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THE ROLE OF SOCIAL SUPPORT AND DEMOGRAPHIC CHARACTERISTICS IN ACADEMIC AND CLINICAL BURNOUT OF MENTAL HEALTH PROFESSIONALS IN TRAINING

A Dissertation Presented

by

TINATIN SURGULADZE

Submitted to the Office of Graduate Studies,
University of Massachusetts Boston
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

August 2018

Counseling and School Psychology Program

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ABSTRACT

THE ROLE OF SOCIAL SUPPORT AND DEMOGRAPHIC CHARACTERISTICS IN ACADEMIC AND CLINICAL BURNOUT OF MENTAL HEALTH PROFESSIONALS IN TRAINING

August 2018

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Although there is an abundance of literature on clinician burnout within the mental health field, there is a gap in research about student burnout, especially for the student population undergoing clinical training. The aim of this research was to fill the gap in literature on burnout and explore factors that might contribute to or buffer burnout among student clinicians. This research particularly focused on the differences in burnout rates between students' academic life and their clinical practice. Using the theory of conservation of resources, it was hypothesized that social support would serve as a buffer for burnout of student clinicians. Additionally, this research studied the relationship between burnout level and demographic characteristics such as

age, gender, marital status, race/ethnicity of student clinicians. Furthermore, the relationship between burnout and level of perceived competency was explored. Finally, the impact of combination of responsibilities on both academic and clinical burnout was studied.

The analyses yielded several significant findings regarding clinical and academic burnout. Firstly, students experienced academic burnout, which was demonstrated by high levels of cynicism and exhaustion and moderate levels of personal efficacy. Students' clinical burnout was demonstrated by moderate levels of emotional exhaustion and personal accomplishment and by low level of depersonalization. These results indicate that burnout of student clinicians is real and deserves attention.

When comparing clinical burnout of our sample with published data, our participants experienced higher levels of emotional exhaustion and personal accomplishment and lower levels of depersonalization than norms of mental health providers (Maslach, Jackson, & Leiter, 1996). Clinical and academic burnout had a significantly different distribution of scores for all subscales, suggesting that student clinicians experience significantly different levels of burnout in their academic and clinical lives. Levels of academic burnout were higher compared with clinical burnout.

Demographic characteristics were not correlated with level of burnout in this study. Neither clinical nor academic burnout were significantly correlated with the degree of autonomy, nor with the level of functioning of clients. Feelings of competency were not related to clinical or academic burnout, with the exception of clinical personal accomplishment. Both clinical and academic burnout were affected by students' combined responsibilities across most subscales.

The participants' ratings of social support were significantly negatively associated with feelings of academic and clinical burnout, as indicated by the Emotional Exhaustion,

Depersonalization, and Cynicism subscales. Ratings of social support were significantly positively related to self-reported measures of Personal Accomplishment and Personal Efficacy. The only burnout subscale not significantly associated with social support was Academic Exhaustion. Taken together, these findings suggest that social support may provide a buffer for burnout experienced by student clinicians.

DEDICATION

This dissertation is dedicated to my mother, Mariam Surguladze, my husband, Angelo Joseph Franco and my daughter, Julia Mariam Franco.

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My husband, Angelo Franco deserves special gratitude for giving constant support emotionally (by giving me motivational speeches), and academically (by proofreading). You worked fulltime, cooked delicious dinners, and became a stay at home dad for our baby during the internship process. You made sure I did not stop believing in myself.

Additionally, I would like to thank my clinical advisor Dr. Elyse Lemaire. Discussions with you made me believe that studying student burnout could have important implications for clinical practice.

Moreover, I would like to express love to my friends Tata Gulua, Anuka Kontridze, Salome Kuchukhidze and Jeannine Vassalo. You helped me with my dissertation by letting me

talk about it constantly and giving feedback on my writing. You also kept reminding me that there is life outside my academic world and spoiled me with your love.

Finally, I would like to thank my mother-in-law and father-in-law, Anthony and Sharon Franco. You gladly took on the role of my late parents and showed me limitless love, kindness, warmth and patience.

