

Understanding the Pandemic Experience for People With a Preexisting Mental Health Disorder

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The COVID-19 pandemic has led to increased rates of mental health disorders. Individuals with and without preexisting psychiatric disorders were surveyed about their experiences during the pandemic. Sexual minority status was also examined with respect to psychological and physical distress. Therapists with private practices recruited their clients to participate in the study; additional participants were recruited from a participant pool at a northeastern university. Participants ($n = 183$) completed questionnaires on SurveyMonkey that included demographic questions, stress-related questions as measured by the Impact of Events Scale–Revised, physical symptoms as measured by the Cohen and Haberman Inventory of Physical Symptoms, anxiety and depression as measured by the Patient Health Questionnaire–4, and coping as measured by the Brief COPE Inventory. A 2 (Sexual Minority Status) \times 2 (Preexisting Diagnosis) multivariate analysis of variance revealed that those participants with a self-disclosed preexisting psychiatric disorder and those who identified as lesbian, gay, bisexual, transgender, and queer/questioning showed more stress-related symptoms, anxiety and depression, physical complaints, and maladaptive coping behaviors. Those participants with a preexisting psychiatric condition were higher in anxiety, depression, physical symptoms, and maladaptive coping behavior. Those who identified as a sexual minority were higher in anxiety, depression, posttraumatic stress, physical symptoms, and maladaptive coping. There was also an interaction effect on depression, anxiety, and physical symptoms. Those who were both a sexual minority and had a preexisting psychiatric condition were highest in these variables.

Keywords: COVID-19 pandemic, mental health, personal trauma, coping, sexual minorities

The COVID-19 pandemic has affected both physical and mental health and well-being (Fiorillo & Gorwood, 2020). Many individuals are dealing with the impact of the pandemic, putting those with preexisting mental health issues at further risk for the development of new symptoms or the exacerbation of preexisting symptoms. As a result, mental health providers expect to see an increase in serious disorders including panic disorder, obsessive–compulsive disorder, acute stress disorder, major depressive disorder, and trauma-related disorders (Fiorillo & Gorwood, 2020). Fitzpatrick et al. (2020) reported on an increase in fear associated with the pandemic within the United States in hot spots

and outbreak areas. Specifically, they found that females, Asians, Hispanics, foreign-born individuals, families with children, married persons, and individuals newly unemployed or furloughed due to the pandemic all reported far greater rates of distress as compared with other demographics.

In addition, Cao et al. (2020) found that students in China experienced more worries and anxiety related to the COVID-19 pandemic when they were living alone as compared with living with their parents and when they were worried about academic delays and the impact on their daily life. Students experienced higher levels of anxiety when they were from rural areas, their families were without a steady income, or they knew someone who was infected with the COVID-19 virus. Hoerger et al. (2020) found, through an analysis of Google trends, that he could forecast mental health symptoms and issues by downloading data on search term frequency. They found that symptoms of everyday worry and anxiety spiked from April 2019 through April 2020, concluding that it was a forewarning of a transition to clinical symptoms of anxiety. Other studies have shown that an increase in loneliness, especially for young women, was associated with an increase in depression

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(Lee et al., 2020). The impact of the pandemic on mental health in the general, global population appears to be quite high with many individuals meeting the criteria for a psychiatric disorder, for example, anxiety, depression, and trauma disorders (Xiong et al., 2020).

As the psychological community continues to identify the risk for psychiatric symptoms and disorders in individuals without a prior history, there is also concern that those with preexisting psychiatric conditions may be at an increased risk with the additional stress associated with the pandemic. Previous studies on the psychological effects of a past epidemic found that psychiatric disorders increased in prevalence following the SARS outbreak for Toronto hospital workers, who were found to have more risk when they had a previous history of psychiatric illness (Lancee et al., 2008).

