ORIGINAL ARTICLE

How bad is it? Suicidality in the middle of the COVID-19 pandemic

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Abstract

Objective: The current paper examines the intersection between social vulnerability, individual risk, and social/psychological resources with adult suicidality during the COVID-19 pandemic.

Method: Data come from a national sample ($n = 10,368$) of U.S. adults. Using an online platform, information was gathered during the third week of March 2020, and post-stratification weighted to proportionally represent the U.S. population in terms of age, gender, race/ethnicity, income, and geography.

Results: Nearly 15 percent of sampled respondents were categorized as high risk, scoring 7+ on the Suicide Behaviors Questionnaire-Revised (SBQ-R). This level of risk varied across social vulnerability groupings: Blacks, Native Americans, Hispanics, families with children, unmarried, and younger respondents reported higher SBQ-R scores than their counterparts ($p < .000$). Regression results confirm these bivariate differences and also reveal that risk factors (food insecurity, physical symptoms, and CES-D symptomatology) are positive and significantly related to suicidality ($p < .000$). Additionally, resource measures are significant and negatively related to suicidality ($p < .000$).

Conclusions: These results provide some insight on the impact COVID-19 is having on the general U.S. population. Practitioners should be prepared for what will likely be a significant mental health fall-out in the months and years ahead.

1 | INTRODUCTION

In a recent commentary, Reger, Stanley, and Joiner (2020) suggest the COVID-19 public health crisis is creating the "perfect storm" for a mental health disaster in the United States. Because of the unique juxtaposition of extreme physical distancing, approaching geographical isolation, coupled with sustained social isolation, we are quickly becoming a population at risk. Despite aggressive public health interventions in place to combat the novel coronavirus (COVID-19) around the globe, mental health prevention and intervention practices have lagged behind. Not surprisingly, a growing number of European and Chinese COVID-19 studies report significant mental health consequences for isolated, fragmented, and distraught populations (Brown & Schuman, 2020; Cowan, 2020; de

Girolamo et al., 2020; Qui et al., 2020; Sonderskov, Dinesen, Santini, & Ostergaard, 2020; Stankovaska, Memedi, & Dimitrovski, 2020; Wang, Di, Ye, & Wei, 2020).

In response to multiple calls for research action (e.g., Asmundson & Taylor, 2020; Holmes, O'Connor, & Hugh Perry, 2020; Rajkumar, 2020; Reger, Stanley, & Joiner 2020), the current study examines the intersection of social and behavioral risk factors, social-psychological resources among the socially vulnerable, and their relationship with suicidality for a large, post-stratification weighted national sample of U.S. adults ($n = 10,368$). Anchoring our work in the context of other public health and natural disaster research with a mental health focus (e.g., Fergusson, Horwood, Boden, & Mulder, 2014; Goldman & Galea, 2014; Kolves, Kolves, & De Leo, 2013; Neria, Nandi, & Galea, 2008) provides a pathway for both

comprehensively exploring what factors might inform the analysis and aiding in the examination of the potential anomalies of the current COVID-19 crisis that parallel past research.

We add to a growing literature on suicidality in the midst of public health crises by examining the intersection of vulnerability, risk, resources, and suicidality amidst the COVID-19 pandemic. As such, we focus our attention on the following questions: What risk factors are compounding an already stressful circumstance that may be impacting the mental health of Americans? How are these risk factors associated with varying levels of suicidality? Are there any mitigating resources that can be identified and incorporated into strategic intervention and prevention planning to address the mental health consequences for a population in need? We are particularly interested in exploring these questions using a large, national sample of post-stratification weighted U.S. adults surveyed during the early months of the COVID-19 pandemic in the United States.

