

Eight Dimensions of Wellness: Undergraduate Student Behavior

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ABSTRACT

Background: Mental health and well-being are important public health issues. College students are vulnerable to mental health and other wellness issues as this population is often making lifestyle choices autonomously for the first time and many are balancing new responsibilities, priorities, and situations in life.

Aim: This study sought to gain an understanding of college students' behavior when provided time and autonomy to focus on their wellness needs.

Methods: Students completed a self-selected activity that corresponded to a dimension of wellness. A chi-square goodness-of-fit test was performed to determine distribution of responses. A chi-square test of independence was performed to examine relationships between dimension of wellness and gender, year of enrollment, and the interaction of gender by year of enrollment.

Results: All dimensions of wellness were reflected in student responses with physical, social, and emotional dimensions selected more frequently. A significant relationship was found between dimension of wellness and gender and the interaction effect of gender by year of enrollment. No significant relationship was found between dimension of wellness and year of enrollment.

Conclusions: This study highlights the need for diversity in wellness programming and provides valuable insights to optimize student support.

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INTRODUCTION

Undergraduate student mental health and well-being is an important public health issue and has become a major focus of attention for universities (Brown, 2016; Sheldon et al., 2021) as the prevalence of depression and suicide-related outcomes have approached 25% in recent years (Sheldon et al., 2021). College students are vulnerable to mental health and other wellness issues as this population is often making lifestyle choices autonomously for the first time (Deliens et al., 2015; Montgomery & Cote, 2023), and many are balancing new or different responsibilities, priorities, and situations in various areas of life such as academics, work, relationships, and free time (Rodriguez-Romo et al., 2023). The degree to which an individual can successfully balance these demands and other life challenges influences their level of wellness.

One of the overarching goals of the American College Health Association (2023) Healthy Campus 2030 initiative is to promote positive health and well-being on college campuses. The framework acknowledges the importance of



physical and mental health for student success. Positive mental health influences other healthy living habits (Rodriguez-Romo et al., 2023), which highlights the need for student mental health as a research priority (Sheldon et al., 2021). In addition, it is well documented that changes in health behaviors are linked to times of transition (e.g., beginning college). This period in life also influences health behavior patterns later in life (Maldari et al., 2023), emphasizing the need to further understand how to better support health promotion in a college setting.

The benefit of physical education classes on college campuses in helping students establish positive physical activity habits and overall well-being is well known (Miller et al., 2008). Although, recent research has found physical education classes contribute to improved well-being and motivation when comparing pre- and post-semester assessments using the Wellness Inventory (Lothes 2020; Lothes & Kantor, 2021), at present there is no published research on student behavior related to the dimensions of wellness. This study sought to expand upon this literature gap and gain an understanding of college students' behavior when provided the time and autonomy to attend to their wellness needs relative to the eight dimensions of wellness, which include physical, spiritual, social, intellectual, emotional, occupational, environmental, and financial dimensions. Furthermore, this study aimed to assess if there are differences in behavior in engagement with a dimension of wellness activity relative to year of enrollment and/or gender identity. The rationale for the study was to contribute to the understanding of student well-being to optimize student support. Through understanding the specific domains of wellness, students can choose to focus on more tailored interventions and additional support can be developed.

Theoretical Framework

The dimensions of wellness by Hettler (1976) endorsed by the National Wellness Institute (2024) guided this research. Hettler (1984) defined wellness as “an active process through which people become aware of, and make choices toward, a more successful existence” (p. 14). According to this framework, wellness is an active and dynamic state that encompasses six interdependent dimensions including emotional, intellectual, occupational, physical, social, and spiritual, and optimizing all dimensions contributes to the overall health of an individual (Hettler, 1976; Hettler, 1984). Various models have been proposed over the years that include additional dimensions (Oliver et al., 2018). The present research also included the environmental and financial dimensions. These eight dimensions are particularly relevant in a college setting where individuals are predominantly independent for the first time and are making decisions and forming habits that have lifelong impact.