In another study, Alonzi et al. (2020) found that individuals with preexisting psychiatric and mental health conditions showed higher levels of anxiety and depression in response to the pandemic. Kwong et al. (2020) used longitudinal data to show that both anxiety and depression were greater in those with preexisting mental health conditions as well as medical conditions for younger people, women, and individuals who were experiencing socioeconomic problems, even when they controlled for initial levels of anxiety and depression. Further, there is evidence from studies following Hurricane Katrina that those with preexisting mental illness were 6.8 times more at risk for developing a new disorder after living through a traumatic event (Sullivan et al., 2013). Additionally, if the preexisting condition was posttraumatic stress disorder (PTSD), that rate jumped to 11.9 times greater. The authors concluded that those with PTSD should be considered a high-risk group for poor outcomes following a disaster. In addition, when people are asked to quarantine during a traumatic event, they are often subjected to negative psychological effects due to social isolation (Hawryluck et al., 2004). Those with fewer resources were more impacted and that in combination with long periods of isolation, put individuals at risk for PTSD and depressive symptoms.

It has also been demonstrated that people who have mental health conditions are at greater risk for medical conditions and concerns (Filipčić et al., 2020), and simultaneously those with medical concerns are at risk for increased mental health concerns, both under normal circumstances (van Eck van der Sluijs et al., 2015) and during the COVID-19 pandemic (Xiong et al., 2020). Research into identifying and understanding the etiology of psychiatric disorders and the pathway from subthreshold symptoms to diagnosis has often included the experience of a psychosocial stressor (Herzig et al., 2012). Herzig et al. followed a group of primary care patients and following a psychosocial stressor, within a year, they developed a psychiatric disorder. Although stressors might impact patients differently, they are a consistent part of the puzzle. It is not unusual for traumatic stressors to place a person at risk for both psychiatric and physical symptoms and disorders (McFarlane, 2010).

Given the increased risk associated with the COVID-19 pandemic in those individuals with a preexisting mental health condition, we were interested in documenting their responses to the pandemic as well with one vulnerable subgroup—sexual minorities. Peterson et al. (2020) found that sexual minorities were vulnerable to the COVID-19 pandemic, reporting more mental health

symptoms including anxiety, depression, and peritraumatic stress reactions as compared with heterosexuals. These results are not unexpected given Meyer's (2003) minority stress model, which proposes health disparities among sexual minorities as a result of a lifetime of living in an environment that is incredibly stressful, with exposure to harassment, prejudice, discrimination, and stigma. Further, recent studies have also shown that sexual minorities suffer from more physical health disparities as compared with heterosexuals (Lick et al., 2013; DiPlacido & Fallahi, 2020).

We were interested in not only the mental health challenges that the individuals in our study are showing with the increased stress associated with the pandemic but also their methods of coping with those stressors. Inherently, stress disturbs a person's equilibrium and may impact the ability to cope (Gerrig & Zimbardo, 2002). Coping is a method used to manage stressors and in a recent study on mental well-being during the COVID-19 lockdown, Agha (2021) found that individuals who were able to manage their symptoms utilized different types of coping, as measured by the Brief COPE Inventory (Carver, 1997). Some coping styles on this inventory are considered adaptive, whereas others are considered maladaptive. Given the stressors associated with the pandemic, Agha found that women were more likely to use religion and denial as a coping strategy as compared with men who used active avoidance. Additionally, those suffering with depression, anxiety, and stress were more likely to use active avoidance.

Hypothesis 1: Those individuals with preexisting psychiatric conditions will show increased levels of anxiety, depression, stress-related symptoms, and physical complaints as compared with those without preexisting conditions; they will also demonstrate more maladaptive coping.

Hypothesis 2: Those individuals who identify as a sexual minority will similarly report higher levels of all of the dependent variables.

Hypothesis 3: We predict an interaction between preexisting psychiatric condition and identifying as a sexual minority, such that those individuals who have a preexisting psychiatric condition and identify as a sexual minority will show more mental health symptoms and more maladaptive coping than having a preexisting condition alone.