1.1 | Heightened risk and suicidality

As the COVID-19 pandemic unfolded, researchers began noting a potential for an unusually high level of susceptibility to extreme mental health consequences, including both suicide ideation and attempts (Brown & Schuman, 2020; Reger, Stanley, & Joiner 2020). The hypersensitivity to the novel coronavirus (COVID-19) has added a layer of risk to personal safety as the pandemic continues to alter people's daily lives. People are generally fearful of COVID-19 and its devastating impact on families and communities (Fitzpatrick, Harris, & Drawve, 2020), but such fear has become entangled with the added burden of rising unemployment, limited supplies of household goods, long lines at food pantries, and limited access to social and health-related services. Together, these create a new level of compounded risk that, for many who are already teetering on the edge of economic disaster, may be so overwhelming that they consider acting on their dread, doom, and despair with lethal self-harm.

There is good reason to suspect that this burden may fall unevenly across the population of the United States. There is evidence to suggest that older people, the chronically ill, the socially and physically isolated, and persons with high daily exposure to an exaggerated health risk like the virus (i.e., frontline healthcare workers and emergency responders) are at greater risk for suicide ideation and completion than those that are not in these high risk categories (Elovaino, Hakulinen, & Pulkki-Raback, 2017; Holmes et al., 2020; Matthews et al., 2019; Tsang, Scudds, & Chan, 2004). Any attempt at trying to disentangle all of the confounding factors that could be impacting suicidality generally, and more specifically among a sample of pandemic survivors, presents a challenge. Our interest here is in making an important step in this direction by examining how specific suicide risk factors impact suicide ideation, as well as explore those factors that mitigate these negative risks with coping strategies and psychosocial resources.

1.2 | Social vulnerability

Often the most socially vulnerable are the most psychologically affected by natural and public health disasters (Fitzpatrick & Spialek, 2020; Masozera, Bailey, & Kerchner 2007; Ueland & Warf 2006). Yet, vulnerability to mental health risks varies considerably. Nevertheless, we propose exploring the suicidality risk among some of these more socially vulnerable subgroups—including women, persons who are currently not working, those that are single, older, or racial/ethnic minorities—that might be at greatest risk, particularly during a public health crisis like the current COVID-19 pandemic.

1.3 | Risks and resources

A risk and resources model provides the framework we employ to examine a variety of social and behavioral factors that could either exacerbate or minimize suicidality during a crisis like the current COVID-19 pandemic. Previous work demonstrates the utility of using this type of approach for exploring the mental health consequences of "exposure" (e.g., Fitzpatrick & LaGory, 2011; Fitzpatrick & Spialek, 2020). Furthermore, research demonstrates that both mental and physical health factors are important risks to consider when examining suicidality among adult populations (Ahmedani, Peterson, Yong, Rossom, & Lynch, 2017; Bradvik, 2018; Handley, Rich, Davies, Lewin, & Kelly, 2015; Hawton, Casanas, Comabella, Haw, & Saunders, 2013; Malone et al., 2000). The work on food insecurity and mental health consequences is a little less clear, but nevertheless suggests that the two are linked (e.g., Davison, Marshall-Fabien, & Tecson, 2015; Nagata et al., 2019; Shayo & Lawala, 2019). This may be of particular relevance given the current 24-hr news cycle devoted to highlighting the implications for a fractured food supply chain, and an over-burdened food-focused service provider network in the United States during the COVID-19 pandemic (New York Times May, 2020; UPI, 2020). Because of this, we were particularly interested in the salience of a specific set of risks including mental health symptomatology (depressive symptoms), physical health symptomatology (physical symptoms), and the perception of food insecurity and hunger that respondents report having experienced during the early stages of the COVID-19 pandemic in March 2020.

Additionally, we explore both social and psychological resources to determine whether or not they help minimize these risks and lower the likelihood that persons think about or act on harming themselves. How connected a person is to a social network and their perception of that strength has been noted as critical in determining one's mental health (e.g., Lin & Ensel, 1989; Thoits, 2010). Likewise, while typically not examined in the suicidality literature, having control or mastery over ones' fate could be an important psychological resource mitigating negative social or behavioral risks for persons exposed to the general uncertainty of a pandemic (Pearlin, Menaghan, Lieberman, & Mullan, 1981).