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CHAPTER 1

INTRODUCTION

> *When one of my deeply trusted supervisors died, and I met his wife for the first time, she told me that sometimes he would return home too exhausted to even speak, and that a frequent statement she heard from a man who obviously treasured his clinical work, teaching, and writing was: "They feel better, but I surely do not." How well I understood this feeling, I thought* (Smullens, 2014).

This introductory chapter provides insight into the relevance of studying the burnout among graduate student-clinicians. Firstly, a brief history of the current research on burnout is given, in addition to a discussion on the health effects of burnout. Secondly, the introductory chapter discusses the scales available for testing levels of burnout. Thirdly, the chapter discusses the conservation of resources (COR) model of burnout, and explores current directions in student burnout. Additionally, this chapter reviews prevention programs for burnout, as well as social justice implications of the current research. Lastly, this introductory chapter states the aims, hypotheses, and objectives of the study that form the basis for this dissertation.

Burnout as a topic for research

Burnout is a syndrome of extreme exhaustion and loss of work efficacy, which results from chronic occupational stress (Alarcon, Edwards, & Menke, 2011). It has become the focus of health and vocational research over the last three decades, due to its detrimental impact on human service providers and their clients (Hill, 2004; Puig et al., 2014; Rossler, 2012; Steel et al., 2015).

Burnout research has typically focused on professions such as medical doctors, nurses, social workers, psychologists, counselors, psychiatrists, and teachers (Eastburg et al., 1994; Greenglass et al., 1994; Han, Lee, & Lee, 2012; Koniarek & Dudek, 1996; Morse et al., 2012; Prosser et al., 1997; Puig et al., 2014; Rossler, 2012; Russell et al., 1987; Vredenburgh, Carlozzi, & Stein, 1999; Zellars et al., 2000). Some studies suggest that it is not only professionals who are at risk of burnout, but also mental health students (Boren, 2013; Maslach et al., 2001). Student burnout is a new and unexplored subfield of burnout. This study focuses on student burnout since students providing mental healthcare services may be especially vulnerable to burnout due to high academic demands coupled with the pressures of clinical practice.

Origins of the term "Burnout"

Burnout was first mentioned by authors in the early sixties. However, psychiatrist, Freudenberger was the first to form a definition of "burnout" from his observations and interviews with young staff members of a drug rehabilitation clinic (Freudenberger, 1977). Freudenberger described burnout as a reaction to work-related stress, arguing that symptoms of burnout showed in about one year. Likewise, social psychologist Maslach based her definition of burnout on observation and interviews of social service workers.

Both Freudenberger and Maslach focused on workers within human service environments and therefore associated burnout to work-related stress.

During the 1980s and into the 1990s, researchers turned their focus towards professionals working outside the field of human services. Moreover, researchers considered additional influences that cause burnout, such as individual and environmental factors. Furthermore, researchers compared symptoms of burnout to depression and anxiety in an attempt to develop a diagnostic method. Currently, psychologists still debate over its symptoms and treatment. Regardless, burnout remains linked to work-related stress (Muheim, 2013).

The Prevalence of Burnout and Effects on Health and Work Performance

The prevalence of burnout among mental health providers is substantial. Surveys estimate that over 50% of mental health providers experience at least a moderate level of burnout (Acker, 2012), 30% of which experience high levels of burnout (Morse, Slayers, Rollins, Monroe-DeVita, & Pfahler, 2012).

The prevalence of burnout among mental health providers is not only concerning because of its high rates, but also because of the detrimental health consequences for the sufferers. Research has shown that burnout results in changes in cortisol levels and that employees with high burnout levels were twice more likely to complain of pain-related ailments, as compared to participants showing low levels of burnout. The results were also compared to individuals who did not show levels of burnout (Pruessner, Hellhamer, & Kirschbaum, 1999). Additionally, individuals with chronic work-related stress were found to have twice the risk of heart disease in comparison with employees without work stress (Chandola, Brunner, & Marmot, 2006). Research has shown that burnout has a

deleterious impact on mental health as well, with individuals suffering from mild burnout being three times more likely to develop major depressive disorder, compared to individuals without the symptoms of burnout (Ahola et al., 2005). Thus, research suggests that burnout compromises the sufferer's mental and physical health.

