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Substance Use and Help Seeking as Coping Behaviors Among Parents and Unpaid Caregivers of Adults in the United States During the COVID-19 Pandemic

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Abstract

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Background—During the COVID-19 pandemic, caregiving responsibilities may have been associated with increased substance use.

Objectives—To characterize substance use to cope with stress and willingness to seek help among: (i) parents, (ii) unpaid caregivers of adults, and (iii) parent-caregivers.

Methods—Data were analyzed for 10,444 non-probabilistic internet-based survey respondents of the COVID-19 Outbreak Public Evaluation (COPE) initiative (5227 females, 5217 males). Questions included new or increased substance use, substance use in the past 30 days to cope, insomnia, mental health, and willingness to seek help.

Results—Nearly 20% of parents and unpaid caregivers of adults each reported new or increased use of substances to cope with stress or emotions;65.4% of parent-caregivers endorsed this response. Compared to non-caregivers, all caregiver groups had higher odds of new or increased use of substances, with parent-caregivers showing the largest effect size (aOR: 7.19 (5.87–8.83), $p < .001$). Parent-caregivers had four times the adjusted odds of using drugs other than cannabis (aOR: 4.01 (3.15–5.09), $p < .001$) compared to non-caregivers).

Conclusions—Caregivers may initiate or increase substance use as a coping strategy when under stress. The higher odds of substance use underscores the importance of efforts to screen for sleep disturbances and adverse mental health symptoms particularly among parent-caregivers. Clinicians may consider asking patients about family situations more broadly to help identify people who may be experiencing stress related to caregiving and, if indicated, offer treatment to potentially alleviate some of the risks.

Keywords

alcohol; opioids; parenting; caregiving; substance use

Introduction

The coronavirus disease 2019 (COVID-19) pandemic presented many population health challenges, including those related to psychological distress, mental health, sleep health, and substance use (1–3). Increases in mental health conditions were a global burden (4). After the onset of the COVID-19 pandemic, surveys of adults in the U.S. found nearly one-third reported depression and/or anxiety symptoms (5, 6). People also reported sleep disturbances (7, 8) and initiation of substance use or increased substance use (3, 5, 6) that can be a result of adverse mental health symptoms. One nationally representative study conducted during 2020 found that among adults 21 to 24, alcohol use increased while among adults 25 and older, cannabis use increased (9). In contrast, use of other illegal drugs and prescription drug misuse decreased among adults 25 years and older, while tobacco use decreased in both groups.

Some groups have been disproportionately affected, including people in unpaid caregiving roles, as parents and caregivers of adults more commonly report depression and/or anxiety symptoms compared to non-caregivers (5). In June of 2020, an analysis of a large non-probabilistic sample in the U.S. found that 27.2% reported being unpaid caregivers of adults (5). Also in 2020, 40% of families, defined as two or more people in the home,

lived with their own children.(10) In October of 2021, a nationally representative panel survey conducted by Pew Research Center showed that 23% of adults in the U.S. had both a parent over the age of 64 and a child younger than age 18 or provided financial support to an adult child (11). While caregiving was a risk factor for adverse mental health symptoms pre-pandemic (12, 13), increased caregiving intensity (i.e., amount of hours) and burden (i.e., perception of burden) (14, 15) and increased insomnia symptoms during the pandemic (16, 17) presented additional challenges. Those with dual caregiving responsibilities (parent-caregivers, also known as the “sandwich generation”); (18) may have experienced even greater challenges. For example, recent research revealed that caregivers with dual responsibilities had five times the odds of experiencing adverse mental health symptoms compared to non-caregivers, which was also higher than for parents or caregivers of adults only (19).

One potential effect of pandemic-related psychological distress and insomnia that has been shown in the literature is initiation, increase or continuance in the use of alcohol, tobacco and other substances to cope with stress (20, 21). Surveys showed that nearly one-fifth of adults in the United States reported new or increased substance use, inclusive of alcohol, early in the pandemic (6, 22). Caregivers reported increased alcohol consumption compared to non-caregivers, and both sleep quality and symptoms of insomnia were associated with alcohol consumption among caregivers of adults but not non-caregivers (23).

Perceived social support can reduce the perception of caregiving burden (24). Having someone to rely on for support for personal or emotional problems may be protective against adverse mental health symptoms in the context of the pandemic (19). However, data on caregivers seeking or receiving support show inconsistent results. Early in the COVID-19 pandemic, caregivers reported increases in seeking emotional social support (25). As the pandemic continued, another study found that nearly half of the caregivers sampled suggested that they received less social support in comparison to pre-pandemic levels after lockdown measures began (26). Research in the United Kingdom showed that 60% of caregivers experiencing symptoms of depression did not access support, and one-fifth reported no need for support (27). However, the reasons for not having sought support and whether caregivers were willing or had sought support were not assessed. Examining willingness to seek help through different support options, such as family, friends, professionals can inform ways to provide effective support for caregivers.

Thus, the current study examines coping behaviors among U.S. adults during the COVID-19 pandemic, stratified as: non-caregivers; parents only; unpaid caregivers of adults only; and parents and unpaid caregivers. Coping behaviors include (i) new or increased use of any substance, or use of substances in the past 30 days to cope with stress or emotions, and (ii) willingness to seek help for personal or emotional problems. Differences in proportion of parents and/or caregivers of adults reporting substance use is explored between: (i) individuals with or without insomnia, and (ii) individuals with or without depression and/or anxiety symptoms. Comparisons by caregiver type for sources from which they were likely to seek help are also presented. Finally, we evaluate the associations between perceptions about caregiving and: (i) substance use in the past 30 days and (ii) willingness to seek help. Findings from this study can help inform strategies to cope with caregiving-related stress

and any associated substance use, encourage help seeking, and promote wellbeing in parents and caregivers during public health emergencies.

Materials and Methods

Study design and participants

This study analyzed Waves 5 (December 2020) and 6 (February-March 2021) questionnaires from the COVID-19 Outbreak Public Evaluation (COPE) Initiative, a series of non-probabilistic internet-based surveys administered by Qualtrics, LLC (Provo, Utah, and Seattle, Washington, US). The waves consisted of 10,444 total respondents who were recruited to approximate population estimates for age groups, sex, race, and ethnicity based on 2019 American Community Survey estimates. Detailed information about participant recruitment is mentioned elsewhere (19). The study protocol was approved by Monash University (Protocol #24036). Consent was provided by the participants at the start of the study.

