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4-1-2022

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COVID-19 and Mental Wellbeing of College Students

An honors thesis submitted in partial fulfillment of the requirements for Honors in Psychology.

By

Taysia E. Porter

Under the Mentorship of Dr. Lawrence Locker

ABSTRACT

The purpose of the current study was to assess the relationship between the appearance of Covid-19 and retrospective judgments of mental wellbeing in college students. Specifically, students were asked to provide ratings of their mental wellbeing before and after the arrival of COVID-19. Participants also provide ratings of awareness of their mental wellbeing as well as how worried they were, how they adjusted to social distancing and changes in learning format. The results revealed that the arrival of COVID-19 was related to judgments of mental wellbeing such that wellbeing was rated lower after the arrival of COVID-19 than before. There were also differences in ratings of awareness of mental wellbeing. Relationships among the measures and mental wellbeing after the arrival of COVID-19 were also examined. The pattern of results supports the notion that the arrival and adjustment to COVID-19 was related to mental wellbeing in college-age adults.

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April 2022
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Acknowledgments

I would like to thank my former mentor Dr. Brandon Weiss for assisting with the formulation of a research topic falling under an interest of mine. I would also like to thank my current mentor Dr. Lawrence Locker for accepting me as his research mentee under such short notice and helping me get through the research study. Whether it was through the countless revisions or reminders on important deadlines, Dr Locker has shown nothing but the utmost patience and support through the entire journey as we worked through various obstacles. Without the support from Dr. Locker, I would not be as comfortable as I am sharing and presenting my thesis. I would also like to thank my family and friends for supporting me throughout my journey, and always being understanding of the time commitment required to complete such a project, and for accepting any goal I set for myself to achieve.

Introduction

In late December of 2019, a viral sickness like pneumonia stemming from Wuhan, China was announced to the World Health Organization (WHO, 2020). By March of 2020, COVID-19 began to rapidly spread around the world, spreading to more than 294,110 people in 187 different countries (WHO, 2020). While a great deal of focus has been on saving lives and controlling the spread of the virus, noticing and assessing the mental health care needs of those impacted by the pandemic has been heavily neglected (Xiang et al., 2020). However, there has been some recent research regarding mental health in the context of the appearance of COVID 19 (e.g., Germani et al., 2020; Ma et al., 2020; Prelog et al., 2022; Wang et al., 2020; Yang et al. 2021). The purpose of the current study is to analyze the depth to which the arrival of COVID-19 has possibly had a negative relationship with the mental health of college-age adults and specifically college students, as reflected by self-reported mental wellbeing. Sharp and Theiler (2018) reviewed the literature over a period of 30 years concerning psychological distress in university students across the world. Their review revealed, for example, based on data from university counseling centers, that there is a concerning level of psychological distress among students including anxiety and depression and that there is evidence that the levels of psychological distress are higher in university students relative to the adult population. Their review also revealed that psychological distress was associated with poorer academic outcomes and negative behaviors such as substance abuse. Sharp and Theiler (2018) discussed factors associated with distress that included individual differences such as psychological and demographic characteristics (e.g., finances stress; gender; dispositional hope) and academic related factors such as class size, resources and achievement. Another factor that is related to mental health and wellbeing is social

support. (e.g., Hepner & Eisenberg, 2009). Hepner and Eisenberg (2009) discuss social support as a coping resource that with positive effects (e.g., positive effects on self-esteem) as well as a protective factor against effects of stress with social support being a function of assistance (e.g., emotional) from friends, family, or a significant other. In a study assessing a large sample of college students, higher quality of social support was associated with a lower likelihood of mental health problems including depression and anxiety. Li et al. (2021) examined social support in relation to mental health across age groups in the context of the COVID-19 pandemic. Their research did reveal a positive relationship between mental health and social support in the context of the pandemic in that social support moderated the relationship between resilience and mental health. The authors interpreted this as social support providing additional resources when resilience is lower and that this moderating relationship was similar across the age groups.

