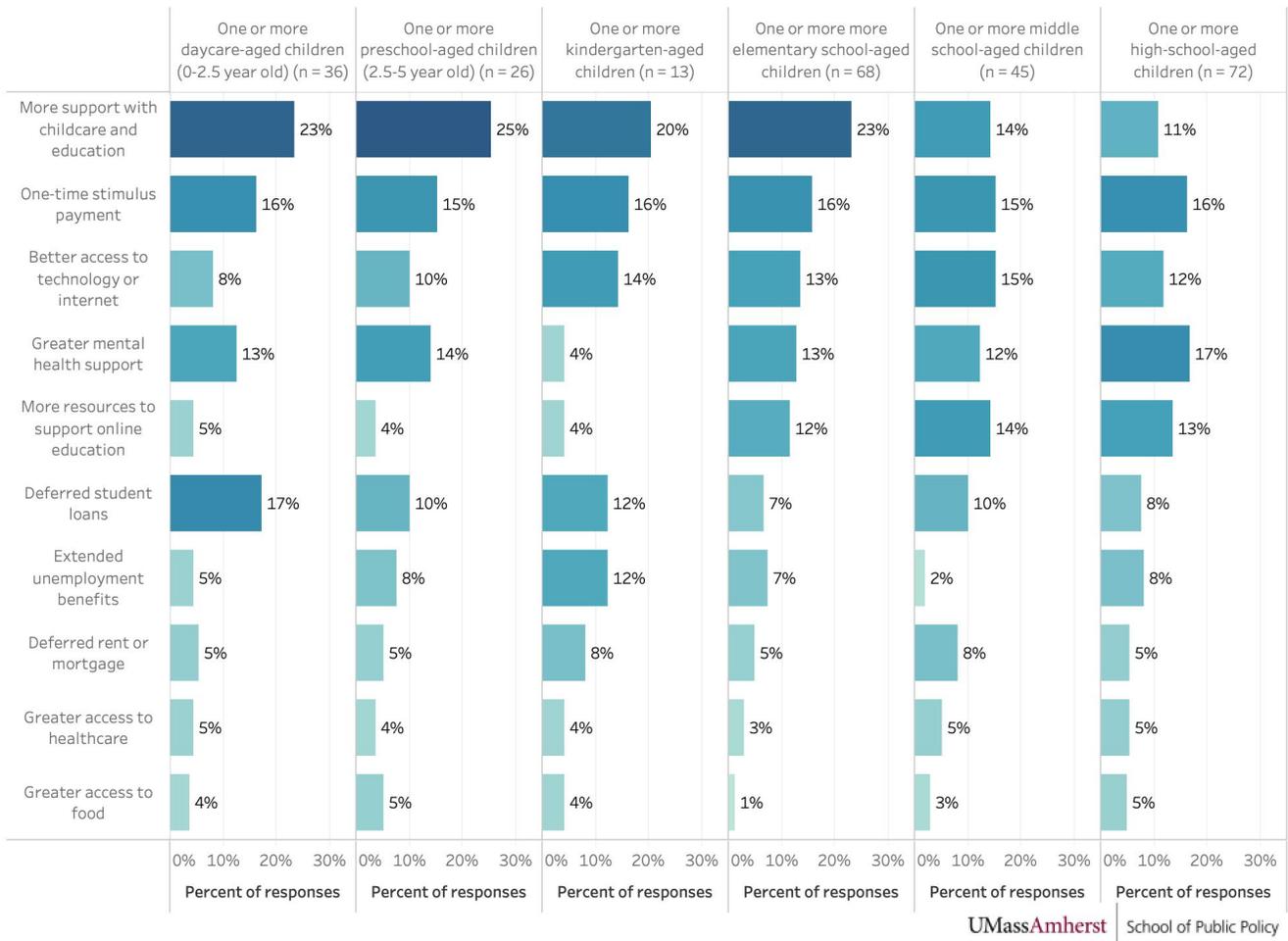