Consequently, burnout affects the occupational performance of clinicians (Garner, Hunter, Godley, & Godley, 2012). Clinicians experiencing burnout are less likely to follow evidence-based practices as precisely as clinicians without burnout, thereby reducing the quality of the clinical interventions and outcomes. Research showed that clinicians working in settings that employed evidence-based practices (EBP) experienced less emotional exhaustion, resulting in less employee turnover in comparison with clinicians working in organizations that did not implement such EBP. The results showed a positive correlation between emotional exhaustion and high caseloads within organizations not using EBP ($r=.194$, $p< .01$). Additionally, the results showed negative correlation between emotional exhaustion and age, $r= -.28$, $p< .01$. The results indicate that associations were statistically significant although weak (Aarons, Fettes, Flores, & Sommerfeld, 2009). Negative correlation between age and level of exhaustion suggested that older clinicians were, lower level of burnout they experiencd as demonstrated by emotional exhaustion subscale of burnout. This counter intuitive relationship will further be discussed in context of student burnout.

Definition of Burnout and Burnout Scales

Most of the literature on burnout has been based on Maslach's burnout definition such that her burnout inventory was used by 90% of studies (Hemmeter, 2013; Schaufeli et al., 2002). According to this model, burnout consists of three components: emotional

exhaustion, depersonalization, and a diminished sense of personal accomplishment (Maslach, 1982). Emotional exhaustion can be described as extreme fatigue and aversion towards the job responsibilities, usually accompanied by irritation and somatic symptoms. Depersonalization is characterized by a loss of compassion and empathy toward clients and the development of a cynical attitude. A diminished sense of personal accomplishment is characterized by a lack of self-efficacy and a sense of incompetence and helplessness at one's own job (Maslach, 1982).

Maslach and Jackson (1981) developed one of the most frequently utilized burnout inventories, the Maslach Burnout Inventory (MBI), which measures the three factors that comprise burnout among human care providers (Maslach & Jackson, 1981). There are four versions of this inventory, relevant to different populations: the MBI-HSS (Human Services Survey) for health areas/human/social caretakers or services, the MBI-SS (Student's Survey) for students, the MBI-ES (Educator's Survey) for teachers, and the MBI-GS (General Survey) that is applicable for professions not dealing with human clients.

Three other inventories are repeatedly used in burnout literature: Counselor Burnout Inventory, Copenhagen Burnout Inventory and the Oldenburn Burnout Inventory. The Counselor Burnout Inventory (Lee at al., 2007) was designed to measure counselor burnout using twenty items. The questionnaire rates five dimensions of burnout: Exhaustion, Incompetence, Negative Work Environment, Devaluing Clients and Deterioration in Personal Life. The Copenhagen Burnout Inventory is a nineteen-item questionnaire comprising three subscales which measure personal burnout, work burnout and client burnout (Kristensen, Borritz, Villadsen, & Christensen, 2005). The Oldenburn

Burnout Inventory (OLBI) is a battery that rates work burnout with two dimensions: exhaustion (6 items) and Disengagement (7 items). OLBI can be used in any occupational context (Demerouti et al., 2003).

Although all three of above mentioned batteries were validated and established strong psychometric properties (Demerouti et al., 2003; Kristensen, Borritz, Villadsen, & Christensen, 2005; Lee at al., 2007), OLBI and Copenhagen Burnout Inventory were developed and tested on non-English speaking population. Moreover, convergent validity of the above-mentioned three scales was demonstrated by correlations with the Maslach Burnout Inventory (Maslach & Jackson, 1981). Maslach Burnout Inventory is the best fit for the proposed study because it was developed for an English speaking population. Most importantly the proposed study aims to distinguish between clinical and academic burnout of students, which would be possible by using clinical and student versions of same MBI questionnaire.

