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WELLNESS

Fall 2020 Fully Online Semester and Maintaining Wellness in College Student Physical Education

John Lothes II, Michael Taylor, and Lindsey Nanney

Abstract

With instructional formats changing due to COVID, it is essential to examine the effect of a physical activity (PA) and wellness course on college student wellness and motivation when courses had to be delivered fully online. This research examines the effect of an online PA and wellness course on wellness and motivation during the COVID-19 pandemic. Pre- and post-test surveys were utilized to measure changes in wellness and motivation among college students enrolled in a PA and wellness course. There were significant increases between the pre- and post-assessment scores for all dimensions of wellness and motivation. Including whole-person wellness and motivation content in college-level IPAP curriculum may enhance students' overall wellness and motivation for wellness-promoting behaviors even during an atypical semester.

John Lothes II, Department of Health and Applied Human Sciences,University of North Carolina Wilmington. Michael Taylor, University of North Carolina Wilmington. Lindsey Nanney, Department of Physical Education, University of North Carolina Wilmington. Please send author correspondence to lothesj@uncw.edu

Introduction

College Student Wellness

Student wellness has become not only a domestic concern here in the US (Cardinal, 2015) but has also drawn international concern (Esteban-Gonzalo et al., 2020; Roffey, 2015; Rose et al., 2015). The concept of a holistic approach to college student wellness has recently gained traction in higher education despite a longstanding understanding of its importance (Cardinal, 2014). Hettler (1984) proposed a holistic approach to college student wellness, consisting of six dimensions of health-related behaviors: physical wellness, emotional wellness, spiritual wellness, social wellness, occupational wellness, and intellectual wellness.

Today, a holistic approach to wellness is associated with improved psychological functioning that serves as a protective mechanism against physical disorders in adolescent populations (Esteban-Gonzalo et al., 2020). Research in college student health and wellness has design limitations that threaten reliability and validity. Studies on college students and wellness either have used small sample sizes (Baldwin et al., 2017) or overlooked a pre-post-intervention design (Lothes & Nanney, 2019). Lothes and Nanney (2019) and Baldwin et al. (2017) found that wellness differences may vary from the types of colleges students attend to gender differences in ratings of wellness. Baldwin et al. (2017) found that students who reported being employed also reported higher ratings of self-efficacy than unemployed students. Baldwin et al (2017) also found that female students reported engaging in less exercise and reported lower ratings of overall health-related behaviors than males. Lothes and Nanney (2019) conducted an end-of-semester assessment with college students (n = 1544) using the Wellness Inventory (Travis, 1981) and found few significant differences between the demographics of age and gender on the 12 dimensions of wellness. On the other hand, they discovered that students who self-reported higher overall levels of wellness and higher levels of exercise frequency had higher wellness scores than students who reported lower levels of both. A limitation of both Lothes and Nanney's (2019) and Baldwin et al.'s (2017) work was that they failed to conduct pre-post assessments to examine whether

wellness scores changed within the groups over the course of the semester.

Quinn et al. (2019) and Son et al. (2020) found through a series of qualitative interviews that students expressed concerns for information on matters of wellness, including issues of nutrition, economics, mental health, social interactions, the health of loved ones, and campus safety. Wilson et al. (2021) found that during the COVID-19 pandemic, physical activity alone did not protect against deterioration in mental health. Due to recent concerns growing internationally, as well as from the COVID-19 pandemic, it is important for an instructional physical activity course to offer information on wellness beyond just engaging in physical activity. While these findings shed light on wellness differences between college students, they were taken in a single snapshot in time, overlooking how interventions could be designed for long-term activities and benefits.

With the continued trend of college students engaging in sedentary (Buckworth & Nigg, 2004) and unhealthy behavioral patterns, Cardinal (2014) asked researchers and colleges to engage in a call-to-action to study student well-being and examine how we can positively impact college student's health and well-being beyond teaching diet and exercise. Instructional physical activity courses need to design and implement effective ways to encourage students to engage in activities that promote not only physical health, but overall wellness as well. A student's time during college not only allows them to grow as emerging adults, but it also has the potential to lay the foundation for what healthy or unhealthy lifestyle habits will develop across their lifespan (American College Health Association [ACHA], 2010). Cardinal (2014) has suggested that researchers look at college students' well-being on a more holistic level.

