

Virtual 4-Week Mindfulness Program for College Students during COVID-19

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INTRODUCTION

University students are presented with a unique combination of stressors, such as academic pressure, financial uncertainty, and difficult workloads, which may lead to high levels of anxiety and stress in this population (Bamber & Schneider, 2016; Kerrigan et al., 2017). In 2019, approximately 66% of a sample of college students in the U.S. reported feeling overwhelming anxiety, and approximately 87% of students indicated that they felt overwhelmed by all they had to do (American College Health Association, 2019). College students within the U.S. and across other countries report that they feel stress due to high expectations, academic pressure, and feelings of perfectionism (Kanuri et al., 2020; Kerrigan et al., 2017). The recent COVID-19 global pandemic has exacerbated rates of stress and anxiety in college students due to isolation, uncertainty, and massive change, such as the transition to online learning, which have compounded the traditional academic challenges that college students face (Huckins et al., 2020; Wang et al., 2020). Mental health concerns among university students, including stress and anxiety, demonstrate a need for accessible interventions that can address these specific psychosocial challenges for this population. As a result, many higher education institutions are implementing counseling and/or therapeutic programs on campus,

such as mindfulness-based interventions (MBI) (Bamber & Schneider, 2016; Kerrigan et al., 2017).

Mindfulness stems from ancient Buddhist philosophy and Indian yoga teachings and may be described as “moment-to-moment non-judgmental awareness” (Kabat-Zinn, 2013). The concept of mindfulness has been used in various settings (hospitals, schools, businesses) and used to target diverse populations, such as clinical populations with anxiety disorders and chronic illnesses, and non-clinical populations seeking to support their subjective well-being (Crane et al., 2017). One well-established program is an 8-week structured course known as mindfulness-based stress reduction (MBSR) (Kabat-Zinn, 2013). Variations of this program have been developed and include shortened forms, such as a 4-week MBI for college students, which focuses on accessibility, while retaining the efficacy of an 8-week MBI (Bamber & Schneider, 2016; Demarzo et al., 2017). Due to our population of college students and possible time limitations in their academic schedules, particularly during COVID-19, we developed a 4-week mindfulness program in this study.

Recent studies have shown that the adaptation of mindfulness and other mental health programs onto virtual/digital platforms can be feasible among university students and may provide increased accessibility to treatment for students who experience anxiety and stress (Behan, 2020; El Morr et al., 2020; Kanuri et al., 2020; Lauricella, 2014). Similarly, a mindfulness study involving adolescents concluded that digital programs still retain some of the psychological benefits found with traditional face-to-face intervention programs, particularly in reducing levels of anxiety (Lahitnen & Salmivalli, 2020). Virtual-based platforms can offer potential advantages over traditional mindfulness programs, such as improved accessibility, sustainability, and cost effectiveness (Krusche et al., 2013; Jayawardene et al., 2017; Mrazek et al., 2019), and lead to

decreased levels of stress (Jayawardene et al., 2017; Krusche et al., 2013; Spijkerman et al., 2016; Venkatesan et al., 2021), and decreased levels of anxiety (El Morr et al., 2020; Krusche et al., 2013; Spijkerman et al., 2016). However, more research is needed to assess the challenges associated with virtual-based mindfulness programs, such as the possibility of low accountability, engagement, and retention rates (Lahitnen & Salmivalli, 2020; Lauricella, 2014; Mrazek et al., 2019; Spijkerman et al., 2016). Additionally, a recent meta-analysis of preventive online mindfulness interventions assessing stress and mindfulness included only eight randomized controlled trials (Jayawardene et al., 2017), and a separate meta-analysis of online MBIs included only fifteen randomized controlled trials (Spijkerman et al., 2016), indicating a need for further research surrounding virtual mindfulness platforms.

The current COVID-19 pandemic provided a unique opportunity to further expand on previous research directions as many colleges and universities moved to online instruction. In line with previous recommendations on developing interventions (Craig et al., 2008), we implemented a pilot study to assess feasibility and acceptability of a 4-week virtual mindfulness program. We explored student perceptions about mindfulness, levels of mindfulness, physiological measures, academic performance, and mental health outcomes of a 4-week mindfulness-based program offered virtually with both synchronous and asynchronous components. This format allowed our program to retain the level of accountability in traditional face-to-face programming, while also providing participants with flexibility and ease of access to mindfulness resources, similar to other studies that used a blended format (Venkatesan et al., 2021). We hypothesized that participants who completed the 4-week virtual mindfulness program would demonstrate increased levels of mindfulness, improved well-being, and high levels of acceptability of the program.