The Appearance of COVID 19

COVID-19 is a fairly new disease, it is caused by a novel coronavirus that was not previously found in the human body. Most individuals who contract COVID-19 will only report mild flu-like symptoms (Center for Disease Control and Prevention [CDC], 2022). Older adults and those with underlying health conditions are more likely, however, to develop more severe symptoms/illnesses (CDC, 2022). The outbreak of the Corona Virus was first reported in Wuhan, China, on December 31st, 2019. The first cases in the United States were reported in January of 2020 (CDC, 2022). In March of 2020, the WHO labeled the Coronavirus as a global pandemic, resulting in a global shutdown and distressing effects worldwide (Wang et al., 2020). The abrupt appearance of COVID-19 changed the world as we know it. Due to the worldwide fear of the spread of sickness along with many unknown factors surrounding the dangers of the virus; theme parks,

restaurants, places of work, grocery stores, schools, etc. were closed. With schools closed, many institutions transitioned to an online remote learning service. Through the use of video chatting and online communication students and instructors abruptly shifted to a virtual form of learning. Among the many stressors associated with this change, literature has stated that the separation of the students from their peers has possibly been related to increased stress (Yang et al.,2021).

COVID-19 and mental health in young adults

One of the most drastic changes was the adjustment to the school systems having to adapt to the pandemic conditions. Many perceive college as a new beginning, the start of adulthood, the place where one begins to prepare for the life of their dreams while also meeting people whom they will call their best friends. College is a place where you meet individuals who may become some of the most important people in your life. The arrival of COVID 19 changed this perception. A recent study by Lukács (2021) was performed to assess the relationship between fear/worry concerning the pandemic and mental well-being in a sample of Hungarian college students after 4–6 weeks of restriction following the outbreak. Measures included sociodemographic variables (e.g., age, gender, finance), measures of health and physical activity, and a set of life-satisfaction indicators for which participants provided ratings before (retrospectively) and after the pandemic (e.g., relationships with friends and family, finances, and future prospects). An 8-item measure of depression was utilized for mental wellbeing whereas worry about the pandemic was measured via responses to questions on a 0-10-point scale. There were two notable findings reported by Lukács (2021) relevant to the current study. First, all the life-satisfaction measures in their study did significantly differ when comparing pre-and-post

pandemic ratings such that the ratings were lower following the pandemic. Interestingly, however, Lukács did not find a relationship between fear and worry about the pandemic and mental wellbeing. Multiple regression analyses revealed that when sociodemographic, health and physical activity measures, and life satisfaction variables were included in the model, worry about the pandemic did not significantly predict mental wellbeing. The author concluded that although participants did express concern about the pandemic (e.g., possibility of friends or family being infected; efficacy of health care), this was not significantly predictive of mental wellbeing (Lukács, 2021). Ma et al. (2020) conducted a large-scale study that surveyed 821, 218 college students throughout China. The study assessed several factors related to COVID-19 including the severity of the epidemic in one's area and exposure to COVID cases (e.g., number of friends or relatives who were infected with COVID). The questionnaire also included demographic and health questions as well as measures of acute stress, anxiety, depression, and social support. Their results revealed that nearly half of their sample (i.e., 45%) revealed symptoms of acute stress, anxiety, and depression, with acute stress being the highest (34.9 % of the sample). The results also revealed that positive cases among friends or relatives as well as a prevalence of cases in the community in which one lives were associated with poorer mental health outcomes in terms of the three measures. Lower perceived social support and increased exposure to media covering COVID-19 was also associated with poorer mental health outcomes.

Another study reported by Germani et al. (2020) examined 1,045 Italian young adults (age 18-29) to assess the prevalence of anxiety and perceived risk regarding COVID-19 in emerging adults. The study was conducted via survey for which

participants rated their perceived risk concerning COVID-19 which included questions concerning how serious they perceived COVID to be as well as their worry concerning being infected or infecting others. They also completed a measure of state/trait anxiety as well as measures of self-esteem, self-efficacy, and a relationship questionnaire. A relatively high percentage of participants in the study indicated severe to moderate levels of anxiety related to COVID-19 (43.4%) whereas the remainder of the sample reported mild to low anxiety. Almost half of the sample was classified as high in perceived risk whereas just over half was classified as low in perceived risk. In regard to anxiety, analyses revealed that being secure in relationships, higher self-esteem, higher self-efficacy, and less stress related to health was associated with lower anxiety. Higher security relationships and higher self-esteem, alternatively, were associated with higher perceived risk. The authors concluded that there was a prevalence of anxiety among emerging adults in terms of anxiety related to COVID, but factors such as secure relationships or higher self-esteem served as protective factors. The findings concerning perceived risk in relation to self-esteem and relationships were interpreted as a more realistic understanding of the risks of COVID-19 for these individuals compared to those with lower self-esteem or less secure relationships

