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Short communication

Suicidal ideation among university students during the COVID-19 pandemic: Identifying at-risk subgroups

Kim L. Gratz *, Adam J.D. Mann, Matthew T. Tull

Department of Psychology, University of Toledo, 2801 West Bancroft Street, Toledo, OH 43606, USA

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ABSTRACT

Given concerns of increased suicide risk among university students during the COVID-19 pandemic, this study examined rates of lifetime and past-year suicidal ideation (SI) among university students in Fall 2020 (vs. two earlier semesters), overall and across gender, racial/ethnic background, and sexual identity. Participants included 1700 university students enrolled in a general education psychology course in Fall 2020, Fall 2014, or Fall 2013. Rates of SI were not significantly higher in Fall 2020 versus the earlier semesters and did not differ across racial/ethnic background. However, rates of SI in Fall 2020 were significantly higher among sexual minority than heterosexual students.

1. Introduction

Coronavirus disease 2019 (COVID-19) emerged in late 2019 and was characterized as a pandemic in March 2020. The rapid spread of COVID-19 prompted the implementation of extraordinary social distancing interventions that, while vital for public health, may have unintended negative psychological consequences (Brooks et al., 2020) and increase risk for adverse mental health outcomes, including suicidality (Czeisler et al., 2020; Reger et al., 2020). University students have been identified as a particularly vulnerable population during the pandemic, due to the disruptions in classes, living arrangements, routines, and access to services that have occurred (Charles et al., 2020; Hoyt et al., 2021; Son et al., 2020; Wang et al., 2020; Wathelet et al., 2020).

Although preliminary research suggested increases in stress and psychological difficulties among university students during the early stages of the pandemic (Charles et al., 2020; Son et al., 2020), few studies have examined suicidal ideation (SI) and the results of these studies are unclear. Specifically, although researchers have noted concerning rates of SI among university students during the pandemic (including 8% for pandemic-related suicidal thoughts (Son et al., 2020), 18% for past 2-week suicide/self-harm thoughts (Wang et al., 2020), and 11.4% for past-month SI (Wathelet et al., 2020)), whether these rates reflect an increase in SI during COVID-19 remains unknown. Indeed, one study found no significant differences in student SI in Spring and Fall 2020 versus Fall 2019 (Charles et al., 2020).

In addition to comparing rates of SI among students during and before the pandemic, research is needed to identify subsets of students most at-risk for heightened SI during the pandemic. Two groups of students who may be particularly vulnerable to SI during this time are racial/ethnic and sexual minorities, as these groups have been disproportionately affected by the pandemic and related mitigation strategies, respectively (Hoyt et al., 2021).

This study examined rates of lifetime and past-year SI among university students in Fall 2020 versus two previous semesters, and explored differences across gender, racial/ethnic background, and (in 2020 only) sexual identity. We hypothesized that rates of SI would be elevated in Fall 2020 and higher among racial/ethnic and sexual minorities.

2. Method

2.1. Participants

Participants were drawn from 1754 students enrolled in a general education psychology course at a Midwestern university in Fall 2020 (n = 452), Fall 2014 (n = 566), and Fall 2013 (n = 736). Students in this course complete screening questionnaires as part of their research requirement. Participants in this study (N = 1700) included those who completed the SI items in Fall 2020 (mean age = 19.53±3.15; 61.9% women; 29.0% racial/ethnic minority; 14.4% sexual minority), Fall 2014 (mean age = 19.39±3.40; 69.2% women; 24.8% racial/ethnic minority), or Fall 2013 (mean age = 19.26±2.80; 64.9% women; 25.5% women).
Table 1

Rates of lifetime and past-year suicidal ideation as a function of gender, racial/ethnic background, and sexual minority status within and across Semester.