METHODS

Participants

All students (both undergraduate and graduate) were invited to participate in our mindfulness program via the university student e-mail listserv and through the university's counseling center. Licensed counselors invited students to participate, particularly if they presented with anxiety. Inclusion criteria included being at least 18 years old and a currently enrolled student. Recruitment lasted for approximately three weeks and included three e-mail invites. All participants included in the study received a randomly generated ID number to allow researchers to track participant data across measures and to ensure confidentiality of the data. Additionally, all participants were told that if they were currently participating in counseling or taking any medications they should continue doing so during the duration of the study.

Procedure

The 4-week mindfulness program was developed using principles from Dr. Kabat-Zinn's MBSR program and was designed to introduce participants to a variety of daily mindfulness practices in order to manage mental health and support overall well-being (Kabat-Zinn, 2013). It consisted of an asynchronous and synchronous component over the course of 4 weeks (Weeks 7-10 of our 14-week semester) during the fall 2020 semester. For the asynchronous component, participants were encouraged to practice a daily 15-minute meditation using provided audio recordings created by SD via an online learning management system. For the synchronous component, participants were invited to attend weekly one hour group sessions via Zoom, with the day and time determined after input from the participants. To maintain accountability and retention, participants were reminded about the weekly sessions via e-mail the day of the session and reminded via e-mail at the begin-

ning of the weekly sessions if they had not logged on once the session had begun. Participants were also sent a follow-up e-mail if they missed a weekly session, and they were also reminded twice a week via e-mail about daily 15-minute meditations to encourage consistent practice.

The mindfulness sessions were led by instructors (SD and GB) who have extensive experience in mindfulness practices. SD is a professor of fine arts and has offered mindfulness practice to the university community for several years through the university's health and wellness services. She has over 15 years of mindfulness meditation experience as a daily practitioner, as well as extensive retreat practice with nationally recognized Buddhist teachers and authors. GB is a licensed psychologist and clinical coordinator for counseling services. She has over 15 years of experience working with undergraduate students through counseling services. She has trained in mindfulness-based treatment as used in Dialectical Behavioral Therapy (DBT) and Acceptance and Commitment Therapy (ACT) psychotherapy models. She also participated in online MBSR training during this study.

During the weekly synchronous sessions, participants learned mindfulness techniques such as body scan, breath meditation, yoga, and a touch drawing exercise, which invited participants to trace their face with their eyes closed using one hand, while drawing what they felt using the opposite hand (Figure 1). During each group session, participants were encouraged to share their experiences with the meditation practice from the previous week and to provide self-reported data on their physiology (blood pressure, temperature, and pulse), pre- and post- the synchronous session. Participants also practiced meditation during the synchronous session led by the mindfulness instructors. Participants were sent an email after the study with additional resources for campus counseling.

Participants were invited to complete the Mindful Attention Awareness Scale (MAAS) survey, the Counseling Center Assessment of Psychological Symptoms (CCAPS) survey, and a program assessment survey at baseline (before the mindfulness program began). Right after completing the mindfulness program and three months after completing the mindfulness program, participants were invited to complete a program assessment survey, the MAAS survey, and the CCAPS survey. Additionally, academic data was collected at baseline and three months after completing the mindfulness program. Physiological measures were collected during each week of the mindfulness program.

Measures

The Mindful Attention Awareness Scale (MAAS)

MAAS is a 15-item survey intended to assess characteristics related to dispositional mindfulness. Each item is rated using a 6-point Likert scale, with a higher score reflecting a higher state of mindfulness. This survey has been validated in a college population (Brown & Ryan, 2003). Participants completed the MAAS at baseline, after the 4-week program, and at a 3-month follow-up. Twelve participants completed the baseline MAAS survey. Due to a technical error, the participant ID did not appear on the survey, but this was corrected, and all 12 participants were able to enter their assigned number. Eight participants completed the post-program MAAS survey. MAAS data were analyzed using the same 8 participants from baseline and post-program surveys.

