

Changes in Substance Misuse, Emotional Distress, Health, and Well Being among Vermont Young Adults during the First Two Months of the COVID-19 Emergency

A Special Topics Brief Report

DECEMBER 2020

Submitted to ADAP on December 31, 2020

Acknowledgments

This report was prepared by the Pacific Institute for Research and Evaluation (PIRE) for the Vermont Department of Health (VDH), Division of Alcohol and Drug Abuse Programs (ADAP). Authors are Vanessa Berman and Bob Flewelling. Assistance with the analysis was provided by Sean Hanley.

The data presented here were collected in conjunction with the evaluation of Vermont's Partnerships for Success (PFS) 2015 grant, also known in Vermont as Regional Prevention Partnerships (RPP), administered by the Vermont Department of Health, Division of Substance Abuse Prevention. PIRE served as the evaluator. Funding for RPP and its evaluation was provided by the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA). Additional information about the Vermont Young Adult Survey is available on the VDH/ADAP website or by contacting Amy Livingston, PIRE, at alivingston@pire.org.

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Background

In response to the emerging COVID-19 pandemic, Vermont's governor declared a state of emergency on March 13, 2020, and proceeded to limit activity in the state over the coming weeks. This included the March 15th order to close all Prek-12 schools and to close all bars and restaurants the following day. Throughout the Spring of 2020, further restrictions were put in place through a "Stay Home, Stay Safe" order that limited travel, non-essential gatherings, non-essential businesses, and all in-person education, including higher education.

Many public health practitioners and researchers have warned of the potential for increased misuse of alcohol and other substances as a result of the social isolation and emotional distress caused by the pandemic (Horigian, Schmidt, and Feaster (2020); Ornell et. al., 2020; Rodriguez, Litt, and Stewart, 2020). Clearly the situation has created exceptional changes and challenges for people of all ages, including significant disruption in lifestyle, isolation, economic hardship, illness, and concern for loved ones, all of which in turn can be expected to lead to increases in stress, anxiety, depression, and consequent substance misuse. Some of these challenges may be especially salient to young adults, particularly due to the closure of schools, colleges, businesses, and other venues that provide structure and opportunities for social interaction in this age group. For underage young adults, concerns regarding potentially easier access to alcohol and other substances (e.g., through online ordering of products available for take-out or delivery, or increased access to parents' supplies), and more unsupervised time at home in general, have also been raised. Evidence for impacts of the COVID emergency on alcohol and other drug use among adolescents and persons under age 21, however, is scarce.

According to a survey conducted by RTI International (Barbosa, Cowell, and Dowd, 2020), the average drinks per day, the number of those who exceeded drinking guidelines, and binge drinking among adults in the U.S. all increased from prior to the COVID pandemic (February 2020) to immediately after (April 2020). A study comparing alcohol use between spring 2019 and spring 2020 showed a similar pattern, with an increase in days of alcohol consumption and days of heavy drinking among adults in the United States (Pollard, 2020). The American Medical Association has warned of increases in opioid and other drug-related overdoses during the pandemic (AMA, 2020). As noted in a Commentary in the *Journal of Adolescent Health* (Richter, 2020), however, the effects of the pandemic on adolescent substance use may not be entirely negative. Richter suggests that reductions in some of the risk factors for substance use for at least some adolescents (e.g., contact with peers who engage in unhealthy behaviors, easy access to substances, school-related academic and social pressures, and sleep deprivation), combined with an increase in selected protective factors (e.g., increased time with parents to share meals and engage in activities), could contribute to a decrease in substance use among adolescents during the COVID-19 pandemic. Support for this view was provided in a study of Canadian adolescents aged 14-18. Dumas et al (2020) found that the percentages of study participants reporting vaping, binge drinking and (among girls) using cannabis decreased, although the frequency of alcohol and cannabis using increased among those that were using.

The purpose of this report is to present COVID-19 related findings from a survey of 2340 young adult residents of Vermont aged 18 to 25 administered in the spring of 2020. The Vermont Young Adult Survey (YAS) was conducted to support the evaluation of two successive federal funded Partnerships for Success (PFS) grants awarded to Vermont for purposes of substance misuse prevention among adolescents and young adults. Because the survey was scheduled to begin very shortly after the March 13th emergency declaration, several questions were included to help assess possible effects of the emergency on substance misuse and other health and lifestyle measures.