COVID-19 and Well-being

Mental illness can affect students' motivation, concentration, and social interactions—crucial factors for students to succeed in higher education (Son et al. 2020). The presence of an epidemic—in the case of COVID-19, a pandemic—accentuates or creates new stressors, including fear and worry for oneself or loved ones, constraints on physical movement and social activities due to quarantine, and sudden and radical changes to lifestyle (Son et al. 2020). The COVID-19 pandemic continues to upend the lives of students in higher educa-

tion institutions (Soria & Horgos, 2021). In particular, the pandemic has had deleterious effects on students' mental health leading to an increased prevalence of major depressive disorder (MDD) and generalized anxiety disorder (GAD) (Soria & Horgos, 2021). Per the Centers for Disease Control and Prevention (CDC) survey, 40.9% of 5,412 adults reported at least one adverse mental health condition in 2020 (White et al., 2021). This trend has also been documented globally (White et al., 2021). Results from Soria and Horgos (2021) show that, during the pandemic, 35% of students met the criteria for clinically significant MDD, and 39% met the criteria for GAD. Certain variables can affect the severity of the stressors due to the COVID-19 pandemic, including demographics (gender, first generation, race/ethnicity, international, dependency, etc.), interpersonal (feeling valued), institutional (feeling supported by the university), health and safety, finances, and academics (Soria & Horgos, 2021). The current study was conducted during the fall 2020 semester when the COVID-19 pandemic caused all classes to be delivered online the entire semester at a southeastern university in the United States. In this study, participants' levels of wellness were measured at the beginning and end of the semester to investigate changes in wellness patterns during a global pandemic.

Distance Learning/Online Learning and Wellness

Due to COVID-19, distance learning/online learning has become more prominent than in the past. The COVID-19 pandemic also caused disruptions in students' wellness (Wilson et al., 2021). Wilson et al. (2021) compared a group of students during the COVID-19 pandemic with fully online courses to a group of students from the same university before the pandemic. They found significant declines in physical activity, an increase in perceived stress, and a significant increase in depressive symptoms among women in the pandemic group. According to Son et al. (2020), 71% of the participants indicated increased stress, anxiety, and depressive thoughts during the COVID-19 shutdown. Some identified stressors as their health and loved ones' health, difficulty concentrating, disruptions to sleeping patterns, decreased social interaction, and increased concern for academic performance. Due to these findings, measures need to be taken to combat these problems.

Hager et al. (2012) assessed physical activity, diet, and fitness in a wellness course delivered face-to-face and online through a pre- and post-survey. The in-person course had greater improvements across measures, but both the face-to-face and online courses improved. Therefore, the course was valuable for promoting wellness regardless of delivery format. However, Everhart and Dimon (2013) assessed a face-to-face, fully online, and hybrid format and found that regardless of the delivery method, completing a wellness course improved the participants' nutrition habits and physical activity. Spittaels et al. (2006) reported that regular physical activity has an important influence on the health status and well-being of adults. A goal universities should include is to increase physical activity or increase the knowledge of how physical activity can help emerging adults, such as how to implement physical activity into the daily lives of the undergraduate population. Considering current trends with college students engaging in sedentary lifestyles both during their college years and after (Buckworth & Nigg, 2004), it is strongly encouraged that students are educated on matters of wellness and physical activity during this time.

Miller and Jensen (2020) introduced mindfulness activities into their online course delivery, to examine the effects and possibly decrease the levels of stress among students in the high-stress time of COVID-19. Miller and Jensen (2020) reported that they received positive feedback from students even if they did not attend every activity. A student shared qualitative data that they found the activities to be very beneficial because they relieved high levels of stress from their already difficult courses being changed to an online delivery format due to COVID-19. In the study by White et al. (2021), they administered a large online self-care intervention course open to any interested participant who was willing and able to pay the registration fee. They evaluated data after to determine the effectiveness of the course, and they found that through their online course (N = 216), they were able to provide support for the effectiveness of an online formatted self-care intervention (wellness) course. Significant improvements occurred over the semester in measures of nutrition, physical activity, mental health (depression and anxiety), perceived stress, and self-efficacy (one's perceived ability to overcome adversity).