Outcome measures

Primary exposure for this report is caregiving status, i.e., not a caregiver, unpaid caregiver of adults, parent, or parent-caregiver. Within the survey, respondents also provided following information: self-reported demographic, socioeconomic information, education, employment status, and caregiving status. Caregivers of adults and parent-caregivers both specified reasons for caregiving, such as age-related health decline, a chronic medical condition, cognitive challenges, active case of COVID-19 disease, at risk of COVID-19 disease, mental health or substance use condition, or other reasons. Substance use was examined through two questions: “Have you started or increased using substances to help you cope with stress or emotions during the COVID-19 pandemic?” and “In the past 30 days, have you used any of the following to help you cope with stress or emotions during the COVID-19 pandemic?”. Substances assessed with the latter question by providing separate response options were alcohol, tobacco (cigarettes or electronic cigarettes such as JUULs and vape pens), marijuana (cannabis) (referred to as “cannabis” from here on), prescription drugs other than opioids used in any way not directed by a doctor, cocaine, methamphetamine, opioids (e.g., “prescription pain medications, oxycontin, fentanyl, or heroin”), and benzodiazepines (e.g., “alprazolam, diazepam, lorazepam, candy, or downers”).

The General Help-Seeking Questionnaire (GHSQ) examined willingness to seek help for personal or emotional problems (“yes” or “maybe” = 1 and “no” = 0, and willingness to seek help from different sources, such as an intimate partner, friend, parent, doctor, etc. (28; completed by respondents in the Wave 5). Responses were provided on a Likert scale of 1–7, with 5–7 (Likely-Extremely Likely) used to identify willingness to seek help from a particular source. Previous research has shown that GHSQ has high test-retest reliability (0.92) and good internal consistency (Cronbach’s alpha = 0.85) (28).

Covariates

Perceptions of caregiving impact were assessed among those who endorsed caregiving for adults or both parenting and caregiving responsibilities and were measured as level of

agreement with single items describing perceptions of the impact of caregiving using the Caregiver Intensity Index (CII, 29), with previous research indicating acceptable internal consistency with Cronbach's alpha ranging from 0.72 to 0.89 for the subscales, and 0.91 for the overall measure. Example items include "Feel underprepared for caregiver situations" and "Have someone to turn to for support". Insomnia symptoms and depression and/or anxiety symptoms were measured using the two-item Sleep Condition Indicator (SCI-2; 30) and the four-item Patient Health Questionnaire (PHQ-4; 31), respectively. These variables recorded as presence of insomnia symptoms based on cut off score of ≤2 out of 8 on SCI-2; (32), and presence of depression and/or anxiety symptoms using a cut off score of ≥3 out of 6 on either subscale of the PHQ-4; (31). Both questionnaires have acceptable to good internal consistency indicated by Cronbach's alpha (SCI-2 = 0.74; PHQ-4 = 0.85) (31,32).

Data analysis

All analyses were performed using R v4.1 (RStudio). Demographic quotas were set for sex, age, race, and ethnicity using questions and national U.S. adult population estimates from the 2019 American Community Survey. After the surveys were conducted, iterative proportional fitting and weight trimming were applied to the overall sample to match 2019 American Community Survey estimates for sex, age, and combined race/ethnicity. Rounded, weighted values are reported, including summary data as percentages and comparisons were conducted across caregiver role (i.e., non-caregivers; parents only; unpaid caregiver of adults only; and parent-caregivers). These weights were applied to all analyses. For all analyses, substances used in the past 30 days, originally assessed as separate responses to a single question, were grouped in the following four categories: (i) alcohol; (ii) tobacco; (iii) cannabis; and (iv) other substances, which included cocaine, methamphetamine, opioids (prescription pain medications, oxycontin, fentanyl, or heroin), benzodiazepines, and prescription drug (other than opioids).

Differences in the proportion of parents, caregivers of adults, and parent-caregivers reporting substance use as a coping strategy between: (i) individuals with or without insomnia, and (ii) individuals with or without depression and/or anxiety and differences in potential sources for willingness to seek help across caregiving roles were examined using Z-tests.

Logistic regression was used to calculate adjusted odds ratios (aORs) for the outcomes of new or increased use of any substance, use of alcohol, tobacco, cannabis, and other drugs (i.e., cocaine, methamphetamine, opioids, benzodiazepines, prescription drug (other than opioids)) in the past 30 days to cope with stress or emotions during the pandemic as separate outcomes and willingness to seek help for personal or emotional problems, stratified by caregiving role. Adjusted odds ratios were also calculated among caregivers of adults and parent-caregivers for associations between perceptions about caregiving based on single items on the CII and (i) use of substances in the past 30 days to cope with stress or emotions, and (ii) willingness to seek help for a personal or emotional problem. All models included survey wave, sex, age group, combined race and ethnicity, sexual orientation, disability status, education, urbanicity, employment, insomnia, and depression or anxiety symptoms as covariates. For use of any substance and help-seeking based on caregiving status analysis that included "other substances," a sensitivity analysis was undertaken excluding

benzodiazepines, as they may be prescribed for management of stress or anxiety. Results of the sensitivity analysis are included in Supplementary Table 1. In addition, Supplementary Table 2 includes reasons for caregiving (caregiver of adults, or parent-caregivers) and use of any substance in the past 30 days to cope with stress or emotions.

Results

Overall, 42.6% of the 10,444 U.S. adult respondents identified as parents, unpaid caregivers of adults, or both (parent-caregivers; Table 1). Parent-caregivers had the highest percentage of new or increased substance use to cope with stress or emotions during the COVID-19 pandemic (65.4%) as well as the highest percentage endorsing each type of substance use in the past 30 days. This group also showed the highest percentage of anxiety or depression symptoms (70.6%) and the highest percentage of employed respondents (83.1%). Caregivers of adults only showed the highest percentage of insomnia symptoms (26.1%).

Substance Use in caregivers based on insomnia or mental health symptoms.