Beyond these resources, we know that religious affiliation and religiosity act as important resources minimizing risk and improving mental

health outcomes for some individuals. By creating a layer of support through a general connection to ones' belief systems or through actual instrumental support via a community of organizationally connected people, religion can help stave off the negative emotions (e.g., worry, concern, uncertainty) that are often associated with a public health crisis (Dervic et al., 2004; Lawrence, Oquendo, & Stanley, 2016; Rasic et al., 2009). Given this body of work on the risk and resources associated with a variety of mental health consequences, including suicidality, we propose the following general hypotheses:

H1: The socially vulnerable (women, elderly, racial/ethnic minorities, foreign born, families with children, and unmarried) will have higher suicidality scores than their counterparts, even after controlling for risks and resources.

H2: Risk factors, including depression, food insecurity, and physical health symptoms, will be associated with higher suicidality scores.

H3: Resources, including strength of social ties, mastery of fate, and a subjective sense of how important religion is in ones' life, will be associated with lower suicidality scores.

2 | METHODS

2.1 | Participants and procedures

A national sample of 10,368 adults (ages 18 and over) living in the United States is used in the current analysis. An online survey was released on March 23, 2020, through Qualtrics Inc. to a national panel of U.S. residents that participated in the IRB-approved survey. After obtaining consent to participate, respondents were provided a survey that took approximately 20 min to complete. A series of questions ranging from COVID-19 fear and anxiety, social and behavioral health changes, attitudes and perceptions of coronavirus, and physical/mental health assessments were asked of all participants with only complete responses collected (i.e., no missing data). The final sample was post-stratification weighted across gender, age, race, income, and geography (state) to ensure the equitable contribution to our estimates of respondents across their individual demographic and geographic strata relative to their representation in the overall population of the United States.

2.2 | Measurement

In order to test the hypotheses stated above, we examine specific suicidality differences across population subgroups including *gender* (female = 1); a series of race dichotomous dummy variables including (*Blacks* = 1; *Asians* = 1; *Native Americans* = 1; *Other races* = 1);

Hispanic status (Hispanic = 1); *marital status* (unmarried = 1); *work status* (unemployed/laid off = 1); *nativity* (foreign born = 1); and *families with children* (yes = 1). The series of race dummy variables results in White respondents being the reference category.

The dependent variable of interest is the Suicide Behavior Questionnaire (SBQ-R) (Osman et al., 2001). This particular screening measure employs four questions that assess different elements of suicidality, including lifetime suicide ideation and attempts (question 1); frequency of suicide ideation over the last 12 months (question 2); the threat of suicidal behavior (question 3); and self-reported likelihood of suicidal behavior (question 4). These items are coded and summed to create a possible range from 3 to 18. The SBQ-R in our analysis is reliable with Cronbach's alpha = 0.86.

There are three risk variables that are used in the current analysis. First, we measure *CES-D symptomatology* as a standard assessment of depressive symptomatology that has been utilized in a variety of clinical and non-clinical settings (Beekman et al., 1997; Radloff, 1977). For the current analysis, we measure depressive symptoms with a shortened version of the 20-item Center for Epidemiological Studies for Depression (CES-D) Scale that contains 11 questions and has been used extensively to measure depressive symptoms and has been found to be both a reliable and valid alternative to the longer version (e.g., Fitzpatrick & Willis, 2018; Willis & Fitzpatrick, 2019). Respondents are asked how often over the past couple of weeks they felt sad, lonely, worrisome, or had trouble sleeping, getting up in the morning, etc. Possible responses ranged from 0 (Less than one day) to 3 (five to seven days) for each item. The shortened CES-D scale used here is weighted by a factor of 1.8 (the number of items in the original measure divided by the number of items in the shortened measure) in order to make comparisons with other studies in the general population using the full 20-item questionnaire. The weighted scale is reliable with Cronbach's alpha = 0.94.

Our second risk variable is *physical symptoms*. Respondents are asked a series of questions about their current physical health. The scale reflects the sum of the physical symptoms and is moderately reliable with Cronbach's alpha = 0.76. This symptom scale has been found to be both a valid and reliable strategy for assessing current physical symptomatology, particularly among at-risk subgroups (e.g., Irwin, Harrison, Ritchey, & Fitzpatrick, 2008).