Due to the online format, researchers believed adherence to course activities to improve wellness while taking online courses could be challenging. White et al. (2021) found that within their study, the adherence to the course and the participants' wellness goals met percentages were very high, even with the online format. The mean adherence was 76.3% of days for nutrition, 79.7% for physical activity, and 74.6% for mental wellness behaviors. In their study 88% met their nutrition goals, 89% met their physical activity goals, and 85% met their mental wellness goals. Although the percentages showed that they did not reach 100% adherence, data was not collected to determine the reason for non-adherence. According to Sideman et al. (2011), no matter the course delivery method, the motivation of the participants involved did not show any significant differences. This is promising evidence that no matter the method of delivery of these courses they can facilitate positive change to better students' wellness.

College Student Wellness

According to Travis (1981), people must engage in self-care activities to attain higher levels of wellness. Such activities may include being able to experience and express emotions effectively, eating a nutritious diet, participating in regular physical activity, constructively engaging the mind, being creative, and having some form of spiritual practice.

The American College Health Association (ACHA, 2021) identified physical inactivity as a continuing concern for the college population and has called for immediate attention to the matter. According to the National College Health Assessment (NCHA), delivered by ACHA, 39.7%% of US college students (N = 33,204) met physical activity recommendations for aerobic and strength training activity. The NCHA also showed that 36.5% of US college students self-reported being overweight or obese.

When it comes to issues of mental health, the ACHA has also expressed concerns about increasing issues of college student mental health. The implications for these elevated numbers of mental health concerns in college students suggest that universities need to implement wellness teaching to help students learn effective, evidence-based skills that may help to reduce maladaptive behaviors and improve mental health. With increased rates of college mental

health service usage, even before the pandemic (Lipson et al., 2018), colleges and universities must employ strategies to help students develop skills for high-level wellness they can utilize immediately and sustainably to reduce the load on mental health services. Still, many students face challenges and hindrances to their wellness and may not seek or get the help they need (Keyes & Haidt, 2003). This is where wellness and physical activity courses for students could offer some helpful tools to move them toward the direction of wellness.

The goal of many physical activity and health educators is to equip and empower students to establish and implement healthy lifestyle choices so they can flourish or move toward high-level wellness. Health behavior patterns established during college years have been shown to have a strong relationship to adult patterns of health behaviors later in life (Hultquist et al., 2009). Rouse and Biddle (2009) claim that a better education or understanding of physical activity and wellness can help move people toward high-level wellness. During their college years, many students are learning for the first time how to balance work, school, relationships, free time, and self-care. Providing students with educational materials on wellness is vital at this stage of their development. Through practical quality education, students can learn about different effective and ineffective health habits for wellness and how to begin to establish healthy habits. Many factors play a role in college students' wellness (Downes, 2015); therefore, a multidimensional approach to wellness is essential (Chugani et al., 2020; Travis & Ryan, 2004).

Purpose of Study

The purpose of this study was to determine if there were changes in students' wellness scores while taking a Physical Activity and Wellness (PED 101) course during the COVID-19 pandemic Fall 2020 semester at a southeastern university in the United States (IRB approval #18-0232). An examination of overall changes in the 12 dimensions of wellness scores, as well as self-reported motivation to make changes in those wellness dimensions, was conducted. Pre-post outcomes were assessed for overall scores of wellness and motivation and by gender, self-reported health status, and frequency of exercise. The hypotheses were:

- H_1: All students who took PED 101 during the Fall 2020 COVID-19 pandemic semester would experience a signifi-

cant improvement in wellness scores from the start of the semester to the end of the semester.

- H_2: All students who took PED 101 during the Fall 2020 COVID-19 pandemic semester would experience a significant improvement in motivation scores from the start of the semester to the end of the semester.
- H_3: Students who took PED 101 during the Fall 2020 COVID-19 pandemic semester, divided by gender into a male group and a female group, would experience a significant improvement in all dimensions of wellness from the start of the semester to the end of the semester, regardless of gender.
- H_4: Students who took PED 101 during the Fall 2020 COVID pandemic semester, divided by gender into a male and a female group, would experience a statistically significant improvement in motivation scores for all dimensions of wellness from the start of the semester to the end of the semester, regardless of gender.