Yang et al. (2021) examined the stress and health of a sample of Chinese college students in the context of the COVID-19 pandemic in terms of relationships with academic workload, separation from school, and fear of contagion. Among their results, a notable finding was that perceived stress was positively associated with separation from school, but negatively with health. Another notable finding was that fear of contagion was also positively correlated with perceived stress. Thus, the study by Yang et al (2021)

also illustrates the negative effects experienced by college students during the pandemic, notably with regards to the relationship to their education.

The research reported in the literature discussed above supports the idea that the advent of the pandemic has a negative relationship with mental health in college-age young adults. The current study was conducted to further assess the nature of this relationship in terms of self-reported subjective wellbeing. Specifically, we were interested in how, and the extent to which, college-age adults perceived mental health differed after the advent of the pandemic as compared to before as very little research to our knowledge has examined this question. We were also interested in further exploring the relationship between mental wellbeing and adjustments to both social distancing and the related changes in learning format. Utilizing retrospective self-report measures, we hypothesize that subjective well-being would be rated lower post-COVID-19 than pre-COVID-19. We also predict how well-reported adjustment to social distancing as well as changes in learning format (i.e., in-person vs. online) would be positively associated with post-COVID-19 mental wellbeing whereas self-reported worry about the appearance of COVID-19 would be negatively associated with post-COVID-19 mental wellbeing. Finally, we explored the extent to which one's self-reported awareness of their mental wellbeing differed before and after the appearance of COVID-19.

Method

Participants

Participants were 85 college-aged individuals at least 18 years of age or older ($M = 18.96$, $SD = 1.56$). The sample consisted of 67 females and 18 males. In terms of

race/ethnicity, the sample were 30.2% African American, 1.2% Asian/Asian American, 54.7% White, 5.9% Hispanic, 5.9% two or more races/not Hispanic and 1.2% preferred not to respond. In terms of academic rank, 60.3 % were Freshmen, 23.3% were sophomores, 5.8 % were juniors, and 9.3 % were seniors. Participants were recruited using the online SONA system at Georgia Southern University and received course credit for participation. One participant did not complete all the measures and was excluded from analysis. Therefore, analysis was based on responses from 84 participants. The study procedures were approved by the Georgia Southern University Institutional Review Board.

Apparatus and Measures

The study was conducted online using the Qualtrics platform. Participants completed the survey on their own devices, which may have ranged from desktop, laptop, or smart devices such as a phone or tablet. To complete the survey, the only materials needed were a keyboard to type with and a mouse pad or touch screen device for scrolling and clicking. The measures included seven items for which participants were asked to indicate on a one-to-nine Likert type scale, their mental wellbeing and awareness of mental wellbeing both before and after the appearance of COVID-19, how worried they were concerning the appearance of COVID-19 and how well they adjusted to the social distancing due to COVID-19 as well as change in learning format (i.e., in person-to-online learning). Participants were also asked to complete four demographics questions (see Appendices A & B).

Procedure

Each of the participants was asked for their consent and informed that they could

withdraw from the survey at any given time. Participants indicated consent by selecting an option to move the next screen. The seven measures were presented one at a time on the screen. The participants then answered the series of seven scale-based questions with separate anchors from one to nine (e.g., “How would you rate your overall mental wellbeing **prior to** the arrival of Covid?” with one representing not very good and nine representing very good; See Appendix A). After completing the questions, on the next page participants were asked to respond to demographic questions concerning age, gender, race/ethnicity and academic standing (i.e., Freshman, Sophomore, Junior, or Senior; See Appendix B).

Results

A paired-samples *t*-test was used to analyze the difference between pre-and-post COVID mental wellbeing. There was a difference in self-reported mental wellbeing, $t(83) = 5.27, p < .001, d = .57$. Participants rated their mental wellbeing higher pre-COVID 19 ($M = 6.62, SD = 2.21$) than after the arrival of COVID 19 ($M = 5.14, SD = 2.29$).