A significantly higher proportion of parent-caregivers with insomnia symptoms reported new or increased substance use and use of substances in the past 30 days ($p < .001$), including alcohol ($p < .01$), tobacco ($p < .001$), cannabis ($p < .001$), and other substances ($p < .001$), compared to parent-caregivers without insomnia (Figure 1). Similarly, a significantly higher proportion of parents and unpaid caregivers of adults with insomnia reported use of some, but not all, substance use outcomes (parents: tobacco [$p < .001$], cannabis [$p < .001$], other substances [$p < .001$], caregivers of adults [new or increased substance use [$p < .01$], alcohol [$p < .001$], cannabis [$p < .001$]). In comparison to individuals without depression and/or anxiety symptoms, caregivers with depression and/or anxiety symptoms were significantly more likely to report use of substances to cope with stress or emotions during the pandemic across caregiver types and substance use outcomes (all comparison $p < .001$; (Figure 1).

Sources for willingness to seek help

Most of the sample reported willingness to seek help for personal or emotional problems from family, friends, or professional sources of support, such as mental health professional, text, or phone helpline. Parent-caregivers had the highest percentage of respondents reporting willingness (87.5%, Table 1). As shown in Figure 2, parent-caregivers had significantly higher percentages of respondents who were “likely” or “extremely likely” to seek help from a friend (74.0%), parent (68.7%), mental health professional (69.5%), phone or text helpline (68.7%), or doctor (68.3%) compared to all other groups (all comparison $p <.001$). Percentages of parents and parent-caregivers did not differ significantly in willingness to seek help from partners (76.3% and 73.3%, respectively).

Use of any substance and Help-seeking based on caregiving status.

Compared with non-caregivers, parents, unpaid caregivers of adults, and parent-caregivers had higher odds of reporting new or increased use of any substance in the 30 days preceding completion of the survey compared to non-caregivers [parent adjusted odds ratio (aOR): 1.62; 95% CI=1.23–2.13; adult caregiver aOR: 1.69; 95% CI=1.32–2.17; parent-caregiver

aOR: 7.19; 95% CI=5.87–8.83 Table 2]. Compared with non-caregivers, caregivers of adults and parent-caregivers had greater odds of reporting alcohol (, adult caregiver aOR: 1.42 95% CI: 1.14–1.77, parent-caregiver aOR: 1.86 95% CI: 1.53–2.26). Compared with non-caregivers, parents, caregivers of adults and parent-caregivers had greater odds of reporting tobacco (parent aOR: 1.65 95% CI: 1.30–2.08 , adult caregiver aOR: 1.57 95% CI: 1.26–1.96, parent-caregiver aOR: 2.93 95% CI: 2.39–3.59), cannabis (parent aOR: 1.63 95% CI: 1.20–2.22, adult caregiver aOR: 1.61 95% CI: 1.22–2.13, parent-caregiver aOR: 2.05 95% CI: 1.62–2.58), and other substance(s) (parent aOR: 1.80 95% CI: 1.31–2.47, adult caregiver aOR: 1.66 95% CI: 1.20–2.31, parent-caregiver aOR: 4.01 95% CI: 3.15–5.09) in past 30 days to cope with stress or emotions, with the exception of alcohol use among parents. Willingness to seek help was associated with higher odds or new or increased substance use and use of cannabis (aOR: 1.69 95% CI: 1.20–2.38) and other substances (aOR: 2.05 95% CI: 1.48–2.84) in the past 30 days.

Compared with non-caregivers, being a parent-caregiver was associated with higher odds of greater willingness to seek help for a personal or emotional problem (aOR=2.39; 95% CI=1.76–3.24).

Substance use and Perceptions of Caregiving

Unpaid caregivers of adults and parent-caregivers who agreed with statements such as, “I resent what I have to do as a caregiver,” “I have had to cut down on my own living expenses because I am helping pay for things” and “Family disagreements about not enough help” had higher odds of alcohol, tobacco use, cannabis use, and other substances (Figure 3). “Feeling underprepared for caregiver situations” and “Caring situation was unpredictable” were associated with higher odds of alcohol, tobacco, and other substances. By contrast, individuals who endorsed “I feel that I am doing a good thing being a caregiver” had lower odds of using other substances. Individuals who indicated they had someone to turn to for support had higher odds of willingness to seek help for personal or emotional problems.

Discussion

Approximately 2 in 5 individuals from the 10,444 U.S. adults surveyed in this demographically representative sample assembled with non-probabilistic quota sampling and post-survey weighting identified as parents and/or unpaid caregivers of adults. Nearly two-thirds of parent-caregivers (i.e., the sandwich generation) reported new or increased substance use as an attempt to cope with stress or emotions during the pandemic.Multivariable models revealed that parents, caregivers of adults, and parent-caregivers had higher odds of new or increased substance use in the past 30 days compared to non-caregivers. Of particular concern, parent-caregivers had approximately 7 times the odds of new or increased substance use compared to non-caregivers and had higher odds of reporting use of all types of substance use as a coping strategy for stress or emotions. The pandemic may have resulted in greater parenting or caregiving responsibilities, difficulty balancing work and caregiving with changes in routines, or reduced social support (26, 33). Identifying unmet needs of individuals with dual caregiving responsibilities and providing support to offset their stress have the potential to improve health and wellbeing. Although

the COVID-19 public health emergency ended in May of 2023 (34), the population of the U.S. continues to age and in 2021 approximately 38 million family caregivers provided an estimated 36 billion hours of care (35). Additionally, in 2021, and nearly one in four adults had a parent over 65 and were raising a child or financially helping an adult child (11).

Our study also showed a higher proportion of parent-caregivers, parents and caregivers of adults reported some substance use outcomes if they had symptoms of insomnia. Previous research has shown that caregivers with sleep difficulties, particularly sleep interruption due to caregiving, faced increased risk of workplace productivity impairment (36). Self-help resources may help caregivers identify how they are feeling and how to integrate self-care into their caregiving routines (37). As well, Cognitive Behavioral Therapy (CBT) has been shown to be effective for reducing stress among people caring for people with dementia (38).