Methods

Participants

The population for this study consisted of students enrolled in PED 101 who completed a lifetime physical activity and wellness curriculum during the Fall 2020 fully online COVID-19 semester as part of an Instructional Physical Activity Program (IPAP). For the sample, PED 101 students (n = 1593) were assessed at the beginning of the semester (August 2020) for each dimension of wellness and then again at the end of the semester (December 2020).

Demographics

Participating students were asked to provide demographic characteristics. Of the 1,593 students, 593 identified as male and 1,000 as female. Age was split into the Wellness Inventory's specified categories: 18-24 years of age = 1,379 students; 25-34 years of age = 135 students; and 35+ years of age = 56 students, and 45+ years of age = 23 students. The 1,593 students exercised at different frequencies (daily to monthly): daily = 131 students; 4-6x/week = 272 students; 3x/week = 361 students; 2x/week = 377 students; 1x/week = 288 students; and

1x/month = 164 students. Frequency of exercise was combined into three groups: daily and 4-6x/week (High = 402 students); 3x/week and 2x/week (Moderate = 738 students); and 1x/week and 1x/month (Low = 453 students). Students also self-reported their level of health status: Excellent = 357, Good = 922, Fair = 289, Poor = 25.

Course Description

During Fall 2020, the course was fully online. The academic content of the course was conducted online with resources available through Canvas and the Wellness Inventory for dimensions of wellness. An eBook with the physical activity curriculum was also used through Top Hat (Nanney, 2019) for students to work through tutorials online about physical activity and wellness. The course was two credit hours and included both a wellness lecture component and a physical activity lab. The physical activity lab normally is delivered face-to-face with instruction two times per week for 50 minutes. Due to the COVID-19 pandemic, the lab was offered fully online with asynchronous instruction equivalent to two days of 50 minutes of physical activity. The wellness lecture, normally delivered asynchronously online, included course content and assignments focused on increasing wellness awareness and developing wellness-promoting practices across John Travis's 12 dimensions of wellness (i.e., self-responsibility and love, moving, eating, feeling, and communicating). The course was designed to provide applicable information to a large diverse group of undergraduate students with a variety of knowledge and background in physical activity and wellness. The course was designed to be appropriate for all levels of students, from those who know very little about health and wellness to those who may have a strong grasp on concepts of health and wellness. Throughout the semester, students created action steps to help guide them on a path toward wellness through a process of implementing small steps for continuous improvement (Cardinal, 2014).

For the physical activity laboratory, students had the autonomy to enroll in the class physical activity they preferred from among approximately 50 different physical activity topics. Examples include Aikido, fencing, Pilates, yoga, group exercise, weight training, couch to 5K, dance for fitness, tennis, lifetime sports, cardio/strength/stretch, and many more. The laboratory consisted of readings that were conducted through a customized online book (Nanney, 2019),

applied learning-focused labs, and physical activity logs. Chapters and labs focused on topics such as aerobic fitness, muscular fitness, mobility and breath, the impact of physical activity on thinking and feeling, sustaining an active lifetime, and more. All the physical activity labs for this semester were delivered online. The instructor utilized different methods, such as real-time Zoom classes, activity logs, videos to follow along, and more, to help students engage in their selected physical activity class. Students also documented the completion of their activities in some form of log or journaling activity, and these counted as their attendance records for the semester.

Measures

Wellness Inventory

Completion of the Wellness Inventory was a required assignment at the beginning and end of the course. The Wellness Inventory was used to assess self-reported student wellness across the 12 dimensions of wellness. Results were visible to the students in a final, interactive report through the Wellness Inventory portal. The Wellness Inventory has evidence of reliability and validity in the assessment of college student populations (Travis & Ryan, 2004). The Wellness Inventory has also been used in previous studies with college-aged populations (Lothes & Kantor, 2021; Lothes, 2020; Lothes & Nanney, 2019) and during a natural disaster (Lothes et al., 2021).