|                     | Fall 2020\(^a\) | Fall 2014\(^b\) | Fall 2013\(^c\) | Across Semester |
|---------------------|-----------------|-----------------|-----------------|-----------------|
|                     | Lifetime SI     | Past-year SI    | Lifetime SI     | Past-year SI    | Lifetime SI     | Past-year SI    | \(\chi^2 (p)\) |
| **Gender**          |                 |                 |                 |                 |                 |                 | \(\phi\)       |
| Female/woman        | 44.2% 22.5%     | 45.1% 31.1%     | 42.8% 27.7%     | 43.9% 27.6%     |
| Male/man            | 37.6% 16.8%     | 41.2% 25.9%     | 40.3% 20.9%     | 39.8% 21.2%     |
| **Race/Ethnicity**  |                 |                 |                 |                 |                 |                 | \(\phi\)       |
| White               | 41.4% 20.1%     | 42.4% 28.3%     | 41.7% 24.9%     | 41.8% 24.8%     |
| Black/African American | 50.9% 26.3%   | 44.1% 27.7%     | 40.3% 27.7%     | 43.7% 27.4%     |
| Other minority      | 41.2% 21.7%     | 60.0% 45.7%     | 46.9% 24.5%     | 47.4% 28.1%     |
| **Sexual Identity**|                 |                 |                 |                 |                 |                 | \(\phi\)       |
| Heterosexual        | 37.1% 17.9%     |                  |                 |                 | 30.91 *** (0.27) |                  | 17.66 *** (0.20) |
| Sexual minority     | 74.6% 41.3%     |                  |                 | 30.91 *** (0.27) |                  |                 |

\(\chi^2\) examining differences in rates of lifetime suicidal ideation.

\(\chi^2\) examining differences in rates of past-year suicidal ideation.

* \(p < .05\).

** \(p < .01\).

*** \(p < .001\).

Note. SI = suicidal ideation.

\(^a\) \(n = 438\).

\(^b\) \(n = 539\).

\(^c\) \(n = 723\).

\(^d\) Chi-square examining differences in rates of lifetime suicidal ideation.

\(^e\) Chi-square examining differences in rates of past-year suicidal ideation.
racial/ethnic minority). These demographics did not differ significantly across semester ($p > 0.05$).

2.2. Measures

Lifetime and past-year SI were assessed via two questions each semester. In 2013 and 2014, these were assessed by the items: “Have you ever thought about or attempted to kill yourself?” and “How often have you thought about killing yourself in the past year?” In 2020, these were assessed by the items: “Have you ever had thoughts of killing yourself in your life?” and “Have you had thoughts of killing yourself in the past year?” Dichotomous variables reflecting the presence versus absence of lifetime and past-year SI were created.

2.3. Procedure

All procedures received approval from the university’s Institutional Review Board. After providing informed consent, participants completed online screening questionnaires in exchange for course credit.

3. Results

Chi-square analyses were conducted to examine differences in rates of SI across semesters. Rates of lifetime SI in Fall 2020 (42.6%) were not significantly higher than in Fall 2014 (43.9%) or 2013 (41.9%), $\chi^2(2, N = 1687) = 0.497, p = .780, \varphi = 0.017$. Although there were significant differences in rates of past-year SI across semesters, $\chi^2(2, N = 1700) = 8.722, p = .013, \varphi = 0.072$, this was driven by an elevated rate in Fall 2014 (29.5%) versus 2013 (25.3%) and 2020 (21.2%).

Results of chi-square analyses examining differences in rates of SI within and across semester as a function of gender, racial/ethnic background, and sexual minority status are presented in Table 1. Results revealed no significant racial/ethnic differences in rates of SI, and a significant gender difference (women $>$ men) for only past-year SI in 2013. However, in Fall 2020, the rates of lifetime (74.6%) and past-year (41.3%) SI among sexual minorities were more than twice as high as their heterosexual peers (37.1% and 17.9%, respectively).

4. Discussion

Despite concerns that suicide risk may increase during the COVID-19 pandemic, this study did not find elevated rates of SI among university students in Fall 2020 versus two earlier semesters. Together with the results of a recent study finding increases in student stress and emotional symptoms but not SI in Spring 2020 (with a return to pre-pandemic levels in Fall 2020; Charles et al., 2020), these findings suggest that observed increases in some psychological difficulties among university students during the COVID-19 pandemic (Charles et al., 2020; Hoyt et al., 2020) were not supported (although the fact that all non-significant differences were associated with very small effect sizes increase confidence that results were not due to Type II error). Strengths include the large and diverse sample and inclusion of data on SI from two previous semesters.

CRediT authorship contribution statement

Kim L. Gratz: Conceptualization, Formal analysis, Writing – original draft, Drafting – review & editing. Adam J.D. Mann: Formal analysis, Writing – original draft, Drafting – review & editing. Matthew T. Tull: Formal analysis, Writing – original draft, Drafting – review & editing.

Declaration of Competing Interest

All authors have no conflicts of interest to report.

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