Conservation of Resources (COR) Model of Burnout

The Conservation of Resources (COR) model has been the primary theory of burnout since the 1990s (Gorgievski & Hobfoll, 2008). Meta-analysis of burnout studies suggested that COR best explains the data (Alarcon, 2011; Lee & Ashforth, 1996) since it maintains that humans have an inherent drive to obtain and conserve resources for survival. Resources can directly lead to well-being (i.e. food, shelter, health, love of a close one) or they can be regarded as tools for obtaining key resources (such as money, assets, social status). According to COR, primary resources also include personal qualities such as self-esteem or optimism. According to COR, stress is caused either by the threat of losing resources, by the actual depletion of resources or by the absence of

resource-gain after significant resource-investment. Stress of long-term loss of resources without replenishment leads to burnout (Gorgievski & Hobfoll, 2008).

COR theory argues that people take major risks to prevent resource-loss and actively seek resource-gain (Hobfoll, 1989). Work is the major area of life that can provide access to primary resources or pose a threat of resource-loss. Organizational resources such as autonomy, social support, supervisory support and opportunities for career development enhance primary resources such as self-efficacy, self-esteem and optimism (Gorgievski & Hobfoll, 2008).

Burnout Among Students

Burnout among students has become a new focus of burnout research (Boren, 2013; Schaufeli et al., 2002). Burnout can occur in all occupations, but it is especially prevalent among those in the caring professions. Research has also shown that professionals under the age of 30 years are most likely to report burnout. Workers who interact with patients, customers, or students are at the highest risk of burnout (Boren, 2013; Schaufeli & Bakker, 2004; Smith, 1999). This includes teachers, clinicians who work with patients and mental health professional students who have clinical practice. Some studies further suggest that the university students of mental health are at a high risk of burnout (Boren, 2013; Maslach et al., 2001). Existing research of student burnout in mental health professions predominantly focuses on academic-related burnout and does not address burnout related to clinical practice. There is a dearth of research on burnout among students in clinical practice. The current study aims to analyze clinical and academic burnout of mental health providers in training.

Schaufeli et al. (2002) modified the original Maslach Burnout Inventory to make

it applicable to students (the Schaufeli et al. version will herein after be referred to as the 'student survey'). The student survey measures burnout related to academic demand and does not address clinical burnout. For example, the student survey measures emotional exhaustion by, "I feel emotionally drained by my studies". likewise, depersonalization/cynicism is measured by, "I've become less interested in my studies since my enrollment." An example of a question that measures professional efficacy is "I feel I am making an effective contribution in class."

Alarcon, Edwards and Menke (2011) tested whether social support was negatively correlated with burnout using the COR model. The authors did not find any direct relationship between social support and burnout (Alarcon, Edwards, & Menke, 2011).

Contrary to the previous findings, Boren (2013) found that social support directly affected emotional exhaustion. He studied the role of co-rumination as mediator between social support and emotional exhaustion. He found a partial mediation effect, where co-rumination suppressed the relationship between perceived social support and emotional exhaustion. The direct effect of social support on emotional exhaustion was -.62, mediation effect was -.50 ((F(2, 207) = 11.66, $p<.001$; $R^2=.10$; adjusted $R^2= .09$. $p<.01$). Despite the above findings, the study only tested for one subscale of burnout (emotional exhaustion); thus, results cannot be generalized to all three dimensions of burnout.

Jacobs and Dodd, (2003) explored the relationship between subscales of burnout and social support, personality traits, subjective workload and the number of working hours. Emotional exhaustion was not found to have a significant relationship with social support. A high level of burnout was associated with a low level of social support ($R^2 =$ .26. $F(3, 146) = 16.59$, $p<.001$). Moreover, a low level of personal accomplishment was

correlated with a low level of social support (R^2=.53, F(4, 146)=40.72, p<.001). The study sampled undergraduate students and cannot be generalized to graduate or postgraduate student experiences of burnout due to difference between workload between them. According to these studies, the relationship between social support and burnout is inconclusive. (Alarcon, Edwards, & Menke, 2011; Boren, 2013; Jacobs & Dodd, 2003).