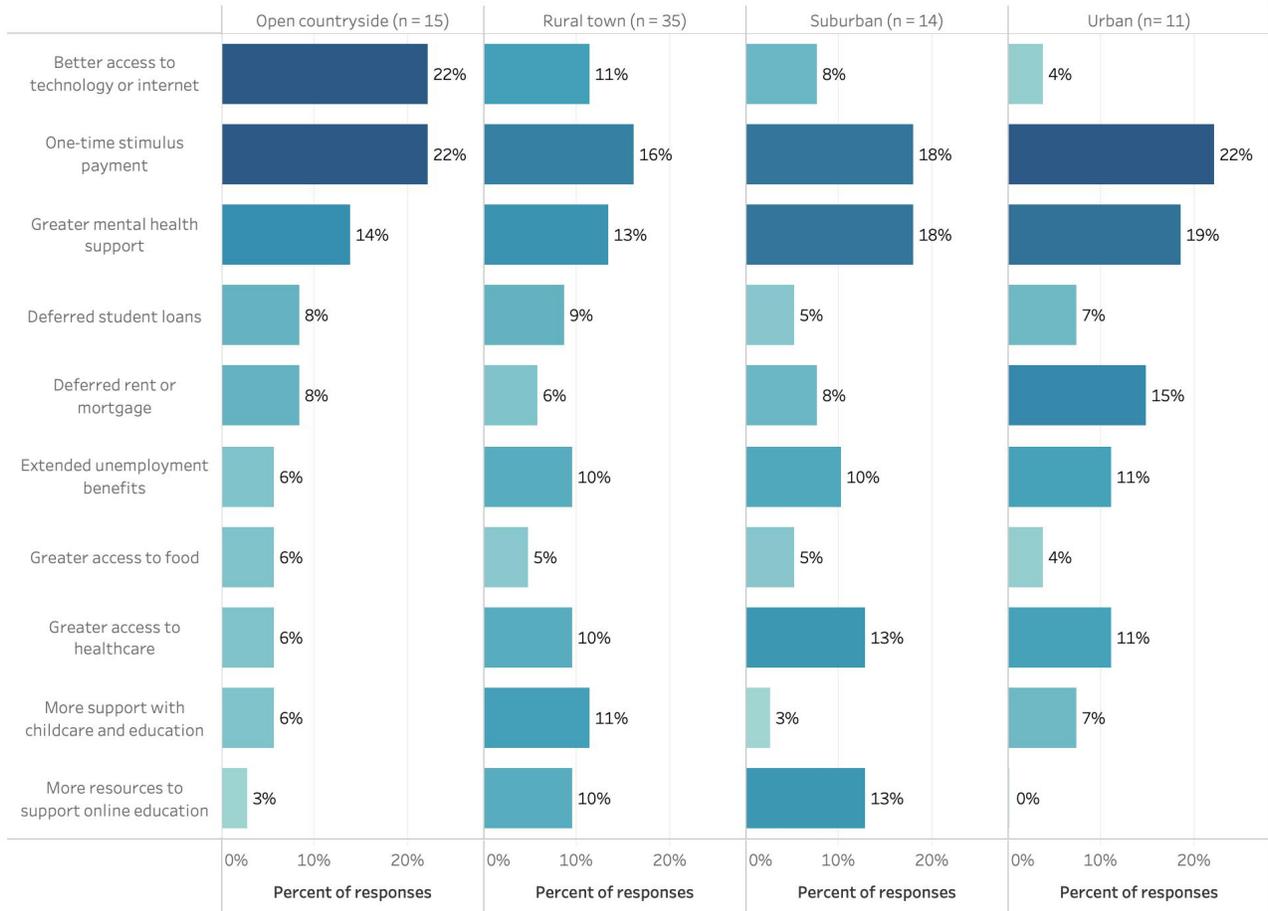UMassAmherst | School of Public Policy