This study also found that among parent-caregivers and caregivers of adults only, perceptions of impact of caregiving, reflected by family disagreements about help and having to decrease living expenses were associated with higher odds of using substances. These findings support earlier reports of intensified psychological distress, caregiving workload (14, 39, 40) and financial difficulties during the pandemic (41). Delivery of essential items such as groceries, and assistance navigating healthcare systems may provide much needed support (33, 42, 43). Expanding the scope of respite care to include these services may accelerate their use and adoption and help to decrease stress among parents-caregivers.

Most parents and caregivers reported willingness to seek help for personal or emotional problems. The sandwich generation (18) reported the highest percentages of willingness to seek help from friends, parents, mental health professionals, phone and text helplines, and doctors. However, it is unknown whether they sought help, and greater willingness to seek help may reflect greater need. Additionally, the finding that many parent-caregivers reported willingness to seek help from parents warrants further investigation as it is unclear if their parent is the adult for which they are caring. Most parents and caregivers reported paid employment in addition to their caregiving roles, which can impact the ability to seek help. Future research could explore whether help-seeking intentions reflect need, and whether receipt of help influences other coping behaviors such as substance use.

Strategies to help ameliorate using substances to cope can include timely screening for risky substance use behavior, and avenues for help-seeking. Screening, Brief Intervention, and Referral to Treatment (SBIRT) is a public health approach to intervene early among those with substance use disorders (SUDs) or at risk for developing them; an advantage of the SBIRT is that it is appropriate for people with SUDs and people who do not yet meet the criteria for SUDs (44). Patients with little to no risky behavior related to substance use (i.e., behavior that increases the likelihood of physical, mental, or social harm) may benefit from universal prevention measures, those with moderate risk behavior may be helped through brief interventions, while those with the highest risk behavior may be best served through brief treatment. For more tailored strategies for families with children, substance use and use disorder can be addressed through family-centered approaches. These can provide

comprehensive treatment and support for each person in the family, including the person seeking substance use disorder treatment (45).

In addition, expanding telemedicine services could aid in prevention and management of substance use in both parenting and caregiving populations, particularly during public health emergencies (46, 47). Special consideration is important for providing mental health outreach or substance use treatment for members of racial and ethnic minority groups, since these individuals may be less likely to receive treatment through telemedicine visits or opt for psychosocial support due to persistent systemic social inequities (6, 48, 49). While the rates of parenting and caregiving appeared comparable across diverse racial and ethnic communities in our study, it is critical to focus on equity in substance use prevention, treatment planning, implementation, and evaluation.

Caregivers reporting substance use to cope may also need support with adverse mental health symptoms and insomnia. Nearly three-fourths of the adults with parenting and adult caregiving responsibilities in this study reported symptoms of a mental health condition such as depression or anxiety, and one in four reported insomnia. Given that substances may be used as a depressant or stimulant to manage sleep difficulties and daytime dysfunction (50, 51), sleep education can be a focus for public health messaging. CBT for Insomnia, adapted for caregivers might provide much needed non-pharmacological support for sleep, mental health and night time hypervigilance that is associated with caregiving (52–54).

Limitations

This study has limitations, including that it is a non-probabilistic survey. The study is cross-sectional, precluding assessing causality, and did not fully characterize the nature of parenting roles (e.g., age and number of children, length of caregiving role, background in healthcare or caregiving, additional caregivers, and child health status). The study used odds ratios, and overinterpretation of the risk must be avoided. Second, these English-language surveys might not be representative of U.S. adults, although demographically informed quota sampling and weighting were employed to minimize demographic differences between the sample and population. Third, self-reported substance use is subject to recall and social desirability biases. Opioid use in this survey did not differentiate between prescription pain medication and illicit opioids. However, respondents were asked to select substances they used to “cope with stress or emotions during the pandemic”, suggesting potential misuse of prescription pain medications. For benzodiazepines, the survey did not identify the reason for prescription, precluding the assumption that it was misused. To address this, sensitivity analyses were undertaken, excluding benzodiazepines (supplementary table 1). Results were similar with or without the exclusion of benzodiazepines, warranting further research into the potential misuse of these prescription medications in caregiving populations. Finally, while willingness to seek help was measured, it is unknown whether respondents sought or were able to seek help, limiting the interpretation of results.

Conclusion

Parents and unpaid caregivers of adults play critical roles in providing hands-on support for children and adult care-recipients, and as the population ages, caregivers may play heightened societal roles in non-hospital support for community members, which may be associated with stress and caregiver intensity. Support to help those at risk for a substance use disorder and treat those with a substance use disorder are critical. Encouragingly, a majority of caregivers and non-caregivers in this study were willing to seek help, with the highest percentage among parent-caregivers. Clinicians, including pediatricians, may consider asking patients about family situations more broadly to help identify people who may be experiencing stress related to caregiving. Further research can identify whether substance use trends among caregivers changed as the pandemic evolved. Caregivers, in particular those who are parent-caregivers, may benefit from systematic screening and intervention for sleep disturbances and adverse mental health symptoms, which were associated with higher odds of all categories of substance use among them in this study, to potentially alleviate some of the risk Multimodal interventions that include psychoeducation, therapist support, occupational therapy and respite care are important to improve the wellbeing of caregivers as the U.S. population continues to age and nearly one in four adults are part of the sandwich generation.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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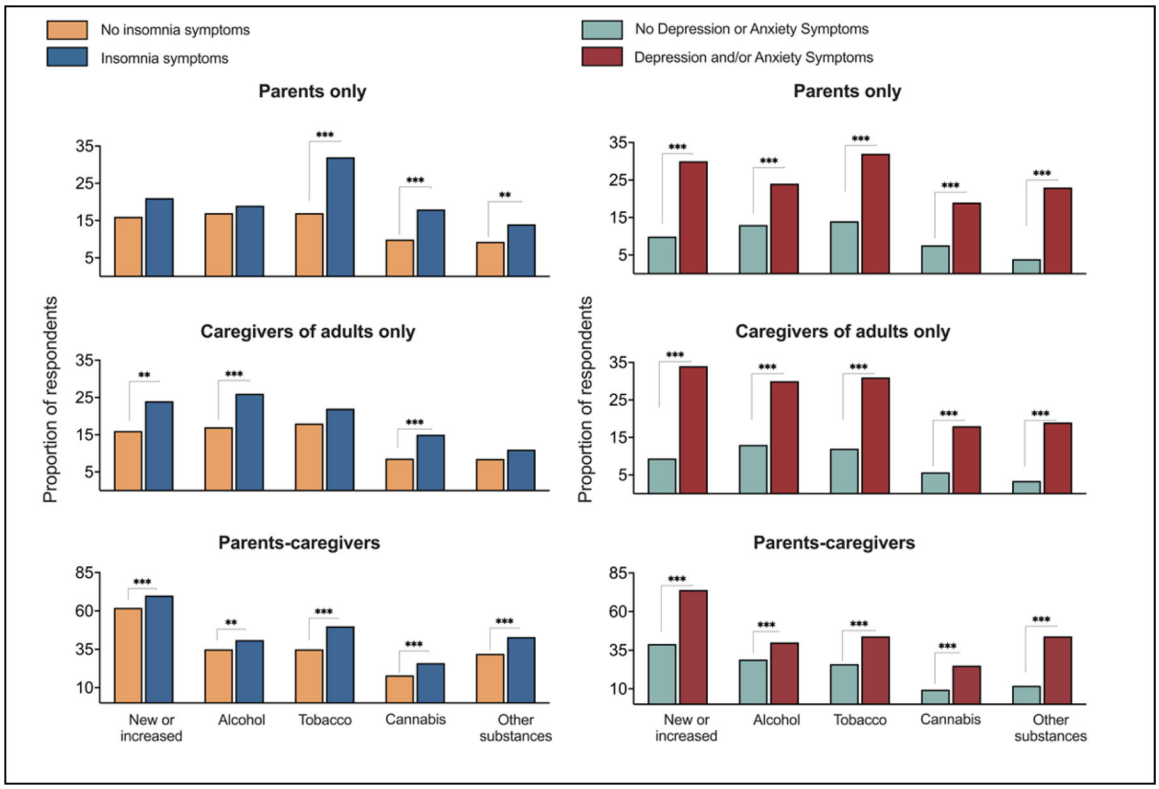