The Wellness Inventory assessment includes 10 questions on a 10-point Likert scale ranging from 0 (not at all) to 10 (completely) for each of the 12 dimensions of wellness (120 questions total). The questions ask about behavioral aspects of each wellness dimension with a total possible score ranging from 0 (lowest) to 100 (highest) for each dimension. There is also a 10-point Likert scale, ranging from 0 (lowest) to 10 (highest), to assess the respondent's motivation to change a particular aspect of wellness. Motivation scores range from 0 (lowest) to 100 (highest). The wellness inventory includes no reverse-scored items. There are 12 dimensions of wellness in John Travis's Wellness Inventory (Travis & Ryan, 2004). See Lothes et al. (2021) for a more detailed description of the Wellness Inventory dimensions.

Statistical Analysis

The Wellness Inventory results were collected for all 12 dimensions of wellness for all the courses offered. To maintain the confidentiality of the students, no personal identifiers were used during data analysis. Paired t-tests were conducted on the scores for each of the dimensions of wellness from the Wellness Inventory (pre/post). Students also reported motivation for change on each of the 12 dimensions in the Wellness Inventory. Paired *t*-tests were conducted on pre/post motivation to change scores for each dimension of the Wellness Inventory. Paired *t*-tests were also conducted separately for males and females to assess if there were differences by gender.

Results

Overall Wellness Scores

Wellness assessment scores showed significant increases across each of the 12 dimensions of wellness from pre- to post. Similar trends were identified for motivation (Tables 1 & 2).

Gender

Both males (Appendix A & B) and females (Appendix C & D) showed significant increases in both wellness ratings and motivation for change per dimension from pre-assessment to post-assessment.

Discussion

These results support the hypothesis that wellness scores would increase from the beginning of the semester to the end of the semester even amid a pandemic. The results also support the hypotheses that wellness scores and motivation would increase in both males and females. Along with the pandemic came increased rates of depression, anxiety, and substance misuse among college students (Charles et al., 2021). With the COVID-19 variants that surfaced over the course of the pandemic and the pandemic's consistent disruption to institutions, universities should establish contingency and continuity plans to mitigate academic disruptions in the short term and long term. These plans should consider not only current or potential pandemics but also other potential disruptions, such as natural disasters (Lothes et al., 2021). These contingency and continuity plans should include considerations for how to support whole-person wellness among

Table 1
Overall Wellness Pre/Post

Dimension (*N* = 1593)	Pre		Post		Pre-Post			
	Mean	SD	Mean	SD	Pooled SD	Paired t	p-value	Cohen's d
Self-Respect & Love	73.89	13.32	80.70	13.25	13.285	21.40	<.0001***	0.513
Breathing	56.36	17.97	72.18	18.04	18.005	34.35	<.0001***	0.879
Sensing	66.93	14.87	76.54	14.99	14.930	27.75	<.0001***	0.644
Eating	55.32	18.78	67.03	18.89	18.835	27.98	<.0001***	0.622
Moving	57.56	20.95	72.25	19.49	38.573	31.07	<.0001***	0.381
Feeling	65.29	17.35	74.83	17.44	17.400	24.58	<.0001***	0.548
Thinking	62.35	17.39	73.08	17.90	17.647	27.03	<.0001***	0.608
Playing & Working	64.09	18.07	74.89	17.86	17.965	26.63	<.0001***	0.601
Communicating	76.24	14.27	81.55	14.15	14.210	17.48	<.0001***	0.374
Intimacy	77.02	16.36	82.13	15.50	15.936	15.26	<.0001***	0.321
Finding Meaning	67.93	17.77	76.36	17.28	17.527	22.43	<.0001***	0.481
Transcending	67.07	18.16	75.89	17.51	17.848	23.14	<.0001***	0.494

Note. *<.01; **<.001; ***<.0001.

