A Qualitative Study of Burnout in Graduate Students Enrolled in Healthcare Programs

Kaylene Irizarry

*Philadelphia College of Osteopathic Medicine*

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A QUALITATIVE STUDY OF BURNOUT IN GRADUATE STUDENTS ENROLLED IN HEALTHCARE PROGRAMS

By Kaylene Irizarry

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ABSTRACT

Burnout has not been defined in a universal and operational manner that is agreed upon by professionals. Burnout is prevalent among graduate students, has many negative side effects, and is not well understood. The experience of burnout varies by population. The lack of clear understanding makes assessment of burnout difficult. Assessment of burnout is difficult between groups because of the ambiguity of the construct and lack of construct validity with other terms. The purpose of this research was to identify shared themes related to burnout in graduate student populations in health-related programs and to gain insight into students’ perspectives on two current burnout and depression inventories. This study used a qualitative methodology in which 18 focus groups composed of individuals from varying healthcare programs at a graduate institution were asked about their experiences and views of burnout and critiqued the two measures. Repeated ideas pertaining to the psychological, environmental, and physical components of burnout were identified. Participants felt the construct validity between the assessments was poor. They identified possible changes they would like to see in the measures for improved validity and reliability. As burnout continues to negatively affect graduate students, the new proposed definition of burnout can be operationally measured in hopes to create a new assessment.
CHAPTER 1: INTRODUCTION

Statement of the Problem

Burnout is an ambiguous construct, and therefore, assessing for burnout has been a major challenge (Taris et al., 2005). Pines and Aronson (1988) developed one of the most commonly used definitions of burnout: a state of physical, emotional, and mental fatigue. The most frequently used assessment of burnout defines burnout as achieving high levels of emotional exhaustion causing lower levels of personal accomplishment and depersonalization (Leiter & Maslach, 1988; Schutte et al., 2000).

Others postulated burnout may be synonymous with a variety of terms, including depression, stress, worn out, and atypical depression (Bianchi et al., 2014; Bianchi et al., 2018; Brill, 1984; Shirom & Ezrachi, 2003). A study of burnout and depression showed a strong ($r = .71$) correlation between the two constructs and identified issues with the discriminant validity of both constructs (Bianchi et al., 2018). No current operational definition of burnout encapsulates its complexity. Thus, the lack of an operationalized definition makes assessment of burnout difficult (Bianchi et al., 2018). Researchers have called for more research to understand whether burnout is, a standalone diagnosis or a symptom of depression (Shirom & Ezrachi, 2003; Wheeler et al., 2011). No clear definition of burnout in graduate students exists. Graduate school demands are different from those of undergraduate school; graduate students reported challenges related to research, staff support, and expectations from advisors and supervisors (Barry et al., 2018). The closest definition of burnout was derived from research focused specifically on undergraduate students. Maroco and Campos (2012) determined burnout in undergraduate students is best defined by physical and psychological exhaustion paired with cynicism and disengagement. A study comparing undergraduate and graduate medical students found that
although both groups of students experience similar stressors, graduate medical students cope with stressors in a less adaptive fashion. They have a higher probability than undergraduate medical students of using substances to cope (Zvauya et al., 2017). This study helped bridge the gap in the literature and helped to identify the unique needs of health-related graduate students.

A random sample of undergraduate and graduate students \( N = 64,519 \) showed that 52.9% met criteria for a mental health problem (Lipson et al., 2016). Graduate students, specifically doctoral candidates, have increased levels of perceived and actual stress, depression, and anxiety when compared to control groups from the general population (Barry et al., 2018; Bullock et al., 2017). The prevalence of burnout in medical and dental students fell between 55 and 71%, with more than 54% of dental students feeling low levels of personal accomplishment. Students experienced burnout throughout their training in both clinical and didactic rotations (Chang et al., 2012; Mazurkiewicz et al., 2012; Shetty et al., 2015).

Burnout can lead to a variety of medical and physiological issues. Mental health, empathy, and professional conduct are negatively impacted by burnout (Bullock et al., 2017). In a study of medical students, the 60% of medical students who reported burnout also screened positive for depression when surveyed (Chang et al., 2012). Medical students reported experiencing insomnia, low self-esteem, and a lack of control in their lives (Mazurkiewicz et al., 2012). Owing to the high comorbidity between burnout and depression, some researchers feel the constructs share too many qualitative features and the difference between burnout and depression is not significant (Iacovides et al., 2003).

Burnout in graduate students is measured predominantly by the Maslach Burnout Inventory-Student Survey (MBI-SS; Bresó et al., 2007). This assessment was created to measure burnout in undergraduate students (Maslach et al., 2018). Major issues with this assessment
include the validity of the subscales. Researchers request improvements to the assessment, specifically the addition of new items, an ability to identify one composite burnout score, and the development of clinically significant reliability at a diagnostic level (Bresó et al., 2007; Morgan et al., 2014; Shi et al., 2019). Another major concern with the current burnout assessments is the lack of discriminant validity between burnout and depression (Arthur, 1990).

**Purpose of the Study**

Two main issues are presented in this statement of the problem. One is the lack of a clear understanding of the burnout experience in graduate students. Burnout negatively impacts many students and needs an operationalized definition. This study involved focus groups to explore students’ perceptions of the experience of burnout. The second issue involves the area of assessment. The study aimed to identify students’ perceptions of a current depression and burnout inventory. Students were also asked to suggest improvements they would like to see in both inventories.

**Research Questions**

The research question for this study is: how do graduate students in healthcare related program define and identify burnout?
CHAPTER 2: REVIEW OF THE LITERATURE

Defining Burnout

Freudenberger (1974) first defined the term *burnout* as a state of mental and physical exhaustion caused by one's professional life. Since that time, burnout has become an umbrella term to define a plethora of symptoms. The lack of a unanimously agreed-upon definition of burnout inhibits gaining a true understanding of the concept (Beemsterboer & Baum, 1984). The most frequently used definition of burnout was created by Leiter and Maslach (1988); they found burnout to be a response to chronic job stress. Burnout is when emotional exhaustion leads to greater depersonalization, subsequently resulting in low levels of personal accomplishment (Lieter & Maslach, 1988). Later, Maslach suggested that emotional exhaustion was positively related to depersonalization (Maslach, 1993).

Golembiewski (1996) had a different perspective on burnout. He concluded that Maslach’s three subscales of burnout, which include depersonalization, emotional exhaustion, and personal accomplishment, should be further broken down into high and low subscales. They found no benefit to obtaining scores on the three subscales without having set markers for high, medium, and low levels. Individuals experiencing burnout progress through a continuum and work their way up to severe burnout. Burnout can be either an acute or a chronic experience (Golembiewski, 1996).

Some researchers have deviated from Maslach’s three components and identified other aspects of burnout (Montero-Marín et al., 2009). Three other burnout subtypes have been identified: frenetic, underchallenged, and worn out. Frenetic burnout can be seen in people who are highly motivated to work and invest a great deal of time and effort into their work; the problem in frenetic burnout is that individuals are so frustrated that they work harder in hopes of
alleviating frustration. Those who experience underchallenged burnout lack interest in their work and are unmotivated to continue producing quality work. Lastly, worn-out individuals are not engaged in their work to a point in which they neglect their responsibilities. These subtypes refer to the different means of dealing with frustration in the workplace (Montero-Marín et al., 2009). Maslach’s description of burnout does not include the frenetic profile; therefore, researchers believe this group of individuals is neglected by the common definition (Montero-Marín & García-Campayo, 2010). Burnout begins when workers start feeling overloaded, unchallenged at work, and neglected (Montero-Marín et al., 2011).

Recently, the World Health Organization (2018) identified burnout as an occupational experience. It states that burnout is a different experience from anxiety and depressive disorders and can be referred to only when speaking about symptoms experienced as a result of workplace stress. Some symptoms of burnout are lack of energy, withdrawal from work, and decreased personal efficacy (World Health Organization, 2018). One may argue that being a student is a job, but perhaps the experience is different because students are typically paying to do their work rather than being paid.

**Prevalence, Precursors, and Causes of Burnout**

Graduate students had higher levels of burnout compared to same-aged peers (Bullock et al., 2017; Rotenstein et al., 2016). Approximately 71% of the 86 medical students surveyed in one study met the criteria for burnout (Mazurkiewicz et al., 2012). Burnout is more common than generally believed and impacts numerous individuals in different graduate programs and parts of their lives (Iacovides et al., 2003). Some studies showed burnout is more prevalent during the first 3 years of medical school, while others reported it occurs more frequently during clinical training (Chang et al., 2012; Mazurkiewicz et al., 2012). Although burnout originally was
hypothesized to be an experience of those already working in the health professions, it also may appear prior to working in the field (Bullock et al., 2017; Leiter & Maslach, 1988;).

Burnout is caused by an array of situations. Based on a study of graduate dental students, individuals between 21 and 25 years old who regretted their decision to pursue education and had not yet strengthened their coping skills to adapt to school demands were more prone than other aged peers to burnout (Njim et al., 2018; Shetty et al., 2015). Individuals who felt in control of their lives, had fewer children, and were pleased with their incomes were less likely to experience burnout than peers without financial struggles and children (Enoch et al., 2013; Njim et al., 2018). Cisgender male students, and students living away from parents, and those having experienced a stressful life event within a year were more likely to have elevated levels of burnout when compared to the general population (Talih et al., 2018). Students in master’s and doctoral levels of humanities fields, such as psychology and counseling, were more likely to experience depression and suicidality compared to students in other disciplines (Lipson et al., 2016). Some independent causes of burnout are feelings of inadequate control over one’s work, unmet hopes and expectations, and disengagement in the meaning of life (Iacovides et al., 2003).

The school environment influences the level of burnout experienced by students (Mafla et al., 2014). Organizational issues lead to increased levels of burnout. Structural issues with faculty and organization can trickle down and impact the amount of burnout students experience (Montero-Marín et al., 2013).