Figure 1:

Proportion of parents and/or caregivers endorsing new or increased use of substances to cope with emotions based on: (i) presence of insomnia symptoms (i.e. in the past month to what extent has poor sleep has troubled the respondent; and how many nights have they experienced a problem with their sleep), or (ii) symptoms of depression (i.e. in the last two weeks if the respondent has had little interest in doing things; feeling down, depressed or hopeless) and/or anxiety (i.e. feeling nervous, anxious or on edge; unable to stop or control worrying). [n=10,4440].

*p<.05, ** p <.01, *** p <.001

For most analyses, there was a significant difference between individuals reporting insomnia symptoms versus individuals that did not report insomnia symptoms. Parents only reported significantly higher proportions of tobacco and cannabis use, and use of other substances to cope with stress or emotions, but not new or increased use of substances or alcohol use. Caregivers of adults only with insomnia reported significantly higher proportions of new or increased substance use, alcohol and cannabis use to cope with stress or emotions, but tobacco sue or use of other substances. Compared to parents-caregivers without insomnia, parents-caregivers with insomnia reported higher proportion of new or increased substance use, alcohol, tobacco, and cannabis use, and use of other substances to cope with stress or emotions (all p <.05). For all analyses, there was a significant difference between individuals reporting depression or anxiety symptoms versus individuals that did not report these symptoms. In particular, compared to parents-caregivers without depression or anxiety symptoms, parents-caregivers with depression or anxiety symptoms reported higher

proportion of new or increased substance use, alcohol, tobacco, and cannabis use, and use of other substances to cope with stress or emotions (all p<.001)

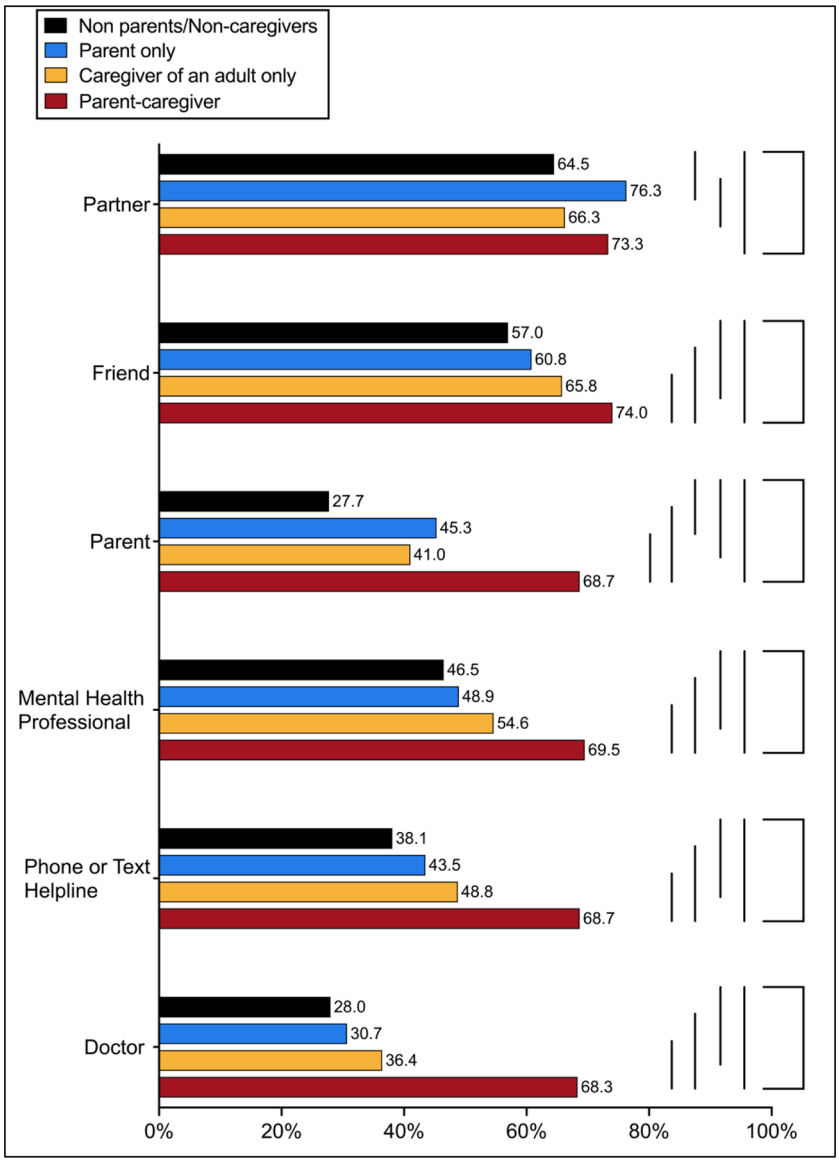

Figure 2.