A second paired-samples *t*-test revealed a difference between participants' ratings of their awareness of their mental wellbeing before and after the arrival of COVID-19, $t(83) = -4.53, p < .001, d = .49$. Participants' ratings of their awareness of their mental wellbeing were lower pre-COVID 19 ($M = 6.12, SD = 2.17$) than after the arrival of COVID 19 ($M = 7.25, SD = 1.68$).

Bivariate correlations were utilized to examine the relationships among the seven measures. There was a positive relationship between participants' ratings of how well they adjusted to social distancing and post-COVID mental wellbeing, $r(82) = .23, p = .035$. There was also a positive relationship between ratings of adjustment to the change to online learning and post-COVID wellbeing, $r(82) = .22, p = .044$. There was also a

negative relationship between ratings of worry concerning the arrival of COVID and post-COVID mental wellbeing, $r(82) = -.26, p = .017$. There were also positive relationships between pre-and-post COVID ratings of mental wellbeing, $r(82) = .35, p = .001$ and between pre-and-post COVID ratings of awareness of mental wellbeing, $r(82) = .31, p = .004$. There was also a negative relationship between pre-COVID wellbeing and worry about the arrival of COVID, $r(82) = -.32, p = .001$. See Table 1 for all correlations among the measures.

Table 1

Descriptive Statistics and Bivariate Correlations

Variable	M	SD	1	2	3	4	5	6	7
1. Pre-COVID mental wellbeing	6.62	2.21	1.00	.35**	-.19	-.06	-.32**	.14	-.03
2. Post-COVID mental Wellbeing	5.14	2.29		1.00	.23*	.22*	-.26*	.01	-.03
3. Adjustment to social distancing	5.75	2.26			1.00	.39	.20	.15	.12
4. Adjustment To learning	5.05	2.54				1.00	.01	.05	-.02
5. Worry concerning COVID	5.76	2.62					1.00	.18	.22*
6. Pre-COVID awareness of wellbeing	6.12	2.17						1.00	.31**

7. Post-COVID awareness of wellbeing	7.25	1.68	1.00
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Note: * correlation is significant at < .05; correlation is significant at ** < .01

Discussion

The purpose of this study was to investigate the relationship between the arrival of COVID-19 and mental health in college students. Specifically, college students were asked to rate their mental wellbeing prior to and after the arrival of COVID -19. To further understand this relationship, participants were also asked to also rate their awareness of their mental wellbeing prior to and after the arrival of COVID-19 as well as rate how worried they felt due to the appearance of COVID-19. They were also asked to rate how well they perceived themselves to have adjusted to both the social distancing measures and more specifically how well they adjusted to the change in learning format (i.e., from in-person to online changes). The findings in the current study do align with recent research that has found a relationship between the appearance of COVID-19 and mental health in young adults and college students (e.g., Yang et al., 2021). For example, that mental wellbeing was lower after than prior to COVID is not unexpected given the stressors associated with the pandemic including fear and worry about infection, changes due to social distancing and, in the case of students, change in instruction modality and isolation from peers (e.g., Germani et al., 2020; Yang et al., 2021). Indeed, our results showed that not only was mental wellbeing lower post-COVID compared to pre-COVID but that how well one perceived that they adapted to social distancing was positively associated with post-COVID wellbeing. It should be noted, however, that this latter correlation was relatively small in terms of effect size. This is not unexpected as there

were a number of individual differences that can account for variance in terms of wellbeing (e.g., social support; self-efficacy, e.g., Germani et al., 2020; Ma et al. 2020).

The correlation concerning adjustments to the change to online schooling also aligned with the predictions. Adjustment to online learning was positively related to post-COVID-19 ratings of mental wellbeing. Thus, post-COVID wellbeing was rated lower as perceived adjustment to the change to online learning was lower. This finding does align with the study reported by (Yang et al., 2021) that found a relationship between separation from school and perceived stress. It should be noted, however, that this correlation was relatively small. One possibility for the relatively weak relationship is that the majority of students in our sample were Freshmen and Sophomores. A study by Lessard et.al. (2021) investigated the issue of changes to learning format in middle and high-school students. Their study also found that the transition was difficult for students. However, the transition was found to be more difficult for upper-level students (e.g., Juniors and Seniors) compared to first-or-second year students. A study by Guo et al. (2021) assessed the relationship between COVID and undergraduate medical students' anxiety. It was found that stress was higher in second- through fourth-year students compared to first-year students (Guo et al., 2021). Thus, it is possible that a stronger relationship may have been observed in the current study had our sample consisted of a greater percentage of Juniors and Seniors.