Counseling Center Assessment of Psychological Symptoms (CCAPS)

CCAPS is 62-item mental health assessment specifically intended for college students. It assesses psychometric measurements on eight subscales, including depression, generalized anxiety, so-

cial anxiety, academic distress, eating concerns, family distress, hostility, and substance use. Each item is rated using a 5-point Likert scale with higher scores indicating greater distress (Center for Collegiate Mental Health, 2012; McAleavey et al., 2012). Participants completed the CCAPS-62 at baseline, after the 4-week program, and at a 3-month follow-up.

Physiological Measures

During each weekly synchronous session, participants were asked to provide self-reported data regarding their physiology (blood pressure, temperature, and pulse), at the beginning and end of the session. These physiological measures were also collected at a 3-month follow-up. If participants did not have access to a device to measure blood pressure or temperature, they were asked to leave those items blank. The majority of participants were only able to provide their pulse because they lacked access to equipment to measure temperature and blood pressure. Therefore, we only reported pulse data. The difference between the pre- and post-pulse data was calculated for each participant, and then the group average was determined. If a participant only reported pre- or post-data (but not both), then their data was not included in that week's group average. The total number of participants who reported pulse data varied each week, so data could not be analyzed across all weeks for each individual participant; instead, any participant who reported data each week was included. During Week 1, although the synchronous mindfulness session was interrupted for two participants by a fire drill in their dormitory, their data was still included in the analysis. Also, one participant disclosed that she was pregnant at the end of the study. Her data was also included in the analysis.

Participants were also asked to provide their height and weight at baseline, after the 4-week program, and at a 3-month follow-up.

Although data on height and weight was collected, not enough participants consistently reported this information after the program or at the 3-month follow-up to report any comparisons.

Academic Data

Before the start of the 4-week study and at the 3-month follow-up, researchers were provided information from the university's registrar on participant's GPA and number of course withdrawals during fall 2020 and spring 2021.

Program Feasibility and Acceptability

Prior to participation in the mindfulness program, participants were invited to complete a survey regarding prior experience and attitudes towards mindfulness and their experience with online learning and stress during COVID-19. Participants also provided demographic information including age, class standing, academic major, sex, and racial or ethnic group (Tables 1 and 2).

After completing the mindfulness program, participants were invited to participate in a post-program survey, assessing feasibility and acceptability of the program. This included questions regarding barriers to attendance and practicing mindfulness, adherence to the program, impact of the program, and intended future mindfulness practice. Participants were also asked whether the mindfulness program impacted their experience as a student during the COVID-19 pandemic (Tables 1 and 2). After 3 months, participants were invited to complete a similar feasibility and acceptability survey to assess continued mindfulness practice and impact of the program (Tables 1 and 2).

Data analysis

For MAAS data, averages were calculated for participants that completed both the baseline and post-program surveys (n=8), and a

paired t-Test was run using R (R Version 4.1.0, *Vienna, Austria*). For CCAPS-62 data, percentage of participants at or above subscale low cut score at baseline and percentage of participants with positive change or clinically significant positive change post-program and at 3 months was calculated using SPSS (IBM, *Armonk, NY*). For pulse, academic data, and program assessment surveys, Microsoft Excel 2016 was used for data analysis. All values are reported as mean \pm 1 STD. Differences were considered significant if $p < 0.05$.

RESULTS

Participants

The initial number of participants who signed informed consent forms was 15. Two participants withdrew from the study before the first meeting and reported time constraints as the reason. This left 13 participants who attended at least one of the synchronous mindfulness sessions. Of the remaining 13 participants, one stated that they could not attend any more sessions after the first week, but still participated in the surveys. Another participant withdrew from the study after the first week due to personal reasons. Completion of the program surveys and MAAS varied across time points: baseline (n=12), post-program (n=8), and 3 months (n=5). Similarly, completion of the CCAPS-62 also varied across time points: baseline (n=9), post-program (n=4), and 3 months (n=4). The majority of participants identified as white females. The only other identified racial or ethnic group was Black or African American. Participants belonged to a broad range of academic majors (for example, biology, psychology, social work, accounting, and counseling and development) and class standings (Table 1).

The Mindful Attention Awareness Scale (MAAS)

Levels of mindfulness were significantly higher in the post-

program group (3.87 ± 0.81) compared to the baseline group (3.26 ± 0.83 ; $t = -3.39$, $p = 0.012$; Figure 2). Five participants completed the 3-month post-program MAAS survey. Of those five, four participants also completed the baseline and post-program MAAS. The 3-month group average of those four participants was 3.9 ± 1.08 .