Caregiver reported sources that they were “likely” or “extremely likely” to seek help for a personal or emotional problem. “]” indicates significant difference between non parent/non-caregiver v/s one or more caregiving groups and “|” indicates significant difference between two groups [n=4,187].

For all analyses, there was a significant difference between non parents/non-caregivers and one or more caregiver groups ($p<.001$). Parents indicated significantly greater willingness to seek help from partners compared to non parents/non-caregivers ($p<.001$) and caregivers of adults only ($p=.02$). Compared to all other groups, parents-caregivers were significantly more likely to indicate willingness to seek help from friends, parents, phone or text helpline, mental health professionals and doctors (all comparisons $p<.001$ with the except of parent-caregivers compared to caregivers of adults only for willingness to seek help from friends [$p=0.02$]). Other significant associations are presented in the figure.

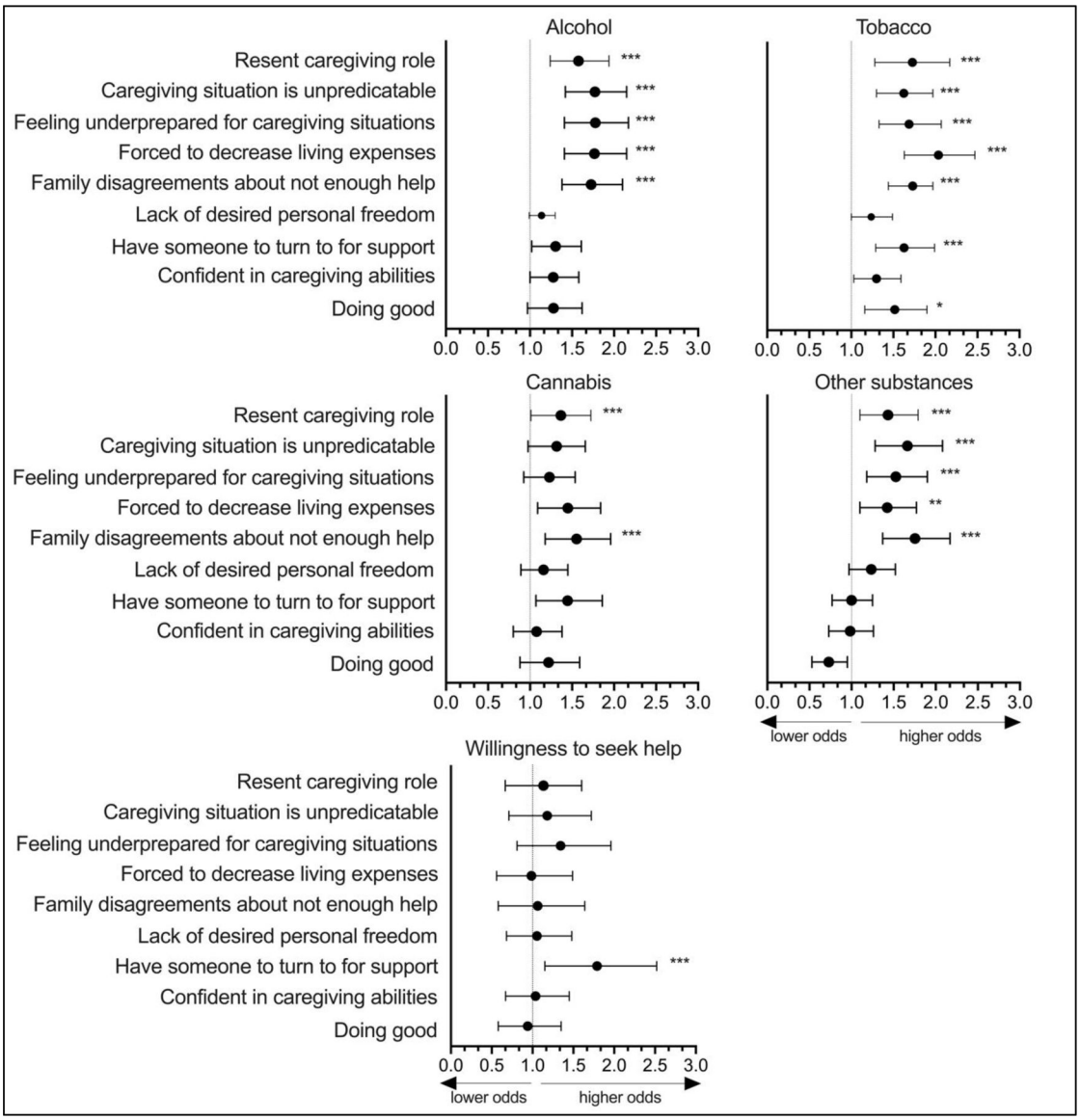

Figure 3 –.

Caregiving perceptions associated with the use of alcohol, smoking, cannabis, cocaine and/ methamphetamine and/or prescription substances other than opioids in the past 30 days to cope with stress or emotions during the pandemic, and willingness to seek help for a personal or emotional problem. Adjusted odds ratios presented. Questions about perceptions were presented to respondents who indicated that they were either unpaid caregivers of adults only, or parents and caregivers of adults. [n=3155 for figures 2a-2d; n=1522 for figure 2e].

** p <.01, *** p <.001

Two negative perceptions around caregiving, *resentment towards caregiving role* and *family disagreements about not getting enough help*, were associated with higher odds of reporting use of all four substances in the past month to cope with stress or emotions (all p <.001). *Caregiving situation is unpredictable, feeling underprepared for caregiving situations* and

forced to decrease living expenses was associated with higher odds of reporting alcohol and tobacco use, and use of other substances, but not cannabis use. By contrast, *having some to turn in for support* was associated with higher odds of reporting willingness to seek help ($p<.001$).

Table 1.