A final risk variable included in the analysis is *food insecurity*. Using the standard, 10-item USDA Adult Food Security Module (Coleman-Jensen, Rabbitt, Gregory, & Singh, 2019), respondents are asked a range of questions that assess their adequate access to healthy food and the barriers present that may be impacting that access. All affirmative responses, including "some months" or "almost every month," are coded as 1. Respondents who answer in the affirmative to 3 or more items are considered food insecure, while those who answer in the affirmative to 2 or fewer items are considered food secure. The recoded scale is reliable with Cronbach's alpha = 0.91.

In addition to risk and social vulnerability variables, we examine three social and psychological resource variables. The first is a social resource variable capturing *strength of social ties*, which measures how connected respondents see themselves to other persons in their

social network (Lin, Dean, & Ensel, 1986). The scale uses three items to assess how respondents perceive those connections, including if respondents feel that they have enough companions, have enough friendships, and if they see having close friends as a problem. For the current study, the scale is reliable with Cronbach's alpha = 0.88.

A second psychological resource variable is *mastery of fate*. We use a scale developed by Pearlin and Schooler (1978) in which higher scores indicate greater mastery of fate and overall sense of control over one's life. For the current sample, the scale is reliable with Cronbach's alpha = 0.84.

Our final resource variable is a single-item Likert like question that assesses how *important religion is in respondent's lives*. The single-item question contains for responses that range from religion not at all important in my life = 1 to religion very important in my life = 4. Prior research identifies a connection between a wide range of religious behaviors and improved mental health (Lawrence et al., 2016).

2.3 | Analysis plan

We begin by presenting descriptives of the sample, as well as bivariate relationships between various levels of suicidality across socially vulnerable groups, and risk and resource variables. Bivariate association measures (χ^2/F) statistical significance between categorical variables and suicidality categories, and continuous variables and suicidality categories are presented. Additionally, we examine the multivariate relationships between these variables and suicidality in a series of linear regression models.

3 | RESULTS

The descriptive statistics (mean, standard deviation, and percentages) for the suicidality measure (SBQ-R) are presented in Table 1. This table provides a snapshot of the sample, which we note is 51% female, 23% non-White, with approximately 18 percent of sampled respondents self-reporting Hispanic origin. Approximately 10% are born outside the United States, 25 percent of respondents said they are living with children under the age of 18, the majority are unmarried, and the average age is 47 years. The risk variables show that CES-D symptomatology is elevated. The average respondent scores nearly a full point above a score of 16, often considered an important case sensitivity cutoff for further diagnostic evaluation. These elevated levels of depression during the current pandemic are contrasted with general adult scores of CES-D that have been reported as much lower (e.g., Radloff 1977; Vilagut, Forero, Barbaglia, & Alonso, 2016). Additionally, respondents report on average, two physical symptoms, and food insecurity (moderate or high food insecurity) among respondents is high (38%). Social and psychological resources are, on average, elevated, with almost two-thirds of the sample respondents saying that religion is somewhat or very important to their life.

TABLE 1 Descriptive statistics for model variables (n = 10,368)

	%	Mean	SD
Suicidality measure			
SBQ-R (3-18)	–	4.6	3.1
Social vulnerability measures			
Gender (1 = Female)	51.0%	–	–
Race		–	–
(Black)	12.4%	–	–
(Asian)	5.5%	–	–
(Native American)	1.0%	–	–
(Other races)	2.5%	–	–
Hispanic status (1 = Yes)	18.2%	–	–
Nativity (1 = Foreign born)	10.6%	–	–
Families w/Children (1 = Yes)	25.0%	–	–
Marital status (1 = Unmarried)	54.7%	–	–
Age (years)		47.4	17.7
Individual risks			
CES-D symptomatology (0-60)	–	16.7	15.6
Physical symptoms (0-23)	–	1.7	2.5
Food insecurity (1 = Moderate to high food insecurity)	38.3%	–	–
Social and psychological resources			
Strength of social ties (3-15)		11.4	13.6
Mastery of fate (7-27)		19.8	4.0
Religion important in life (1-4)			
Not at all important	20.1%		
Not very important	13.3%		
Somewhat important	26.2%		
Very important	40.4%		