Figure 20c. Considering the current COVID-19 economic disruptions, what policies or resources would be most helpful to you or your family during this time? (By area where respondents live)

	Open countryside (n = 15)	Rural town (n = 35)	Suburban (n = 14)	Urban (n = 11)
Better access to technology or internet	22%	11%	8%	4%
One-time stimulus payment	22%	16%	18%	22%
Greater mental health support	14%	13%	18%	19%
Deferred student loans	8%	9%	5%	7%
Deferred rent or mortgage	8%	6%	8%	15%
Extended unemployment benefits	6%	10%	10%	11%
Greater access to food	6%	5%	5%	4%
Greater access to healthcare	6%	10%	13%	11%
More support with childcare and education	6%	11%	3%	7%
More resources to support online education	3%	10%	13%	0%
	Percent of responses	Percent of responses	Percent of responses	Percent of responses

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REFERENCES

Alexander Bartik, Marianne Bertrand, Zoe B. Cullen, Edward L. Glaeser, Michael Luca, and Christopher Stanton. "The impact of COVID-19 on Small Business Outcomes and Expectations." *PNAS* July 28, 2020 117 (30) 17656-17666; first published July 10, 2020; https://doi.org/10.1073/pnas.2006991117

Kroenke, Kurt, Robert L. Spitzer, Janet B. W. Williams, and Bernd Löwe. "An Ultra-Brief Screening Scale for Anxiety and Depression: The PHQ-4." *Psychosomatics* 50, no. 6 (December 2009): 613–21. https://doi.org/10.1176/appi.psy.50.6.613

Matthew Dey, Harley Frazis, Mark A. Loewenstein, and Hugette Sun, "Ability to work from home: evidence from two surveys and implications for the labor market in the COVID-19 pandemic," *Monthly Labor Review*, U.S. Bureau of Labor Statistics (June 2020). https://doi.org/10.21916/mlr.2020.14

U.S. Census Bureau (2019) (A). "Household Type by Relatives and Non-relative Population in Households. American Community Survey 1-year estimates". Accessed June 23. Retrieved from <https://censusreporter.org>

U.S. Census Bureau (2019) (B). Sex by Age American Community Survey 1-year estimates. Accessed June 23, 2021. Retrieved from <https://censusreporter.org>

U.S. Census Bureau (2019) (C). "U.S. Census Bureau quickfacts: Vermont." US ACS Census, 2019. Accessed June 23, 2021. Retrieved from https://www.census.gov/quickfacts/VT

U.S. Census Bureau (2021). "Household Pulse Survey public use file [data files]". Accessed June 23, 2021. Retrieved from https://www.census.gov/programs-surveys/household-pulse-survey/datasets.html

U.S. Department of Labor (2020) "Vermont's Unemployment Rate Decreases to 3.2 Percent in October" Department of Labor press release, November 20, 2020, accessed June 23, 2021. https://labor.vermont.gov/press-release/vt-unemployment-jobs-report-october

Vermont Department of Labor (2020) "Employment Statistics" Accessed June 23, 2021. Retrieved from https://labor.vermont.gov

Vicarelli, Marta, Meredith Canada, Yu Ya Htut Tin, Anna Gishin, Madeline Leue, Elizabeth Murphy, Aryen Shrestha, Yash Tyagi. 2021. "Impacts of COVID-19 on US Households: a Survey Analysis." *School of Public Policy, University of Massachusetts Amherst*, MA, USA. (Forthcoming)

APPENDIX

APPENDIX I

Table A1 - Q147 - Is your first language English?		
	Count	**Percent**
Yes	497	98.81%
No	6	1.19%
Total	**503**	

Table A2 - Q80 - Are you Hispanic/Latinx		
	Count	**Percent**
Yes	3	0.72%
No	416	99.28%
Total	**419**	

Table A3 - Q6 - Are you currently living with your partner/spouse?		
	Count	**Percent**
Yes	374	95.17%
No	19	4.83%
Total	**393**	

Table A4 - Q85 - How many people earn an income in your household?		
	Count	**Percent**
0	21	4.28%
1	146	29.74%
2	301	61.30%
3	16	3.26%
4	6	1.22%
5 or more	1	0.20%
Total	**491**	

Table A5 - Q148 - How many people are in your household (including children)?		
	Count	**Percent**
1 person	68	13.96%
2 people	199	40.86%
3 people	104	21.36%
4 people	86	17.66%
5 people	26	5.34%
6 people	3	0.62%
7 or more people	1	0.21%
Total	**487**	