Counseling Center Assessment of Psychological Symptoms (CCAPS-62)

At baseline, 9 participants completed the CCAPS-62, and 67% scored at or above subscale low cut indicating clinical levels in the areas of anxiety, depression, eating concerns, hostility, substance use, and overall distress (Figure 3A). 89% indicated clinical levels in social anxiety and 100% indicated clinical levels in academic distress (Figure 3A). After the 4-week mindfulness program, 4 participants completed the CCAPS-62 survey, and some participants demonstrated positive change compared to baseline in all areas except academic distress, with none reaching clinically significant positive change (Figure 3B). At 3 months, 4 participants completed the CCAPS-62 survey, and some participants demonstrated positive change compared to baseline in all areas, with one participant reaching clinically significant positive change for depression (Figure 3C).

Physiological Measures

The difference in pulse measurements at the end of the session compared to the beginning of the session generally decreased across the 4-week mindfulness program (Figure 4). This suggests that as participants engaged in mindfulness practices, the amount that their pulse rate decreased after a weekly mindfulness session was greater towards the end of the program.

Academic Data

Academic data was collected for 12 participants who attended the weekly mindfulness sessions. Of these 12 participants, 6 participants (50%) were first semester students and therefore didn't have a GPA recorded during the semester of the study. Of the remaining 6 participants, the average GPA for fall 2020 was 3.47, and only one student out of the 12 participants had any recorded course withdrawals. Three months after completing the mindfulness program, all 12 participants had a recorded GPA, and the average was 3.59. Only one participant had any recorded course withdrawals at the 3-month follow-up, and one participant was no longer attending the university.

Program Assessment

Twelve participants completed the baseline program survey. Of the 12 participants, one accidentally completed the survey twice, but had similar responses each time, and another participant completed the survey during week 2 of the program because they did not attend the week 1 session (Tables 1 and 2). Of the 12 participants who completed the baseline program survey, a majority (67%) had either no prior mindfulness experience or less than 10 sessions of mindfulness practiced. The majority of participants (75%) expressed interest in mindfulness during the baseline program survey, and all participants reported an interest in mindfulness and indicated that they were either likely or very likely to continue practicing mindfulness in the post-program and 3-month surveys. The majority (60%) who completed the 3-month survey indicated that they practice mindfulness every day, with 40% indicating that they practice mindfulness 3-4 times a week. In addition, the majority (80%) indicated in the 3-month survey that they practice mindfulness for less than 5 minutes at a time, and a wide variety of practices were noted as most often practiced (Table 2).

Overall, participants reported that the program was practical and feasible, with the majority (87.5%) indicating that the time commitment required was the “right amount.” One participant noted that the program was “[...] a good starting point to get into mindfulness without a huge time commitment.” Of the 8 participants who completed the post-program survey, a majority (87.5%) attended either 3 or 4 of the 4 weeks of synchronous mindfulness sessions, and a majority (62.5%) completed the daily mindfulness audio recordings 3-4 times a week. Breathing meditation was reported by half of the participants as their favorite part of the 4-week program (Table 2). Participants responded that the online format of the program was “convenient,” “fun and helpful,” “worked very well,” and “it was easy to locate and communicate with others online in the program.” Others noted that they would have preferred in person sessions, but overall, there was a positive response to the virtual format.

In the post-program survey, all participants had positive comments about their attitude towards mindfulness, including that mindfulness is “great,” “beneficial,” “very useful,” “relaxing,” and “very important.” Participants commented that strengths of the program include its “asynchronous practice,” “flexibility,” “freedom to speak about their experience with mindfulness,” “good introduction to mindfulness,” and “great team of support.” Although no specific adverse experiences related to the mindfulness program were reported by the participants, some did offer potential suggestions for improvement within the post-program survey. Participants suggested making the overall program more engaging by implementing “variations” to the types of mindfulness practices each week, moving the synchronous portion of the mindfulness study to the weekend rather than meeting during a weekday to increase participation, and sending out more reminders. Additionally, participants noted that their obstacles to completing the mindfulness

activities during the program and at the 3-month follow-up included being busy and not having enough time.