Table 2
Overall Motivation Pre/Post

Dimension (N = 1593)	Pre		Post		Pre-Post			
	Mean	SD	Mean	SD	Pooled SD	Paired t	p-value	Cohen's d
Self-Respect & Love	70.66	22.01	76.23	25.25	23.685	10.16	<.0001***	0.235
Breathing	69.15	23.87	75.90	25.51	24.704	11.83	<.0001***	0.273
Sensing	64.72	37.22	71.97	28.30	33.062	8.35	<.0001***	0.219
Eating	71.55	23.44	76.39	25.09	24.279	8.94	<.0001***	0.199
Moving	71.15	24.76	76.09	26.67	25.732	8.52	<.0001***	0.191
Feeling	70.87	26.43	75.77	28.05	27.252	8.57	<.0001***	0.180
Thinking	73.89	35.68	76.96	26.54	31.444	3.57	<.001**	0.098
Playing & Working	72.11	26.15	76.26	27.60	26.885	7.22	<.0001***	0.154
Communicating	71.17	29.20	75.92	29.44	29.320	7.76	<.0001***	0.162
Intimacy	69.82	30.96	74.83	31.14	31.050	7.85	<.0001***	0.161
Finding Meaning	73.42	26.29	76.84	27.93	27.122	5.89	<.0001***	0.126
Transcending	66.53	28.28	72.90	29.32	28.805	10.55	<.0001***	0.221

*<.01, **<.001, ***<.0001

students during disruptions, not just logistics like course delivery format changes. This study's results provide promising outcomes that universities offering a physical activity and wellness course can help build and maintain wellness even when disruptions to traditional course schedules occur.

Summary of Findings

The implications of using the Wellness Inventory as an assessment tool for college students are promising. Regardless of the pandemic, natural disaster (Lothes et al., 2021), or during a "normal" semester (Lothes & Kantor, 2021), the results of this study offer evidence that a course designed for implementing the 12 dimensions of wellness shows promise for moving students in the direction of high-level wellness. Even during the challenges posed by a pandemic, college students showed significant increases in all 12 dimensions of wellness. Both male and female students showed significant increases in wellness ratings from the start to the end of the semester. These outcomes show promise that a physical activity and wellness course that incorporates teaching and application of whole-person wellness practices can be designed to help move students in the direction of high-level wellness (2018 Physical Activity Guidelines Advisory Committee, 2018; Cardinal, 2014).

Cardinal et al. (2015) have advocated for more well-rounded approaches to teaching and assessing wellness in college students. One possible reason behind the successful increase in wellness scores was that the wellness curriculum was delivered through online (Canvas and Top Hat) tutorials that students accessed each week with homework assignments that engaged students in different dimensions of wellness each week.

Copeland et al. (2021) found that students enrolled in the University of Vermont's Wellness Environment program reported that they were less affected by COVID-19 in terms of their internalization of symptoms and attention problems than those who were not enrolled in the Wellness Environment program on campus. Marr and Wilcox (2015) found that self-efficacy and social support facilitated the relationship between health locus of control, physical activity behaviors, and healthy eating habits. A course that offers a battery of options for learning about wellness aspects and describes

how to improve upon the dimensions of wellness can help increase college students' self-efficacy in moving toward high-level wellness.

As Cardinal (2017) has stated, "Quality physical education classes and programs that promote active, healthy living and that allow people to have profoundly meaningful physical activity experiences are something that we need more of" (p. 4). Cardinal (2014) has also recommended that we assess student wellness and education beyond health-based outcomes like exercise and weight. The findings of this study support the Travis and Ryan (2004) theory that wellness is more fluid than static. The current findings also build upon more contemporary research (Lothes, 2020; Lothes & Kantor, 2021; Lothes et al., 2021) by examining pre- and post-assessments as opposed to a single snapshot in time (Lothes & Nanney, 2019). These results show that students involved in a physical activity course within an Instructional Physical Activity Program that takes a holistic approach to wellness can help students improve on multiple dimensions of wellness even during a pandemic. Future research wanting to examine current pandemic effects could examine semesters across the pandemic (Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021, and Fall 2021) to see if there are differences between scores of wellness at different stages of the pandemic. Future research should assess if wellness scores baseline after people are habituated to the effects of the pandemic.

As health educators, we can equip students to recognize where they are on their wellness journey and equip them to move forward toward high-level wellness (Travis, 1981; Travis & Ryan, 2004). Through educating on the matters of the 12 Dimensions of Wellness, educators can facilitate students' development of their wellness journey and maintain it even after graduation.

