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The Relationship Between Social Media Use and Depression and Anxiety Symptoms during COVID-19

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Introduction

• The rise of the coronavirus (COVID-19) pandemic has caused a global surge in exposure to disaster and crisis-related media. Increases in poor mental health outcomes such as anxiety and depression are associated with increased exposure to such media content (Abbas et al., 2021; Rehm et al., 2020; Zhao & Zhou, 2020).

• During the COVID-19 pandemic, there has been an increase in social media use due to social distancing and isolation resulting from pandemic-related safety measures (Abbas et al., 2021; Rehm et al., 2020).

• Previous literature prior to the pandemic has found an association between total time spent using social media and increased odds of depression (Lin et al., 2016; Shen et al., 2018).

• The current project will investigate these associations by analyzing results from ongoing longitudinal study. Spit for Science (S4S). The significance of this study is to contribute to the scientific literature regarding the impact of COVID-19 and other global events and social media use on mental health outcomes.

Methodology

Participants and Procedures

Data was collected from S4S, an ongoing longitudinal study conducted to examine environmental and genetic factors affecting individual susceptibility to substance use and emotional health concerns (Dick et al., 2014). In May of 2020, S4S added additional survey questions assessing the COVID-19 experiences of undergraduate students who were enrolled during the beginning of the COVID-19 outbreak and represents the current study sample. (N= 897).

Measures

Anxiety and Depression Symptoms

Symptoms of anxiety and depression were measured using 8-items that assessed general anxiety and depression during the past month. Items were asked on a 5-point Likert scale with 0 meaning “Not at all” and 4 meaning “Extremely”. Some example items include, “nervousness or shakiness inside” and “feeling no interest in things”. These items were calculated into a sum score to represent the combined depression and anxiety symptom scores.

Social Media Use

Social Media Use (SMU) was assessed using 3 self-report items that measured frequency (on a Likert scale 0-4), and whether there was an increase in frequency since the pandemic began, and how much (percentage) of a participant’s SMU was related to COVID-19.

Data Analysis

Data analysis was completed in SPSS (Version 27). Linear regressions were used to test the joint association between these SMU variables on anxiety and depression symptoms.

Results

A Multivariate Linear Regression was conducted to analyze the relationship between anxiety and depression symptoms and the SMU variables as predictors; SMU Frequency, Increase in Frequency, and Social Media Exposure (SME) to COVID-19 related content. Our findings showed that there is a statistically significant relationship between the total amount of hours and increase in hours of SMU on higher scores of anxiety and depression symptoms. SME to COVID-19 related content did not significantly predict anxiety and depression symptoms in the context of SMU Frequency and Increase in frequency. (n=885)

Table 1

<table>
<thead>
<tr>
<th>Frequencies for SMU Variables</th>
<th>Independent Variables</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No social media</td>
<td></td>
<td>18</td>
<td>2.0</td>
</tr>
<tr>
<td>Under 1 hour</td>
<td></td>
<td>66</td>
<td>7.4</td>
</tr>
<tr>
<td>1-3 hours</td>
<td></td>
<td>344</td>
<td>38.8</td>
</tr>
<tr>
<td>4-6 hours</td>
<td></td>
<td>280</td>
<td>31.6</td>
</tr>
<tr>
<td>More than 6 hours</td>
<td></td>
<td>179</td>
<td>20.2</td>
</tr>
</tbody>
</table>

SMU Frequency per day:

- Yes: 594 (68.8)
- No: 269 (31.2)

Percentage of SME Related to COVID-19:

- 0-25%: 519 (59.0)
- 25-50%: 200 (23.1)
- 50-75%: 104 (12.0)
- 75-100%: 44 (5.1)

Discussion/Conclusion

- During COVID-19, there was a significant association between SMU and anxiety and depression symptoms, but only when considering frequency of SMU and whether there was an increase since the onset of COVID-19. Interestingly, SME to COVID-19 related content had no significant relationship with anxiety and depression within our sample.

Limitations

- The measures used to assess anxiety and depression were brief, self-report assessments of symptoms as opposed to thorough clinical assessment.

- Our analyses did not account for sociodemographic variables such as age, sex, ethnicity, and socioeconomic status that could potentially play a role in the study’s relationship of focus as well as it’s generalizability to the greater population.

Works Cited


Table 2

<table>
<thead>
<tr>
<th>Linear Regression for Anxiety and Depression Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predictors</td>
</tr>
<tr>
<td>SMU Frequency</td>
</tr>
<tr>
<td>Increase in Frequency</td>
</tr>
<tr>
<td>SME to COVID-19 Content</td>
</tr>
</tbody>
</table>

Acknowledgements

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