Table A6 - Q149 - How many members of your household are children under 18?		
	Count	Percent
0	227	54.05%
1	88	20.95%
2	85	20.24%
More than 2	20	4.76%
Total	**420**	

Table A7 - Business Owners Employment		
	Count	Percentage
Employed	131	
Unemployed	5	4%
Total	**136**	

Figure Appendix 1. 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 = 59)

Respondent's professional life projections | Partner of respondent's professional life projections

- Will keep my job but I will be less productive: 57% / 65%
- Will need to keep the job but will start working fewer hours: 34% / 24%
- Will need to change the job: 7% / 2%
- Will need to take an unpaid leave: 1% / 4%
- Will need to stop working: 0% / 6%
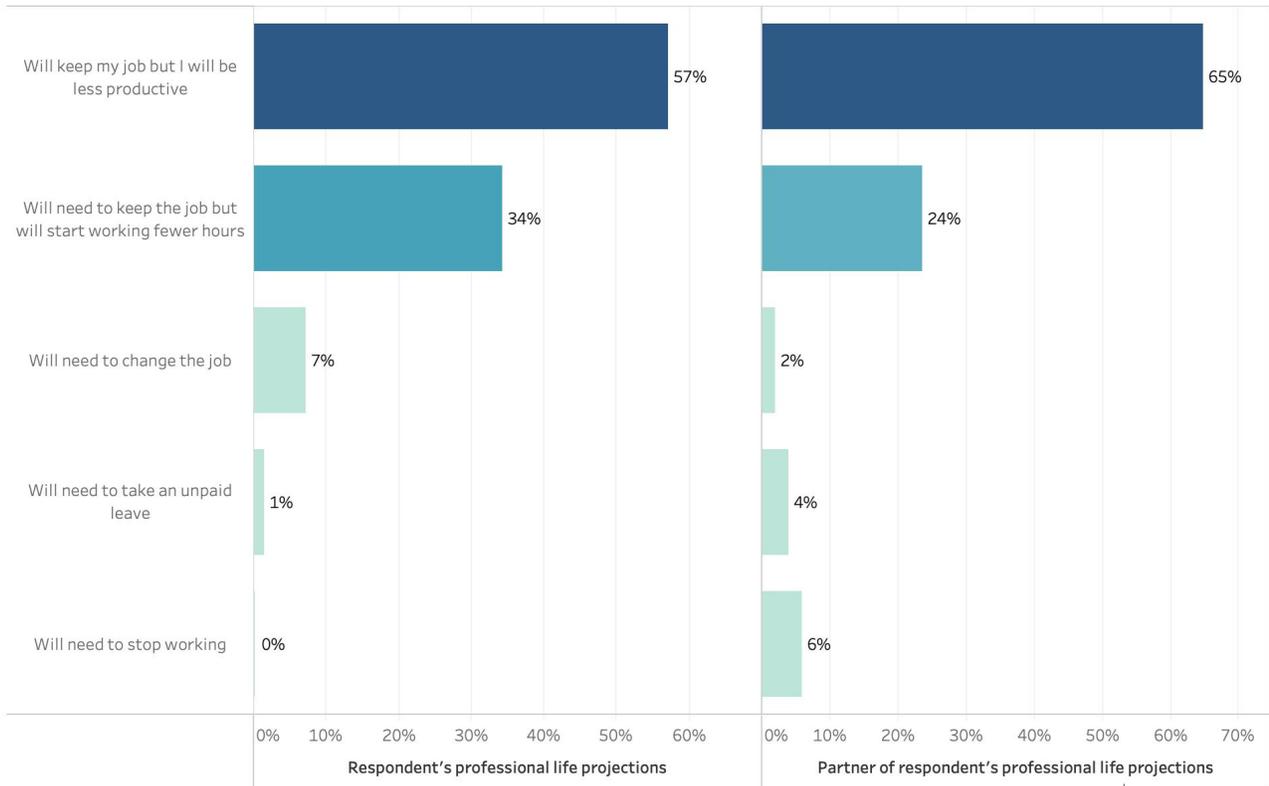
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Figure Appendix 2. Considering the current COVID-19 economic disruptions, what policies or resources would be most helpful to you or your family during this time?(Results for families with children, by child age)