METHODS

Participants

Selective sampling was used whereby participants were recruited from 11 sections of a required 100-level physical education course offered across four semesters from 2023–2024 at a large public university in southeastern United States. To eliminate any student perception of coercion, investigators communicated that participation in the study was voluntary, with no extra course credit offered for completion of the study and that their responses would remain anonymous. A total of 285 students (157 females, 128 males; 25 freshman, 67 sophomore, 87 junior, and 106 seniors) participated in the study. Thirteen students declined to participate. The study was approved by the North Carolina

State University Institutional Review Board (#27044) according to the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments. All participants gave their informed consent prior to participation in the study.

Course Description

The one credit, 15-week physical activity course met twice a week for 50 minutes per session. The course is designed to teach and apply the principles of lifetime physical fitness utilizing the five major components of cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition. The components of fitness are met through structured individually paced aerobic and strength activities. Lecture content included dimensions of wellness, components of fitness, nutrition, stress management, injuries and prevention, and current health issues. The course meets the University General Education Program requirement for Health and Exercise Studies and students can complete the course as graded or credit-only.

Study Procedures

In place of an in-person class meeting during the semester, students were directed to use the class time to complete a self-selected activity of choice (minimum of 30 minutes) that corresponded to one of the eight dimensions of wellness (Table 1). Students were encouraged to select a dimension of wellness that they felt needed time or focus to create improved overall wellness.

Table 1

Eight Dimensions of Wellness

Dimension	Definition
Emotional	Awareness, acceptance, expression, and management of emotions
Environmental	Satisfaction with and management of one's space and surroundings
Financial	Financial decisions, investing, and preparing for emergencies
Intellectual	Stimulating mental activities, and developing and applying knowledge
Occupational	Contributing skills and formal education to personally meaningful work
Physical	Self-care through physical activity and healthy eating
Social	Forming and maintain positive personal and community relationships
Spiritual	Developing purpose in life and a value system

Note: Hettler 1976; Horton & Snyder, 2009; Stowen, 2017.

Through a two-question reflection submission on the course Moodle page, students self-reported the dimension of wellness selected and provided a detailed description of the activity completed. As more than one dimension of wellness can be impacted by an activity (e.g., exercising with a friend can be viewed as both physical and social dimensions), students were prompted to select the dimension of wellness they felt was most positively impacted. Due to the variance in answers on the activity of choice, only data related to the dimension of wellness selected is discussed.

Statistical Analysis

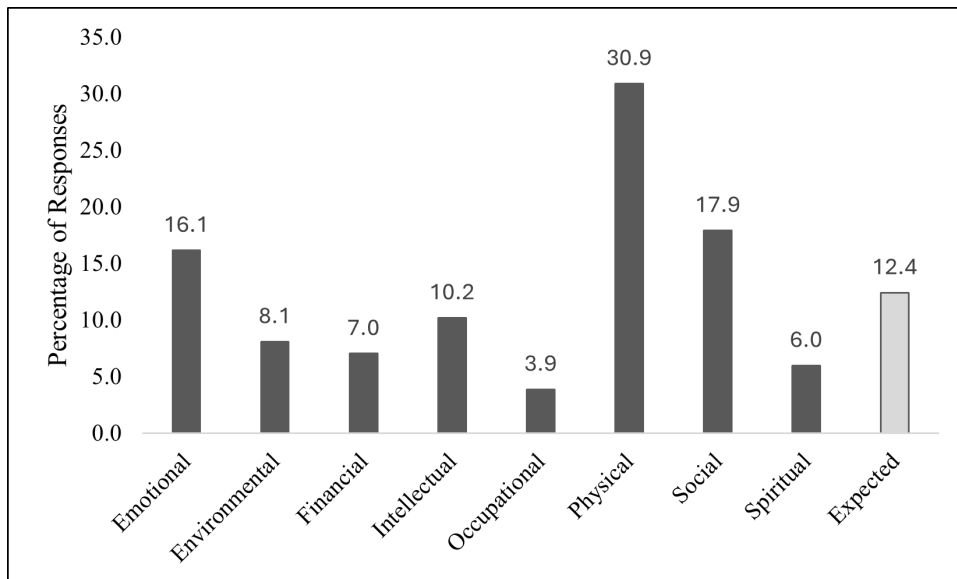
A chi-square goodness-of-fit test was performed to determine whether the dimensions of wellness were equally preferred among participants. A chi-square test of independence was performed to examine relationships between dimension of wellness and gender, year of enrollment, and the interaction of gender by year of enrollment. Data were analyzed using IBM SPSS Statistics (Version 28.0.1.0) with significance set at $p < 0.05$.

