An Intentional Wholeness Focus and the Association With Burnout in Graduate Students

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Abstract

Rates of stress, anxiety, depression, and burnout for university students are concerning. As in other competitive professional fields, graduate students in occupational therapy, physical therapy, and speech language pathology face many performance pressures. Creating supportive learning and wholeness climates along with individual grit, resilience, and healthy spirituality have the potential to positively impact these pressures. The study's purpose was to examine factors related to burnout within an institution committed to creating supportive learning and wholeness environments. Three hundred and fifty-three graduate students from occupational therapy, physical therapy, and speech language pathology graduate programs were recruited to participate in a cross-sectional survey exploring student functioning using primarily validated measures. Hierarchical multiple regressions were utilized to test the unique contributions of perceived learning and wholeness climates, demographics, mental health factors, and potential coping factors to better understand burnout/disengagement and burnout/exhaustion. All models accounted for a significant amount of the variance in both burnout/disengagement (38.2%) and burnout/exhaustion (46.9%). Higher student perceptions of positive wholeness and learning climates, grit, and personal spirituality/peace suggested lower burnout/disengagement, but spirituality/meaning had an unexpected negative outcome. Burnout/exhaustion was negatively associated with anxiety, depression, and spirituality/faith while positively with spirituality/peace. Overall, students' views of the university providing a supportive wholeness and learning climate as well as their personal grit was associated with lower burnout. Depression and anxiety were negatively associated with burnout/exhaustion. Spirituality was more complicated with variation in risk versus supportive factors. Results may help guide future studies, provide suggestions for specific programming, and promote supportive university environments.

Keywords

Burnout, wholeness, mental health, grit, spirituality

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ABSTRACT

Rates of stress, anxiety, depression, and burnout for university students are concerning. As in other competitive professional fields, graduate students in occupational therapy, physical therapy, and speech language pathology face many performance pressures. Creating supportive learning and wholeness climates along with individual grit, resilience, and healthy spirituality have the potential to positively impact these pressures. The study's purpose was to examine factors related to burnout within an institution committed to creating supportive learning and wholeness environments. Three hundred and fifty-three graduate students from occupational therapy, physical therapy, and speech language pathology graduate programs were recruited to participate in a cross-sectional survey exploring student functioning using primarily validated measures. Hierarchical multiple regressions were utilized to test the unique contributions of perceived learning and wholeness climates, demographics, mental health factors, and potential coping factors to better understand burnout/disengagement and burnout/exhaustion. All models accounted for a significant amount of the variance in both burnout/disengagement (38.2%) and burnout/exhaustion (46.9%). Higher student perceptions of positive wholeness and learning climates, grit, and personal spirituality/peace suggested lower burnout/disengagement, but spirituality/meaning had an unexpected negative outcome. Burnout/exhaustion was negatively associated with anxiety, depression, and spirituality/faith while positively with spirituality/peace. Overall, students' views of the university providing a supportive wholeness and learning climate as well as their personal grit was associated with lower burnout. Depression and anxiety were negatively associated with burnout/exhaustion. Spirituality was more complicated with variation in risk versus supportive factors. Results may help guide future studies, provide suggestions for specific programming, and promote supportive university environments.

Introduction

Burnout has been identified as an ongoing concern across university campuses (Stoliker & Lafreniere, 2015; Williams, et al., 2018a; Wolf & Rosenstock, 2017). How environments have been chosen to optimize learning and acknowledge supportive factors matter. Specifically, education, policy, and future healthcare practitioners may be impacted. The aim of the study was to contribute to the sparse literature on the effect of a learning climate that stresses wholeness along with a number of other typically protective factors by exploring if two different types of burnout, specifically burnout/disengagement and burnout/exhaustion, were associated with student perceptions of wholeness and learning climates, stress, anxiety, depression, religiosity/spirituality, grit, and resilience. The researchers posited that higher student perceptions of positive wholeness and learning climates at the university and higher religiosity/spirituality, grit, and resilience would be associated with lower burnout overall. Whereas lower perceptions of a climate committed to positive learning and wholeness, as well as higher perceived stress, anxiety, and depression would be associated with higher burnout.

Below, the authors review the literature involving definitions for key theories and concepts including student involvement, learning climate, wholeness climate, and burnout. Further literature examines related aspects of burnout and its impacts. Finally, the need of the current study is explained, and examples of ways the university is already attempting to provide institutional wholeness are provided.

Literature Review

Student Involvement Theory

When considering how to support university students, Astin (1999) provided a guiding theory based upon his Student Involvement. The theory looks at the time and energy placed into a multitude of college-related experiences including how one creates circles of influence through conversations with on-campus partners, understanding study concepts, and extracurricular involvement. Student Involvement Theory asserts that as a student's involvement in college increases so does their learning both in content and personally (Astin, 1999). Student Involvement adds another layer to consider how much students choose to invest in their graduate school experiences.

Learning Climate

The learning climate can be abstract without a specific formula of measurement (Lombarts et al., 2014). One definition is presented as follows: "School climate—by definition—reflects students', school personnel's, and parents' experiences of school life socially, emotionally, civically, and ethically as well as academically" (Thapa et al., 2012, pp. 10-11). The learning environment may be viewed as synonymous with the learning climate. In Herrington and Herrington's (2006) book, the learning environment was further defined as being collaborative in nature, having a healthy leadership style, embracing of differences, a safe place that allows for both critical thinking as well as reflection, dealing with conflict through dialogue and willingness to see the world in a

new way, and working toward wholeness. Within the learning environment, it is highly important that actions and words align. Of course, this is a process that requires vision, values, and gauging such ideas against one's present reality in order to make adjustments. Creating meaningful learning environments is not a simple task (Herrington & Herrington, 2006).

As discussed within the theory of Student Involvement, student participation matters within the learning climate (Astin, 1999). In addition, faculty provide a key role in influencing the learning climate on campus. Thus, creating an atmosphere inside and outside of the classroom that values diversity of thought is an important element to establishing a positive learning climate, and instructors who create a caring environment influence their students in the art of caring as well, especially when considering the clinical component of the academic experience (Labrague et al., 2015; Ryder et al., 2016).

More specifically, Busteed (2016) provided insights that will further guide the current research study, and he emphasized the importance of behavioral economic measures within a learning climate, which include emotional supports and experiential learning experiences. In essence, the created climate on campus has the potential to make a lasting impact on well-being and life goals of the future.

Wholeness Climate
Striving toward wholeness is a vital component of health and well-being that integrates into multiple aspects of life. The idea of wholeness emerges in various forms throughout the literature including: addressing wholeness prenatally, parental self-care, spirituality and religiosity for individuals in the military, awareness of how a patient's rehabilitation environment impacts wholeness, the connection of wholeness and exercise, as well as providing a whole-person care approach within palliative care, (Freeman, 2016; Greenwood & Delgado, 2013; Kluny & Dillard, 2014; Raanaas et al., 2016). Regardless of the specific wholeness element examined, all lead to the same conclusion. That is to say, the idea and implementation of true wholeness matter. More specifically, wholeness can be defined as encompassing the mind, body, and spirit while looking both inward and toward the greater community (Fountain et al., 2016).