Some of the information presented here was included in two previous VDH brief reports published in August and October 2020.^{1,2} This report includes additional findings from the YAS regarding COVID-19 effects.

Methods

Vermont residents ages 18 to 25 were recruited through Facebook and Instagram ads to participate in an online survey. A chance for a randomly drawn cash prize was used as an incentive to participate. The 2020 survey was conducted from March 15 through May 20, and generated 2340 useable surveys³. To enhance the representativeness of the samples, the data were weighted to reflect the young adult population of Vermont with respect to age group (18 to 20 vs. 21 to 25), sex, and county of residence. The subset of respondents that provided comments to the open-ended question regarding how COVID has affected them (n=647) was re-weighted to reflect the age group and sex distribution for the entire state.

Findings

Effects on Substance Use

As shown in Table 1, almost half the survey respondents reported that their use of alcohol had been influenced by the COVID-19 emergency and one third of the respondents said the same thing about marijuana use. Smaller percentages reported that the emergency had influenced the use of other substances. The patterns of influence varied across substances. Marijuana stands out as the only substance for which a substantially higher percent of young adults reported they had either started using or increased their use as a result of the emergency,

¹ <https://www.healthvermont.gov/sites/default/files/documents/pdf/ADAPSubstanceUseDuringCOVIDQ1.pdf>

² <https://www.healthvermont.gov/sites/default/files/documents/pdf/ADAPSubstanceUseDuringCOVIDQ2.pdf>

³ All findings in this report except for those based on comments in response to the open-ended question were based on the entire sample. The specific numbers of respondents contributing to each table or figure, however, are slightly less than 2340 due to missing responses for each question.

compared to stopping or decreasing their use. Although 23.6 percent reported starting or increasing the use of alcohol (almost all these respondents reported increasing use as opposed to starting use), this was counterbalanced by an equal percentage of young adults who reported stopping or decreasing their use.

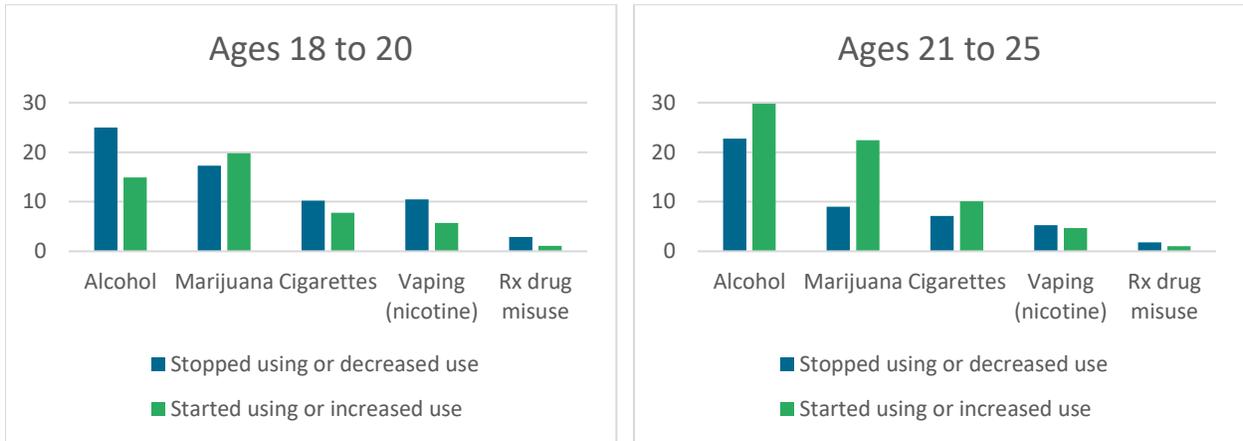
Table 1. Ways in which the COVID-19 emergency influenced the use of alcohol and other drugs compared to the month before the emergency began: Percent of respondents reporting each response.

	Substance									
Influence	Alcohol		Marijuana		Cigarettes		Vaping (products with nicotine)		Prescription drugs (misuse)	
Stopped using	6.4	} 23.6	5.3	} 12.4	3.9	} 8.4	4.5	} 7.4	1.7	} 2.3
Decreased use	17.3		7.1		4.5		2.9		0.6	
Started using	1.6	} 23.6	1.0	} 21.3	1.1	} 9.2	0.7	} 5.1	0.6	} 1.0
Increased use	22.0		20.4		8.0		4.4		0.5	
None of the above	52.8		66.3		82.4		87.5		96.7	
(Total)	100.0		100.0		100.0		100.0		100.0	

Other substance use behaviors experienced notably smaller degrees of change in either direction, reflecting the finding that a high percentage of respondents did not use the substance either before or after the emergency began. For alcohol, marijuana, and cigarettes, COVID was more likely to influence either a decrease or an increase in use, as opposed to stopping or starting use. This was not the case of vaping and prescription drug misuse, although the rates for any type of influence on these behaviors were much lower.