Students in public institutions with large class sizes and/or who failed one or more classes were likely to experience increased levels of burnout (Mafla et al., 2014). Dental students surveyed identified students from an upper socioeconomic class and those who are older students as more likely to experience burnout (Mafla et al., 2015). Interestingly, nursing students
experienced less burnout when married, while dental students experienced higher rates of burnout when married. Of note, both student populations were predominantly cisgender female (Mafla et al., 2015; Njim et al., 2018). Individuals not rewarded for their efforts and neglected by peers and supervisors are more likely to experience burnout (Montero-Marín et al., 2013).

**Effects of Burnout**

Burnout impacts individuals in numerous ways. Burnout has a negative impact on mental health, empathy, and professional conduct. It also increases the likelihood of insomnia and sleep deprivation (Talih et al., 2018). While burned out, students felt they had little control of their lives and were not confident in their abilities to implement clinical skills post-graduation (Bullock et al., 2017; Mazurkiewicz et al., 2012).

Burnout follows physicians, nurses, and social workers after they complete school. A meta-analysis showed that 17.3% of surveyed health professionals reported burnout, and 19.5% of those evaluated reported a low sense of personal accomplishment (Parola et al., 2017). Physicians had 41.2% lower levels of personal accomplishment compared to those in other specialties assessed. However, the prevalence of burnout was higher in social workers by 27% compared to other healthcare professionals (Parola et al., 2017). Another study looked at levels of burnout in psychologists, social workers, psychiatrists, counselors, and occupational therapists who worked in a mental health setting. Mental health providers have high levels of emotional exhaustion, moderate levels of depersonalization, and high levels of personal accomplishment which may be the result of providers feeling competent in their skills but also overworked, exhausted, and emotionally drained (O'Connor et al., 2018). Students who experienced burnout also felt they had little control in their lives and were not confident in their abilities to implement clinical skills post-graduation (Bullock et al., 2017; Mazurkiewicz et al., 2012).
Burnout impacted employees in all disciplines. For example, burned-out correctional officers ended up spending less time getting to know inmates and more time being punitive, instead of collaborating with the inmates on problem solving (Salyers et al., 2015). Burnout leads to individuals feeling uncomfortable in the workplace and has a negative effect on interpersonal and family relationships, possibly leading to hopelessness (Iacovides et al., 2003; Montero-Marín et al., 2013). It also increases the likelihood of insomnia and sleep deprivation (Bullock et al., 2017).

**Depression**

Major depressive disorder (MDD) is defined as an experience of depressed mood and anhedonia lasting at least 2 weeks. According to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association, 2013), symptoms of MDD include, but are not limited to, changes in appetite and sleep, feelings of worthlessness, increased somatic complaints, impaired executive functioning, and suicidal ideations and thoughts.

Rates of depression range from 27.2 to 33% in graduate and medical students (Peluso et al., 2011; Rotenstein et al., 2016). Health-related graduate students with depression also exhibit increased stress, loneliness, fatigue, suicidal ideation, disordered eating, and increased drinking (Rostenstein et al., 2016; Rummell, 2015; Zeng et al., 2018). In one study of medical students, approximately 11.1% of those surveyed reported previous suicidal ideation (Rostenstein et al., 2016).

A relationship was identified between depression symptoms, stress symptoms, posttraumatic stress symptoms (PTSS), and suicidality. Students with higher levels of depression and PTSS were more likely to exhibit suicidal thoughts and ideations if they had impaired emotion regulation skills and self-efficacy (Zeng et al., 2018). Students with higher rates of
depression were less likely to engage in positive health behaviors and more likely to be under stress than peers (Mazurek Melnyk et al., 2016a).

Both depression and burnout have little discriminant validity and explain how individuals perceive ambiguous stimuli (Bianchi et al., 2014; Bianchi et al., 2018). Depression and burnout affect cardiovascular and neuronal health. Heart rate variability and brain-derived neurotrophic factor, a protein found in the brain, were equally and significantly lower in individuals with burnout and depression (Orosz et al., 2017). Therefore, further research looking at more than biological markers to differentiate between the two constructs must be conducted (Orosz et al., 2017). An earlier study of school teachers found 90% \((n = 5,575)\) of participants who met the criteria for burnout also met the criteria for depression (Bianchi et al., 2014). An individual with higher levels of burnout is more likely to view a neutral stimulus negatively than compared to one with moderate levels of burnout. The moderate and negative relationship of burnout and depression with pleasantness leads those with low to medium levels of burnout and depression to more likely regard ambiguity in a positive light (Bianchi et al., 2018).

Atypical depression was a subset diagnosis of depression in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994). Symptoms of atypical depression included high levels of mood reactivity, feelings of rejection and hypersensitivity, and impairment in social and occupational functioning (American Psychiatric Association, 1994). Bianchi et al. (2014) postulated no difference between atypical depression and burnout.

**Anxiety**

Generalized anxiety disorder (GAD) involves dealing with excessive worry and anxiety that are grossly proportioned to the stimuli (American Psychiatric Association, 2013). GAD is
associated with worries regarding health, finances, and job responsibilities. These worries not only interfere with psychosocial functioning, but also are pervasive, intense, and negatively impact somatic complaints (American Psychiatric Association, 2013). Symptoms of anxiety in health-related graduate students can include irritability, feeling overly stressed or anxious, difficulty concentrating, decreased motivation, panic attacks, nervousness, and difficulty sleeping (Garcia-Williams et al., 2014; Rummell, 2015).

Increased levels of anxiety and depression in health-related graduate students lead to higher levels of stress and lower involvement in prosocial and positive health behaviors (Mazurek et al., 2016). Students report more somatic complaints when they have higher levels of financial stress and difficulty accessing healthcare (Rummell, 2015). A positive correlation exists between anxiety and stress in health-related graduate students and a negative correlation exists between anxiety and healthy lifestyle activities in health-related graduate students (Mazurek et al., 2016). The workload of health-related graduate students increases anxiety, resulting in students feeling nervous and engaging in unhealthy eating behaviors (Garcia-Williams et al., 2014).

**Cognitive Distortions**

Previous research showed cognitive distortions were related to psychological well-being, depression, and anxiety in nursing students (Kantek & Kabukcuoğlu, 2017). Beck (1967) coined the term *cognitive distortion* and stated it was an incorrect method of processing information. Notable cognitive distortions relevant to burnout include comparison, should statements, and emotional reasoning. Comparison is viewing oneself as less than others, should statements involve maintaining unrealistic expectations of oneself, and emotional reasoning involves making assumptions based on an experienced emotional state (Yurica & DiTomasso, 2005).
Demands of Graduate School Work

Each graduate program has specific demands and requirements. In one study, burnout was shown in as many as 89.8% of medical students (Becker, Milad, & Klock, 2006). For example, the first 2 years of most medical programs typically involve didactic classes, whereas the second 2 years involve clinical rotations (Mazurkiewicz et al., 2012). A cross-sectional study composed of allied health students, specifically in physical therapy, physician assistant, and occupational therapy, reported that students in the didactic stage of their education reported worse mood and decreased health, as measured by weight and heart rate, in comparison to those completing clinical training (Boolani et al., 2018).

Health-related graduate students reported many challenges that arose in their programs. A qualitative study showed that students felt supervision, specifically focused on research, needs to be improved. Additionally, universities should work to improve students' interactions with professors, time management, relationships with staff, and clarity of expectations from professors and advisors (Barry et al., 2018). Graduate student athletic trainers are required to travel with their assigned teams and possibly teach classes to meet their graduate assistant requirements. These tasks increased burnout compared to that in students not required to teach or travel for their clinical experiences (Mazerolle et al., 2012).

Psychology graduate students state that most of their time is spent completing clinical work and their assistantships (Rummell, 2015). Students dedicated approximately 54 hours a week to completing work for school. Most of these students felt completing a thesis/dissertation while trying to balance work and family life elicited the most stress. Self-critical perfectionism was a moderating factor between depression and burnout among clinical and counseling psychology doctoral students (Richardson et al., 2018). Students with higher levels of self-
compassion were less likely to be depressed or burned out than peers (Richardson et al., 2018). Students reported that graduate programs could improve by strengthening mentorship between students and faculty and by providing more financial assistance (Rummell, 2015).

A study comparing physical therapy students to medical students revealed that the environment of physical therapy school was more favorable compared to that of medical school. Students identified that physical therapy programs aided more in personal development. Physical therapy students indicated more positive staff-student interactions, while medical students reported higher instances of student mistreatment. Physical therapy students reported less disengagement and exhaustion in their programs. These notable differences may relate to physical therapy students experiencing burnout at a lower frequency than medical students (Shields et al., 2018). Physical therapy students participated in slightly less physical activity during their didactic training compared to their clinical training (Boolani et al., 2018).

Physician assistant students were noted not to have clinically significant differences in health at the beginning of either their didactic or their clinical work. However, once they started didactic work, students reported being slightly more sedentary, sitting approximately 3 more hours a week, and having increased tension, anxiety, depression, and anger with decreased levels of mood (Boolani et al., 2018).

**Interventions**

Identifying the effects of burnout helps determine appropriate interventions (Lebares et al., 2018). Although a universal definition of burnout does not exist, institutions have realized burnout is a problem that needs to be addressed. An evaluation of clinical psychology doctoral students showed that they were not receiving adequate training on burnout. Students recommended schools provide coping skills for stress, interventions highlighting self-
compassion and decreased perfectionism, and information on avoiding current and future burnout (Montero-Marín et al., 2009; Thompson et al., 2011; Zemirah, 2000). Master’s-level counseling students identified resilience as a critical aspect of burnout prevention (Richardson et al., 2018). Interventions in reducing burnout, depression, and suicidality symptoms in health-related graduate students should also emphasize self-efficacy and emotion regulation skills (Zeng et al., 2018).