Burnout Definitions
Academic burnout encompasses the ideas of stress, a lack of desire to study, exhaustion, and feeling cynical (Lian et al., 2014, Neckel et al., 2017; Toubasi et al., 2022). For the purpose of the current study, the researchers examined two specific forms of burnout, burnout/disengagement and burnout/exhaustion. "Exhaustion is defined as a consequence of intense physical, affective, and cognitive strain …" (Tipa et al., 2019, p. 356). Whereas "disengagement is related to distancing oneself from ones' [school]work in general, [school]work object, [school]work content" (Tipa et al., 2019, p. 356).

Academic Burnout

Within the academic setting, burnout was related to satisfaction with the learning climate/environment, and students who experienced burnout from learning were more likely to have a negative academic experience (Dyrbye et al., 2009; Stoliker & Lafreniere, 2015; Wei et al., 2021). Actively engaging with schoolwork was part of academic success, but for individuals already burned out, this understandably posed a challenge (Leupold, 2020; Salmela-Aro & Upadyaya, 2014). Motivation for learning has been known to change over time and may be influenced by situations presented in teaching and learning environments (Mäenpää et al., 2019; Mousavi et al, 2018).

For healthcare graduate students, burnout was seen at higher rates than within non-healthcare peers (Bullock et al., 2017). In turn, personal and organizational strategies are needed to relieve the impacts for healthcare professionals (Reith, 2018). Furthermore, when looking at graduate physical therapy (PT) students, recent data suggested that academic burnout increased with program progression along with states of exhaustion, disengagement, and continuously feeling overloaded (Smith et al., 2022a; Williams et al., 2018b). For occupational therapy (OT), albeit undergraduate students, burnout was connected to time spent studying, year within the program, and one's age (Morales-Rodríguez et al., 2019). Additional contributing factors to academic burnout included insufficient sleep, poor exercise, and mental health concerns that often accompany demanding graduate programs (Johnson et al., 2017; Wolf & Rosenstock, 2017).

Academic Burnout and Mental Health

When considering academic burnout and related mental health concerns, both positive and negative associated factors should be noted, as they may inform prevention efforts. Issues found to negatively influence the academic experience included stress, depression, and anxiety (Baghurst & Kelley, 2014; Cokley et al., 2017; Farrer et al., 2016; Hurst et al., 2013). Graduate students, in particular, were prone to stress and mental health concerns, which may be associated with burnout (Allen et al., 2020; Allen et al., 2021; Nagy et al., 2019). Further aggravating the concern, mental health challenges met stigma to seek help, thus reducing the likelihood of individuals receiving needed services to address their burnout (Harris, 2021; Pearl et al., 2017; Schwenk et al., 2010). Then, with the recent COVID-19 pandemic and its associated fears, mental health concerns have heightened (Alimoradi et al., 2022; Mute Browning et al., 2021; Wang et al., 2020).

Academic Burnout and Protective Factors to Positively Cope

Suggested protective factors against burnout included positive coping of personal resilience, grit, and spirituality/religion/faith within its healthy form (Aparicio et al., 2017; Berry & York, 2011; Duckworth et al., 2007; Kuo et al., 2014; Rushton et al., 2015). Resilience has been shown to increase coping for college and medical students with greater perceived quality of life, and social work students who have faced previous trauma and/or incorporated faith may experience higher resilience (Li & Yang, 2016; Tempski et al., 2015; Thomas & Beecher, 2018). Grit also benefitted learners within the classroom and was found to support online learners' satisfaction and academic success

in addition to overall offering a buffer effect for suicidal ideation against challenging life events when high amounts of grit are present (Aparicio et al., 2017; Blalock et al., 2015). More specifically, for OT students, resilience may increase through mindfulness-based educational programming and as the program continues through clinical practice, thus helping to mitigate burnout (Mattila et al., 2020; Rodriguez-Martinez et al., 2021). For PT students, grit was related to better academic and clinical performance (Bliss & Jacobson, 2020; Calo et al., 2022; Carp et al., 2020). Spiritual well-being was associated with satisfaction with life for university students (Alorani & Alradaydeh, 2018). Spirituality helped bring about whole person care for graduate students within health professions such as OT, PT, pharmacy, nursing, and medical school even though definitions of what spirituality meant naturally varied (Espiritu et al., 2020; Ray & Wyatt, 2018). Furthermore, mental health was associated with positive coping mechanisms. For instance, religion/spirituality has shown to have a protective, adaptive effect for college students, post-graduate students, and OT students (Berry & York, 2011; Gnanaprakash, 2013; Rodriguez & Provident, 2018).

Burnout Beginnings and Carryover
Many have suspected that burnout begins in undergraduate education and/or before students move into highly competitive fields of graduate education but continues to build throughout their graduate training and work with ever increasing professional demands (Duru et al., 2014; Stoliker & Lafreniere, 2015; Wei et al., 2015). For graduate students, burnout was associated with one's mental health and the academic experience (Gallea et al., 2021; Nagy et al., 2019). For healthcare professionals, burnout has progressed at an alarming rate, affecting work force stability and quality of care (Krisberg, 2017; Salyers et al., 2017). Thus, if students experience high burnout in their academic training, it may carry over to their careers, adding to the concerning burnout rates already observed.

Therefore, if burnout is not identified and mitigated early, such as within the academic journey, consequences may continue professionally. Workforce burnout was a significant concern and may lead to exhaustion, higher mistakes, reduced commitment, and missed work days (Hakanen & Bakker, 2016; McGeary et al., 2014; Rzeszutek & Schier, 2014). Medical residents, in particular, were found to experience high burnout associated with mental health concerns such as anxiety and depression as well as poorer social skills, and burnout may fluctuate based upon residency specialty to then affect the patients served (Pereira-Lima & Loureiro, 2015; Rodrigues et al., 2018). For OT, PT, and speech language pathology (SLP) practitioners, burnout impacts the work environment (Burri et al., 2022; Ewen et al., 2021; Shin et al., 2022). While various factors associated with risks exist, aspects such as income satisfaction, rapport with supervisors, obtaining a higher degree, respect, appropriate caseloads, support, a sense of resilience, and meeting needs at a basic psychological level may shield against burnout (Ewen et al., 2021; Gupta, 2012; Katsiana et al., 2021; Patel & Bartholomew, 2021; Shin et al., 2022). New graduate occupational therapists may also experience higher burnout than their colleagues who have been working longer

(McCombie & Antanavage, 2017). Though, further research suggests that burnout is higher during the final year of studies than the first year of practice for nursing, OT, and social work students (Robins et al., 2018).