While this PED 101 course was not specifically designed to address the concerns of a pandemic disruption other than an extra credit, custom-created chapter on COVID-19 and wellness, the results do show that wellness enhancement can still be encouraged during these times. Specific content in the course lectures covered such topics as taking media breaks, engaging in self-care, mindfulness and meditation, exercise and nutrition, connecting with others, and finding time to unwind and engage in meaningful and joyful ac-

tivities. The content that focused on self-care and wellness consisted of a variety of approaches that students could implement.

Outcomes from this study show that even during times of a pandemic, a positive impact on student health and well-being can be addressed and affected despite the unconventional semester, thus helping maintain a healthy academic community for students.

Limitations

A limitation of this study was that there was no control group or randomization to see if observed differences were the result of the course or were just a natural occurrence of being in college. It is recommended that future studies adopt an experimental or quasi-experimental approach by including a control group that is not exposed to the course. It is also recommended to capture student wellness before the course and follow them for longitudinal data collection after taking the course. Ideally, data collection should start during the semester before they take the course and continue through the semester that students take the course. Researchers could also consider tracking students longitudinally after the course to see if trends were sustained for the remainder of their college years. Randomization is not an option in this as students self-select when they will take their courses in college. However, the limitations of lacking randomization do not reduce the merit that changes are occurring from the start of the semester to the end of the semester.

Factors such as exposure to pandemic levels were not assessed and this study was only done at one university in the southeastern United States. These results may have looked different in more densely populated areas or regions of the country with prolific COVID-19 outbreaks. Research on natural disasters has found that during a disaster, an individual's degree of exposure to the disaster is highly predictive of their susceptibility to subsequent mental health issues (Fernandez et al., 2015; Goldman & Galea, 2014). The large sample size helps to offset any outliers in the data that may skew the data.

Another suggestion would be to try this same type of educational protocol with individuals in the public on a voluntary basis to see if measures of the wellness dimensions change in the absence of tight deadlines and the need to earn credit. Due to the nature of an academic course, participants may have been motivated to engage in wellness activities to earn credit for homework assignments.

Conclusion

Health educators are ideally placed to promote a holistic approach to well-being regardless of external events such as a pandemic (Cardinal et al., 2018). Since we cannot control what is going on globally, we can help to facilitate wellness for students in what they can control—their wellness journey.

Conflict of Interest Disclosure

The authors have no conflicts of interest to report. The authors confirm that the research presented in this article met the ethical guidelines, including adherence to the legal requirements, of the United States, and received approval from the Institutional Review Board of the University of North Carolina Wilmington (18-0232).

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Appendix A

Males' Wellness Pre/Post

Dimension (*n* = 593)	Pre		Post		Pre-Post			
	Mean	SD	Mean	SD	Pooled SD	Paired t	p-value	Cohen's d
Self-Respect & Love	73.90	13.57	79.17	14.01	13.792	10.04	<.0001***	0.382
Breathing	57.86	17.63	70.84	17.97	17.801	18.91	<.0001***	0.729
Sensing	67.25	14.50	75.20	14.63	14.565	15.17	<.0001***	0.546
Eating	55.75	18.10	66.37	17.81	17.956	17.04	<.0001***	0.591
Moving	60.88	19.69	72.30	18.53	19.119	16.95	<.0001***	0.597
Feeling	65.81	16.82	73.55	17.03	16.925	12.93	<.0001***	0.457
Thinking	64.27	17.20	72.45	17.04	17.120	13.55	<.0001***	0.478
Playing & Working	65.94	17.22	74.33	16.95	17.085	13.65	<.0001***	0.491
Communicating	74.71	14.85	79.08	14.54	14.696	8.89	<.0001***	0.297
Intimacy	75.86	16.08	79.86	15.09	15.593	6.96	<.0001***	0.257
Finding Meaning	68.41	17.69	74.61	16.84	17.270	10.95	<.0001***	0.359
Transcending	66.10	18.01	73.43	17.36	17.688	11.83	<.0001***	0.414