In the baseline program survey, the majority reported that the pandemic negatively affected their collegiate experience, particularly as it relates to online learning. The majority who completed the baseline program survey also reported increased levels of stress as a result of the COVID-19 pandemic, with participants indicating that online-learning, loneliness, anxiety, wearing a facemask, quarantine, and uncertainty all contributed to their levels of stress. Within the post-program survey, the majority reported that the mindfulness program had a positive impact on their experience as a student during COVID-19. Participants reported the program provided interaction with others, allowed time to reflect and “think clearly,” and provided “tools to use” when stressed. Similarly, in the 3-month follow-up, some participants also reported that mindfulness practice positively impacted their experience as a student during COVID-19. One participant commented:

“I find that if I let myself, my mind almost defaults into worries about the future/past instead of being in the present moment. By practicing mindfulness techniques as well as just being mindful throughout my day, I am able to help myself to better stay grounded in the present which helps me with being more productive/a better student.”

DISCUSSION

This study examined the feasibility and acceptability of a 4-week virtual mindfulness program for college students during the COVID-19 pandemic. On average, students significantly increased mindfulness after participating in the program, as well as decreased their pulse rate. Some participants demonstrated positive change

across psychological measures immediately after the program and at 3 months after the program. The majority indicated that the time commitment for the program was feasible and most attended a majority of the synchronous weekly sessions and completed the asynchronous 15-minute audio meditations 3-4 times a week. The program was rated positively, suggesting acceptability, with highlights of the program being “flexibility” and “asynchronous practice.” These findings support our hypothesis that participants who completed the program would increase levels of mindfulness, improve well-being, and report high levels of acceptability of the program.

Virtual Program

Although there are other studies that have reported using virtual platforms for mindfulness intervention (El Morr et al., 2020; Jayawardene et al., 2017; Krusche et al., 2013; Mrazek et al., 2019; Spijkerman et al., 2016), this is still a developing area of research. Therefore, a unique aspect of this program was the virtual platform, including both synchronous and asynchronous components, which was implemented due to the COVID-19 pandemic. Recent meta-analyses of online mindfulness interventions found some mindfulness improvement (Jayawardene et al., 2017; Spijkerman et al., 2016), which aligns with our findings of significantly increased mindfulness following our virtual 4-week program. Similar to other studies examining digital mental health interventions (Kanuri et al., 2020), our participants rated this virtual mindfulness program as feasible and acceptable. Positive comments regarding the online format of the program included that it was convenient and worked well. This flexibility might benefit students even after the return to on-campus activities, particularly for students who live off-campus. The positive comments regarding the virtual mindfulness program are in contrast to a majority of participants noting that online learning was a negative outcome of the COVID-

19 pandemic on their collegiate experience. This suggests that students may be open to virtual learning and can benefit from that modality, but awareness of format and timing will be necessary to design feasible virtual mindfulness programs in the future (Mrazek et al., 2019). Similar to other studies (Lauricella, 2013), some participants in our study noted that they would have preferred in-person instruction, so having options for students, such as a hybrid program with virtual and in-person components, will likely result in the greatest participation in future programs.

While some research suggests that online mindfulness programs are as effective at reducing levels of anxiety and depression as traditional in-person programs (Krusche et al., 2013), other research suggests that they may not be as effective (Spijkerman et al., 2016). In our study, some participants showed positive change related to psychological measures after the program and at 3 months compared to baseline, including one participant who reached clinically significant positive change for depression; however, other participants demonstrated either greater distress or no change after the program and at three months. Therefore, more research is needed to explore the virtual format compared to traditional in-person mindfulness programs regarding effectiveness. Additionally, more participants indicated positive change in psychological measures at 3 months compared to post-program. This trend is similar to other studies that suggest that lower stress may be associated with longer mindfulness practice, which may lead to better outcomes (Spijkerman et al., 2016).

Long-term acceptability of the mindfulness program was assessed during 3-month surveys. All participants reported an interest in mindfulness and indicated that they were either likely or very likely to continue practicing mindfulness in both the post-program and 3-month surveys. Additionally, at 3 months, the majority of participants report practicing mindfulness daily and for less than 5

minutes at a time. Some of the barriers to practicing mindfulness that participants noted were related to time management. This suggests that college students may best be able to incorporate mindfulness into their daily lives with frequent, but short (5-15 minutes), mindfulness practices, and it would be helpful to study this specific approach in future programs. Also, having a variety of mindfulness practice options (such as body scan, breathing meditation, and yoga) may help students decide what works best for them.