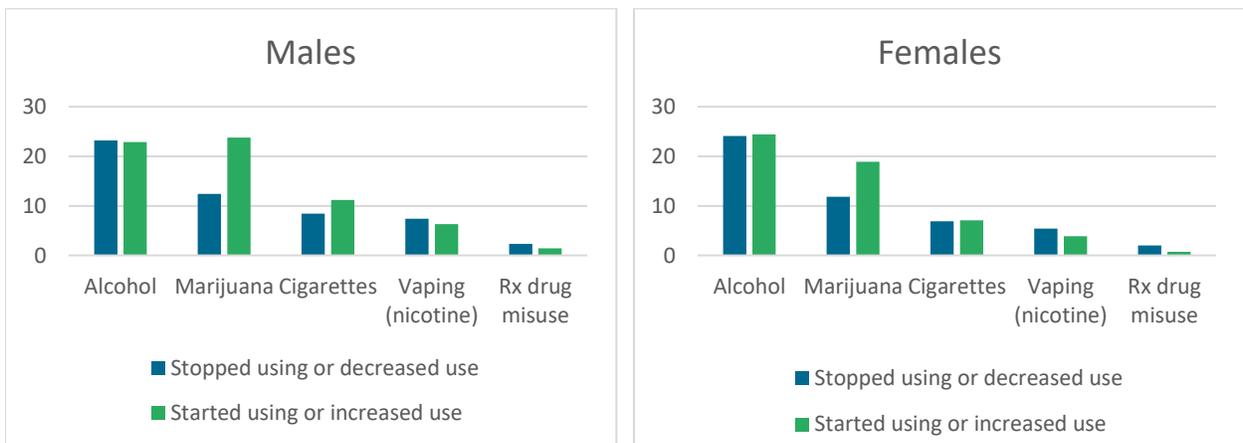
The percentages of young adults reporting starting/increasing use versus stopping/decreasing use, separately for age subgroups 18-20 and 21-25, are shown in Figure 1. The findings reveal very different patterns for these two subgroups. Younger young adults were notably more likely to report stopping/decreasing use versus starting/increasing use of alcohol, cigarettes, and vaping, and prescription drug misuse. The older young adults, on the other hand, were more likely to start/increase use of alcohol and cigarettes, and were about equally likely to start/increase versus stop/decrease vaping and prescription drug misuse. Both subgroups reported higher rates of starting/increasing marijuana use compared to stopping/decreasing use, but this difference was substantially greater for the age 21-25 subgroup.

Figure 1. COVID-19 emergency influences on the use of alcohol and other drugs, by age group. Percent of respondents reporting changes in use.



Similar information comparing COVID influences on substance use for young adult men and women are provided in Figure 2. Unlike the age group comparisons, the patterns for these two subgroups were similar. The only notable differences were slightly higher rates of starting/increasing use of marijuana and cigarettes for young adult men versus women, both with respect to their absolute rates and when compared to rates of stopping/decreasing use.

Figure 2. COVID-19 emergency influences on the use of alcohol and other drugs, by sex. Percent of respondents reporting changes in use.



Effects on Emotional Distress

The percentages of young adults reporting various types of emotional distress before and after the COVID-19 emergency began are shown in Table 2. For all four measures, not surprisingly, the values were higher at the time the survey was taken (i.e., within the two months after the emergency began). The increases were more pronounced for the first two measures, which are indicators for depression, as compared to the two anxiety-related measures.