Method

Measures

Impact of Event Scale–Revised

Weiss and Marmar's (1997) Impact of Event Scale–Revised (IES-R) is a 22-item scale used to measure Intrusion, Avoidance, and Hyperarousal. The directions for this scale explicitly asked participants to respond how much they were distressed or bothered by the COVID-19 pandemic during the past 7 days. The Intrusion subscale has eight items that measure invading thoughts, feelings, and imagery, as well as nightmares, and dissociative-like reexperiencing. The Avoidance subscale contains eight items that measure numbing and avoiding feelings, situation, and thoughts. The Hyperarousal subscale includes six items that measure anger, irritability,

hypervigilance, increased startle response, and difficulty concentrating. Participants answered each item on a 5-point Likert scale (0 = *not at all* to 4 = *extremely*) and were instructed to answer based on the past seven days. A typical item on this scale includes, *I had waves of strong feelings about it*—a low score on this item may indicate that the participant is low in Intrusion. The items of each subscale were averaged for a total score.

Cohen–Hoberman Inventory of Physical Symptoms

Cohen and Hoberman's (1983) Inventory of Physical Symptoms (CHIPS) is a 33-item scale used to measure the following physical symptoms: seven items for Sympathetic/Cardiac, six items for Muscular, five items for Metabolic, five items for Gastrointestinal, four items for Vasovagal, two items for Cold/Flu, two items for Headache, and two items for Minor Hemorrhagic. Participants answered each item on a 5-point Likert scale (0 = *not at all* to 4 = *extremely*). Participants were instructed to answer based on the past 2 weeks *including the day they completed the survey*. A typical item on the scale includes *Back Pain*—a low score on this item may indicate that the participant is low in Muscular symptoms. All items are summed to provide a total score.

Patient Health Questionnaire–4

Kroenke et al.'s (2009) Patient Health Questionnaire–4 (PHQ-4) four-item scale was used to measure anxiety and depression. The PHQ-4 was designed as a screening tool to indicate the need for further analysis with two items for depression and two for anxiety. Participants answered each item on a 4-point Likert scale (0 = *not at all* to 3 = *nearly every day*). Participants were instructed to answer based on the last 2 weeks. A typical item includes, *Feeling nervous, anxious or on edge*—a low score may indicate that the participant is low in Anxiety. Items scores are totaled from 0–12, with psychological distress measured by: None (0–2), Mild (3–5), Moderate (6–8), Severe (9–12). On each subscale, a score of 3 or greater is considered positive for screening purposes, so a sum of each subscale was taken for each participant.

Brief COPE Inventory

Carver's (1997) Brief COPE Inventory is a 28-item scale divided into Adaptive or Maladaptive subscales. The Adaptive Coping subscale includes 16 items with a range of scores from 0 to 48, with a higher score indicating a greater use of active coping. These include the following subscales: Active Coping, Planning, Positive Reframing, Acceptance, Humor, Religion, Using Emotional Support, and Using Instrumental Support. The Maladaptive Coping subscale includes 12 items and a possible range of scores from 0 to 36, with higher scores indicative of a greater use of maladaptive coping. These include the following subscales: Self-Distraction, Denial, Venting, Substance Use, Behavioral Disengagement, and Self-Blame. Participants answered each item on a 4-point Likert scale (1 = *I have not been doing this at all* to 4 = *I have been doing this a lot*). Participants were instructed to answer each item based on their experiences with the pandemic and answer each question separately from the others. Each subscale consisted of two items that were averaged for a total score.

Self-distraction measures active attempts to use behaviors to distract from the stressor. Active Coping measures the process of consciously taking steps to rid the stressor. Denial measures the

process of refusing to accept that the stressor is real or occurring. Substance Use measures the practice of misusing substances such as alcohol or drugs as a way of coping with stress. Use of Emotional Support measures finding moral support, compassion, and sympathy. Use of Instrumental Support measures looking for advice, help, and information. Behavioral Disengagement measures coping as one would do in a different situation. Venting measures the practice of talking through what one is feeling as a form of relief. Positive Reframing measures the technique of viewing the stressor in a positive way. Planning measures the practice of thinking about the best way to handle the stressor in the future. Humor measures handling the stressor in a positive way by finding aspects of it that could be humorous. Acceptance measures understanding the reality of the situation in an attempt to arrange with the situation. Religion measures a form of emotional support. Self-blame measures the practice of blaming oneself for the stressor.

Table 1 includes a reliability analysis for all measures used in the study.