Addressing Burnout Through Wholeness and Learning Climates and Need for the Current Study

To address burnout and support protective factors for students, universities have increasingly attempted to balance potential mental health sequelae by creating positive learning and wholeness climates with some success (Herrington & Herrington, 2006; Mahmoudi et al., 2012; Miller, 2005; Thapa et al., 2012). One such faith-based, private university in California has been seeking to intentionally implement a supportive learning environment by incorporating institutional (including student) wholeness within classrooms and across the campus. For instance, regarding institutional wholeness, as students' schedules allow, they may choose to be involved in provided university opportunities such as the wellness center for exercise-based health, additional religious activities, school socials and events, mental health services, community outreach opportunities, mission-based trips, study sessions, weekly chapels, provided meals, check-in times with faculty, and the like. However, to the researchers' knowledge, no studies to date have explored if student perceptions regarding such efforts indeed result in lower burnout. Therefore, the current study has been deemed necessary to help provide further insights for universities, future studies, and associated policies.

Materials and Methodology

Participants

Three hundred and sixty allied health professions graduate students (84.71% participation rate) enrolled in the Departments of Communication Sciences and Disorders (CMSD), OT, and PT participated in an anonymous, cross-sectional survey. However, after the data cleaning process, a total of 353 cases were used for data analyses to begin the multivariate models (with the sample sizes decreasing as the models progressed to 317 for burnout/disengagement and 319 for burnout/exhaustion by model 4 of each analysis). Participants were adults aged 20-51 years (mean age = 26.02 years, $SD = 4.37$; female = 76.8%), who attended a religious university in California, United States. Further participant demographics are displayed in Table 1.

Participants were included if they: a) were 18 and older, b) offered informed consent through participation, and c) were students within the departments of CMSD for students within the Master of Science in SLP degree program, OT for students within the Master of OT degree program, and PT for students within the Doctor of PT degree program.

Table 1

Demographic Characteristics of Participants, Means and Standard Deviations, and Regression Values

Variables	N (Valid %)	M(SD) - Burnout/ Disengagement (Scores range from 1 - 4.)	F (df)	M(SD) - Burnout/ Exhaustion (Scores range from 1 - 4.)	F (df)
Race/Ethnicity			2.19 (3, 350)*		1.34 (3, 350)
White	131 (36.5)	2.16 (.45)		2.57 (.43)	
Asian	107 (29.8)	2.16 (.37)		2.67 (.41)	
Hispanic/Latino(a)	65 (18.1)	2.01 (.47)		2.61 (.47)	
Other/multi-racial	56 (15.6)	2.05 (.45)		2.54 (.52)	
Gender			1.72 (1, 352)		5.36 (1, 352)**
Female	282 (78.6)	2.10 (.45)		2.63 (.45)	
Male	77 (21.4)	2.18 (.41)		2.50 (.44)	
Department			.15 (2, 352)		3.70 (2, 352)**
Communication Sciences and Disorders	61 (16.9)	2.11 (.43)		2.74 (.39)	
Occupational Therapy	155 (43.1)	2.10 (.45)		2.58 (.44)	
Physical Therapy	144 (40.0)	2.13 (.45)		2.57 (.47)	
Year of Program			.21 (2, 352)		2.61 (2, 352)*
Year 1	147 (40.8)	2.10 (.47)		2.61 (.46)	
Year 2	112 (31.1)	2.14 (.41)		2.66 (.45)	
Year 3	101 (28.1)	2.11 (.45)		2.52 (.43)	
Religious Affiliation			.42 (1, 342)		.26 (1, 341)
Non-Religious	42 (12.1)	2.15 (.39)		2.64 (.47)	
Religious/Spiritual Affiliation Given	305 (87.9)	2.11 (.46)		2.61 (.44)	
Combination of all participants	355 (100)	2.12 (.45)		2.60 (.45)	

*$p < .10$, **$p < .05$ from simple linear regression

Procedures
Institutional Review Board (IRB) approval was granted. Student participants completed pilot-tested, self-administered paper/pencil surveys during or directly after class time within the 2017-2018 academic year. Prior to administering the surveys, two faculty members from each CMSD, OT, and PT departments (N = 6) were recruited to individually participate in semi-structured key informant interviews to provide further insights on the wholeness and learning climates of the university as well as inform the survey and to familiarize the interviewed faculty with its contents. Then, please note that five Orthotics and Prosthetics Master of Science students pilot tested the survey and provided further feedback regarding factors such as length, acceptability, readability, and clarity. Finally, IRB-approved minor changes were incorporated based on suggestions before administering the final version for the study.

The student researcher made an announcement in each class prior to surveys being administered in order to recruit. Surveys were collected in a stacked pile for each course void of names. Cover letters were provided at the top of each survey for students/participants to then be able to contact the researchers with any questions as needed along with results and stated: risks (including confidentiality/privacy breach, a feeling of obligation, boredom, and remembering distressing thoughts with a Counseling Services contact), benefits (no direct but potentially influencing policy/procedures), confidentiality procedures, and the voluntary nature of participation along with the right to stop the survey at any time. Completion of the surveys took from approximately 10 - 60 minutes with anticipated average rates of 30-40 minutes after piloting, depending on the individual student/class dynamics. (Please note: 10 minutes was rare.) Students received snacks, which were offered to all regardless of participation, and the chance for a raffled $25 Amazon gift card as a token of appreciation for survey completion within each visited class (with nine total gift cards distributed).

Measures

Demographics/Control Variables
Standard demographics, including a brief academic profile of the participants, were assessed, and provided information for: age, gender, race/ethnicity, religious affiliation, department enrolled, and year of the program. Please see Table 1.

Independent Variables

      Learning Climate. The researchers utilized questions adapted from Busteed's (2016) Gallup survey for assessed feelings toward students' learning climate (thus no preliminary Cronbach's alpha to compare). The questions included elements pertaining to behavioral economic measures of emotional support elements (professor and/or mentor support) plus experiential learning elements (long-term projects, internship, and extracurricular involvement). For the purpose of the current study, the six questions based upon Busteed's (2016) article were used with a 5-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5) and summed for a total learning climate

score ranging from 6–30. Higher scores represent higher satisfaction with the learning climate. The study's Cronbach's alpha for the learning climate was in the lower acceptable range at α = .62.

Wholeness Climate. The researchers used the Wholeness Climate Survey (WCS), developed locally at the authors' institution (no published Cronbach's alpha). The measure consists of 23 questions and uses a 5-point Likert scale that addresses students' perceptions of wholeness and alignment of values with the university. Each item was scored from "strongly disagree" (1) to "strongly agree" (5) and added together for a total score ranging from 23–115 with higher sums associated with higher wholeness satisfaction on campus. Sample items included in the scale were: "Through the education I receive at [the studied university], I am better prepared to provide whole person care for others (patients, clients, etc.);" "While at [the studied university] a staff member, professor, or administrator at [the university] has talked with me about my own wholeness;" and "It is evident in their work that staff, professors, and administrators integrate body/mind/spirit, value relationships, care for resources, and value service." The WCS' Cronbach's alpha for the current study was in the high range at α = .93.