Given our focus on suicidality amidst the COVID-19 pandemic, we believe it is instructive to look at the SBQ-R separated across three distinct categories and to examine the distribution of social vulnerabilities across those categories as shown in Table 2. The overall average SBQ-R is 4, which fell into the low SBQ-R category. Moderate SBQ-R scores (5–7) made up approximately 10 percent of the sample, with the remaining nearly 15 percent of scores in the high (7+) category. Previous studies report a mixed assessment of suicidality using the SBQ-R among both clinical and non-clinical populations (Batterham et al., 2015; Cassidy, Bradley, Bowen, Wigham, & Rodgers, 2018; Osman et al., 2001). Typically, in the majority of cases, general population estimates of persons scoring in the highest SBQ-R category are somewhat fewer than we report, again depending on the sample.

Chi-square analysis examines the statistical significance of differences across social vulnerability groups in terms of representation in the three SBQ-R categories. Gender (male vs. female) and the Asian racial subgroup (as compared to the other racial categories) are the only two comparisons that are not statistically significant. Blacks, Native Americans, Hispanics, persons born outside the United States,

TABLE 2 Bivariate measures with SBQ-R, social vulnerabilities, risks, and resources (n = 10,368)

	SBQ-R Mean	SBQ-R 0-5	SBQ-R 5-7	SBQ-R 7+	p^a
	4.6	(7,599)	(949)	(1,820)	
Social vulnerabilities					
Gender					
(1 = Female)	4.5	74%	9%	17%	.244
(0 = Male)	4.8	73%	9%	18%	
Race					
(1 = Black)	5.0	71%	6%	23%	.000
(0 = Non-Black)	4.6	73%	10%	17%	
(1 = Asian)	4.6	74%	8%	18%	.369
(0 = Non-Asian)	4.6	74%	9%	17%	
(1 = Native American)	5.9	59%	5%	36%	.000
(0 = Non-native American)	4.6	73%	9%	18%	
(1 = Other races)	4.6	73%	13%	14%	.025
(0 = Non-other races)	4.6	73%	9%	18%	
Hispanic status					
(1 = Hispanic)	5.4	67%	8%	25%	.000
(0 = Non-Hispanic)	4.5	75%	9%	16%	
Nativity					
(1 = Foreign Born)	4.7	75%	6%	19%	.003
(0 = Non-foreign) Born)	4.5	73%	8%	19%	
Families w/Children					
(1 = Yes)	5.1	70%	8%	22%	.000
(0 = No)	4.5	74%	10%	16%	
Marital status					
(1 = Unmarried)	4.9	67%	11%	22%	.000
(0 = Married)	4.3	80%	8%	12%	
Age[b]	−.28				.000
Individual risks[c]					
CES-D symptomatology	.56				.000
Food insecurity					
(1 = Moderate to High)	5.9	59%	9%	32%	.000
(0 = No to Low)	3.8	83%	9%	8%	
Physical symptoms	0.32				.000
Social and psychological resources					
Strength of social ties	−0.43				.000
Mastery of Fate	−0.39				.000
Religion important in life	−0.05				.000

[a]Chi-square analysis was used to test for differences between categorical variables and SBQ-R categories.

[b]Pearson correlations between SBQ-R scale and continuous level vulnerability, risk, and resource variables.

[c]One-way ANOVA tests for differences between SBQ-R categories and continuous vulnerability, risk, and resource variables.

*$p < .05$;

**$p < .01$.

unmarried, and families with children are represented at greater percentages in the high SBQ-R category (7+) compared to their counterparts ($p < .000$). Additionally, persons that report moderate or high levels of food insecurity are four times more likely to be in the high SBQ-R category compared to those reporting no or low food insecurity ($p < .000$).