Characteristics of respondents by caregiver role[a] (N=10444)

Characteristics	Total, n (%)	Nonparents/ Non-caregivers, n (%)	Parents only, n (%)	Caregivers of adults only, n (%)	Parent-caregivers, n (%)
Total	10444	5991 (57.4)	880 (8.4)	1175 (11.2)	2398(23)
Age *(in years Mean ± SD)*	49.8 ±17.5	55.1±17.1	44.2±15.2	48.9±17.2	37.1±11.7
Age group *(in years)*					
18–24	1253 (12.0)	551 (9.2)	92 (10.5)	146 (12.4)	464 (19.3)
25–44	3623 (34.7)	1388 (23.2)	429 (48.8)	395 (33.6)	1411 (58.8)
45–64	3434 (32.9)	2303 (38.4)	267 (30.3)	428 (36.4)	436 (18.2)
≥65	2134 (20.4)	1749 (29.2)	92 (10.5)	206 (17.5)	87 (3.6)
Sex at Birth					
Female	5227 (50.0)	3193 (53.3)	519 (59.0)	617 (52.5)	898 (37.4)
Male	5217 (50.0)	2798 (46.7)	361 (41.0)	558 (47.5)	1500 (62.6)
Race and ethnicity					
White, non-Hispanic	6336 (60.7)	3684 (61.5)	553 (62.8)	715 (60.9)	1384 (57.7)
Black, non-Hispanic	1250 (12.0)	720 (12.0)	104 (11.8)	136 (11.6)	290 (12.1)
Asian, non-Hispanic	591 (5.7)	411 (6.9)	43 (4.9)	66 (5.6)	71 (3.0)
Other race or multiple races	383 (3.7)	221 (3.7)	37 (4.2)	61 (5.2)	65 (2.7)
Hispanic or Latino, any race, or races	1884 (18.0)	955 (15.9)	142 (16.1)	197 (16.8)	589 (24.6)
Education					
Some High School	382 (3.7)	243 (4.1)	35 (4.0)	37 (3.1)	78 (3.3)
High School Graduate	2118 (20.3)	1278 (21.3)	183 (20.8)	235 (20.0)	362 (15.1)
Some College	207 (2.0)	1199 (20.0)	181 (20.6)	235 (20.0)	327 (13.6)
Associate degree	1081 (10.4)	681 (11.4)	123 (14.0)	141 (12.0)	176 (7.3)
Bachelor’s Degree	2666 (25.5)	1519 (25.4)	219 (24.9)	311 (26.5)	636 (26.5)
Master’s Degree	1621 (15.5)	1002 (16.7)	108 (12.3)	166 (14.1)	630 (26.3)
Professional or doctoral degree	504 (4.8)	319 (5.3)	181 (20.6)	235 (20.0)	93 (3.9)
Employment					
Employed	5810 (55.6)	2643 (44.1)	517 (58.8)	657 (55.9)	1993 (83.1)
Unemployed	1797 (17.2)	1154 (19.3)	213 (24.2)	220 (18.7)	210 (8.8)

Characteristics	Total, n (%)	Nonparents/ Non-caregivers, n (%)	Parents only, n (%)	Caregivers of adults only, n (%)	Parent-caregivers, n (%)
Retired	2512 (24.1)	2002 (33.4)	122 (13.9)	270 (23.0)	118 (4.9)
Student	325 (3.1)	195 (3.3)	25 (2.8)	37 (3.1)	68 (2.8)
Total Household Income					
Less than $25,000	2069 (19.8)	1326 (22.1)	167 (19.0)	238 (20.3)	338 (14.1)
$25,000-$49,999	2222 (21.3)	1364 (22.8)	212 (24.1)	263 (22.4)	383 (16.0)
$50,000-$99,999	2803 (26.8)	1688 (28.2)	235 (26.7)	311 (26.5)	569 (23.7)
$100,000-$199,999	2277 (21.8)	1009 (16.8)	184 (20.9)	239 (20.3)	845 (35.2)
$200,000 or more	540 (5.2)	205 (3.4)	42 (4.8)	62 (5.3)	231 (9.6)
Prefer not to say	533 (5.1)	399 (6.7)	40 (4.5)	62 (5.3)	32 (1.3)
New or Increased Substance Use	2465 (23.6)	507 (8.4)	165 (18.0)	223 (18.9)	1570 (65.4)
Substance Use in the Past 30 Days[##]					
Alcohol	1911 (18.3)	683 (11.4)	150 (17.0)	227 (19.3)	851 (35.5)
Tobacco use	1874 (17.9)	577 (9.6)	171 (19.4)	212 (18.0)	914 (38.1)
Cannabis	1066 (10.2)	332 (5.5)	111 (12.6)	135 (11.5)	488 (20.4)
Prescription drugs other than opioids	192 (1.8)	64 (1.1)	17 (1.9)	21(1.7)	90 (3.7)
Cocaine	365 (3.5)	44 (0.7)	18 (2.1)	25 (2.1)	274 (13.2)
Methamphetamine	485 (4.6)	60 (1)	35 (3.9)	37 (3.1)	353 (14.7)
Opioids	448 (4.2)	68 (1.1)	25 (2.8)	48 (4.1)	288 (12.0)
Benzodiazepines	468 (4.4)	86 (1.4)	31 (2.7)	44 (3.7)	307 (12.8)
Anxiety or depression symptoms [b]	3788 (36.3)	1325 (22.1)	313 (35.6)	458 (39.0)	1692 (70.6)
Insomnia symptoms	2199 (17.9)	1087 (18.1)	210 (23.9)	307 (26.1)	596 (25.0)
Willingness to seek help [c]	4205 (80.3)	2410 (78.2)	345 (77.6)	432 (78.3)	1018 (87.5)
Perceptions of Caregiver Intensity [d]					
Caring situation is unpredictable	-	-	-	441 (37.5)	1379 (57.5)
Feeling underprepared for caregiver situations	-	-	-	307 (26.1)	1302 (54.2)
Forced to decrease living expenses to pay for things	-	-	-	371 (31.5)	1387 (57.8)
Have family disagreements about not helping enough	-	-	-	357 (30.3)	1316 (54.8)
Lack of desired personal freedom	-	-	-	477 (41)	1304 (54.3)
Have someone to turn to for support	-	-	-	723 (61.5)	1528 (63.7)