Stress. The researchers utilized the Perceived Stress Scale, 10 Items (PSS-10), which measures the perception of stress in one's life using a 5-point Likert scale. The PSS-10 uses a 5-point Likert scale ranging from "never" (0) to "very often" (4). Total scores were summed from all 10 answers after reverse coding (for four items); the higher the score, the greater the amount of perceived stress indicated (Cohen et al., 1983; Cohen & Williamson, 1988). For the use of Table 2, scores were further divided as low (0–13), moderate (14–26), and high (27–40) perceived stress based upon guidelines from prior studies using the scale with undergraduate medical students (Anandhalakshmi et al., 2016; Thangaraj & D'souza, 2014). Additionally, Roberti et al. (2006) found that the PSS-10 was valid and reliable to measure stress amongst college/university students with Cronbach's alpha at .82 – .85. Similarly, the current study's Cronbach's alpha was in the high range at α = .84.

Anxiety. The Generalized Anxiety Disorder 7-Items (GAD-7) was used as a screening assessment for anxiety with a 4-point scale before scores were summed in total (Spitzer et al., 2006). Scores range from minimal at below 5 to mild at 5 to moderate at 10 (with likelihood of generalized anxiety disorder) to severe at 15+ (Spitzer et al., 2006). The response options regarding a series of statements goes from "not at all" (0) to "nearly every day" (3) with higher scores representative of higher anxiety. The measure has been used widely, including for university and medical students (Choueiry et al., 2016; Moir et al., 2016). Cronbach's alpha was found to be .89 within the general population (Löwe et al., 2008). The current study's GAD-7 Cronbach's alpha was high at α = .91.

Depressive Symptoms. The Patient Health Questionnaire – 9 Items (PHQ-9), a standardized screening assessment for depression, was used to assess the severity of depressive symptoms (Kroenke et al., 2001). The nine items in the PHQ-9 include symptoms of hopelessness, lack of energy, difficulty concentrating, and suicidal

thoughts, among others. Each question is presented on a four-point scale from "not at all" (0) to "nearly every day" (3) with scores ranging from a total of 0–27. "PHQ-9 scores of 5, 10, 15, and 20 represented mild, moderate, moderately severe, and severe depression, respectively" (Kroenke et al., 2001, p. 606). The PHQ-9 has been used with university students, graduate students, and medical students (Garcia-Williams et al., 2014; Moir et al., 2016; Umegaki & Todo, 2016). Cronbach's alpha was found to be .91 (Umegaki & Todo, 2016). The current study's PHQ-9's Cronbach's alpha was in the high, acceptable range at α = .83.

Resilience. The Connor-Davidson Resilience Scale – 10 Items (CD-RISC-10) is designed to assess individual resilience with consistency and reliability found in a variety of populations including the emerging adulthood population, which relates well to most graduate students' phase of life (Connor & Davidson, 2003; Madewell & Ponce-Garcia, 2016). The abridged 10-item version, or the *CD-RISC-10*, was developed utilizing a sample of undergraduate students. It was also found to be reliable and valid with a Cronbach's alpha ranging from .85 to .93 in various populations (Alahdab et al., 2020; Campbell-Sills & Stein, 2007; Hartley, 2012). The current study's α = .90, which was considered high. The ten questions are answered using a 5-point Likert scale from "not true at all" (0) to "true nearly all the time" (4). The higher the score, the greater the suggested resilience (Connor & Davidson, 2003; Madewell & Ponce-Garcia, 2016).

Grit. Defined, grit is "perseverance and passion for long-term goals" (Duckworth et al., 2007, p. 1087; Rimfeld et al., 2016, p. 780). The Grit-S, previously used with collegiate populations, is an 8-item assessment that measures grit in individuals based on a 5-point scale ranging from "very much like me" (5) to "not like me at all" (1) with reverse coding utilized for select questions. Higher scores are indicative of higher grit (Duckworth et al., 2007; Duckworth & Quinn, 2009; Wolters & Hussain, 2015). Questions address work consistency, goals, and diligence, among other areas. (Duckworth & Quinn, 2009). Alphas for internal consistency ranged from .73–.83 (Alahdab et al., 2020; Duckworth & Quinn, 2009). Likewise, the current study's Cronbach's alpha was in the acceptable range with α = .77.

Spirituality. The Functional Assessment of Chronic Illness Therapy - Spiritual Well Being - Non-Illness (FACIT-Sp-Non-Illness), a 12-item questionnaire about one's well-being through the lens of religiosity/spirituality was utilized. Participants responded based on a 5-point Likert scale ranging from "not at all" (0) to "very much" (4) with periodic reversed coding incorporated (FACIT.org, 2010; Haugan, 2015; Peterman et al., 2002). The measure has been utilized with graduate medical/PhD students with Cronbach's alpha at .86 (Wachholtz & Rogoff, 2013). The FACIT-Sp-Non-Illness includes three subscales of meaning, peace, and faith (Peterman et al., 2014). The current study's spirituality/meaning was in the acceptable range with α = .75, spirituality/peace α = .79, and spirituality/faith α = .89. Higher scores implied more perceived spirituality within each subscale. The subscale for peace pertained to items about harmony within, peacefulness, and finding comfort within oneself. Meaning

consisted of one's perception of productivity in life and purpose, among other areas. The faith subscale addressed comfort and strength within one's beliefs and response to hard times (FACIT.org, 2010; Peterman et al., 2002).

It should be further noted that the FACIT-Sp-Non-Illness is utilized to examine religiosity/spirituality, as the neutral wording provides a way to encompass both aspects simultaneously. However, religion and spirituality should not be viewed as interchangeable, and it is possible for individuals to be one without the other (Hurley, 2012). Variation in belief terms is necessary to note when considering the studied university's diversity in represented faiths (or lack thereof).

Dependent Variable

Burnout. The Oldenburg Burnout Inventory-Student English Version (OLBI-S) – Disengagement and Exhaustion is a 16-item questionnaire for exploring burnout with a 4-point scale based on how much one reports agreeing with given statements in the context of two components: a) dedication versus disengagement and b) vigor versus exhaustion (Demerouti & Bakker, 2008; Reis et al., 2015). Scores range from "strongly agree" (1) to "strongly disagree" (4) with higher scores representing greater perceived burnout within the two subcategories. Each subcategory has eight questions. A total score is obtained and then divided by eight for a recorded average total score (Williams, et al., 2018b). Within Table 2, scores were divided into high, average, or low based upon the numbers utilized by Williams et al. (2018b). The psychometric properties continued to be positive for the student version, and omega values (.98 for disengagement and .97–.99 for exhaustion) versus Cronbach's alpha reliability measures were utilized (Reis et al., 2015). Previous Cronbach's alpha scores have been less than ideal for the OLBI-S exhaustion subscale at .57 and acceptable at .70 for the disengagement subscale (Bonini Campos et al., 2012). However, a recent study validated the OLBI-S on PT students with a more positive outlook at Cronbach's alphas of .83 and .78 for the exhaustion and disengagement subscales respectfully (Smith et al., 2022b). Similarly, the current study yielded levels at α = .78 for burnout/disengagement and α = .77 for burnout/exhaustion. The OLBI-S was also recently utilized among Doctor of PT students, as pertinent to the current study (Williams et al., 2018b).