In addition to the bivariate categorical analysis, we also present correlations between the SBQ-R scale and the continuous social vulnerability, risk and resource variables in Table 2. Younger respondents, and persons reporting more physical and mental health symptoms score higher on the SBQ-R; correlations are negative between SBQ-R and all of the social and psychological resource measures as expected ($p < .000$).

The final part of the analysis examines the association of social vulnerability, individual risk, and social-psychological resources with suicidality (SBQ-R). The first model in Table 3 presents both standardized and unstandardized regression coefficients for the social vulnerability variables. Females are at lower risk compared to males, as are Asians compared to Whites (the reference group) and younger respondents as compared to those who are older. Native Americans, Hispanics, the foreign born, and unmarried respondents

are positively related to SBQ-R, confirming patterns noted earlier in Table 2.

When the individual risk variables are added into the second model, several shifts take place. Men are still a higher risk for suicidality compared to women, but Black respondents report significantly higher SBQ-R scores ($p < .01$) as do Native Americans and those of "other" races. Additionally, respondents who do not have any children under the age of 18 currently living with them are at higher risk for suicide and Hispanic status is still positively related to SBQ-R scores, while age is negatively related ($p < .01$). Respondents who reported more food insecurity, more physical symptoms, and higher CES-D symptoms are more likely to score higher on the SBQ-R scale compared to those reporting no or low food insecurity with fewer physical and mental health symptoms. The explained variance in this second model increased by nearly fourfold (0.35) as compared to the first model with just the social vulnerability variables (0.09).

The final model in Table 3 includes social vulnerability, risk, and resource variables. The explained variance has again significantly increased, and the individual variables remain essentially the same as noted for model two. However, the resource variables provide

TABLE 3 Suicidality multiple regressions ($n = 10,368$)

Model variables	Model 1 b (B)	Model 2 b (B)	Model 3 b (B)
Social vulnerabilities			
Gender (1 = Female)	−0.30 (−.05)**	−0.49 (−.08)**	−0.44 (−.07)**
Race (1 = Black)	−0.01 (−.01)*	0.27 (.03)**	0.34 (.04)**
(1 = Asian)	−0.28 (−.02)*	0.18 (.01)	0.10 (.01)
(1 = Native American)	1.1 (.03)**	1.1 (.03)**	1.2 (.03)**
(1 = Other races)	0.04 (.01)	0.44 (.02)**	0.47 (.02)**
Hispanic status (1 = Yes)	0.26 (.03)**	0.20 (.02)**	0.25 (.03)**
Nativity (1 = Foreign Born)	0.17 (−.01)*	0.12 (.01)	0.10 (.01)
Families with children (1 = Yes)	0.08 (.01)	−0.16 (−.02)**	−0.16 (−.02)**
Marital status (1 = Unmarried)	0.17 (.02)**	−0.08 (−.01)	−0.19 (−.03)**
Age	−0.05 (−.27)**	−0.01 (−.10)**	−0.02 (−.09)**
Risks			
CES-D Symptomatology		−0.09 (.45)**	−0.07 (.36)**
Physical symptoms		0.19 (.15)**	−0.18 (.14)**
Food insecurity (1 = Moderate to high)		0.37 (.06)**	−0.22 (.04)**
Social and psychological resources			
Strength of Social ties			−.09 (−.11)**
Mastery of fate			−.05 (−.07)**
Religion important in life			−.06 (−.04)**
Constant	6.90	3.76	6.46
Adjusted R^2	.09*	.35*	.37*

Note: One-tailed *t* tests.

*$p < .05$,

**$p < .01$, R^2 change

***$p < .001$ (two-tailed)

additional explanatory power, and as hypothesized earlier, all of the resource variables are negatively related to the suicidality measure. Persons with stronger social ties, greater mastery of fate, and persons who consider religion to be important in their life score lower in the SBQ-R compared to those with fewer social ties, less mastery, and those persons who say religion is not important to their lives.