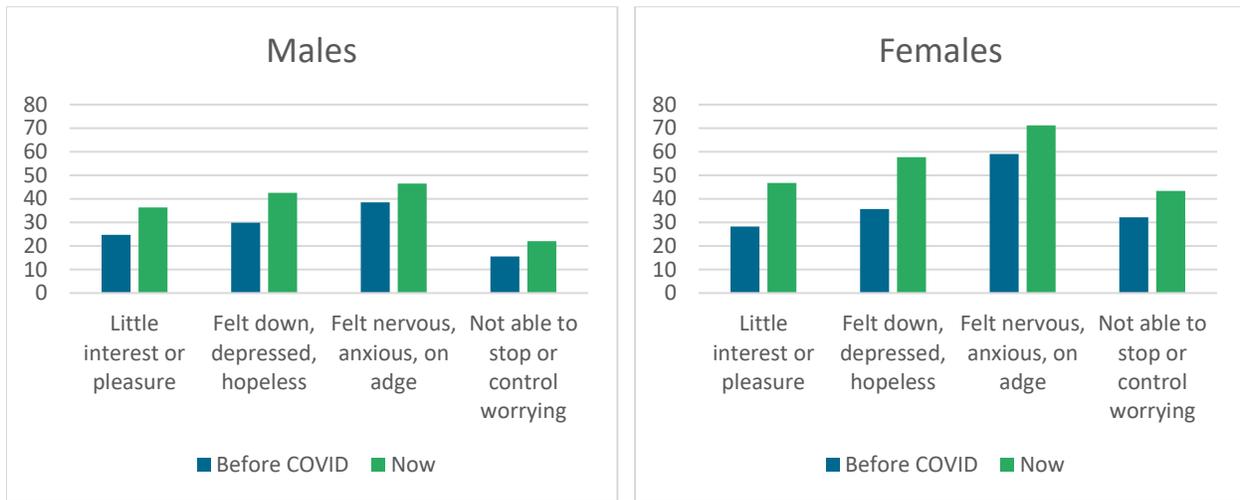
Table 2. Emotional distress reported in the two weeks before the COVID-19 emergency and now (i.e., in the past 2-weeks). Percent of respondents reporting various types of emotional distress.

Emotional distress indicators:	Before COVID	Now
Little interest or pleasure in doing things	26.5	41.5
Felt down, depressed, or hopeless	32.7	50.1
Felt nervous, anxious, or on edge	48.7	58.8
Was not able to stop or control worrying	23.9	32.6
None of the above	41.8	26.1

The findings provided in Table 2, broken out by sex, are shown in Figure 3. The primary feature of these findings is the uniformly higher rates of emotional distress for young adult women compared to men across all four measures, both before the COVID emergency and again when the survey was taken. The rates increased for both subgroups, although the percentage point increases were higher for women than men for all four measures.

The levels and patterns of change for emotional distress indicators for the younger and older age groups were found to be similar, so these data are not shown.

Figure 3. Emotional distress reported in the two weeks before the COVID-19 emergency and now, by Sex. Percent of respondents reporting various types of emotional distress.



Self-reported descriptions of COVID-19 effects

Near the end of the survey respondents were invited to enter anything else they would like to share regarding how the COVID-19 emergency has affected their health, well-being, or health-related behaviors. Of the 2340 respondents to the survey, 647 provided a response in the open-ended text field provided. Many responses were quite descriptive and detailed, with an average length of 31 words per response. Responses were first coded into 34 response types, and then grouped into seven broader categories. Because many responses described more than one way in which their lives had been affected, up to five different responses codes were identified for each respondent, thereby generating a total of 990 coded responses.

Table 3 shows the percentage of respondents providing each coded response, based on the total number of respondents (n = 647) who provided a response to the question.⁴ Because more than one code could be assigned to each response, the percentages sum to more than 100. Although it's possible that fewer respondents mentioned COVID effects on substance use, anxiety, and depression compared with other effects because we had already asked about those issues in previous close-ended questions, over a quarter (28.6 percent) of respondents indicated that COVID had a negative impact on mental health. These impacts included new or increased anxiety and/or emotional stress, new or increased sadness or depression, and either specified or unspecified emotional distress or mental health issues. Respondents reported that COVID also had a negative effect on lifestyle or routine activities (33.6 percent), which included responses reflecting the challenges of social isolation (10.4 percent) and those related to an increase in alcohol and/or drug use or being worried that it would increase (5.0 percent), and feelings of boredom (6.3 percent). On the other hand, 15 percent of respondents shared that COVID had a

⁴ Responses simply indicating that the respondent had nothing else to share were not included.

