Evaluating the Effects of the COVID-19 Pandemic and Telehealth on University Student Use of Mental Health Resources

American Public Health Association

Kawai O. Tanabe, MPH

Grace Duncan, MPH, Nicole Ruzek, PhD, Saumitra V. Rege, PhD, Christopher P. Holstege, MD

University of Virginia, Charlottesville, Virginia
Presenter Disclosures

1. The following personal financial relationships with commercial interests relevant to this presentation existed during the past 24 months:

No relationships to disclose
Background

• Prior to the COVID-19 pandemic, university students were identified as a vulnerable population at risk for mental health issues.

• Early surveys reported significantly higher incidences of:
  • anxiety
  • depression
  • other mental health issues

• Approximately 70% of student body felt that stress and anxiety had increased due to the COVID-19 pandemic.
Background

• Prior to pandemic, telehealth had been gaining traction
  • improve healthcare access and patient retention
  • reducing costs
  • achieving similar outcomes to in-person visits
• The state of emergency declaration for COVID-19 permitted regulating agencies to ease restrictions to allow for virtual visits.
• In spring 2020, due to increasing numbers of COVID-19 cases, many universities stopped in-person services and shifted medical and counseling appointments entirely online.
Study Objectives

• To examine key changes in student demographics and appointment attendance at a large public university’s counseling and psychological services program (CAPS) during the COVID-19 pandemic.

• To identify disparities in access to mental health resources as a result of telehealth.
Methods

Retrospective study of students attending a large, public university

• **Population**: students utilizing the university student health and wellness center’s counseling and psychological services (CAPS)

• **Time frame**: fall 2019 (pre-COVID) and fall 2020 (during COVID) academic semesters

• **Data source**: de-identified data obtained from the Student Health Research Database
  
  • an institutional review board approved comprehensive university student dataset linking medical, counseling, disability access services and academic registration data
Methods

Data analysis to examine potential trends between pre-COVID and during COVID semesters:

- Demographic characteristics (age, gender, academic status)
- Number of appointments and visit reasons
- Chi-square and two sample t-tests were performed at a significance level of 0.05
### Results – Table 1

<table>
<thead>
<tr>
<th>Student characteristics</th>
<th>Fall 2019 (N=1840)</th>
<th>Fall 2020 (N=1231)</th>
<th>X²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Appointments per student (mean ± sd)</td>
<td>4.02 ± 4.22</td>
<td>4.44 ± 3.94</td>
<td>T=-2.84, df=2758.1</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Age (mean ± sd)</td>
<td>21.96 ± 4.02</td>
<td>22.26 ± 4.16</td>
<td>T=-2.00, df = 3069</td>
<td>0.045</td>
</tr>
<tr>
<td>Student status</td>
<td></td>
<td></td>
<td>7.23</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Graduate</td>
<td>572</td>
<td>31.09</td>
<td>438</td>
<td>35.58</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>1263</td>
<td>68.64</td>
<td>784</td>
<td>63.69</td>
</tr>
</tbody>
</table>
## Results – Table 1 continued

<table>
<thead>
<tr>
<th>Student characteristics</th>
<th>Fall 2019 (N=1840)</th>
<th>Fall 2020 (N=1231)</th>
<th>X²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>645</td>
<td>35.05</td>
<td>376</td>
<td>30.54</td>
</tr>
<tr>
<td>Female</td>
<td>1192</td>
<td>64.78</td>
<td>853</td>
<td>69.29</td>
</tr>
<tr>
<td>Citizenship Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US citizen</td>
<td>1604</td>
<td>87.17</td>
<td>1113</td>
<td>90.41</td>
</tr>
<tr>
<td>International</td>
<td>236</td>
<td>12.83</td>
<td>115</td>
<td>9.34</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>221</td>
<td>12.01</td>
<td>148</td>
<td>12.02</td>
</tr>
<tr>
<td>Black or African American</td>
<td>158</td>
<td>8.59</td>
<td>88</td>
<td>7.15</td>
</tr>
<tr>
<td>Hispanic</td>
<td>124</td>
<td>6.74</td>
<td>99</td>
<td>8.04</td>
</tr>
<tr>
<td>Multi-Race</td>
<td>104</td>
<td>5.65</td>
<td>70</td>
<td>5.69</td>
</tr>
<tr>
<td>International</td>
<td>194</td>
<td>10.54</td>
<td>85</td>
<td>6.9</td>
</tr>
<tr>
<td>White</td>
<td>968</td>
<td>52.61</td>
<td>682</td>
<td>55.4</td>
</tr>
</tbody>
</table>

X² values: 6.77, 8.71, 16.97
p values: <.01, <.01, <.01
Figure 1: Appointment Reasons by Semester

- Individual Talk Therapy
- Brief Screening/Triage
- Medication Management
- Intake Assessment
- Group Therapy
- Emergency Consultation
- Care Management
- Other

Fall 2019 (N=7394 visits)

Fall 2020 (N=5468 visits)
Discussion

- CAPS continued to serve large student population throughout the pandemic using telehealth
- Decrease in international student utilization due to travel restrictions
- Graduate students were more likely to remain in the University area
- Consistent with literature that shows that women seek psychological services more frequently than men
Discussion

• The increase in the number of appointments attended per student and an increase in individual talk therapy visits is a positive indicator demonstrating the shift towards a psychotherapy model and away from an emergency intervention model.

• Telehealth visits may improve access and visit attendance, however, the decline in emergency/crisis visits is concerning
  • Prior to the COVID-19 pandemic, the CAPS crisis service was a walk-in service but with telehealth, students had to make an appointment for a telephone consultation
  • Does telehealth pose a barrier to emergency or crisis intervention care?
  • Where are these individuals getting care?
## Limitations & Strengths

<table>
<thead>
<tr>
<th>Limitations</th>
<th>Strengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducted at a single large, public university and results may not be generalizable.</td>
<td>Data is consistent with the literature that found that with telehealth, the shift has been towards more talk therapy visits and fewer emergency visits.</td>
</tr>
<tr>
<td>Regulations restricted the practice of medicine across some state lines so some students couldn’t see CAPS counselors directly and had to rely on referral services.</td>
<td>This study utilized a unique IRB-approved de-identified dataset that linked clinical, counseling and academic data.</td>
</tr>
</tbody>
</table>
Conclusions

• Mental health, particularly during a pandemic, is a major public health concern.

• Linking student academic, socio-demographic and clinical data highlights students not adequately reached by telehealth services: men, younger students, some minority groups and those in crisis situations.

• Colleges and universities should be proactive in supporting mental health needs of students.

• Further research should be conducted on the utilization of telehealth and barriers to access.

• Efforts should be made to ensure equitable access.
Acknowledgements

Grace Duncan, MPH
Nicole Ruzek, PhD
Saumitra Rege, PhD
Christopher Holstege, MD

thank you
Thank you!