Data Analytic Plan

Data were collected, entered, checked for accuracy with a 10% double entry of the sample, and analyzed using SPSS versions 21.0 and 28.0 by the student researcher in collaboration with the primary investigator. The research team's statistician was also available to consult and assist for the data process. Once data were cleaned and assumptions checked, final scale construction (e.g., obtaining Cronbach's alphas) took place. Missing data were excluded listwise. Bivariate analyses explored relationships between the outcome and independent variables to facilitate model building. Pearson's (r) correlations for continuous variables and simple linear regressions for categorical variables were utilized, with $p \leq .05$ and $p \leq .10$ respectively, retained for further analyses. Four hierarchical multiple regression models for each dependent variable

(burnout/disengagement and burnout/exhaustion) were generated to examine the unique linear combination of the research variables: a) beginning with the control demographics, b) adding in learning and wholeness climates, c) then including mental health components of stress, anxiety, and depression, and finally d) adding resilience, grit, spirituality/meaning, spirituality/peace, and spirituality/faith to the proceeding combination of variables. Please note that for the hierarchical multiple regression models, the demographic variables were dummy coded with reference groups as follows: White (race/ethnicity), female (gender), OT (program), and Year 1 (year of the program).

Results

Descriptive and Bivariate Results

The majority of students were female, White or Asian, and religiously affiliated. Males and females were found to handle burnout differently; males were more likely to experience burnout through disengagement, while females were more likely to be exhausted from burnout. Students displayed similar levels of burnout for disengagement or exhaustion throughout programs. However, PT had the highest means for burnout/disengagement, and CMSD had the highest means for burnout/exhaustion. In general, burnout appeared to peak in the second year of study. While categorizing scores based on the current burnout measure was not recommended, it appeared that midrange levels were present for burnout/disengagement and even higher for burnout/exhaustion. See Table 1.

Additionally, student demographic variables were analyzed with mental health outcomes. Across departments and years in the program, perceived stress predominantly fell within the moderate range. Stress levels appeared highest for a combination of moderate to high during the first year of the program for CMSD and PT but within the second year for OT. Anxiety was predominately mild across programs (and moderately high during the second year of the CMSD program). Anxiety concerns followed the previous stress pattern with the highest levels in first year of CMSD and PT and second year of OT for the cohorts assessed. Depression was mainly mild for CMSD, none/minimal for OT (except within the third year), and mostly none/minimal in PT (except for mild during the first year). Across all years and programs, based on the created categories recommended in Williams et al. (2018b), disengagement/burnout was low, but exhaustion/burnout was high. Please see Table 2. Bivariate results included significance for race/ethnicity in relation to burnout/disengagement along with gender, department, and year of the program for burnout/exhaustion (as outlined in the previous Table 1).

The analysis results of continuous variables are depicted in Table 3. Age was not significant, and therefore not included in the models. However, learning climate, wholeness climate, stress, anxiety, depression, resilience, grit, and the three forms of spirituality were all significant at $p < 0.01$ for burnout/disengagement and burnout/exhaustion. Thus, the significant variables were added to the multivariate models.

Table 2

Mental Health Valid Percent Frequencies for Each Program and Year

N (Valid %)	CMSD		OT			PT		
	Year 1	Year 2	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Stress								
Perceived low stress (0-13)	3 (9.4%)	5 (17.2%)	18 (34.0%)	9 (20.0%)	12 (23.1%)	12 (20.0%)	7 (20.6%)	20 (43.5%)
Perceived moderate stress (14-26)	27 (84.4%)	20 (69.0%)	33 (62.3%)	30 (66.7%)	37 (71.2%)	39 (65.0%)	25 (73.5%)	23 (50.0%)
Perceived high stress (27-40)	2 (6.3%)	4 (13.8%)	2 (3.8%)	6 (13.3%)	3 (5.8%)	9 (15.0%)	2 (5.9%)	3 (6.5%)
Anxiety								
Typical (0-4)	7 (21.9%)	8 (27.6%)	22 (40.0%)	11 (22.9%)	14 (26.9%)	12 (20.0%)	15 (45.5%)	25 (51.0%)
Mild (5-9)	11 (34.4%)	8 (27.6%)	23 (41.8%)	19 (39.6%)	22 (42.3%)	20 (33.3%)	11 (33.3%)	17 (34.7%)
Moderate (10-14)	8 (25.0%)	9 (31.0%)	7 (12.7%)	10 (20.8%)	12 (23.1%)	18 (30.0%)	6 (18.2%)	6 (12.2%)
Severe (15+)	6 (18.8%)	4 (13.8%)	3 (5.5%)	8 (16.7%)	4 (7.7%)	10 (16.7%)	1 (3.0%)	1 (2.0%)
Depression								
None/minimal (0-4)	9 (28.1%)	10 (34.5%)	34 (61.8%)	20 (43.5%)	20 (39.2%)	23 (39.7%)	18 (52.9%)	29 (59.2%)
Mild depression (5-9)	12 (37.5%)	11 (37.9%)	15 (27.3%)	16 (34.8%)	27 (52.9%)	24 (41.4%)	12 (35.3%)	14 (28.6%)
Moderate depression (10-14)	9 (28.1%)	6 (20.7%)	4 (7.3%)	7 (15.2%)	2 (3.9%)	7 (12.1%)	3 (8.8%)	3 (6.1%)
Moderately severe depression (15-19)	2 (6.3%)	2 (6.9%)	1 (1.8%)	1 (4.3%)	2 (3.9%)	2 (3.4%)	1 (2.9%)	1 (2.0%)
Severe depression (20-27)	0 (0.0%)	0 (0.0%)	1 (1.8%)	1 (2.2%)	0 (0.0%)	2 (3.4%)	0 (0.0%)	2 (4.1%)
Burnout – Disengagement								
High (> 3.63)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Average (2.75-3.63)	2 (6.3%)	2 (6.9%)	2 (3.6%)	3 (6.3%)	7 (14.0%)	7 (11.7%)	5 (15.6%)	2 (4.1%)
Low (<2.75)	30 (93.8%)	27 (93.1%)	53 (96.4%)	45 (93.8%)	43 (86.0%)	53 (88.3%)	27 (84.4%)	47 (95.9%)
Burnout – Exhaustion								
High (> 2.49)	27 (84.4%)	19 (65.5%)	30 (55.6%)	36 (75.0%)	33 (64.7%)	43 (74.1%)	25 (71.4%)	25 (52.1%)
Average (1.90-2.49)	4 (12.5%)	10 (34.5%)	18 (33.3%)	10 (20.8%)	14 (27.5%)	11 (19.0%)	5 (14.3%)	16 (33.3%)
Low (<1.90)	1 (3.1%)	0 (0.0%)	6 (11.1%)	2 (4.2%)	4 (7.8%)	4 (6.9%)	5 (14.3%)	7 (14.6%)