In their study among students in Australia, Singapore, and Hong Kong, Lushington and Luscri (2001) found that young age was correlated with burnout subscales of emotional exhaustion (r=-.34), depersonalization (r=-.29) and personal accomplishment (r=.23; p<.0001). Similarly, a sense of loneliness was correlated with all three subscales of burnout: emotional exhaustion (r=.41), depersonalization (r=.28) and personal accomplishment (r=-.27, p<.0001). Kulik (2006), found that student-volunteers experienced a higher level of burnout (M = 40.6, SD = 10.40) as compared to employed participants (M =35.60, SD = 11.60; F (3, 373) =2.81, p < .05).

There is a growing body of research examining factors that contribute to the development of academic burnout among students. Researchers of student burnout are mostly interested in coping styles and personality traits (Grigsby, 2015; Wilczek-Ruzyczka & Jableka, 2013). There is much less research studying the effects of social support on burnout (Alarcon, Edwards, & Menke, 2011; Jacobs & Dodd, 2003). Research has shown that social support plays a major preventative role against burnout (Awa, 2010). Studying the relationship between social support and clinical burnout will provide a deeper understanding of the risks and preventative factors of clinical practice for student clinicians.

Prevention Programs of Burnout

A systematic review of burnout intervention studies distinguished between three types of intervention programs: person directed, organization-directed and a combination of both (Awa, Plaumann, & Walter, 2010). Person directed intervention programs using different kinds of relaxation exercises, aiming at enhancing job competence and personal coping skills as well as social support from friends and family were found to reduce burnout in the short term (six months or less after the intervention). On the other hand, organization-directed intervention programs, which included work process restructuring, work performance appraisals and enhanced support from supervisors led to reduction in burnout lasting up to one year. The longest-lasting positive effects (12 months and over) in reducing burnout were obtained using a mix of person- and organization-directed interventions. Although a reduction in burnout level was achieved after 80% of utilized interventions, the positive effect diminished over time (Awa, Plaumann, & Walter, 2010). This review provided preliminary information about the effectiveness of prevention interventions in burnout, yet meta-analysis is needed to show the magnitude of these results.

Gaps in Burnout Research

Recent studies examining student burnout have only measured academic burnout. Studies exploring academic burnout among psychology students compare these students with student norms or the general population using the nonclinical general survey of the Maslach Burnout Inventory (Alarcon, Edwards, & Menke, 2011; Boren, 2013; Grigsby, 2015; Jacobs & Dodd, 2003; Lushington & Luscri, 2001; Wilczek-Ruzyczka & Jableka, 2013).

The literature review conducted over the course of this dissertation has demonstrated a clear gap in the research on burnout among students in the mental health field; none of the studies have adequately distinguished between the academic and clinical components of postgraduate studies and their individual and combined impact on burnout.

In the 2014-15 academic year 26,773 students were matriculated in a Master's degree and 6,583 students were enrolled in a Doctorate degree in the field of psychology only in the United States of America (U.S. National Center for Educational Statistics, 2017). It is necessary to fill this gap and to study burnout in novice clinicians, considering the number of students training to become mental health professionals (U.S. National Center for Educational Statistics, 2017).

Social Justice Implications

Mental health facilities with a low level of autonomy are associated with a higher risk of burnout and turnover than private practice settings with higher level of autonomy (Lim et al., 2010; Vredenburgh, Carlozzi, & Stein, 1999). Community mental health clinics, which are often accessible and affordable to the public, serve diverse clients with acute mental health issues. They often accept a variety of insurance policies and help clients attain services outside of the realm of mental health. They also train generations of student clinicians, who may be inexperienced and thus more susceptible to burnout (Boren, 2013; Maslach et al., 2001). Settings with a low level of autonomy are most associated with the high likelihood of burnout among young clinicians or students, and have a higher percentage of staff turnover (Morse et al., 2012; Rossler, 2012).

Clinicians with a high level of burnout may be less sensitive and less effective with their clients. This will affect the metal health of clients and their adherence to

therapy (Landrum, Knight, & Flynn, 2012; McCarthy, & Frieze, 1999). Overwhelmed, novice clinicians are vulnerable to burnout under such circumstances. Thus, it is relevant to study burnout among graduate students providing mental health services while in professional training.