Procedure

The survey was developed using SurveyMonkey (<https://www.surveymonkey.com>) and was approved by the Institutional Review Board at a Northeastern University. Participants were recruited from two different sources. The first included therapists with private practices who recruited their clients to participate in the study. Clients who participated did not receive compensation for their participation. The second group consisted of students who completed the survey for course credit. Informed consent was implied by the completion and submission of the survey. Participants from both recruiting methods indicated whether or not they had a prior mental health diagnosis. Those who self-reported a psychiatric diagnosis were combined from both groups (more on this below). We did not ask therapists to indicate the number of clients who were approached and then participated, so we do not have any data on their completion rate. The data collection ran for approximately four months in Summer/Fall of 2020. Participants were asked to convey that they understood and agreed to participate by pressing "yes."

Participants

We are reporting on 183 participants, with 127 coming from university students and 56 referred from therapists in independent practice. Most of the participants identified as female (57.4%), young adults ages 18–24 (61.7%), White (76.0%), and heterosexual (70.5%). Of this sample, 47.7% self-reported that they were diagnosed with a preexisting psychiatric disorder prior to the start of the COVID-19 pandemic. Given that we were also interested in the effects of the pandemic in lesbian, gay, bisexual, transgender, and queer/questioning individuals, we combined those participants who self-identified as something other than heterosexual, for example, asexual, bisexual, pansexual, queer, and so forth, and placed them into a sexual minority comparison group (26.8%).

Results

Because of the concern that we have two different sources of participants with a preexisting diagnosis (those referred by their mental health professional and those collected from the participant

Table 1
Scale and Subscale Reliability Analysis

Scale	<i>n</i>	Cronbach's α	<i>M</i>	<i>SD</i>
Financial Concern	182	0.841	2.6	5.6
Personality Concern	182	0.358	1.1	1.5
IES-R	182	0.918	15.1	23.3
Intrusion	182	0.878	6.4	8.3
Avoidance	182	0.789	6	9.5
Hyperarousal	182	0.809	4.8	5.4
CHIPS	182	0.939	19.9	21.9
Sympathetic/Cardiac	182	0.835	4.7	3.3
Muscular	182	0.73	3.6	3.2
Metabolic	182	0.834	5.4	6.9
Gastrointestinal	182	0.81	3.7	3
Vasovagal	182	0.624	2.9	2.5
Cold/Flu	182	0.444	1.5	1.1
Headache	182	0.841	2.3	1.8
Minor Hemorrhagic	182	0.059	0.9	0.5
PHQ-4	182	0.88	3.5	4.4
Anxiety	182	0.851	1.9	2.3
Depression	182	0.866	1.9	2.1
Brief COPE	182	0.867	11.9	60.1
Self-Distraction	182	0.592	1.7	5.6
Denial	182	0.757	1.2	2.6
Instrumental Support	182	0.862	1.8	4.6
Behavioral Disengagement	182	0.768	1.5	3.1
Acceptance	182	0.548	1.5	6.2
Active Coping	182	0.631	1.6	5
Venting	182	0.519	1.5	4.2
Coping Positive Reframing	182	0.801	1.7	5
Coping Self-Blame	182	0.668	1.7	4
Coping Planning	182	0.678	1.6	4.9
Use of Emotional Support	182	0.866	1.9	4.9
Coping Humor	182	0.607	1.7	4.7
Coping Religion	182	0.859	1.9	3.5
PTSD	182	0.915	13.6	35.1

Note. IES-R = Impact of the Pandemic measuring with Impact of Event Scale-Revised; CHIPS = Cohen-Hoberman Inventory of Physical Symptoms; PHQ-4 = The Patient Health Questionnaire-4; Brief COPE = Brief COPE Inventory; PTSD, posttraumatic stress disorder. Each scale is followed by its subscales.

pool), we ran a series of analyses to see if these two groups were similar enough to combine. Chi-square tests for independence revealed no differences on any of our nominal variables (gender, sexual orientation, race; $p > .05$ for all). Independent samples t tests suggest that the groups do not differ on most of our dependent variables of interest (PTSD, CHIPS, or [interestingly] either adaptive or maladaptive coping behaviors; $p > .05$ for all). However, the referred sample was significantly older, $t(79) = -2.91$, $p = .005$; significantly less anxious, $t(80) = 2.61$, $p = .01$; and significantly less depressed, $t(80) = 2.85$, $p = .01$. The age difference is to be expected given that the participant pool is a college-based pool, and we have no reason to suspect that this variable affected any other variable of interest in this study. The differences on anxiety and depression are similarly to be expected given that the referred individuals are undergoing treatment for their mental health, whereas those in the participant pool may not be. Given that most of our hypotheses are about expecting *higher* rates of depression and anxiety in the preexisting diagnosis group, we consider it more conservative to *include* this group rather than to *exclude* it. Therefore, the two groups are combined for all further analyses.