RESULTS

A chi-square goodness-of-fit test was performed to determine whether the dimensions of wellness were equally preferred amongst participants. The results showed the dimensions of wellness responses did not have an equal distribution ($\chi^2 = 125.975$; $N = 285$; $df = 7$; $p < 0.001$) with more participants selecting physical, social, or emotional dimensions and less participants selecting environmental, financial, intellectual, occupational, or spiritual dimensions than if the dimensions were selected equally (Figure 1).

Figure 1

Distribution of Dimensions of Wellness Responses



A chi-square test of independence was performed to examine relationships between dimension of wellness and gender, year of enrollment, and the interaction of gender by year of enrollment. There was no significant relationship between dimension of wellness and year of enrollment, $X^2 (7, N = 285) = 30.271$, $p = .087$. There was, however, a significant relationship between dimension of wellness and gender, $X^2 (7, N = 285) = 25.395$, $p < 0.001$. Males were more likely to select the dimensions of financial, physical, spiritual, and occupational, whereas females were more likely to select the dimensions of emotional, environmental, intellectual, and social. Post hoc comparisons, however, only found a significant relationship between the physical dimension of wellness and males and the emotional dimension of wellness and females. The relationship between dimension of wellness and the interaction effect of gender by year of enrollment was found to be significant, $X^2 (49, N = 285) = 81.746$, $p = 0.002$. Post hoc comparison

found a significant positive relationship for sophomore/female and intellectual, junior/female and social, senior/female and emotional, senior/female and environmental, sophomore/male and physical, and junior/male and physical. There was a significant negative relationship for physical/freshman and female, sophomore/male and emotional, and junior/male and social.

DISCUSSION

This study sought to expand upon existing literature and gain an understanding of undergraduate students' behavior when provided time and autonomy to attend to their wellness needs and to determine if there are any differences in the dimension of wellness selected related to year of enrollment and/or gender identity. The rationale for the study was to contribute to the understanding of student well-being to optimize student support through more tailored interventions. This study provides data to further inform on where practices and programs can be focused or expanded upon to improve wellness in college students.

Although, no dimension of wellness was excluded, there was not an equal distribution of responses across dimensions, with a greater percentage of participants selecting physical, social, or emotional than the other dimensions. This is in alignment with Archer et al. (1987) who surveyed undergraduates on which of the six dimensions (physical, emotional, spiritual, occupational, social, and intellectual) affected their health and wellness. The authors found the physical and social dimensions were the most important to overall wellness and spiritual the least. This is similar to a 2009 study by Horton and Snyder who tracked university students over a two-week period to determine how they spent their time relative to seven dimensions of wellness (physical, spiritual, intellectual, emotional, social, environmental, and occupational) and found physical, social, environmental, and occupational dimensions to be the most prominent. Comparison of the present study results to these older studies demonstrates how over time the dimensions of physical and social wellness have maintained an importance to college students and should continue to have a high level of attention in wellness programming.

In the present study, physical wellness was selected most frequently at 30.9%. There is a depth of research demonstrating high levels of physical activity to be associated with improved mental and social well-being (Biddle 2016; Chekroud et al., 2018; Hills et al., 2015; Rodriguez-Romo et al., 2023). A recent study surveyed a sample of undergraduate students and found better mental health scores in those with a higher level of total physical activity assessed by a Global Physical Activity Questionnaire, specifically, leisure time physical activity performed at a high level and occupational physical activity at a moderate level (Rodriguez-Romo et al., 2023). According to Zohair et al. (2020) focusing on the physical, emotional, and spiritual dimensions will help improve the other dimensions and contribute to positive decisions in life. These findings highlight the interconnectedness of the dimensions and further support the importance of promotion of physical activity for mental health.