The current study also found a difference for the awareness ratings in that the rating for awareness of mental wellbeing prior to the appearance of COVID-19 was lower than after. This finding seems to align with the finding concerning the differences in mental wellbeing before and after the arrival of COVID-19. For example, if wellbeing was diminished post COVID, then this may have required greater efforts at, for example,

emotional regulation and coping strategies. This is also supported by the finding in the current study that how worried one was about the arrival of COVID was negatively related to post COVID awareness of wellbeing. If wellbeing is diminished and worry is increased, then attention may shift to great awareness of one's mental health possibly due to coping strategies, emotional regulation (e.g., Jankford et.al., 2011).

Limitations and Future Directions

Although the current study provides some insight into the relationship between the advent of the pandemic and mental health in college students, there are limitations in the current study that should be discussed. As noted, this was an exploratory study utilizing retrospective, self-report data. Future research should investigate mental health in this context in terms of formal assessments of, for example, anxiety or depression.

Longitudinal studies in this respect should also be investigated. For example, what are the long-term negative mental health effects associated with the arrival of COVID 19?

Likewise, in terms of adjusting to social distancing, the current study did not include an investigation of individual differences that are likely to be associated with mental wellbeing. Individual differences in terms of circumstances such as economic impacts of the loss of friends or family members COVID undoubtedly account for considerable variance in mental health outcomes.

In terms of adjustments to learning changes, future research should also investigate long-term academic outcomes compared to expected outcomes for students, pre-COVID. As noted, there is some evidence in high schoolers that the adjustment may be more difficult for upper-level students. Outcomes for upper-level students at the time of the arrival of COVID could be compared to those beginning college. As discussed

above, in the current study the majority of participants were Freshmen or Sophomores. A future line of research could include comparisons such as graduation rates or mean grade point average (GPA) for students in college during the pandemic as well as comparisons between students who were beginning college versus those later in their college careers. Finally, the current study had a much higher percentage of women than men in the study. Therefore, future research should further investigate possible gender differences in relation to mental health in the context of COVID19.

Conclusion

When comparing the data and results provided by the many articles cited it is apparent that the results differ. It has been found that based on the method of the study, and the factors present, the appearance of COVID has been seen to have either negative or unnoticeable impact on the mental health of college aged students. With further research taking location and other factors into account a more definite answer could possibly be found.

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Appendix A

Instructions and Survey Questions

On the next page, you will be asked to answer a series of questions on a scale of 1 (Not Very) to 9 (Very). Please read the questions carefully before answering.

How would you rate your overall mental wellbeing **prior to** the arrival of Covid?

1	2	3	4	5	6	7	8	9
Not Very Good								Very Good

How would you rate your overall mental wellbeing **after the** arrival of Covid?

1	2	3	4	5	6	7	8	9
Not Very Good								Very Good

How well did you adjust to the social distancing restrictions due to Covid?

1	2	3	4	5	6	7	8	9
Not Very Well								Very Well

How well did you adjust to the changes from in-person to online/remote learning due to Covid?

1	2	3	4	5	6	7	8	9
Not Very Well								Very Well

How worried did the arrival of COVID make you feel?

1	2	3	4	5	6	7	8	9
Not Very Worried								Very Worried

How would you rate your awareness of your mental wellbeing **prior to** COVID?

1	2	3	4	5	6	7	8	9
Not Very Aware								Very Aware

How would you rate your awareness of your wellbeing **after the** arrival of COVID?

1	2	3	4	5	6	7	8	9
Not Very Aware								Very Aware

Appendix B

Demographic Questions

Age:

Gender:

Male

Female

Non-binary/third gender

Prefer not to say

Race/Ethnicity:

African American or Black

American Indian or Alaskan Native

Asian or Asian American

European American or White

Hispanic or Latinx

Native Hawaiian/Pacific Islander

Two or more races, non-Hispanic

I prefer not to respond

What is your current academic class standing?

Freshman

Sophomore

Junior

Senior