To address our three hypotheses and because of the likely correlations between our dependent variables (depression, anxiety, IES-R, adaptive and maladaptive coping behaviors, and physical symptoms), we ran a 2 (Sexual Minority Status) \times 2 (Preexisting Diagnosis) multivariate analysis of variance.

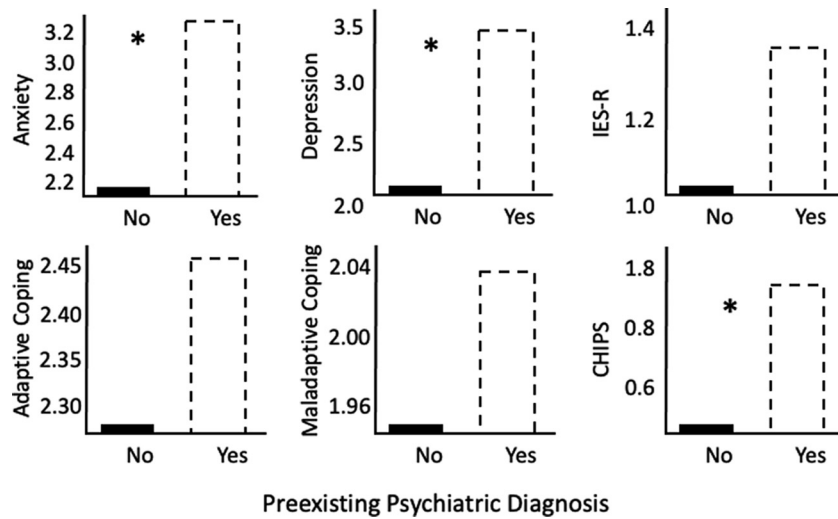
Main Effects for a Preexisting Psychiatric Disorder (Hypothesis 1)

As hypothesized, those participants who self-disclosed as having a preexisting diagnosis showed an increase in depression, $F(1, 160) = 14.33$, $p < .001$; anxiety, $F(1, 160) = 12.37$, $p < .001$; adaptive coping behaviors, $F(1, 160) = 9.48$, $p = .002$; maladaptive coping behaviors, $F(1, 160) = 9.37$, $p = .003$; and physical symptoms, $F(1, 160) = 21.28$, $p < .001$. There was also a marginal increase in IES-R, $F(1, 160) = 3.26$, $p = .07$ (see Figure 1).

Main Effects for Sexual Minority Status (Hypothesis 2)

As expected, those who identified as a sexual minority were higher in depression, $F(1, 160) = 9.98$, $p = .002$; anxiety, $F(1,$

Figure 1
Main Effects for a Preexisting Psychiatric Disorder



Note. Starred graphs are significant, whereas remaining graphs are marginally significant.

160) = 6.97, $p = .009$; IES-R, $F(1, 160) = 17.04, p < .001$; maladaptive coping behaviors, $F(1, 160) = 12.94, p < .001$; and physical symptoms, $F(1, 160) = 9.99, p = .002$. Adaptive coping behaviors were nonsignificant, $F(1, 160) = .003, p = .954$ (see Figure 2).