COVID-19 Pandemic

Another unique aspect of this program was that it occurred during the COVID-19 pandemic (fall 2020). Similar to other studies (Huckins et al., 2020; Wang et al., 2020), our participants reported in the baseline survey that they experienced increased stress due to COVID-19, particularly as it related to their online learning environment. Although our participants reported increased stress, and in particular, academic distress on the CCAPS-62, academic data provided by the registrar suggests that participants achieved high GPAs for both fall 2020 and spring 2021 semesters, and GPA increased from fall to spring. This is particularly noteworthy, since half of our participants were first semester students in fall 2020.

In both the post-program and 3-month surveys, participants noted that the mindfulness program had a positive impact on their experience as a student during COVID-19 by offering peer interaction and mindfulness practices to use when stressed. Although participants self-reported the benefits of the program as it related to their stress and some reported positive change in psychological measures on the CCAPS-62, others indicated more distress. In other studies, there are reports of no change to stress following virtual mindfulness intervention (El Morr et al., 2020), but there were decreases in anxiety and depression. There are several potential explanations for our findings. The first is that previous research has

identified some adverse effects in mindfulness-based programs, at similar rates to other psychological treatments. The more common negative effects identified were related to hyperarousal, such as anxiety (Britton et al., 2021). Although our participants did not self-report any negative adverse effects, we also did not specifically ask about this. Second, there were several external factors that occurred at the time of the post-program survey that were not as prominent during the baseline survey, including midterms, grade reporting, increased lock-down measures, and the up-coming U.S. presidential election. Previous research indicates that student anxiety levels fluctuate throughout the semester, particularly around final exams, even during non-pandemic years, and therefore, timing of the data collection is an important factor to consider (Huckins et al., 2020). Finally, only four participants completed the CCAPS after the program and at 3 months, which is too small of a sample size to draw robust statistical conclusions.

Limitations and Future Research

There are a few limitations to this study that should be noted. First, we did not include a randomized control group in our study and our sample size is small, thus our statistical analysis is underpowered. Future studies should include randomly assigned control and mindfulness treatment groups to assess efficacy of the virtual 4-week mindfulness program. Furthermore, recent discussion on the limitations of self-assessment instruments suggest that a “mixed-methods” approach would strengthen mindfulness studies (Sauer et al., 2013). Therefore, we recommend that future studies include qualitative interviews, along with self-assessment instruments (Sauer et al., 2013).

Second, due to the virtual format of this mindfulness program and the ongoing COVID-19 pandemic, only self-reported pulse data could be collected. Initially, this program was developed

for in-person instruction and included collecting physiological measures each week using standardized equipment by trained professionals. When COVID-19 began and our university moved to online instruction, we modified the mindfulness program to fit a virtual format. Because of the importance of obtaining multiple measures within mindfulness studies (Bamber & Schneider, 2016), we decided to collect self-reported physiology. Although interesting trends with decreased pulse rate across the 4-week program were observed, future mindfulness programs should include more objective, in-person, physiological data collection.

Third, there are also concerns with participant retention in post-program and 3-month follow-up assessments in our study, which have been similarly reported in other studies (Jayawardene et al., 2017; Mrazek et al., 2019; Spijkerman et al., 2016; Venkatesan et al., 2021). One strength of our study was the synchronous weekly meetings, which allowed participants to express any challenges with the program and engage with a community of peers and instructors for support, including a licensed psychologist. Previous research suggests that guided online mindfulness programs may have a greater effect on mindfulness and stress compared to online mindfulness programs that aren't guided; however, this analysis was underpowered, such that further research is needed in this area (Spijkerman et al., 2016). Future studies could examine retention rates between virtual and in-person programs and between guided virtual and independent virtual programs.

Finally, the population of students in our current study included predominantly white females. Although there were a variety of class standings and academic majors included in our study, future research should aim to increase racial/ethnic and sex diversity in mindfulness programs to ensure more inclusive representation across the college population. Additionally, during the week when yoga was completed, there were some comments made by partici-

pants during the synchronous session that centered on self-judgment and shame toward one's body and not being "good" at yoga. These comments were not made during other weeks of the program and warrant further investigation into mindful movement and perceived body image, an area of research that is already currently being explored (Alleva et al., 2020).

Conclusion

The collegiate experience can be a stressful period of development, and with the COVID-19 pandemic, it has become more important than ever to provide coping mechanisms to students. The virtual mindfulness program that we implemented suggests that it's feasible and well-accepted by students as a viable option to assist with stress. Though the results of the current study are limited to a small cohort, they provide a useful foundation for further expanding the virtual mindfulness program in future semesters.

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