Psychology graduate students were disappointed in the quality of education they were receiving about self-care and in the amount of time offered to engage in self-care. They suggested programs should provide more time for teachings in this area, along with professors demonstrating more empathy toward the demands of health-related graduate students (Rummell, 2015). While some students received psychopharmacological and/or psychotherapeutic treatment for mental health symptoms, many were not enrolled in treatment during their training (Garcia-Williams et al., 2014; Rummell, 2015). One study reported that 82% of the health-related graduate students surveyed ($N = 119$) were previously in treatment and stopped treatment after beginning their programs (Rummell, 2015). Students not in psychotherapy abused caffeine and took psychotropic medications at higher rates than those seeking psychotherapy from professionals (Garcia-Williams et al., 2014; Talih et al., 2018). One researcher hypothesized that self-medicating may result from stigmatizing ideas relating to being a health professional and receiving treatment (Garcia-Williams et al., 2014).

A study evaluating the mental health of entering graduate students suggested early assessment is the precursor to developing relevant interventions. In order to improve burnout, student health and wellness outcomes should be addressed first (Mazurek Melnyk et al., 2016).
A study evaluating the use of treatment among medical students found that though many students were experiencing feelings of depression, stress, and suicidal ideations, only 15.7% of those surveyed had sought treatment (Rotenstein et al., 2016).

**Coping Skills**

Coping skills are an important mitigating factor related to burnout (Bianchi et al., 2019). Graduate psychology students present with significant levels of stress, and both maladaptive and inadequate methods of coping (Parola et al., 2017). Peer and faculty support were the most efficacious coping skills at reducing burnout. Engagement in counseling services and extracurricular activities were also regarded as healthy coping skills (Shetty et al., 2015). Some protective factors that decreased the likelihood of burnout were being older than 26 years and having more developed coping skills (Chang et al., 2012). Medical residents who place a high priority on healthy relationships, engage in active spiritual life, and practice humility appeared to be protected against burnout (Shetty et al., 2015).

**Maslach Burnout Inventory**

Although the prevalence and associated symptoms related to burnout are astounding, a recent, reliable, and valid assessment to measure burnout is not available. The most widely used burnout assessment has been the Maslach Burnout Inventory (MBI; Schutte et al., 2000). Two of the three versions of the MBI are the Maslach Burnout Inventory- Health Services Survey (MBI-HSS), a 22-item assessment, and the Maslach Burnout Inventory- Educators Survey (MBI-ES), the same assessment as the MBI-HSS except that the word *recipient* in the first survey has been changed to *student*. These two assessments have three subscales: emotional exhaustion, depersonalization, and personal achievement. The third version is the Maslach Burnout Inventory- General Survey (MBI-GS), a 16-item questionnaire created to assess burnout in all
other fields. The subscales of the MBI-GS are exhaustion, cynicism, and personal efficacy (Maslach et al., 1981).

The Maslach Burnout Inventory-General Survey for Students (MBI-GSS/MBI-SS) was designed to measure exhaustion (EX), cynicism (CY) and professional efficacy (EF) in undergraduate students. This inventory is composed of 16 items, and responses are scored on a 7-point Likert scale. Burnout is indicated by having elevated EX and CY scales and a low EF score (Maslach et al., 2018). The MBI-SS, similar to the MBI, presents with concerns regarding construct validity and may not be appropriate for use with graduate students. As stated earlier, the demands of graduate programs are different from those of undergraduate programs. Therefore, an assessment designed to measure burnout in undergraduate students would not be appropriate for the graduate student population because of the differences in programming and requirements. An assessment of burnout specifically in graduate students may identify niche needs of the population otherwise overlooked in a more generic measure.

**MBI Development**

The MBI was created to measure Maslach’s three components of burnout: depersonalization, emotional exhaustion, and reduced personal accomplishment (Maslach et al., 1997). Interviews, exploratory research, and questionnaires were used to form ideas about the attitudes and feelings that characterize burnout. The authors reviewed other burnout scales but did not take any specific items from other scales (Maslach et al., 1997).

The first form of the MBI contained 47 items. This assessment was used on a sample of 605 people from health and service fields (Maslach et al., 1997). After a factor analysis was completed, the MBI was reduced to 25 items. The remaining items had “a factor loading greater than .4 on only one of the factors, a large range of subject responses, a relatively low percentage
of subjects checking the ‘never’ response, and a high item-total correlation” (Maslach et al., 1997, p. 197).

**MBI Critique**

The frequent use of the MBI has led researchers to question the validity and reliability of the assessment (Arthur, 1990). In comparison to other burnout assessments, the MBI was found superior in terms of reliability and ability to identify aspects of burnout in teachers (Platsidou & Daniilidou, 2016). The statistical validity of the MBI was deemed unusable for diagnostic purposes due to an array of reasons, including a lack of discriminant validity between depressive and personality measures, strong convergent validity with depression assessments, inconsistencies between subscales, low generalizability to varying populations, and an overall poor conceptualization of burnout as an operationalized construct (Aguayo et al., 2011; Arthur, 1990; Bianchi et al., 2019; Chao et al., 2011; Meier, 1984; Wheeler et al., 2011). That being said, the validity and reliability of the MBI and other burnout assessments have been questioned by researchers (Aguayo et al., 2011; Arthur, 1990; Wheeler et al., 2011).

Currently, the MBI is supposed to be a three-dimensional inventory in which the data are used to obtain three subscale scores of burnout (Maslach et al., 1986). Some researchers use the measure as recommended by Maslach et al. (1986) and have taken the three-dimensional subtypes, while others manipulate the three scales to create a composite, unidimensional burnout score that does not provide a valid reading (Koeske & Koeske, 1989). Although the three-dimensional MBI has some functional validity, it is not the most optimal measure (Shi et al., 2019). A more optimal measure would be unidimensional and would provide the researchers with one burnout scale to analyze compared to three subscales (Taris, et al., 1999). Maslach et al.
(2018) have indicated they felt burnout is not dichotomous; rather, it is measured on a continuum.

The subscales of the MBI are depersonalization, personal accomplishment, and emotional exhaustion (Maslach et al., 1981). Overall, the level of heterogeneity among subscales indicates that the assessment cannot be generalized to different populations other than the specifically identified populations (Aguayo et al., 2011). The depersonalization scale of the MBI is the weakest statistically and needs more psychometric work (Chao et al., 2011; Koeske & Koeske, 1989). The depersonalization subscale could be improved by adding more items to all subscales, having a better balance of negatively and positively worded items, and/or dividing the depersonalization scale into two different factors, thus changing it into a four-scale inventory (Chao et al., 2011; Koeske & Koeske, 1989).

The subscales of the MBI-SS are exhaustion (EX), cynicism (CY), and reduced efficacy (EF; Maslach et al., 1981). The major issue with the MBI-SS also involves the subscales. Research supports changing the EF scale to an inefficacy scale to increase the Cronbach's alpha and also worked better with the other scales (Bresó et al., 2007; Morgan et al., 2014). This inventory could be improved by adding items to the measure and expanding to a 9-point scale instead of a 7-point scale (Shi et al., 2019). Similar to the MBI, the MBI-SS needs more research regarding the psychometric properties to make it an item that results in a composite burnout score (Morgan et al., 2014). When a Rasch analysis of the MBI-SS was completed, the reliability score of the inventory was .8, which is adequate for research; however, for diagnostic purposes, the researchers recommended a .9 score (Shi et al., 2019).

Burnout assessments and depression inventories are strongly correlated; this imbalance suggested weak discriminant validity of all burnout assessments (Arthur, 1990). According to
some, the MBI has been overgeneralized. Meta-analysis showed the norms of this assessment on certain populations cannot be used to report burnout in other populations. One study pointed out that assuming reliability when conducting this assessment is dangerous (Aguayo et al., 2011). Another study showed inconsistencies with the reliability of depersonalization and personal achievement subscales. This study endorsed the internal consistency being compromised between translations of the MBI. Specifically, the emotional exhaustion and depersonalization subscales were negatively impacted by the translations (Wheeler et al., 2011). One study was noted that emotional exhaustion was more strongly related to depression than depersonalization and that this finding emphasizes the ambiguity of the operational definition of burnout used in the MBI (Bianchi et al., 2014).

Graduate students in healthcare programs are individuals who intend to dedicate their lives to serving others. More in-depth research relating to burnout is needed to help aid in their self-care. This study provided health-related graduate students the opportunity to highlight the unique characteristics of burnout. The results of this study can help program administrators by identifying the needs of their students so they can provide students with more resources. Additionally, the operational definition of burnout in this study can lead to a new, more reliable diagnostic burnout measure. As previously stated, a new burnout measure is needed. This study yields groundbreaking information to help create the future assessment.
CHAPTER 3: METHOD

Given the lack of literature focused on burnout in graduate students enrolled in healthcare-related programs, this study used a mixed methodology. Qualitative analysis was the best way to analyze focus groups conducted with graduate students, as it better elucidated concepts pertaining to burnout. This study included 18, 90-minute focus groups in which students were asked questions pertaining to their unique experiences and burnout. Then, they were shown a burnout and a depression inventory and asked standardized questions to critique each inventory. Demographic information was collected by completion of a questionnaire via Google Form.

Participants

The study was approved by the Institutional Review Board for the protection of human subjects. Participants of this study were current health-related graduate students at a graduate academic institution. Fifty-three students participated in 18 focus groups for this study. Students from the following programs were targeted to gain more insight into burnout: osteopathic medicine, clinical psychology, school psychology (MS and EDS), biomedical science, mental health counseling, physician assistant, and pharmacy. The focus groups were intentionally inclusive of students from the aforementioned disciplines. Most of the focus groups involved students from multiple disciplines; however, Focus Group 2 had only clinical psychology participants, and Focus Groups 3, 12, 14, 15, and 17 had only osteopathic medicine students. The mixed subgroups allowed for interdisciplinary dialogue on similar and unique experiences health-related graduate students had related to burnout. This study aimed to synthesize views on burnout and to gain insight into the opinions on the validity and reliability of two widely used measures of burnout and depression of students of different backgrounds and disciplines.
Inclusion and Exclusion Criteria

Participants were graduate or doctoral students enrolled full-time in the clinical psychology, school psychology, pharmacy, biomedical sciences, osteopathic medicine, mental health counseling, or physician assistant programs at the institution. Students with comorbid psychological diagnoses and those with expertise/training in burnout were able to participate as well. There were no exclusion criteria if inclusion criteria were met.