Interaction Effects Between Sexual Minority Status and Preexisting Psychiatric Disorder (Hypothesis 3)

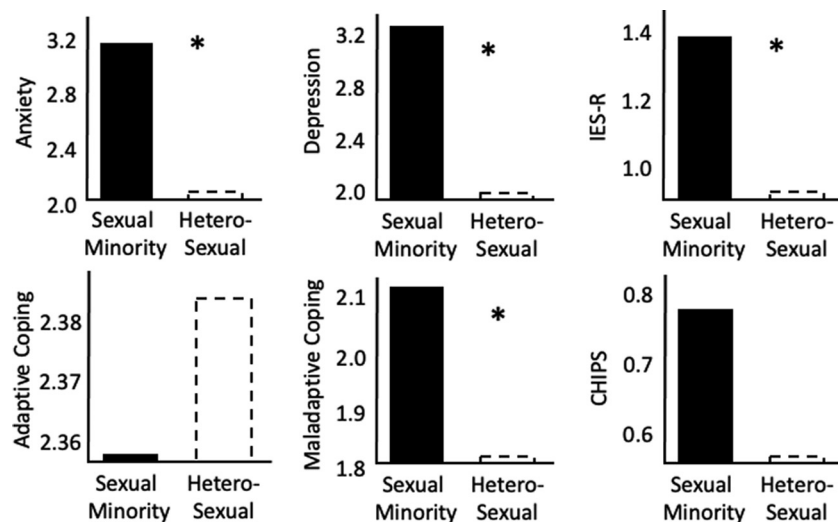
Although we expected an interaction effect for all our variables, we only found an interaction between sexual minority status and preexisting psychiatric disorder for depression, $F(1, 160) = 3.77, p = .05$; physical symptoms, $F(1, 160) = 5.35, p = .02$; and a marginal interaction for anxiety, $F(1, 160) = 3.56, p = .06$. In all three

cases, as expected, the variable was higher for those with both a preexisting psychiatric disorder and sexual minority status (see Figure 3).

Discussion

Although there is evidence that those with preexisting mental health concerns are at greater risk during periods of stress (Tessner et al., 2011), recent research on the psychological effects of COVID-19 is predicting an increase in psychiatric disorders and suicide (Guessoum et al., 2020; Sher, 2020). The scientific community is only just beginning to document how preexisting psychiatric disorders are a risk factor for the exacerbation of symptoms

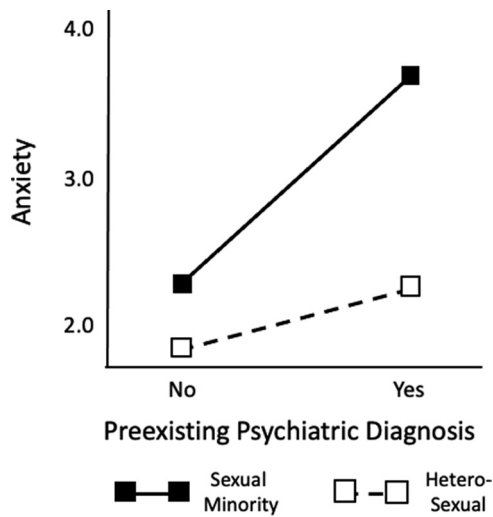
Figure 2
Main Effects for Sexual Minority Status



Note. Starred graphs are significant, whereas remaining graphs are nonsignificant.

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Figure 3
Significant Interaction Effects for Sexual Minority Status and Preexisting Psychiatric Disorder



and the development of new symptoms during the COVID-19 pandemic (Lara et al., 2020; Neelam et al., 2021; Zhou et al., 2020), with one notable exception (Hamza et al., 2021). Hamza et al. examined the mental health of postsecondary students with and without preexisting conditions. Those without preexisting conditions showed an increase in psychological distress, whereas those with preexisting conditions either remained stable or actually improved.

People with preexisting psychiatric conditions are also at risk for health-related concerns during the pandemic (Filipčić et al., 2020). Consistent with these results, we found that those with preexisting mental health disorders experienced more symptoms of anxiety, depression, and increased physical complaints (and a marginal increase in traumatic stress), as compared with those without a preexisting disorder.

We were also interested in how those with a preexisting psychiatric disorder were coping with the increased stressors associated with the pandemic. Given the size of our sample, we were unable to analyze the psychological effects of individual psychiatric disorders, although recent studies are beginning to do just that. For example, Asmundson et al. (2020) found that those with a preexisting anxiety disorder reported more difficulties with fear, socioeconomic consequences, xeno-phobia, and traumatic stress symptoms as compared with those with depression or without a preexisting disorder.