Table 3

Bivariate Pearson Correlations Amongst Continuous Variables

	M(SD)	1	2	3	4	5	6	7	8	9	10	11	12	13
1	25.96(4.37)	—												
2	23.79(3.16)	-.05	—											
3	93.95(11.21)	-.01	.58**	—										
4	17.81(6.22)	-.03	-.14*	-.20**	—									
5	7.58(5.12)	-.04	-.05	-.06	.71**	—								
6	5.82(4.58)	.02	-.12*	-.15*	.63**	.64**	—							
7	29.13(6.15)	.07	.27**	.39**	-.48**	-.31**	-.36**	—						
8	3.57(.58)	-.04	.22**	.26**	-.21**	-.19**	-.33**	.41**	—					
9	14.16(2.39)	-.01	.25**	.40**	-.37**	-.22**	-.53**	.46**	.40**	—				
10	10.30(3.41)	.01	.19**	.31**	-.63**	-.58**	-.61**	.59**	.36**	.56**	—			
11	11.76(4.08)	-.01	.25**	.39**	-.22**	-.26**	-.30**	.34**	.31**	.40**	.42**	—		
12	2.13(.45)	.05	-.38**	-.48**	.25**	.15**	.25**	-.30**	-.38**	-.27**	-.36**	-.20**	—	
13	2.62(.44)	.06	-.19**	-.21**	.52**	.54**	.55**	-.40**	-.29**	-.30**	-.57**	-.19**	.44**	—

Note. Variables are as follows: 1 = Age, 2 = Learning climate; 3 = Wholeness climate; 4 = Stress; 5 = Anxiety; 6 = Depression; 7 = Resilience; 8 = Grit; 9 = Spirituality, meaning; 10 = Spirituality, peace; 11 = Spirituality, faith; 12 = Burnout, disengagement; 13 = Burnout, exhaustion. Listwise N = 312.
*p < .05, **p < .01

Multivariate Results

Results for Burnout/Disengagement. Hierarchical multiple regression assumptions were met including multicollinearity, normality, linearity, and homoscedasticity. As described in Table 4, the hierarchical multiple regression results for burnout/disengagement suggested that across all models, Hispanic/Latino(a)s and individuals from other races (compared to Whites) associated less perception with burnout/disengagement. Learning and wholeness climates consistently were associated with protective factors against burnout/disengagement. Grit and spirituality associated with burnout/disengagement as well in that grit was connected to protective associations while spirituality differed in its effect by type. Spirituality/meaning resulted in greater burnout, while spirituality/peace was associated with protective factors against burnout. In the final model only race/ethnicity, learning and wholeness climates, grit, and spirituality were significant. Of note, OT, PT, and CMSD were not significantly different when it came to burnout/disengagement. All variables, including those not statistically significant, explained 38.2% of the variance ($R^2 = .38$, F(18, 298) = 10.24, p < .001).

Results for Burnout/Exhaustion. As described in Table 5, the hierarchical multiple regression results for burnout/exhaustion indicated that while learning climate remained important until potential coping supports were added, the wholeness climate lost its importance once mental health factors were added. It should also be noted that while CMSD was initially higher in burnout/exhaustion compared to OT (Models 1 & 2), this difference disappeared once mental health variables were entered (Models 3 & 4). Anxiety and depression continued to be significant negative factors across models with higher levels of anxiety and depression being associated with greater burnout/exhaustion. Results for spirituality were mixed. While the faith component of spirituality was significantly associated with burnout/exhaustion, the peace aspect of spirituality was significantly connected with a lesser likelihood of burnout/exhaustion. In the final model only anxiety, depression and the two components of spirituality were significant, and all variables, including those not statistically significant, explained 46.9% of the variance ($R^2 = .47$, F(18, 300) = 14.71, p < .001).

Table 4

Hierarchical Multiple Regression Models Associated with Burnout/Disengagement from Demographics, Climates, Mental Health Factors, and Other Support Variables

Independent and Control Variables	Model 1 b(SE)	β	Model 2 b(SE)	β	Model 3 b(SE)	β	Model 4 b(SE)	β
Race/Ethnicity: Asian (0 = Hispanic/Latino/a, Other, & White, 1 = Asian)	-.01(.06)	-.01	-.00(.05)	-.00	-.02(.05)	-.02	-.02(.05)	-.02
Race/Ethnicity: Hispanic/Latino/a (0 = Asian, Other, & White, 1 = Hispanic/Latino/a)	-.15(.07)*	-.13	-.14(.06)*	-.12	-.15(.06)*	-.13	-.13(.06)*	-.11
Race/Ethnicity: Other (0 = Asian, Hispanic/Latino/a, & White, 1 = Other)	-.11(.07)	-.09	-.16(.06)*	-.13	-.15(.06)*	-.12	-.14(.06)*	-.12
Gender (0 = Female, 1 = Male)	.07(.06)	.07	.09(.05)	.08	.12(.05)*	.11	.10(.06)	.10
Department: PT (0 = CMSD & OT, PT = 1)	.01(.05)	.02	.05(.05)	.05	.05(.05)	.05	.05(.05)	.06
Department: CMSD (0 = OT & PT, CMSD = 1)	.01(.07)	.01	.11(.06)	.09	.08(.07)	.07	.08(.07)	.06
Year 2 of Program (0 = Years 1 & 3, 1 = Year 2)	.02(.06)	.03	-.00(.05)	-.00	-.00(.05)	-.00	-.02(.05)	-.02
Year 3 of Program (0 = Years 1 & 2, 1 = Year 3)	-.00(.006)	-.00	-.04(.05)	-.04	.00(.05)	.00	-.03(.05)	-.03
Learning Climate			-.02(.01)*	-.15	-.02(.01)*	-.14	-.02(.01)*	-.13
Wholeness Climate			-.02(.00)***	-.41	-.02(.00)***	-.37	-.02(.00)***	-.38
Stress					.01(.01)	.11	.01(.01)	.08
Anxiety					.00(.01)	-.01	-.01(.01)	-.09
Depression					.01(.01)	.12	.01(.01)	.10
Resilience							.01(.01)	.06
Grit							-.16(.04)***	-.21
Spirituality/Meaning							.03(.01)*	.15
Spirituality/Peace							-.03(.01)**	-.25
Spirituality/Faith							.01(.01)	.10
Model Fit								
R²	.03		.28		.32		.38	
ΔR²	.03		.25		.04		.06	
F(df)	1.09(8, 344)		12.77(10, 326)***		11.15(13, 308)***		10.24(18, 298)***	