Moreover, there is a significant gender based difference in severity of burnout (Purvanova & Muros, 2010). Women employees experience higher levels of burnout compared to men (Purvanova & Muros, 2010). This difference might be an indicator of unequal treatment of employees in their workplace based on their gender. This research was carried out among employees, and its applicability to student clinicians is yet to be studied. Yet, if one can anticipate that this trend may apply to student clinicians, it is important to acknowledge this difference to better prevent burnout among female student clinicians.

Considering the gender differences on the experience of burnout, it also seems pertinent to investigate whether other demographic characteristics impact the experience of burnout among student clinicians.

Aims of the current study

This study aims to explore the relationship between social support, clinical and academic burnout, and demographic characteristics of mental health professionals in training. To the author's knowledge, this study will be the first to differentiate between clinical and academic burnout of student clinicians.

Clinical burnout among students will be measured using the Maslach Burnout Inventory MBI-HSS (Human Services Survey), for health areas/human/social caretakers or services (Maslach et al., 1996). Academic burnout will be measured using Maslach

Burnout Inventory MBI General Survey – Students (Schaufeli et al., 2002). The proposed study will contribute to the field of psychology by looking at burnout from two dimensions (i.e. clinical and academic). Moreover, the study will test the applicability of the theory of conservation of resources in the context of student clinicians. The relationship between social support, work setting with high autonomy level and low burnout rates can support the conservation of resources model of burnout and add to the existing knowledge about student burnout.

Students who have both clinical and academic responsibilities (clinical hours and classes, research or dissertation) will be recruited for this study. Since undergraduate mental health students do not have intensive clinical practice, only Master and PhD students enrolled in their practicum/internships in US universities will be recruited for this study.

Research Questions and Hypotheses

This section will outline each study aim specifically, and will state the corresponding research question and the hypothesis.

1. Aim: Two separate versions of the Maslach Burnout Inventory (MBI) will be utilized to examine whether there is a measurable difference between clinical and academic burnout in mental health students. Data from the MBI General Survey – Students and the MBI for human service providers will be used for the comparative analysis.

RQ: The study will compare clinical and academic burnout rates among student clinicians.

Hypotheses: The rates of clinical and academic burnout are expected to be significantly

different from each other for the same sample of student clinicians. Academic burnout is hypothesized to be significantly higher than clinical burnout among student clinicians.

2. Aim: The study will explore demographic predictors of burnout among student clinicians in their clinical work.

RQ: The study will examine associations between burnout and age, gender and job-setting.

Hypotheses: Clinical burnout is expected to be higher in females, negatively correlated with age and more prevalent in settings with a lack of autonomy and clients with acute mental illness.

3. Aim: The study aims to analyze the relationship between burnout among mental health professionals in training and the social support that they perceive to have from their colleagues, supervisors, friends and family members.

RQ: The study will explore associations between burnout and perceived social support from colleagues, supervisors, friends and family members of mental health professionals in training.

Hypothesis: Burnout is expected to be negatively correlated with social support from friends and family, peers and supervisors.

4. Aim: To test if overall load of students contributes to their level of burnout.

RQ: Research question four will examine the relationship between burnout subscales and balance of multiple responsibilities. This will be measured by correlating burnout subscales with 7 point Likert scale items “I feel emotionally drained with the combination of my clinical and academic responsibilities” and “I feel emotionally drained with the combination of all responsibilities in my life.”

Hypothesis: The above-mentioned items and academic and clinical burnout will not be significantly related.

5. Aim: In order to distinguish burnout from the exhaustion that results from lack of skills to cope with new and difficult challenges in clinical practice, the study will compare items of the students' clinical burnout scale with the item of perceived competency in their clinical practice.

RQ: The study will explore whether items of the clinical burnout scale correlate with perceived incompetency in the students' clinical work.

Hypothesis: Students' perceived lack of clinical competence will not correlate with the items of clinical burnout.

Definitions of the Study

Depersonalization. An impersonal, cynical response toward clients that are provided services, treatment, or therapy (Maslach & Jackson, 1981).

Cynicism. Cynical attitude towards one's academic work (Schaufeli et al., 2002).