In our sample, we examined participants who identified as sexual minorities and found that they are experiencing more trauma, more depression, more anxiety, more maladaptive coping behavior, and more physical symptoms. Sexual minority status also exacerbated the effect of having a preexisting mental health condition. Those who identified as a sexual minority *and* reported a preexisting condition were highest in anxiety, depression, and physical symptoms. In many ways, unfortunately, this is not surprising as much of the research on mental health in sexual minority populations would predict these results. Meyer and Frost (2013) conceptualized sexual minority mental health disparities through a

lifetime of living in a stressful and hostile environment that leads to harassment, prejudice, discrimination, and stigma. These stressors are chronic, additive, and socially based, leading to the potential internalization of negative social attitudes, homonegativity, rejection sensitivity, difficulties in disclosing sexual orientation and/or gender identity, and the development of different strategies to cope with the negative effects of this environment (Dentato et al., 2013; Meyer & Frost, 2013).

Surprisingly, not all studies are showing an increase in psychiatric distress that remains high throughout the pandemic. Daly and Robinson (2021) predicted and found an increase in psychiatric distress in the beginning days of the pandemic for those with preexisting psychiatric conditions. However, in time, those high levels diminished, allowing the authors to conclude that there may be population-level resilience in mental health occurring during the pandemic. Although other authors have also found that people with preexisting conditions are showing an increase in psychiatric symptoms (Neelam et al., 2021) and that sexual minorities are experiencing higher levels of symptoms (Peterson et al., 2020), more studies are needed to examine the factors that lead to resilience and active coping during the pandemic. We know that family history and preexisting psychopathology are poor predictors of resilience (PeConga et al., 2020). Resilience is more likely to be predicted by the level of social support and the adaptive coping strategies that an individual can employ under times of stress. Treatments that can improve adaptive coping skills and increase the level of social support may be helpful and are recommended for further study.

Limitations

The results of this study may not be generalizable to all individuals with mental health diagnoses or who identify as a sexual minority. As completing the survey was voluntary and restricted geographically to the northeastern part of the United States, individuals with a preexisting psychiatric diagnosis voluntarily provided that information and reported on their own clinical symptoms without any verification. Participants who identified as a sexual minority only made up 26.8% of our sample when combined; therefore, we were unable to analyze data comparing different sexual minority groups.

Conclusion

We examined participants with and without a preexisting psychiatric condition to evaluate acute stress symptoms, depression, anxiety, physical symptoms, and coping related to the COVID-19 pandemic. Those participants with a preexisting psychiatric condition were higher in anxiety, depression, both maladaptive and adaptive coping behaviors, and physical symptoms. Those who identified as a sexual minority were higher in anxiety, depression, acute stress, maladaptive coping, and physical symptoms. There was also an interaction effect on anxiety, depression, and physical symptoms, such that those who were both a sexual minority and had a preexisting psychiatric condition were highest in these variables.

Based on these results, it is important to further understand the risk factors in people with a preexisting psychiatric diagnosis during periods of high stress, like the COVID-19 pandemic. We know that a significant number of trauma survivors previously

diagnosed with PTSD experience an exacerbation of symptoms during stressful life events (Schock et al., 2016). Stressful life events can also impact those who are diagnosed with depression and anxiety (Hassanzadeh et al., 2017). Recent research is beginning to evaluate how people with a preexisting mental illness are faring during the pandemic, and it shows that they have significantly more psychiatric symptoms, including anxiety and depression, as compared with controls (Neelam et al., 2021). Further, Wang et al. (2021) found that physical symptoms were associated with mental health concerns.

As the body of evidence seeks to validate these issues, there are real practical implications for these results. First, as the need for mental health services increases, evaluations should include questions about symptoms that started or became exacerbated during the pandemic for these high-risk groups, including sexual minorities. Further, when seeking medical treatment from a medical provider, this is an opportunity to do a screening for symptoms with the understanding that some medical symptoms may be associated with undiagnosed and/or not discussed psychiatric symptoms. This is an opportunity for medical professionals to understand better the impact of the pandemic by asking specific questions about new or increased symptomatology.

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