Screening and Recruitment

The primary investigator sent the email blast to the Division of Research (DoR) at the institution (see Appendix A). The DoR sent four recruitment email blasts over the course of 3 months to all full-time graduate students. This email asked for participants and explained the purpose of the study, what was required of participants, and the incentive provided. After the completion of all focus groups, four participants were randomly selected to win one of four $25 Amazon gift cards. The email blast provided a hyperlink that allowed students to sign up to participate in scheduled focus groups at their convenience. Students were sent three reminder emails that provided the link for the focus group and the demographic survey. The reminder emails were sent 24 hours before, 1 hour before, and 15 minutes before the start of the focus group with the video chat link. Students were permitted to sign up for a group only if they were in the aforementioned programs.

Measures

Personal Information Questionnaire

A personal information questionnaire was used to gather information pertaining to program, year, gender, marital status, and other information to better understand the population
participating in the focus groups. This assessment was administered via Google Forms (see Appendix A).

**Focus Group Questions**

Questions inquired about the students’ definitions of burnout, stressors during school, and coping skills to prevent or treat burnout. The focus groups were semistructured in that the moderator asked certain questions and prompted for further information or clarification when appropriate or necessary. Standardized questions were used to facilitate a discussion critiquing two commonly used assessments for depression and burnout (see Appendices B and C to review the questions).

**Patient Health Questionnaire-9 (PHQ-9)**

The PHQ-9 is a self-report measure of depressive symptoms. Nine items on this measure coincide with the criteria for depression as described in the *DSM-5* (2013). The respondent is prompted to respond to each statement with “Not at all,” “Several days,” “More than half the days,” and “Nearly every day.” This assessment has been deemed a valid and reliable measure of the severity of depressive symptoms (Kroenke et al., 2001).

**Maslach Burnout Inventory-Student Survey (MBI-SS)**

This assessment measures exhaustion (EX), cynicism (CY), and reduced efficacy (EF) in students. This inventory is composed of 16 items, and responses are scored on a 7-point Likert scale. Burnout is indicated by having elevated EX and CY scales and a low EF score. This assessment is the most commonly used for burnout in students (Schutte et al., 2000).
Procedure

The current study was completed over the course of 18 months. Eighteen 90-minute focus groups were held within a 3-month period. The focus groups were conducted on virtual chat rooms on Blackboard Collaborate. The groups were composed of participants from a variety of programs. The groups were not stratified based on the program in order to facilitate dialogue among different disciplines. All students, regardless of program of study, were provided with the times the groups would be conducted and were able to sign up for their most convenient time. Most groups having participants from multiple disciplines. Others have found the use of mixed focus groups allows participants and the researcher to gain insight into different experiences in individuals with similar backgrounds (Nyumba et al., 2018).

Each focus group was audio- and videorecorded with verbal informed consent provided by all participants. The primary investigator was the moderator for all groups. The moderator was a black, Hispanic female graduate student enrolled in the clinical psychology doctoral program. The focus group involved the moderator asking participants a series of questions related to their graduate student experiences and burnout. Then, the moderator provided a brief overview of the depression assessments and then asked the standardized critique questions. The same process was then repeated for the burnout inventory. All structured questions can be found in Appendices B and C.

Data Analysis

The focus groups were audio- and videorecorded using Blackboard Collaborate and the audio was transcribed by the primary investigator. After the transcription was complete, an email was sent by the second investigator to second- and third-year students in the clinical psychology doctoral program asking if anyone would be interested in being research assistants for this study.
The research assistant recruitment email can be found in Appendix F. The criteria for selection required successful completion of doctoral courses on research methods, psychopathology, and ethics. Two research assistants were chosen and trained in the grounded theory analysis technique originated by Auerbach and Silverstein (2003). Both students were in their second year of the clinical psychology doctoral program; one student identified as a cisgender, European American woman, and the other student identified as a cisgender, European American man.

Grounded theory is “the discovery of theory from data” (Glaser & Strauss, 1967, p. 1) and was used to analyze the data collected from the focus groups. A four-tiered analysis approach was used. First, the research assistant coders were provided a training by the primary investigator on the Auerbach and Silverstein (2003) method of grounded theory via Google Meets. They were informed of the four-tier analysis approach. Then, each research assistant was provided the first transcript to read; the coders and primary investigator identified and highlighted relevant text. Next, the researchers reread the transcript focusing only on the highlighted relevant text. They identified the repeated ideas from the relevant text and wrote the ideas using the comment application on Microsoft Word. The research assistants and primary investigator discussed the repeated ideas that were found. Their dialogue was used to identify common themes that emerged after combining repeated ideas. This process was done for each transcript. The first transcript was read and analyzed while all researchers were on Zoom. Subsequent video meetings involved the team gathering after coding approximately three to five transcripts, separately, every 2 weeks and discussing the repeated ideas and common themes. Each research assistant then submitted their coded transcript to the primary investigator. Next, the primary researcher combined all the transcripts on Microsoft Word to compile a large document of the 18 transcripts with the relevant text highlights and comments identifying
repeated ideas and common themes. Lastly, the primary investigator proposed a theoretical
construct of graduate student burnout from the discussion of common themes. Relevant text was
the most basic tier, and each subsequent tier included data from its preceding tier. Therefore,
relevant text became repeated ideas, turning into common themes, thereby shaping the
theoretical construct.

The goal of the data analysis was to construct a theoretical narrative identifying how the
participants viewed the concept of graduate student burnout. The research question was, “How
do graduate students in healthcare programs perceive burnout?” A bottom-up approach was used
in analyzing the data regarding students’ perceptions of burnout, and a top-down approach was
used to analyze the data about the current depression and burnout inventories. Data analysis
revealed new and undiscovered themes to be addressed further.
CHAPTER 4: RESULTS

The grounded theory methodology presented by Auerbach and Silverstein (2003) was used to explore themes pertaining to the perception of burnout among graduate students in healthcare-related programs. Eighteen focus groups were conducted with a total of 53 participants. Multiple repeated concepts emerged and were categorized during the open-coding phase. Emerging themes were identified and expanded upon. The validation team consisted of two research assistants who studied clinical psychology and successfully completed their doctoral courses on research methods, psychopathology, and ethics.

Personal Information

A total of 53 students participated in this study. The majority of students were in the osteopathic medicine program. See Table 1 for complete personal information reported.

Table 1

**Demographic Data**

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#### Emerging Themes

The data collected focused on students’ perceptions and experiences related to burnout. Mental, physical, and environmental factors pertaining to burnout were elaborated on and explored. Additionally, students reported their perceptions of the relationship between burnout, depression, and anxiety, in turn yielding three relational models to emerge. Graduate students shared their coping strategies for combating burnout. Lastly, students viewed and critiqued two widely used assessments for their relevance to characteristics of burnout: The Patient Health Questionnaire (PHQ-9) measured depression, and the Maslach Burnout Inventory-Student Survey (MBI-SS) measured burnout.

Table 2
Theoretical Constructs, Themes, and Repeated Ideas

I. Graduate Student Burnout
   A. Psychological Factors
      1. Motivation
      2. Overwhelmed
   B. Environmental Factors
      1. Research and Exams
      2. Clinical Experience
      3. Relationships
   C. Physical Factors
      1. Sleep
      2. Diet
      3. Exercise

II. Fighting Burnout

III. Burnout, Depression, and Anxiety

IV. Perception of Depression and Burnout Inventories
   A. PHQ-9
   B. MBI-SS

Graduate Student Burnout

Psychological Factors

Numerous factors affecting mental health were identified. Of note, a lack of motivation and feeling overwhelmed were repeated throughout all of the focus groups. Students indicated a decrease in motivation while experiencing burnout. Specifically, students generalized their lack of motivation outside of the academic realm. One osteopathic medicine student reported, “I think it’s basically just not wanting to do anything or just move, just move your mind. Can’t focus on anything anymore.”
A student in the biomedical sciences program explained that burnout is a “feeling like you don’t want to get out of bed. You don’t want to read any more textbooks. You don’t want to study any more of anything; just you’re totally done.”

The experience of burnout appeared to hinder students' abilities to focus and engage in academic tasks. Some students indicated they were able to continue studying; however, they noted they did not retain information effectively during periods of studying. One osteopathic medicine student explained as follows:

For me, it comes to a point where, like, no matter how much more I'm trying to work and trying to learn, nothing else sticks in my head. And after that point, everything is just kind of in one ear and out the other.

Another student from the same program described their experience as follows:

Burnout is when my mind is exhausted, and it's just been going for so long and it just doesn't absorb any new information. So that's when I feel I’ve been thinking about it and studying for too many hours straight and have to give myself a break, or maybe I need to switch topics, but usually when I hit burnout, it doesn't matter what I try to study. My mind is not absorbing anything else.

Students reported the presence of burnout causes motivation to decrease and a sense of feeling overwhelmed with responsibilities and expectations. Some students noticed a decrease in empathy when they experienced burnout.

Graduate students reported a psychological phenomenon in which they felt their peers experienced burnout, but no one ever talked about it. Students believed their classmates joked about burnout and did not take it seriously. Students perceived they could confide in close peers about their experiences with burnout; however, they did not feel comfortable discussing feeling
burned out with their general cohort. Students felt a lack of support among their overall peer group. Students reported often comparing themselves to their peers, specifically their social media pages. One osteopathic medicine student noted the following:

I kind of get jealous a little bit. So let's say Instagram, right? Like the social media aspect, people always glitter, like, ‘Oh, I'm doing so well’ then say ‘Yeah, life is hard, but there's always a way to bounce back.’ That's not easy. I'm, like, how do the people make it look so easy? I think that's where it's frustrating. Like, man, I wish I could balance it all.