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Characteristics	Total, n (%)	Nonparents/ Non-caregivers, n (%)	Parents only, n (%)	Caregivers of adults only, n (%)	Parent-caregivers, n (%)
Confident in caregiving abilities	-	-	-	673 (57.2)	1578 (65.8)
Doing good	-	-	-	865 (73.6)	1677(69.9)
Resent caregiving role	-	-	-	213 (18.1)	1135 (52.8)
Reasons for Caregiving [e]					
Age related decline	1062 (10.2)	-	-	478 (40.7)	584 (24.4)
Cognitive challenges	525 (5.0)	-	-	187 (15.9)	338 (14.1)
Chronic conditions	979 (9.4)	-	-	303 (25.8)	675 (28.1)
Acute condition	402 (3.8)	-	-	118 (10.0)	402 (16.8)
Mental health or substance use	731 (7.0)	-	-	161 (13.7)	570 (23.8)
Active case of COVID-19 disease	766 (7.3)	-	-	102 (8.7)	664 (27.7)
Risk of COVID-19 disease	833 (8.0)	-	-	189 (16.1)	643 (26.8)
Other reasons	319 (3.1)	-	-	164 (14.0)	155 (6.5)

Notes:

[##]New or increased use of any substance to cope with stress or emotions during the pandemic in the past 30 days (at the time of data collection). For specific substances, the question referred to the use of any substance in the past 30 days to cope with stress or emotions during the pandemic. All data weighted for sex, age, and ethnicity (Source: US Census 2019 American Community Survey).

[a]Parents and unpaid caregivers of adults were self-identified. Parents were defined as persons who provided unpaid care to relatives or friends aged <18 years to help them take care of themselves at any time in the last 3 months. Unpaid caregivers of adults were defined as persons who had provided unpaid care to relatives or friends aged ≥18 years to help them take care of themselves at any time in the last 3 months. Respondents answered questions about parenting and caregiving separately. Respondents were categorized as parents only, caregivers (of adults) only, parents-caregivers (persons in both roles), or nonparents/non-caregivers. Weighted numbers and percentages might not sum to expected values because of rounding. Unweighted numbers and percentages for key demographic variables were as follows: survey wave (December 2020: 5,188 [49.7%]; February–March 2021: 5,256 [50.3%]), gender (female: 5,429 [52.0%]; male: 4,958 [47.5%]; transgender: 35 [0.3%]; none of these: 22 [0.2%]), age group (18–24 years: 867 [8.3%]; 25–44 years: 3,681 [35.2%]; 45–64 years: 2,994 [28.7%]; ≥65 years: 2,902 [27.8%]), and race/ethnicity (non-Hispanic White: 7,737 [74.1%]; non-Hispanic Black: 1,058 [10.1%]; non-Hispanic Asian: 529 [5.1%]; non-Hispanic other or multiple races: 353 [3.4%]; Hispanic or Latino: any race or races, 767 [7.3%]).

[b]Symptoms of anxiety and depression were measured using Patient Health Questionnaire – 4 items; Insomnia was measured using Sleep Condition Indicator – 2 items.

[c]Derived from General Help Seeking Questionnaire. The questionnaire was only presented to respondents the December Wave (n=5239, weighted).

[d]Archangels Caregiver Intensity Index was only completed by unpaid caregivers of adults or both parent-caregiver (n=3573). Items for questionnaire are scored on a five-point scale.

[e]Unpaid caregivers for adults could select multiple options for reasons for caregiving. Responses were dichotomized to disagree/neutral (1, 2, 3), or agree (4–5). Responses presented here reflect ‘agree.’

Table 2.

Adjusted odds ratios for associations between caregiving status, substance use-related outcomes and willingness to seek help for a personal or emotional problem

	Outcomes[a]					
	New or Increased Substance Use ## (n=2206)	Substance Use in Past 30 days ###				Help seeking####
	Adjusted odds ratios (95% CI)					
Characteristics		**Alcohol (n=1911)**	**Tobacco (n=1874)**	**Cannabis (n=1066)**	**Other substances[b] (n=1195)**	**Willingness to seek help (n=4187)**
Caregiving role [c]						
Parent only	1.62*** (1.23–2.13)	1.17 (0.91–1.51)	1.65*** (1.30– 2.08)	1.63** (1.20–2.22)	1.80*** (1.31–2.47)	1.06 (0.79–1.43)
Adult caregiver only	1.69*** (1.32–2.17)	1.42** (1.14–1.77)	1.57*** (1.26–1.96)	1.61*** (1.22–2.13)	1.66*** (1.20–2.31)	1.07 (0.80–1.45)
Parent-caregiver	7.19*** (5.87–8.83)	1.86*** (1.53–2.26)	2.93*** (2.39–3.59)	2.05*** (1.62–2.58)	4.01*** (3.15–5.09)	2.39** (1.76–3.24)
Willingness to seek help	1.68** (1.18–2.39)	1.16 (0.90–1.49)	1.24 (0.93–1.65)	1.69** (1.20–2.38)	2.05*** (1.48– 2.84)	-

##New or increased use of any substance in the past 30 days to cope with stress or emotions during the pandemic (versus no new or increased use)

###Use in any substance in the past 30 days (at the time of data collection) to help cope with stress or emotion during the pandemic (versus no use in the past 30 days). Models with all unpaid caregiver statuses included 10,017 respondents because persons who answered “prefer not to say” for sexual orientation or disability status and those who reported invalid zip codes were excluded.

####Willingness to seek help for personal or emotional problems as measured by the General Help-Seeking Questionnaire where (“yes” or “maybe”) = 1 and “no” = 0.

[a]Weighted multivariable logistic regression models were used to estimate aORs for each adverse mental health symptom, with survey wave, gender, age group, race/ethnicity, sexual orientation, disability status, education, region, urbanicity, and employment (work hours per week and remote work percentage), insomnia and depression or anxiety symptoms as covariates.

[b]Included cocaine, methamphetamine, opioids, benzodiazepines, and prescription drug (other than opioids).

[c]Referent group for all odds ratios are non-caregivers and non-parents.

*p<.05

**p <.01

***p <.001