*p < .05, **p < .01, ***p < .001

Table 5

Hierarchical Multiple Regression Models Associated with Burnout/Exhaustion from Demographics, Climates, Mental Health Factors, and Other Support Variables

Independent and Control Variables	Model 1 b(SE)	β	Model 2 b(SE)	β	Model 3 b(SE)	β	Model 4 b(SE)	β
Race/Ethnicity: Asian (0 = Hispanic/Latino/a, Other, & White, 1 = Asian)	.13(.06)*	.13	.11(.06)	.12	.06(.05)	.06	.08(.05)	.08
Race/Ethnicity: Hispanic/Latino/a (0 = Asian, Other, & White, 1 = Hispanic/Latino/a)	.06(.07)	.05	.05(.07)	.04	.02(.06)	.02	.05(.06)	.04
Race/Ethnicity: Other (0 = Asian, Hispanic/Latino/a, & White, 1 = Other)	-.03(.07)	-.02	-.04(.07)	-.03	-.00(.06)	-.00	.00(.06)	.00
Gender (0 = Female, 1 = Male)	-.13(.06)*	-.12	-.12(.06)*	-.11	-.05(.05)	-.04	-.01(.05)	-.01
Department: PT (0 = CMSD & OT, PT = 1)	.04(.05)	.04	.04(.05)	.05	.05(.05)	.05	.02(.05)	.03
Department: CMSD (0 = OT & PT, CMSD = 1)	.15(.07)*	.13	.22(.07)**	.18	.11(.06)	.09	.06(.06)	.05
Year 2 of Program (0 = Years 1 & 3, 1 = Year 2)	.04(.06)	.04	.04(.06)	.04	.06(.05)	.06	.05(.05)	.05
Year 3 of Program (0 = Years 1 & 2, 1 = Year 3)	-.07(.06)	-.07	-.09(.06)	-.09	.01(.05)	.01	-.01(.05)	-.01
Learning Climate			-.02(.01)*	-.15	-.02(.01)*	-.12	-.01(.01)	-.10
Wholeness Climate			-.01(.00)*	-.14	-.00(.00)	-.07	-.00(.00)	-.06
Stress					.01(.01)	.10	.00(.01)	.00
Anxiety					.03(.01)***	0.32	.02(.01)***	.26
Depression					.02(.01)**	.21	.02(.01)**	.23
Resilience							-.01(.00)	-.10
Grit							-.05(.04)	-.06
Spirituality/Meaning							.02(.01)	.12
Spirituality/Peace							-.03(.01)**	-.25
Spirituality/Faith							.01(.01)*	.11
Model Fit								
R²	.06		.13		.41		.47	
ΔR²	.06		.06		.28		.05	
F(df)	2.56(8, 344)*		4.73(10, 329)***		16.77(13, 311)***		14.71(18, 300)***	

*p < .05, **p < .01, ***p < .001

Discussion

The current study examined two dimensions of burnout, burnout/disengagement and burnout/exhaustion. Both were prevalent in collegiate populations and known to have adverse immediate and long-term consequences (Stoliker & Lafreniere, 2015; Williams et al., 2018b; Wolf & Rosenstock, 2017). In the researchers' sample of 353 graduate students enrolled in CMSD, OT, and PT programs at a faith-based, health sciences university in California, the researchers found that burnout for disengagement and exhaustion were not only significantly high, but also, comparable to rates observed in prior research (Lian et al., 2014; Neumann et al., 1990; Salmela-Aro & Upadyaya, 2014). Thus, the current study supports the growing need to address burnout prevention for healthcare students, especially as they have experienced a recent pandemic (Marshall & Wolanskyj-Spinner, 2020). Moreover, the researchers examined salient risks and protective factors associated with disengagement as well as with exhaustion. Interestingly, the two forms of burnout presented with unique patterns. Deciphering between the disengagement and exhaustion elements of burnout allowed the researchers to explore more nuanced components, which may then aid in working toward offering a knowledgeable approach to the learning climate that is less associated with burnout and its potential devastating effects.

With regard to burnout/disengagement, the current study's multivariate analyses support the researchers' original position, as informed by Student Involvement Theory, asserting an inverse relationship between disengagement and students' positive perceptions of the learning and wholeness climates (Astin, 1999). Department (OT, PT, or CMSD) was not significantly different across burnout/disengagement, whereas race/ethnicity, learning and wholeness climates, grit, and spirituality showed significant associations. The encouragement of students by the university to intentionally create a healthy learning climate across campus may have positively contributed to the findings. Thus, it appears the university's focus on wholeness, as well as the intentionality about creating a positive learning environment, could make a difference, specifically for the reduction of disengagement within burnout. This is encouraging considering that one does not wish for burnout to carry over into students' careers after graduation.

Additionally, when considering associated factors for the current study, grit promoted less burnout/disengagement. Likewise, the peace element of spirituality equated to both less burnout/disengagement and burnout/exhaustion. Surprisingly, the faith element of spirituality pointed to greater burnout/exhaustion, and the meaning element of spirituality represented greater burnout/disengagement. While strictly conjectured by the researchers, spirituality may be seen as a deeply personal component of an individual. Depending on the stage of life, additional questions of spirituality may surface, and challenges may feel difficult to navigate for students during the often-tumultuous periods of graduate school. Thus, the authors recommend awareness of and student resources for healthy spirituality.

Finally, the researchers found, not surprising, that when mental health factors such as anxiety and depression increase, so do burnout/exhaustion (or possibly vice versa). Naturally, not all variables originally posited to be of importance reached significance.

For instance, for both burnout/disengagement and burnout/exhaustion, resilience was not significant in the current study's multivariate models, though correlated significantly. While initially department mattered and CMSD demonstrated higher burnout/exhaustion than either OT or PT, these differences were no longer significant once the full model, including mental health variables, was explored. However, the variables being examined explained a large degree of the variance on measures of burnout, suggesting the current study provides relevant concepts to explore.

At the time of the survey, the researchers found that university efforts appeared to have created intentionally positive learning and wholeness climates with reduced burnout/disengagement. While encouraging for the success of burnout mitigation efforts, universities may vary in the way they encourage environments that promote wholeness and positive learning. Therefore, further study is needed to decipher if results vary across campuses with a myriad of educational philosophies.