Another osteopathic medicine student shared their frustration:

I think because of the field that we're in, you're shown to hide your weaknesses and struggles and everyone kind of plays, like, the tough card and, like, ‘Oh, I've never experienced it.’ Like, everything's fine. Like, I'm getting straight A's. So that's 100% not the case, and the people who are doing that, I can guarantee you, are, from what I've learned, some other aspect of your life is lacking. And I think there's a lot of people who are burned out and they don't talk about it.

Students felt they needed to bare their stressors alone and hide their struggles from peers, which, in turn, caused them to feel isolated from and lesser than their peers.

**Motivation.** The word *motivation* appeared 37 times throughout all the transcripts. Students posited that stress can be motivating at times, while burnout is never a motivating experience. They repeated the phrase *lack of motivation* when describing burnout. One clinical psychology student defined burnout as “feeling ‘over it,’ being physically exhausted and a lack of motivation.” Another clinical psychology student defined burnout as follows: “When you're feeling really stressed out from the amount of work that you have, like, you know you're feeling
exhausted, tired, and lack of motivation due to everything that's going on, whether it be work or school.”

Students reported their perceived lack of motivation present during periods of burnout resulted in procrastination. One clinical psychology student reported how decreased motivation increased their procrastination. Another clinical psychology student indicated their lack of motivation to negatively impact the quality of their work. One DO student felt a lack of motivation was a distinguishing factor in determining burnout.

Students reported decreased motivation can be specific to a particular assignment but also can be generalized. Students noted burnout caused a general lack of motivation in their studies that negatively impacted their self-esteem. Some students even reported questioning their competencies and whether they were in the right field of study after burnout. Specifically, a clinical psychology student stated the following:

When you lose that motivation, especially if it's something that you've worked towards for so long, you kind of start feeling, like, ‘What is my purpose? What am I doing? What is going on?’ So, for me, I definitely started feeling not so great about myself and what I was doing.

**Overwhelmed.** Graduate students of all disciplines indicated that a sense of being overwhelmed accompanied burnout. During the focus groups, the term *overwhelmed* was used by students 16 times. Students reported they felt overwhelmed because of environmental factors and emotional stressors, and their typical coping skills were no longer effective in regulating their emotions. Regarding feeling overwhelmed, one clinical psychology student stated, “[I was]
just overwhelmed with everything. Both in my personal life and the professional life starts to blend in.”

One DO student defined burnout as follows:

   The state of being overwhelmed with too much work all at once, or I guess it could be a bunch of different types of burnout, whether you're working too many hours, not sleeping enough or emotional and mental stress studying all day, every day, and your brain just decides it can't work anymore.

Students also indicated that feeling overwhelmed could lead to neglecting self-care and basic needs.

Environmental Factors

   Graduate students spoke about environmental stressors that impacted burnout. They disclosed that exams, clinical experiences, conducting research, and maintaining interpersonal relationships are the most common external stressors that impact burnout.

   Research and Exams. Research appeared to be a stressor for students in the biomedical sciences, osteopathic medicine, and psychology-related programs. Students in the clinical psychology program mentioned balancing time between clinical work, dissertation, and academic studies was challenging.

   Exams appeared to be a source of stress for students across all disciplines. The timing of exams and the amount of information covered on exams tended to overwhelm students. Students disclosed that feeling overwhelmed about exams resulted in secondary physical side effects. One student noted that at times they had two exams in 1 week. A clinical psychology student stated the following:
I'm a psych student. We have to write a lot of papers. Sometimes that gets really overwhelming when you have, like, a 20-page paper due and an exam the next day, or something like that, while you're still working. So, I think it's just when a lot of things are coming up at once.

One of the DO students shared the same sentiment:

Sometimes, like, you have one exam on Monday and then you have another exam the next Monday, and then you have, like, another exam on Thursday, and you just don't really have a chance to recover. So, you're already exhausted, and then you get hit with another thing when you're already down and out.

A DO student even explained they would vomit from stress prior to every exam. A biomedical student shared the following experience:

The first year, the third term, we had three classes and about, like, one exam per week, and some weeks we had two, so it was just a lot to adjust to, and it's just like a lot of turnover. And I remember staying up late one night and the next day trying to study and, like, literally I knew I wasn't like my[self] physiologically, like my brain. I was, what I was saying was not as cohesive thoughts that I'm, like, used to, and I was a little bit slow and felt a little bit loopy. So, I ended up taking a nap for 6 hours and then kind of went back to bed, and then, like, that was enough to reset.

Students across disciplines reported they all complete standardized comprehensive exams in order to advance in their respective programs. Medical and physician assistant students referred to their exams as “boards” or “steps,” and school and clinical psychology students referred to their examinations as “comps.” These exams differ from routine exams in that the amount of information on them stems from multiple classes. Students indicated that studying for
these exams differs from studying for others because of the time spent studying beforehand.

Students reported studying between 2 to 6 months prior to their respective exams. One DO student explained their studying schedule was changed because of COVID-19:

Like, like DO said, it's the same thing, like, studying for the last 2 months and still studying for boards and everything and kind of putting everything together. Like, that's kinda where I'm still at. Uh, the last few months of that have been tiring, but I guess with the delay of the exam, I had to kind of force myself to kinda take some breaks. And that helps when you realize you're being burned out and that you might as well, you know, take the, like, the loss, I guess, for a day.

One DO student implied studying for the board examinations is so profound that people exhibited significant personality changes:

I think, I'm sure DO started to realize with boards, you see the worst behaviors of people kind of start to come out. Everyone gets irritated because they're just tired and, again, don't care, and they don't really want to be there anymore doing what they're doing, but they have to. It's every single person in med school, I guarantee, burned out second year, and probably end of third slash after fourth-year rotations and auditions, I was pretty much done.

One DO student shared they resided with a student in the same program, and they explained how they perceived changes in their roommate’s behaviors and approachability:

One of my roommates is taking his boards in a couple months or actually thinking less than that. And, since it's really crunch time for him, he's definitely acting a little bit different. He's a little more irritable. He usually likes to hang on talking with me and my
other roommates for a little while, but now he's kind of always rushing around and doesn't really seem like himself.

A clinical psychology student shared how studying for their comprehensive exams in addition to their normal course work led to burnout:

For me, my burnout was really bad when it was, like, comps time. We had a lot of the same academic work happening over and over again. But that's because I'm just more of, like, a clinical person anyways. Like I prefer clinical work as opposed to academia.

While some students felt the academic aspect of school was related to burnout, other students noted how challenging clinical experiences negatively impacted their experiences of burnout.

**Clinical Experience.** Some students thoroughly enjoyed their practicum and clinical experiences, while others felt clinical rotations attributed to burnout. One clinical psychology student said their first burnout experience coincided with starting practicum:

I think, for me, it was probably a couple years ago during the first practicum placement that I had burnout. And I would say honestly, it probably lasted the entire winter and spring semester that year. It was a long time. I was commuting really far daily, and there were some family and financial stressors going on. I was also working on [a] part of my dissertation that was particularly difficult. So, I think there were a lot of compounding things going on in that timeframe. And, I wish I could say how it ended. I really can't pinpoint one thing that actually made it better. I think it was just circumstances changed, and I kind of got through it day by day, like trying my best to, you know, put down boundaries when they were in my control.
While students reported enjoying their clinical experiences, some aspects of clinicals tended to increase student stress and decrease time available to engage in self-care. One DO student noted the burnout experience was exacerbated by long days during her internal medicine rotation:

I think my last burnout was between January and February and then I guess early March, cause I had two kind of . . . I had internal medicine rotation and then surgical rotation after that. And that was just, like, waking up at, like, 6 and then going to the hospital and, like, kind of prepping for either surgery or for rounds. And that was kind of, I don't know, that wasn't, that wasn't new cause I had OB GYN, like, a couple months earlier, so I wasn't worried about waking up. It was just, it was just brutal having to, like, just do that for, like, 2 months straight because I remember my following rotation was radiology in early March, and that was, like, a breeze cause I basically went into the hospital around, like, 9 and then left at, like, 10 because that's just how radiology was. And I had a pretty, I guess I had a pretty easy radiology rotation, uh, as far as I know, and I just basically slept all day after that cause I was just so burned out from internal medicine and surgery.

One DO student who just completed the program noted experiencing high levels of burnout during their fourth year:

Uh, went through all of med school. So it's kind of inevitable, I guess. I did a lot of hard rotations my fourth year. I did, like, 3 months of medicine and 10 weeks of ICU. And my last medicine month in January, I was at a place where I wanted it to match, but I just genuinely did not care. I was tired of going to bed at 9:00 p.m. [and] waking up at 4:00 a.m., but, like, you eat, go to bed. You can't really work out. You work for 14 hours a day for free. So, I think it was just like a breaking point.
Apparently, burnout can be so profound in students that it keeps them from enjoying their clinical work. Of note, some students reported the experience of virtual rotations because of COVID-19 made their schedules easier, so they were able to manage their time more effectively.

**Relationships.** Interpersonal relationships reportedly had a profound effect on burnout in graduate students. Students reported a general sense of decreased engagement in interpersonal relationships. Specifically, they explained their partners, friends, and parents noticed they were more irritable and less present than normal. One clinical psychology student shared the following:

> Like, it [burnout] affects my relationships with other people because, like, I just can't focus on anything, and, um, I feel like I'm down and, like, not present. Like, I just feel, like, I can't, I couldn't at the time, like, I just feel like it affected my quality of life in being present.

Another clinical psychology student echoed the same sentiment:

> I think that it impacts me the most with both my motivation and also, like, my personal relationships. Like I said, I think, like, my motivation is just, like, I don't, I will avoid things or procrastinate that I wouldn't normally. And then when it comes to my personal relationships, like, I just have a lot less to give to other people. Like, I'm not as tolerant or my fuse is shorter or just kind of, like, isolating myself.