*<.01, **<.001, ***<.0001

Appendix B

Males' Motivations Pre/Post

Dimension (n = 593)	Pre		Post		Pre-Post			
	Mean	SD	Mean	SD	Pooled SD	Paired t	p-value	Cohen's d
Self-Respect & Love	67.17	21.79	71.94	25.49	23.712	5.44	<.0001***	0.201
Breathing	63.40	24.23	71.01	25.67	24.960	8.17	<.0001***	0.305
Sensing	61.66	49.79	67.81	26.96	40.037	3.15	<.002*	0.154
Eating	66.83	23.86	71.95	24.85	24.360	5.73	<.0001***	0.210
Moving	65.82	25.46	71.38	26.93	26.205	5.65	<.0001***	0.212
Feeling	62.21	26.83	71.00	28.14	27.493	6.10	<.0001***	0.320
Thinking	69.91	49.14	72.50	26.10	39.344	1.31	.19	0.066
Playing & Working	66.29	26.51	71.70	27.54	27.030	7.22	<.0001***	0.200
Communicating	66.08	28.45	72.08	28.37	28.410	6.00	<.0001***	0.211
Intimacy	65.51	30.43	70.76	30.27	30.350	5.18	<.004*	0.173
Finding Meaning	68.52	26.52	72.73	27.38	26.953	4.45	<.008*	0.156
Transcending	61.76	27.75	68.51	28.32	28.036	7.26	<.0001***	0.241

*<.01, **<.001, ***<.0001

Appendix C

Females' Wellness Pre/Post

Dimension (n =1000)	Pre		Post		Pre-Post			
	Mean	SD	Mean	SD	Pooled SD	Paired t	P-value	Cohen's d
Self-Respect & Love	73.87	13.17	81.60	12.70	12.93	19.42	<.0001***	0.598
Breathing	55.43	18.12	72.94	18.04	18.080	28.96	<.0001***	0.968
Sensing	66.76	15.04	77.34	15.14	15.090	23.38	<.0001***	0.701
Eating	55.05	19.18	67.43	19.51	19.346	22.30	<.0001***	0.640
Moving	55.49	21.49	72.22	20.06	20.787	26.38	<.0001***	0.805
Feeling	64.94	17.64	75.54	17.62	17.630	21.07	<.0001***	0.601
Thinking	61.22	17.41	73.46	18.38	17.901	23.75	<.0001***	0.684
Playing & Working	62.90	18.57	75.22	18.39	18.480	23.14	<.0001***	0.667
Communicating	77.13	14.00	82.99	13.72	13.861	15.22	<.0001***	0.423
Intimacy	77.61	16.70	83.46	15.63	16.174	14.06	<.0001***	0.362
Finding Meaning	67.56	17.93	77.36	17.45	17.692	19.86	<.0001***	0.554
Transcending	67.60	18.24	77.44	17.46	17.854	20.14	<.0001***	0.551

*<.01, **<.001, ***<.0001

Appendix D

Females' Motivations Pre/Post

Dimension (n =1000)	Pre		Post		Pre-Post			
	Mean	SD	Mean	SD	Pooled SD	Paired t	P-value	Cohen's d
Self-Respect & Love	72.72	21.89	78.80	24.74	23.359	8.61	<.0001***	0.260
Breathing	72.52	23.07	78.81	24.96	24.034	8.65	<.0001***	0.262
Sensing	66.55	26.99	74.44	28.77	27.894	10.45	<.0001***	0.283
Eating	74.27	22.86	79.03	24.85	23.876	6.87	<.0001***	0.199
Moving	74.27	23.83	78.87	26.12	25.001	6.39	<.0001***	0.184
Feeling	74.22	25.64	78.61	27.59	26.633	6.11	<.0001***	0.165
Thinking	76.22	24.16	79.56	26.49	25.352	4.76	<.0001***	0.132
Playing & Working	75.56	25.32	78.96	27.30	26.329	4.69	<.0001***	0.129
Communicating	74.14	29.29	78.16	29.88	29.586	5.18	<.0001***	0.136
Intimacy	73.38	30.99	77.26	31.40	31.200	5.93	<.0001***	0.124
Finding Meaning	76.31	25.74	79.32	27.90	26.842	4.02	<.0001***	0.112
Transcending	69.36	28.22	75.54	29.56	28.898	7.80	<.0001***	0.214

*<.01, **<.001, ***<.0001