4 | CONCLUSIONS

This paper provides important insight into the impact COVID-19 is having on the mental health of U.S. adults. A number of recent commentaries and editorials have been written regarding what we should expect to see in the months ahead with regard to the mental health consequences of the pandemic (Asmundson & Taylor, 2020; Holmes et al., 2020; Horesh & Brown 2020; Reger, Stanley and Joiner 2020). Our data confirm many of these suspicions and document the prevalence of mental health symptoms among a nationally representative sample of adults generally and, more specifically, the prevalence of adult, non-clinical suicidality. Suicidality, as measured in the current paper, is not evenly distributed across socially vulnerable population subgroups, and there are some clear risk and resource differences that further sharpen our understanding of the mechanisms exacerbating or mitigating suicidality risk during public health crises.

There are several key findings in our analyses worth highlighting. First, food insecurity appears to be an overwhelming circumstance that, for many, is becoming increasingly difficult to bear. As America struggles to feed those persons who were already food insecure, an entire new layer of food insecurity is developing as the food supply chain and social service sector continue to scramble to meet demand. Long lines, out-of-food signs, and farmers wasting dairy and produce products because they cannot get the adequate support to move their products to market are all signs of extraordinary stress with the potential to create mental health problems as the global pandemic continues to wreak havoc.

As a second key finding, like most of the work related to mental health generally and suicide specifically, risk is not evenly distributed across social categories. In fact, some of the most severe consequences are found in the most socially vulnerable groups, even despite resources that might minimize the impact of specific risks. Blacks, Hispanics, females, and those who are younger appeared to be acutely at risk for suicidality, even net of mitigating resources. This is particularly important to consider when proposing prevention and intervention strategies that are designed to target those with the highest suicidality risk.

Finally, these data provide some scope and context to what is already beginning to develop in the United States with regard to the mental health consequences being reported among adults during the COVID-19 pandemic. While reporting findings like ours early in the process is important, much work is needed in explicating the complicated set of relationships between social and behavioral circumstances, public health reactions, and mental health consequences of adults living through the pandemic in the United States. Research needs to continue to document the ebb and flow in response through multiple phases of this crisis as social resources are built, eroded, or brought to bear and risks are exacerbated or reduced over time. Our data document some of the earliest observations, though we need acknowledge the need to further capture how people are feeling about their circumstances three or six months from now.

4.1 | Study limitations

We have documented the early COVID-19 pandemic impact on the mental health consequences of adults in the United States. Nevertheless, there are several limitations to these data worth noting. For one, we have provided an important snapshot of American mental health in the midst of a pandemic, but it is only a snapshot. This work is not causal and provides only a cross-sectional glimpse of the intersections between vulnerability, risk, and resources in understanding suicidality. A comprehensive panel design with periodic follow-up for a sizeable number of respondents would, of course, be the ideal design to document the full impact of the COVID-19 pandemic from start to finish. Additionally, the SBQ-R and some of the other available measures for risks and resources have been validated and exhibit strong internal consistency. However, there are alternative items, multiple-measure assessments for the same construct, and a more in-depth examination of social, behavioral, and psychological outcomes that could prove fruitful for future research on suicidality. We were limited in terms of the time that we had to get into the field, as well as limitations to the amount of time respondents would reasonably answer questions in an online platform. As such, a compromise was necessary. Finally, while we have made an effort to generate a nationally, representative sample of adults living in the United States, but our online data collection strategy likely created an under-representation of rural residents with limited connectivity.

Despite these and other limitations to our study, we provide an important set of results that contribute to our understanding of the burgeoning mental health consequences of the 2019–20 COVID-19 pandemic in the United States. There are currently a host of unique clinical and practical challenges, but there will be more in the near future. It would seem that now is the appropriate time for practitioners, educators, and researchers to start compiling their work with a concerted effort at improving current practices and designing new suicide prevention strategies that are specifically aimed at addressing complicated needs of adults and children during public health crises. Recognizing what gaps there are in assessment and treatment is critical to developing comprehensive plans to building resilience for the next crisis that will almost certainly come in the near future.

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