In regard to a DO student and their relationship with their mother, they noted, “My mom says I snap very, very easily when I'm tired. I've become more snappy is what she told me. So, I'm going to say that's probably what I do. My patience has gone out the window.”
In the same focus group, another DO student built on that statement and said, “My mom says I'm not her nice, sweet, little boy when I'm studying. I become like a monster.”

Students disclosed maintaining friendships was a challenge while experiencing burnout. One biomedical science student shared that some friends might not understand their stressors because those friends have not been in a “rigorous program like I’m in” or are not understanding when a graduate student is unable to attend an event or communicate as frequently as they once had. One DO student explained as follows:

I think for me, it's probably my relationships with other people when I start getting burned out. Like, I don't really want to interact. I just kind of want to be left alone. Like, I just need time to come out of it and, like, trying to take care of myself and kind of recuperate and do things that I like. And that usually involves just taking time away from the world, turning off my phone.

Students reported maintaining certain relationships while enrolled in their programs became a challenge. Graduate students also noted their physical health was impacted by experiencing burnout.

**Physical Factors**

**Sleep.** All students echoed that exhaustion was a main, if not the most important, factor in identifying burnout. Even if their sleep was not impacted, students defined burnout as an overwhelming sense of exhaustion. A physician assistant student indicated the following:

I think for me, burnout is just being exhausted from overstress. And I think that can be both, like, a physical versus, like, emotional versus mental, um, exhaustion. I don't think it has to be, like, all three, but I think it can be. That's how I would describe it.
Specifically related to sleep, students agreed that quality of sleep was negatively affected. However, the number of hours students slept differed. Some reported increased time sleeping throughout the night, some slept less throughout the night, and others reported taking more naps throughout the day. Students frequently used the word *exhaustion* when defining burnout and as an indicator in identifying burnout in their peers. One DO student defined burnout as, “a feeling of exhaustion with what you’re doing and how much time you have. Just constantly feeling exhausted and have no interest in doing it anymore.”

**Diet.** Nutrition and diet were also impacted by burnout. Students explained they lacked sufficient time to prepare nutritious meals. One clinical psychology student shared the following:

> I'll stop eating as healthy as I like to because it's too much effort to come home and cook a nice meal for myself when I could just stop at Wawa or something on the way home and get, like, a sandwich.

Students disclosed they will sometimes eat more or less food than they desired. One DO student explained their weight fluctuates when they are experiencing burnout. A biomedical science student explained, “[My] snacking definitely increases. I am nervous eating all day long. [It is] definitely a problem.” A physician assistant student shared a different story. They did not believe they ate enough when experiencing burnout. She said, “Whenever I am burned out, I think I might have a poor appetite. Maybe I don't eat as much. I don't know.” The general theme between these factors is that during burnout a change occurs from normal engagement in eating and sleeping habits.

**Exercise.** Some students indicated they were unable to find time for exercise while experiencing burnout. Additionally, students reported physiological effects of burnout. A DO
student who reported they loved to exercise disclosed that “burnout also affects both your mental health and your physical health, for example, exercise. I love exercise. So, I can't do that. I definitely feel it. You know, my body feels slower. I just feel lazy.”

A mental health counseling student noted the following:

I feel it [burnout] in my body. I feel stressed. I feel tense. I feel achy. Um, you sleep worse, you know, just generally worse. And, um, I, I have, like, back issues, you know, like, I have headaches. Um, and certainly when you're feeling that way, you don't want to exercise. You know, you're not really motivated to self-care physically. So, I think that, um, there's an immediate impact, um, on physical well-being.

Most students endorsed a decrease in physical activity when feeling burned out.

**Fighting Burnout**

Students noted combating burnout involved engagement in different activities for different individuals. Some students believed burnout would not end until the academic stressor was removed or had passed. For example, if someone was experiencing burnout because of an exam, the burnout would not cease until the exam was completed. Some students believed burnout could last a few days after completing an exam to fully separate from the identified stressor. Other students believed they could take a more active role in reducing burnout. They listed the following coping skills in dealing with burnout: taking breaks for work, engaging with social networks, and not using technology. Of note, students reported that engaging in the behaviors that decreased when they experienced burnout helped alleviate burnout. For example, students reported that taking time to eat healthy and working out more helped them take control of the burnout. One DO student explained as follows:
I had just had to come back from a summer tragedy, basically. And then having to go back, just being in school was, like, extremely difficult for me. Um, I think what helps me get out of it with my, my close group of friends, my community. Um, I had such an amazing group of friends, and they were always there for me, and it's even, you know, my advisors and my, um, like, the academic support that I had was also really fantastic. So, it was nice to know that I had someone on my side.

In terms of perceived social support from school, students had mixed opinions on their institution’s concern regarding their burnout experience. One DO student noted the institution realized a deficit in their communication with students and the students’ concerns about virtual learning:

   So they've [the institution] been emailing a little bit more. They've been making sure, like, we're okay with what's going on. They did surveys. And then people wrote back their feedback, which I think, like, now more than ever it means a lot because there's no way, no, there's no other way to voice your opinions.

In the demographic questionnaire administered to students, 77.4% of the 53 participants noted they did not receive any training or consultation in addressing burnout. Some students noted the topic of burnout was briefly mentioned during interdisciplinary lectures and training, while others reported attending counseling sessions to help combat burnout. Apparently, techniques are available for students to engage in to help combat burnout, but the institution could better aid students in identifying and using coping strategies.

**Burnout, Depression, and Anxiety**

The final question for the focus group was, “Do you feel burnout, depression, and anxiety can occur at the same time? If so, explain.” This question unintentionally prompted students to
conceptualize the constructs in three different ways. One DO student said, “Maybe the depression and anxiety can lead to burnout or maybe, like, a burnout plus more anxiety can push you into more depression.” Another DO student stated the following:

If you're burned out, you also start to feel stressed and anxious and depressed about the fact that you burned out. This is just medical school, and we still have residency and all these other things. Then you still have the actual act of being a physician. Um, so I feel like it's like a loop, you know, like burnout and also results in you're anxious and stressed and depressed. Um, again, and I think that also ties back to the idea of, you know, when you, when there's no end in sight, that feeling of depression and anxiety and stress comes back. So, that's kind of a moment where all of the four can occur together.

One of the physician assistant students shared the following:

I think that they can all have a little hand in the pot kind of thing of combining into this big storm of just, you know, a depressed mood, a fear of maybe not getting everything done because you're so exhausted that it can lead to just everything kind of mixing together.

**Perception of Depression and Burnout Inventories**

Iacovides et al. (2003) felt that burnout and depression share many qualitative features and that the two concepts are not significantly different. Identifying the difference between depression and burnout was the rationale for having students critique both depression and burnout inventories.

**PHQ-9**

The PHQ-9 is a nine-item measure that coincides with the criteria for depression as described in the *DSM-5* (2013). The respondent is prompted to respond to each statement with,
“Not at all,” “Several days,” “More than half the days” or “Nearly every day.” Students provided critiques and recommendations to improve the inventory. Items 1, 2, and 9 appeared to be the focus of discussion regarding the PHQ-9.

Item 1 stated “little interest or pleasure in doing things.” Students felt this item was not specific to burnout. They noted multiple conditions that may result in anhedonia, for example, anxiety, stress, and attention deficit hyperactivity disorder. One clinical psychology student explained as follows:

I think that, like, answering or these questions could, um, like, you could, like, you could have little interest or pleasure in doing things almost all of the days, but that could be because of depression, or it could be because of burnout, like, questions, like, could be both.

An osteopathic medicine student who self-identified as burned out added the following:

Yeah, just seeing which ones applied to even myself right now as I experienced burnout and some things definitely do apply and some things definitely do not. So, that sort of speaks more to what we were discussing earlier about burnout in the context of depression and vice versa.

The student referred to a conversation in the transcripts during which burnout was regarded as part of depression and often overlapped with depression.

Item #2 stated “feeling down, depressed, or hopeless.” Critiques for this item involved too much of a difference between adjectives, questioning biases attributed to face validity and desirability bias. Some students perceived the item to be too telling outright. Others felt it was challenging to answer the item because of the difference between being down and hopeless. A clinical psychology student noted the following:
Question 2, feeling down, depressed, or hopeless. Feeling down and feeling hopeless to me are way too different things. So, you could as a lay person reading this, like, I could think to myself, Yeah. I felt down, like, you know, I'll give that a two, but I've never felt hopeless in my life, but that's all lumped into one question.

The student continued to explain that two different questions that use different adjectives may yield more informative results.

Students reported most items in the PHQ-9, a commonly used depression screener, coincided with burnout, excluding Item 9. Item 9 read, “thoughts that you would be better off dead or of hurting yourself in some way.” One DO student elaborated:

I think the only one that I would really like to take out is Number 9 cause, I think, I think it [PHQ-9] kind of coincides with burnout, but Number 9 is a distinguisher between burnout and major depression. I, I've never felt like I wanted to kill myself after being burned out.

Participants made general critiques about the assessment focusing on question design and diagnostic use. Multiple students indicated they would prefer a 5-point Likert scale as opposed to a 4-point Likert scale. They felt a median point involving “half the time” would help for students who were unsure about the frequency of their symptoms. Most students had either seen or used the PHQ-9, or a similar assessment, prior to the focus groups.

Graduate students from all programs identified felt a level of overlap between the PHQ-9 and symptoms of burnout. One biomedical science student suggested asking patients straightforwardly if they felt their experienced symptomatology was attributed to burnout or depression. An osteopathic medicine student felt this information could also be gathered by asking the following question: “Have you experienced anything recently or in the past, like,
month or past 2 months or even, like, have you ever experienced anything that has caused you, uh, to delve away from your normal routine or something?”

Another osteopathic medicine student felt one could ask individuals after they completed the questionnaire if they felt their symptoms presented at the same time as a novel environmental stressor.

One clinical psychology student perceived all of the items on the assessment mirrored symptoms of burnout and there was no discriminant validity. They highlighted Items 3 (i.e., trouble falling asleep, staying asleep, or sleeping too much), 4 (i.e., feeling tired or having little energy), 5 (i.e., poor appetite or overeating), and 7 (i.e., trouble concentrating on things…) as primary negative effects of burnout.