While positive wholeness and learning climates were clearly related to less burnout, additional factors that connected to burnout included students' personal variables such as mental health (for the exhaustion component) and spirituality (for both forms of burnout), a finding also noted by Knabb and Grigorian-Routon (2014). In addition, when transitioning to adulthood and beyond, research points to dynamic and multifaceted elements of religiosity being present; this may vary from individual to individual as one continues to make decisions about faith, religion, and spirituality over a lifetime (Lee et al., 2017). Combine that idea with consideration of the natural changes that take place during the growth process graduate school provides, and it may help to explain why spiritual well-being had variations within the current study. The interconnection of spirituality and mental health along with the possibility for polarizing faith views among students attending a faith-based institution may further explain why not all elements of spirituality, specifically the faith element (for burnout/exhaustion) and the meaning component (for burnout/disengagement), were significantly associated with the models within the current study. However, it is possible that some students who are more actively involved in their faith environments (e.g., spiritual or church-based responsibilities and related service activities) may take on added responsibilities when their plate is already full with graduate student life, or the student may have a varying view of faith/be in a moment of finding their own sense of spirituality/faith, thus explaining why the researchers' data reveal a positive (versus the expected negative) relationship between faith and burnout/exhaustion along with meaning and burnout/disengagement. Within the current study, it should also be noted that the majority of students at 87.9% surveyed reported a religious/spiritual affiliation. Furthermore, if one overly engages for spiritual/belief reasons in projects to serve, one may well-meaningly place pressure (in addition to academics) on oneself leading to exhaustion. This is quite possible at the university studied, as it offers many diverse local and international service activities—which, if not balanced well may result in additional pressure for the student.

More specifically, when looking at the definitions of spirituality for the FACIT-*Sp-Non-Illness*, the meaning component involves productivity and purpose, among other factors (FACIT.org, 2010). This may still be in development in students at this stage of the educational journey, perhaps adding to feelings of burnout within disengagement. Also, the FACIT-*Sp-Non-Illness* entails comfort and strength within one's beliefs and how one responds to difficult times when measuring faith/spirituality (FACIT.org, 2010). Sometimes, graduate school leaves students questioning much, including faith, and uncertain of how to respond to life's challenges that may interfere with utilizing the traditional role of faith as a resource; this may potentially explain the apparent contradictory results when diving deeper to describe what each subcomponent of the FACIT-*Sp-Non-Illness* represents (El-Ghoroury et al., 2012; Strosky et al., 2018).

While Evans et al. (2018) suggested a graduate student mental health crisis, the current study's rates of depression and anxiety were relatively low overall, though still concerning. For those who experience challenges in this area, however, the researchers discovered that burnout was indeed an issue. The current study's results support the need to further examine and provide resources for mental health within highly competitive graduate programs, as they clearly relate to burnout. When mental health challenges were present, even providing an intentional focus on learning and wholeness environments was not enough to minimize burnout in the model. Therefore, it is critical to monitor student mental health, and address needs as they emerge. Having strong, individualized, and readily available mental health support systems for graduate students is recommended. Furthermore, it is critical to normalize the discussion regarding mental health; creating an accepting and open atmosphere to encourage taking care of mental health needs may further aid the learning process.

Indeed, burnout was closely connected to mental health factors, and the researchers noted that, overall, the second year of graduate school within the studied programs saw heightened burnout. The increase within the students' second year makes sense considering the needed curriculum progression/intensity of the selected programs.

Additionally, the current study's data were collected prior to the COVID-19 pandemic. Since then, mental health concerns have, unfortunately, increased amongst university students and young adults (Dogan-Sandeer et al., 2021; Lee et al., 2020). Therefore, burnout has the potential to impact in novel ways. Considering what appears to be a great need for positive behavioral health supports globally, even more consideration should be provided despite already previously concerning burnout numbers.

Also, when considering demographic factors from the current study, such as how women are more likely to be exhausted while men are more likely to be disengaged, it made sense that PT had the highest means for burnout/disengagement, and CMSD had the highest means for burnout/exhaustion (as compared to the OT reference group). Though, in regard to reaching a level of significance, the current study's researchers' data matches the most recent consensus that women are more likely to experience burnout exhaustion than men, while disengagement may not significantly differ (Johnson et al., 2020; Roberts et al., 2020). However, as one article explains, men may

be less likely to report burnout concerns than women, and societal demands may influence responses (Artz et al., 2021). Demographics at the university studied reveal that PT has the highest number of men enrolled out of the three programs, and CMSD has the highest number of women. A larger sample may change these perspectives should data be taken from a larger pool of universities.

Practically, in reference to findings about the need for a positive learning climate on campus, Busteed's (2016) guidelines, as adopted for the current study's questionnaire, may prove useful, especially when considering how to reduce the disengagement side of burnout. Busteed (2016) says creating a positive learning climate involves recruiting professors who are both caring and excite learning within the students, having student mentorship available, providing opportunities for students to engage in extracurricular opportunities, offering clinical application of learning, and including a long-term project within the curriculum. The researchers' findings supported that working toward healthy learning and wholeness climates made a difference in reducing students' burnout. Such considerations in combination with support of spiritual and mental health are important when planning for university extracurricular programming (such as for wholeness) and can be influenced even in how the academic learning environment is structured. Further, having resources for accessible mental health support and creating an environment of mental healthiness that reduces stigma is suggested (Pearl et al., 2017). Medical schools, for instance, work on this need, from student support for wellness to mental health factors, by making adjustments to their programming/curriculum in an effort to provide positive learning environments and combat burnout (Drolet & Rodgers, 2010; Slavin et al., 2014). Being mindful of the curriculum scheduling in high-demanding academic programs should also be considered to allow the graduate students' time to rest in an effort to prevent burnout (Ilić Živojinović et al., 2020). Therefore, other graduate programs would likely benefit from similar attention, programming, and study.

Limitations
Naturally, limitations exist for the current study. First, the current study was limited to a single university and specifically to CMSD, OT, and PT graduate students. Therefore, results may differ if the same survey were to be administered to a greater variety of universities/students and cannot be generalized. Then, while most items are validated, the wholeness and learning climate pieces are not for the current study. Though acceptable, the learning climate's Cronbach's α in particular was lower than optimal. In addition, the study was cross-sectional and based on self-report, in-class responses, limiting causality and leaving open the possibility of students being more likely to report favorable impressions.

Future Studies
In this increasingly competitive graduate school environment, future studies should examine the impact of wholeness and learning climates on burnout in a variety of university settings to see how results compare. The creation of a standardized, non-denominational wholeness questionnaire (versus one specific to the university at hand

utilized in the current study) is also recommended in order to continue to assess the associations of striving for a wholeness-focused graduate school environment across an array of university settings from parochial to non-religious to private to public.

Implications for OT Education

The researchers suggest that OT departments implement preventive programs early on in the academic experience, focusing on wholeness and positive learning climates alongside programs that address potential periods of depression and anxiety, including early identification and non-stigmatizing referrals that are easy to access. This becomes increasingly more important as mental health needs rise as a result of the COVID-19 pandemic. In addition, programming and curriculum that implement the promotion of grit throughout the OT educational experience are recommended. With respect to spirituality, it is recommended to be aware of the potential for positive and negative effects on burnout, as students that are faith-driven may place additional pressures on themselves and/or struggle with their own spiritual beliefs while pursuing graduate education. Schools should strive to promote balance in all aspects of life through meaningful curriculum, policy, and programs.

Conclusion

As a whole, the data supported that individuals who perceived a positive learning and wholeness climate were also associated with a healthier graduate school experience with reduced burnout.

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