positive effect on lifestyle or health, such as an increase in positive behaviors (7.9 percent), more time for themselves or to spend with their family (4.8 percent), and a decrease in alcohol and/or drug use (3.0 percent). Some respondents indicated both positive and negative effects (e.g., “I’ve been able to exercise a lot more, but anxiety has gotten worse” or “It has increased my anxiety, because I have asthma, but it’s also made me pay way more attention to my asthma medicine regimen.”) Respondents also shared their concerns about their own health or the health of others (22.3 percent), including details on negative health consequences such as odd sleep schedules, stress eating or over-eating, self-harm behaviors, and reductions in physical activity. Fewer respondents (15.6 percent) reported economic hardships (e.g., job loss, inability to pay bills, and/or complaints about unemployment benefits). Even fewer (7.8 percent) responded with concerns or complaints about the response to the virus (e.g., “It is terrible. The government failed us and we are not getting the resources as students and human beings that we need.”)

Table 3. Responses to open-ended question “Is there anything else you’d like to tell us about ways in which the coronavirus (COVID-19) emergency has affected your health, well-being, or health-related behaviors?”

Code	Category / Response (coded)	Percent of respondents (n = 647)¹
	Negative impacts on mental health	28.6
10	New or increased anxiety and/or emotional stress	13.1
11	New or increased sadness or depression	9.8
12	Other specified emotional distress or mental health issues (e.g., irritability, anger, mood swings, PTSD, panic attacks, suicidal ideation)	4.4
13	Unspecified emotional distress or mental health issues	5.2
	Economic hardships	15.6
20	Economic concerns in general (paying bills)/frustrated about lack of or timeliness of stimulus check	8.4
21	Experienced a loss of job or reduced hours/furlough/Concerns about finding a job after graduation	7.9
22	Complaint or concern about the process for getting unemployment benefits or lack of benefit eligibility	2.0
	Negative effects on lifestyle or routine activities	33.6
30	Increase in alcohol and/or drug use/worried that it will increase due to COVID	5.0
31	Bored/Feeling like it’s difficult that life and all activities are put on hold	6.3
32	Increased family tension/Forced to spend more time in a bad/toxic home environment	1.9
33	School related comment: Negative feelings about remote schooling or need to move off campus/Stressful for teachers/Concern about inability to graduate/Students need more financial supports	5.4

34	Concerns, generally, about the future/Hard to make plans	2.4
35	Social isolation, life is hard without human contact/Loss of community	10.4
36	Feeling unproductive, unmotivated/General lack of focus or structure	2.7
37	General negative feelings about COVID, closures/Overall feeling that COVID has greatly affected the way we live	3.4
	Concerns about health of self or others	22.3
40	Worried about the health of self and/or loved ones	3.9
41	Disappointed or scared about having to work (essential worker)	3.4
42	Feeling overworked or exhausted from work	0.2
43	Negative health consequences (over-eating, less exercise, can't tend to other health related needs)	14.4
44	Food insecurity currently or concern for future insecurity/Poor nutrition due limited access to fresh foods	1.9
	Concerns or complaints about response to the virus	7.8
50	Complaints about the government's handling of COVID/Feeling that government doesn't care/Shows the need for better policies (universal healthcare)	3.2
51	Concern about others not taking COVID seriously (partying, not wearing masks)/Stating importance of following guidelines	1.8
52	Concern about mental health of the community; needs to be increased mental health supports	0.5
53	Need more/better COVID-related resources (PPE, testing)	0.9
54	Feeling that others are over-reacting/Quarantine shouldn't apply to young and healthy/Describing their own choice to still socialize with others	1.3
55	Housing related comment: Need more housing supports/Description of housing instability	0.4
	Positive effects on lifestyle or health	15.0
60	Increase in positive health behaviors (e.g., exercise, yoga)	7.9
61	Decrease in alcohol and/or drug use	3.0
62	More time to myself and/or to be at home or with family	4.8
63	Other positive effects on health or well-being	1.7
	Other	11.2
70	Pleased with government supports (stimulus check, housing, etc.)	0.2
71	Explanation of answer(s) / personal anecdote	6.5
72	Miscellaneous	4.5

¹ Percentages are based on the subsample of respondents who entered a response to the open-ended question that asked about how the COVID emergency has affected them. The percentages sum to over 100 because some responses received more than one code. The percentages reported for the categories indicate the percent of respondents who entered one or more comments within each category.