Although students identified numerous flaws in and improvements they would make to this assessment, they felt the measure was strong because of its correlation with the listed depression symptoms in the DSM-5 (2013).

**MBI-SS**

The MBI-SS is a 16-item assessment that measures exhaustion (EX), cynicism (CY), and reduced efficacy (EF) in undergraduate students on a 7-point Likert scale. Students who have “elevated” EX and CY scales and a “low” EF score are deemed to be experiencing burnout. To date, standard norms as to the scores that correspond to elevated and low are not available. The students were asked, “Is there anything you would add, take away or change to make it [the MBI-SS] more specific to burnout?” Upon first look, one clinical psychology student shared that “It doesn't tap into nonacademic burnout type things, but if you feel like you need to take a look at academic burnout, this is the way to do it.”
One student was unsatisfied with the idea cynicism was a necessary aspect of burnout. A biomedical student explained,

“Like, cynicism to me sounds, like, maybe that's more a symptom of depression than burnout. Um, so, like, that might help differentiate those things.”

Although the general consensus appeared to be the MBI-SS was a fair assessment of academic burnout, participants felt adding certain questions would improve the overall quality of the measure. They believed the assessment should include items pertaining to physical symptoms of burnout, engagement in coping skills, students’ perspectives on the contributors to their experienced burnout, impact on social relationships, previous attempts to resolve the burnout, and inquiry about use of social supports both inside and outside the classroom. A school psychology student suggested the following questions:

How you're feeling, has that affected your social, social relationships, have (sic) that affected your, um, social activities? Have you seen an increase or a decrease in going out, whether it's to a party or even to a coffee shop in the morning?

An osteopathic medicine student was interested in asking, “whether or not, like, [the student] actively sought out to handle the burnout via de-stressors, like meditation walks.”

A mental health counseling student noted the following:

I'm not, I'm seeing a lot of internal reflection and insight, but not a lot of [items] like, ‘my team works well together’ or ‘I trust my supervisor.’ Anything that speaks about the relationship between the individual and external support would speak more towards burnout for me.

Specific physical symptoms students were interested in learning about in the context of burnout included headaches, heart palpitations, digestive problems, and issues pertaining to
sleep, diet, and exercise. Participants were interested in finding out whether a history of depression and anxiety was present and asking about self-care habits.

Students felt certain items were inappropriate for a burnout assessment. Students felt Items 10 (i.e., In my opinion, I am a good student), 12 (i.e., I have accomplished many worthwhile things in my studies), 14 (i.e., I have become more cynical about whether my university work contributes to anything), 15 (i.e., I doubt the significance of my studies), and 16 (i.e., While working at the university, I feel confident that I am effective at getting things done) did not contribute to identifying burnout. Items 10, 12, and 16 relate to the personal efficacy domain, whereas Items 14 and 15 pertain to cynicism. One DO noted Item 10 related more to “self-esteem rather than actual feelings about what you're doing. It's like someone's judging themselves rather than their reactions to their environment.” A physician assistant student questioned the relation between Items 14 and 15 and burnout. An osteopathic medicine student perceived Items 15 and 16 to touch more on depression and anxiety compared to burnout.

Relating to Item 12, an osteopathic medicine student shared the following:

I have accomplished many worthwhile things in my study. I'm not going to accomplish something worthwhile every single day. You know? It doesn't mean I don't feel good. It doesn't mean I'm burned out, or I'm not enjoying my time. It's just, I guess, what do [they] mean by worthwhile?

Students felt the assessment neglected to identify core contributors of burnout outside of academia that were discussed during the question-and-answer aspect of the focus group specifically related to family stress, work overload, interpersonal dilemmas, and other environmental factors. Overall, students felt the measure was necessary, but was missing critical aspects of their perceptions of burnout.
CHAPTER 5: Discussion and Burnout Theory Development

Discussion

This study aimed to better understand the experience of burnout in graduate students enrolled in healthcare-related programs. Apparently, burnout is the result of poor self-efficacy in graduate students’ abilities to manage their responsibilities. Graduate students had more than academic stressors to worry about; they were concerned about parents, relationships, children, jobs, finances, and maintaining social support. Additionally, students reported burnout was not often discussed and often joked about among peers. The stigma of burnout could impact students’ willingness to reach out for social support in their academic communities, where students also feel those are the only individuals who understand all the stressors they encounter.

Previous qualitative studies have evaluated burnout in health-related graduate students. One study looked at the effect of a clinical rotation on career goals in athletic trainers. Two of the 14 students in that study reported burnout. One student, “Jackie,” reported feeling burned out because of being overwhelmed, having to treat too many athletes, and working long hours (Mazerolle et al., 2016). Another student, “Carrie,” did not elaborate on her experience of burnout but stated that she completely changed her career intentions and goals because of the experience (Mazerolle et al., 2016). The students in the present study echoed sentiments similar to those in previous studies. Although none of the students in the present study reported changing career paths as a result of perceived experiences of burnout, some reported feelings of inadequacy and doubt.

Another study used a population of health psychology doctoral students and inquired about their experience in school. They found that major challenges were related to supervision, cohort relations, managing professionalism and expressing needs with staff, and developing
collaborative goals with a supervisor (Barry et al., 2018). Some positive experiences noted were improved self-management, motivation, and accessibility to resources (Barry et al., 2018). Burnout impacts more graduate students each year, compared to those who are not enrolled in a graduate program (Bullock et al., 2017). Most participants in this present study reported experiencing some level of burnout throughout their graduate student careers. One student noted dropping out of a medical school in the Caribbean because of the burnout he experienced. A recent study showed that burnout and dropout were correlated (Cornér et al., 2017).

The present study echoed themes of exhaustion, disinterest, and low motivation in relation to burnout similar to those in previous research (Garcia-Williams et al., 2014; Rummell, 2015). The participants of this study reported their low motivation impacted their quality of work in regard to ability to focus on an assignment. One study showed perceived bullying by faculty toward students impacted burnout (Goodboy et al., 2015). However, students in the present study did not report feeling victimized or abused by faculty members.

Some predictors of burnout include a disinterest in research topics, feeling unsupported by social networks, and a lack of leisure time (José et al., 2016), whereas higher levels of perceived social support tend to be indicative of less burnout (Chang et al., 2012). The present study highlighted students’ perceptions of the importance of having strong social support at school and in the community. Additionally, participants noted decreased time participating in self-care activities resulted in burnout.

Students offered meaningful critiques of the Maslach Burnout Inventory-Student Survey (MBI-SS) and the Patient Health Questionnaire (PHQ-9), thereby aiding in the development of proposed burnout model, and provided justification for the need for an updated burnout assessment. Regarding the construct of depression, the participants noted the items in the PHQ-9
directly correlated with the diagnostic criteria of depression in the *DSM-5* (2013). They indicated minor structural changes could improve the quality of the assessment. Although some students perceived overlap in symptoms of burnout, they could clearly identify the construct measured in this assessment.

Regarding the critiques of the MBI-SS, the participants perceived this measure did not strongly correlate with their view of burnout. Students believed the MBI-SS did not address the physical or environmental components of the burnout they experienced. They noted this assessment focused solely on the academic portion of burnout, whereas they experienced burnout from academia and other facets of life. The students believed that burnout was a culmination of academic, personal, physical, and emotional stressors in their lives. The dissonance between the MBI definition of burnout and students’ report of how they experience and conceptual burnout indicates the need for an updated burnout assessment that can accurately measure their experiences of burnout.

The major concerns with the MBI-SS and other Maslach burnout inventories are the validity and reliability development. Burnout and depression inventories have shown weak discriminant validity (Arthur, 1990). A meta-analysis showed the MBI’s varied use and lack of diagnostic threshold compromised its validity and substantiated the criticisms of the assessment (Khoo, 2019). One of the major limitations of the development of the Maslach Burnout Inventory-General Survey (MBI-GS) was that Maslach used her own measure, the Maslach Burnout Inventory-Health Services Survey (MBI-HSS), to establish convergent validity. Thus, her assessment was measuring burnout because it correlated with another assessment of hers that allegedly measures burnout (Maslach et al., 2018). Therefore, future proposed burnout
assessments need to use burnout measures established by researchers other than themselves to assure strong convergent validity.

**Theory Development**

Three models emerged from the students' perceptions of burnout and its relation to anxiety and stress: a linear model, a cyclical mode, and an interrelated model.

**Student Conceptualizations of Burnout, Depression, and Anxiety**

**Linear**

Some students spoke of a progressive model of burnout in which stress is the precipice of anxiety and depression. Once the anxiety and depression become overwhelming, students will experience burnout.

![Figure 1: Linear Model of Burnout](image)

**Cyclical**

The second proposed model of burnout was cyclical. Some students posited that stress occurs as a result of either feeling overwhelmed with their workload or being stressed about feeling burned out. Students explained the stress then evolves into anxiety, resulting in students
experiencing depressive symptoms because they are anxious. Once the depressive symptoms become too overwhelming, students will experience burnout and cycle through those emotions.

One physician assistant student added the following:

Yeah. I would say the withdrawal and aspect and having less motivation to do things that I maybe know would help or think would help, but you just have, you're, like, I have other things I need to do and then you start feeling guilty. It's just like a cycle.

**Interrelated**

The last model students proposed involved burnout as the result of experiencing all three emotions, stress, depression, and anxiety, at once. Although a model differentiating the four concepts was not universally agreed upon, students seemed to report exhibiting some symptoms of depression, anxiety, and stress with burnout.
Proposed Burnout Theory

Based on the research findings, the development of burnout in graduate students starts with a perceived poor self-efficacy to manage academic, interpersonal, and environmental stressors. This perceived inefficacy stems from the belief that one’s peers are more effective than oneself at managing stressors. The perceived inefficacy is caused by the lack of communication between graduates about their shared burnout experiences. Thus, the cognitive distortions related to burnout involve comparison to others, should statements, and emotional reasoning (Yurica & DiTomasso, 2005). Graduate student burnout appears to be the physical, psychological, and emotional result of believing in cognitive distortions pertaining to one’s perceived inability to manage external stressors and perform similarly to peers. One study of medical students proposed a causal effect between cognitive distortions, specifically maladaptive perfectionism and imposter syndrome, and negative emotions (Hu et al., 2019). The combination of negative feelings and dysfunctional thinking led to increased emotional distress in medical students (Hu et al., 2019).