Several studies have noted that well-being varies across the student population due to differences in gender, field of study, and year of education (Albright et al., 2022; Graham & Eloff, 2022; Loset et al., 2022; Tran et al., 2022). In the present study, there was no significant relationship between year of enrollment and dimension of wellness. However, there was a significant relationship between gender and dimension of wellness with a significant relationship between the physical dimension of wellness and males and the emotional dimension of wellness and females. Several studies have found that females report more severe mental health concerns (e.g., stress, anxiety, depression) than their male, White peers (Brown et al., 2021; Danowitz & Beddoes, 2020). Combined with the present study results, this

indicates that strategies for wellness should be considered for differing gender identities and the importance of ensuring there is consideration of a variety of wellness efforts that meet the various needs of all students.

The relationship between dimension of wellness and the interaction effect of gender by year of enrollment was also found to be significantly positive for sophomore/female and intellectual, junior/female and social, senior/female and emotional, senior/female and environmental, sophomore/male and physical, and junior/male and physical. There was a significant negative relationship for freshman/female and physical, sophomore/male and emotional, and junior/male and social. This variability highlights the importance of diversity in wellness programming for students and that there should be consideration to targeted wellness programming for various stages of a student's college career.

One final aspect that needs to remain at the forefront in this type of research is that perception is an important part of assessing wellness. Individual differences in perception can cause individuals to respond with variability in these types of studies (Archer et al., 1987; Fylkesnes & Forde, 1991). In the present study, students were provided the autonomy to select the activity they felt fulfilled the dimension of wellness. As such, there is a large variety of answers for what students completed for any given dimension. Physical wellness, for example, may have been fulfilled with a variety of health behaviors such as exercise, healthy eating, or sleep. Creating environments to support wellness on a college campus requires education to students on factors that contribute to wellness and implementation of purposeful strategies in wellness programming to enrich a student's academic experience and provide a pathway for lifelong wellness. Although there is a range of effective wellness programs and interventions targeting wellness for college students, this is an area where best practices are still developing (Gawlick et al., 2024; Kunzler et al., 2020; Mitchell, 2021). Academic leaders can utilize emerging research to develop strategies for student wellness (Gawlick et al., 2024) and it is important to engage students in providing feedback to their wellness needs. It is also critical to provide students the opportunity to learn and assess what behaviors they need to maintain their personal state of wellness and provide them tools and guidance to improve personal well-being.

Finally, it should be recognized that educators can employ wellness strategies in their teaching as well. Results from the present study provide insight for educators on how teaching and assessments that target more than one dimension can help to provide a wellness opportunity for a greater number of students in the classroom (e.g., developing an assignment that provides a social component as well as an intellectual component).

Limitations and Implications for Future Research

The sampling method in the study was nonrandom and limited to undergraduate students at a large, public university located in North Carolina and may not represent the population at other colleges and universities across the country. Every campus differs in the needs and interests of its students; therefore, future research is needed to determine if the wellness behaviors identified in this study are applicable to undergraduate students attending colleges and universities in other regions of the United States.

In the present study, demographic groups and student status were not considered, however, research by Myers and Mobley (2004) found non-traditional students of color score lower on total wellness compared to traditional Caucasian students. Therefore, other factors such culture, age, gender, family situation, responsibilities, and socioeconomic backgrounds should continue to be explored to determine how wellness issues impact various student populations. Future research should also include qualitative studies that explore the aspects of student well-being.

Studies that utilize interviews, focus groups, and vignette research may be especially beneficial. Additionally, longitudinal research is needed to investigate the long-term benefits of various wellness promotion strategies.

Lastly, data in the present study were self-reported, which has the potential for inaccuracy or misrepresentation. However, the large sample size reduces any effect of potential misreporting. Future research should consider requiring documentation or other compliance monitoring to minimize these effects.

CONCLUSION

It is critical to provide students the opportunity to learn and assess what behaviors they need to maintain their personal state of wellness not only to be successful in their college career, but also throughout life. Colleges and universities have an opportunity to develop strategies and programming that foster health and well-being on campus. Results from the present study highlight the important role of the physical, emotional, and social dimensions of wellness as well as the need to allocate attention to all the dimensions of wellness. The dimensions of wellness do not need to be equally balanced as each person is unique, however, diversity in wellness programming is crucial to provide an opportunity for all students to improve their well-being.

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