Table 4 shows the percentage of respondents who provided one or more comments within each main category of the coded comments, broken down by age group and by sex. Statistically significant differences between the two age groups and between young adult men and women are noted. Patterns reveal differences between age groups related to economic hardships, with the older group (ages 21-25) reporting economic hardships more than the younger group (ages 18-20) and the younger group reporting negative effects on lifestyle or routine activities more than the older group. Differences by sex were also noted, with young adult women being more likely than young adult men to experience negative impacts on mental health. To a lesser extent, young adult women were also more likely to mention economic hardships, more likely to have concerns about their own health or the health of others, and were less likely to report positive effects on their lifestyle or health as a result of COVID. These differences by sex found in these comments are consistent with findings above related to higher rates of emotional distress among young adult women.

Table 4. Open-ended categories in response to COVID-19 effects question, by age group and sex.

	Percent of respondents offering one or more comments within each category (N=647) ¹						Total
	Age Group			Sex			
Category:	18-20	21-25	Sig ²	Males	Females	Sig ³	
Negative impacts on mental health	31.3	26.7		20.3	37.4	**	28.6
Economic hardships	10.8	19.1	**	12.5	18.9	*	15.6
Negative effects on lifestyle or routine activities	40.1	28.9	**	34.7	32.5		33.6
Concerns about health of self or others	20.7	23.5		18.4	26.5	*	22.3
Concerns or complaints about response to the virus	6.4	8.9		7.2	8.5		7.8
Positive effects on lifestyle or health	11.0	18.0	*	18.2	11.7	*	15.0
Other	11.8	10.7		14.9	7.2	**	11.2

¹ The percentages sum to over 100 because some responses included comments that fell into more than one category.

² Statistical significance level for difference between age groups (**p<.01; *p<.05).

³ Statistical significance level for difference between young adult men and women (**p<.01; *p<.05).

Conclusions

These findings shed light on substance use and emotional distress changes among young adults from the time before the COVID emergency was underway to the initial two months of its implementation. Similar to Dumas's findings among adolescents in Canada, a consistent increase in substance use initiation or an increase in the use of substance was not found across the board, despite an increase in emotional distress among both sexes and both age groups. Instead, we did find an increase in both initiation and increased use of alcohol and cigarettes among those ages 21-25, but not among the younger group. If alcohol was easier for minors to obtain during the COVID emergency due to loosened restrictions on take-out and delivered alcoholic beverages, or increased access to alcohol kept in the home by their parents, this did not translate into overall increases in underage use. We suspect that reduced social opportunities for drinking outside the home was a more important factor influencing underage drinking, and the direction of this influence was towards reduced use. The same considerations may explain the similar patterns observed for cigarette use.

Interestingly, marijuana, which is not available for recreational purchase in Vermont, was the only substance for which a higher percent of underage young adults reported that they started use or increased their use as a result of the pandemic versus those who had stopped or decreased their use. Even with marijuana, however, the age group differences suggest that reduced social interactions and greater time at home may have limited the increases in use among those under age 21 compared to the substantially greater increases in use observed for the older group. Further exploration of the differences across substances and subgroups, particularly the substantial increase in marijuana use when a net increase in other substances was not found, could provide insights regarding motivations for use and opportunities for using substances during emergencies such as the current pandemic.

The responses to the open-ended question regarding the effects of the COVID emergency identified a wide range of impacts, most but not all of which were undesirable. Impacts also varied by age group and sex. The findings that respondents ages 21-25 were more likely to report economic hardships when answering the open-ended question may be due to the older group being more economically independent (i.e., being responsible for rent and other bills) and feeling more of the effect from job loss or reduced work hours. On the other hand, the younger group was more likely to report negative effects on lifestyle or routine activities, which may be related to the younger group feeling more of an impact related to school closures or social isolation. Differences by sex, with young adult women being more likely than young adult men to experience negative impacts on mental health and to comment more about economic hardships and concerns about their health or the health of others, may reflect a heightened sensitivity to these health and health-related concerns in general among young women compared to young adult men, as indicated by their higher levels of emotional distress in the weeks even before the emergency was declared.

Despite the many negative consequences described by survey respondents, it is notable that 15 percent of the comments reflected positive impacts. These responses indicate the presence of resiliency and adaptation even in the face of the changes and challenges created by the pandemic. As such, they serve as examples of young adults turning adversity into opportunities for reflection and self-improvement. Actions like the ones described in these responses, which include devoting more time to positive health behaviors such as yoga and exercise, and spending more time with family members, provide a glimmer of a silver lining to the otherwise painful and, in too many cases, tragic impacts of the COVID-19 pandemic.

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