Current burnout theory suggests burnout is the relationship between exhaustion, cynicism, and reduced efficacy (Maslach et al., 1997). This study elaborated on the impact thoughts related to inefficacy may have in terms of burnout. Exhaustion may be a result of burnout but not necessarily a main component of burnout. In this population of graduate students enrolled in healthcare programs, burnout consisted of exhaustion and a lack of motivation to continue their studies as the result of academic and nonacademic factors. Whereas typical undergraduate students’ lives revolve around school, adult graduate students have life situations that may not pertain as strongly to undergraduates. Students shared such examples as marriages, children, deaths, and finances as nonacademic contributing factors to burnout. When
identifying burnout in graduate students, researchers should look at the time frame during which the students have been experiencing their reported exhaustion and lack of engagement in their studies. Researchers may also benefit from asking students if they feel their reported symptomatology is related to their studies.

The thoughts of poor self-efficacy cause behavioral changes in students, such as less engagement in self-care and social support. This lack of engagement may lead to feelings of sadness and isolation, possibly causing the low discriminant validity between depression and burnout. Once those depression-like feelings emerge, similar symptoms of depression, such as lack of motivation, fatigue, and change in sleeping and eating habits, also emerge.

**Strengths**

One strength of this study was its innovation and the drive behind it. No research similar to this study was found; most studies focused on one specific population, whereas this study looked at multiple healthcare disciplines. Being that the study is qualitative, the researchers were able to identify the students’ specific feelings and thoughts related to burnout without compartmentalizing them into predetermined categories (Doolittle et al., 2013). The results of this study can be used to better help institutions identify their students’ needs.

The use of a semistructured interview with open-ended questions permitted students to express themselves freely without being limited to forced-choice answers on a survey. Students were provided a safe space to freely discuss their experiences and views pertaining to burnout. Additionally, the moderator of the focus group was a graduate student; therefore, students were less likely to censor themselves because of expected professionalism when interacting with faculty.
Limitations

A major limitation of this study is the use of a convenience sample. Although the research was conducted at two different campuses in different geographic locations, the generalizability of the results is limited because it is confined to one graduate student institution. The climate of the institution and staff expectations of students may be different from those at other schools. Previous literature states that full-time students feel more supported by staff compared to part-time students; unfortunately, this study could not assess part-time students perception because of they were excluded from the study (Cornér et al., 2017). Additionally, this study was based on voluntary participation. Students may have volunteered to participate in this study because of polarized views on burnout (e.g., a student who is extremely burned out or one who has only positive experiences in graduate school).

Participants in this study may have been susceptible to desirability bias. Students might have wanted to inhibit their true feelings of burnout because of the mixed focus group population. For example, physician assistant students may have minimized their stressors after listening to the stressors of a psychology student. Conversely, students may want to boost the expectations of their program to seem more superior or competitive compared to others. Students may also feel isolated in their struggles and uncomfortable or shy in sharing their experiences with strangers.

Qualitative studies similar to this study are susceptible to research bias. The amount of research relating to burnout in general is growing, and some of those preconceived notions may subliminally appear in the results of this study. The research intends to reduce the risk of researcher bias by using multiple coders and synthesizing their collected data.
Another limitation of this study is that all focus groups were conducted during the global COVID-19 pandemic. Many of the participants were preoccupied with unprecedented stressors related to stay-at-home orders and quarantine protocols to help stop the spread of the virus. Reported stressors, such as lock-down, uncertainty related to the pandemic, and mass closure of gyms, parks, and recreational facilities, may be unique to the time frame of the study.

Students’ classes and clinical rotations were switched to an online format. Whereas some students reported online studies were easier than in-person studies, some students preferred in-person learning. The original methodology of this study was to include in-person focus groups; however, because of the pandemic, all were conducted online. Students without steady internet access may not have been able to participate in the study. Additionally, students who felt a need to decrease screen time may not have participated in the study. Institutional Review Board approval was obtained originally for in-person focus groups and then obtained to conduct all parts of the study online. The online nature of the focus groups may have led to a decrease in sharing among students. Also, the participants may have felt a lack of cohesion within the groups. Participants may have been concerned about issues related to privacy and confidentiality resulting from their groups being held on a digital platform.

**Future Implications**

This study is the groundwork for many future projects. The main goal of this study was to identify a hypothesis as to the definition of graduate student burnout. The data collected from this research can be used as the foundation of a new burnout assessment. A burnout assessment looking at social supports, cognitive distortions, and perceived weaknesses compared to peers may lead to a more accurate assessment of burnout in graduate students. The findings of this research could lead to continued research on addressing burnout in health-related graduate students and hopefully
on different techniques to prevent it. Higher education institutions may use this research to become more informed as to their students’ experiences with burnout and its treatment.

Future research may look at other healthcare professionals, such as nurses, social workers, clinical nursing assistants, and dieticians, and at other populations’ views of burnout. An evaluation of the contributions of relationship factors to burnout would yield interesting data.
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Appendix A

Personal Information Questionnaire

- What program are you in?
  - Osteopathic Medicine (DO)
  - Clinical Psychology (PsyD)
  - School Psychology (MS, EDS, PsyD)
  - Educational Psychology (PhD)
  - Biomedical Science (MS)

- How old are you?
  - 18
  - 19
  - 20
  - 21
  - 22
  - 23
  - 24
  - 25
  - 26
  - 27
  - 28
  - 29
  - 30
  - 31
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  - 41
  - 42
  - 43
  - 44
  - 45
  - 46
  - 47
  - 48
  - 49
  - 50
  - 51
  - 52
  - 53
- What year will you graduate?
  - 2020
  - 2021
  - 2022
  - 2023
  - 2024
  - 2025
  - 2026

- Are you enrolled as a full-time student?
  - Yes
  - No

- Are you:
  - Male
  - Female
  - Transgender
  - Other

- What is your race?
  - African American
  - Asian American
○ White, non-Hispanic
○ White, Hispanic
○ Middle Eastern
○ Other

● What is your marital status?
○ Single
○ In a committed relationship
○ Married
○ Separated
○ Divorced
○ Widowed

● On a scale of 1 to 10, how burnt out have you been in the past THREE (3) months?
○ 1- Not burnt out
○ 2
○ 3
○ 4
○ 5
○ 6
○ 7
○ 8
○ 9
○ 10- completely burnt out

● How much caffeine do you consume per week?
● Never
   ○ 1-2 cups per week
   ○ 3-5 cups per week
   ○ 7 cups per week
   ○ >7 cups per week

● Have you ever participated in, “Happier You” or other workshops specific to burnout?
   ○ Yes
   ○ No

● Have you received training on consultation to combat burnout?
   ○ Yes
   ○ No

● If yes to the previous question, explain below.
   ○ _______

● Do you typically commute?
   ○ Yes
   ○ No

● If yes to the previous question, how long is your TOTAL commute?
   ○ Less than 30 minutes
   ○ 30 minutes to 1 hour
   ○ 1 to 3 hours
   ○ 3-5 hours
   ○ +6 hours
Appendix B

Focus Group Questions

How would you define and describe burnout?

What are your current stressors?

Have you ever experienced burnout?

What does burnout feel like?

When have you experienced burnout throughout your graduate student career?

What was going on at that time?

How long did it last?

What helped resolve it?

Do you think your peers ever feel burnt out?

What would it look like if your peer was burned out specifically?

How does burnout affect you the most?
What aspects of your life are impacted by burnout?

How do you differentiate burnout from depression?

How do you differentiate burnout from anxiety?

Do you believe they can occur simultaneously? If so, explain.
Appendix C

Critique Questions

PHQ-9

- Have you seen this assessment either in practice or as a recipient of services? If so, explain.
- How do you feel these statements address depression?
- We have talked about burnout a bit. Do you feel like any of these items relate to burnout? If so, explain.
- Is there anything you would add, take away or change to make it more specific to depression?

MBI-SS

- Have you seen this assessment either in practice or as a recipient of services? If so, explain.
- How do you feel these statements address burn out?
- We have talked about depression a bit. Do you feel like any of these items relate to or overlap with depression? If so, explain.
- Is there anything you would add, take away or change to make it more specific to burnout?
Appendix D

Recruitment Email

Hello,

My name is Kaylene Irizarry and I am a 5th-year student at the Philadelphia College of Osteopathic Medicine. Title: An Operational Definition of Burnout from the Perspective of Graduate Students Enrolled in Healthcare Programs

We are currently seeking participants for a study to understand how graduate and medical students define burnout. **Participants must be full-time students in a healthcare-related graduate program. Students at both PCOM Satellite campuses in Georgia are encouraged to participate.** If you choose to be a part of this study, you will be asked to complete a demographic questionnaire, and participate in a focus group. Your participation will be completely voluntary and anonymous, meaning that the reporting of data will not identify you. In addition, you may discontinue your participation at any time without consequence. If you are deemed eligible to participate and complete the survey in its entirety, you may be entered into a secured raffle to possibly win one of four $25 gift cards. The responsible investigator is Kaylene Irizarry (kayleneir@pcom.edu) who is under the direction of Dr. Stephanie Felgoise, Ph.D., ABPP, Principal Investigator (stephanief@pcom.edu).

If you have already participated in the study, you are ineligible to participate again.
If you understand the nature and terms of participation in this project and agree to participate, please sign up using the Google Form Link Below:

Thank You Kindly,

Kaylene Irizarry, MS LAC
Fifth Year Clinical Psy.D. Student Philadelphia College of Osteopathic Medicine