Emotional exhaustion. The feelings of being emotionally depleted and drained by one's clinical work (Maslach & Jackson, 1981).

Exhaustion. The feelings of being emotionally depleted and drained by one's academic work (Schaufeli et al., 2002).

Clinical burnout. A syndrome of extreme exhaustion and loss of sense of accomplishment, which results from chronic exposure to stress (Alarcon, Edwards, & Menke, 2011). The three aspects of clinical burnout include emotional exhaustion, depersonalization, and lack of personal accomplishment (Maslach & Jackson, 1981).

Academic burnout. A syndrome of extreme exhaustion and loss of sense of accomplishment, which results from chronic exposure to stress (Alarcon, Edwards, & Menke, 2011). The three aspects or components of academic burnout include exhaustion, cynicism, and lack of professional efficacy related to academic work (Schaufeli et al., 2002).

Lack of personal accomplishment Lack of achievement and feelings of incompetence in one's clinical work (Maslach & Jackson, 1981).

Lack of professional efficacy. Lack of achievement and feelings of incompetence in one's academic work (Schaufeli et al., 2002).

Mental health professional in training. A graduate student who is training to become a mental health professional and is enrolled in a clinical internship/practicum as well as classes, research or dissertation at postgraduate level.

Mental health professional is a health and community care provider who offers services with the purpose of improving mental health of her clients. Psychologists, counselors, psychotherapists, art therapists, social workers, occupational therapists, behavioral analysts, psychiatrists and mental health nurses are included in the broad definition of mental health professional.

CHAPTER 2

LITERATURE REVIEW

In this chapter, I will firstly review the concept, definition and models of burnout. Secondly, I will discuss the significance of this study on burnout as it relates to helping professionals in training. I will outline factors of burnout among the general population, as well as specificities within the field of psychology and counseling. Thirdly, I will discuss the risk and preventative factors of burnout. Also, the literature review will describe how demographics play an additional role in the development and severity of burnout. Lastly, I will discuss burnout among psychology students. Gaps in the research on burnout will be summarized at the end of the chapter.

Conceptualization of Burnout

Burnout was first mentioned in early sixties. Freudenberg, however, was the first who studied phenomenon of burnout using observations and case studies. Freudenberger (1977) is known as one of the earliest authors to study burnout empirically. He defined burnout as a set of characteristics, including negativism, cynicism, suspiciousness towards coworkers and superiors, and developing a rigid defensiveness against work-related changes. Importantly, as mentioned, Freudenberger developed his definition after closely observing how co-workers reacted to the work related stress psychologists encountered in the New York Free Clinic. Freudenberger noted that the symptoms of burnout were noticeable within one year. Additionally, Freudenberger included characteristics such as alienation from colleagues, becoming emotionally numb towards

clients, and displaying a negative and condescending tone when describing clients.

More generally, burnout was understood as an extreme form of work-related stress that is caused by the social interaction between provider and recipient, (Maslach, 1986), which negatively affects motivation, enthusiasm, and energy for clinical work (Firney, Wallace-Schutzman, & Wiggers, 1982). Burnout is a response to demanding and constantly stressful interactions with individuals who experience difficulties. Stamm (2005) added to the description of burnout, suggesting that burnout includes a gradually developed feeling of hopelessness that one's efforts at work will not be successful. The concept of burnout was first developed as a syndrome, specific for workers of healthcare and social services; however, in the 1990s it was applied to professions other than social services (Galek, Flannelly, Greene, & Kudler, 2011; Rossler, 2012).

Almost universally referenced definition of burnout was developed by Maslach (Schaufeli et al., 2002). Moreover, Maslach burnout inventory (MBI) was used by 90% of published studies (Hemmeter, 2013). That implies that those studies conceptualized burnout according to Maslach's definition. Maslach (1982) defined burnout as a condition that occurs among healthcare professionals that manifests in emotional exhaustion, depersonalization, and reduced personal accomplishment. Emotional exhaustion is defined as fatigue, in response to feeling overworked. Depersonalization occurs when mental health professionals become emotionally disconnected from their clients, viewing them cynically. Lack of personal accomplishment occurs when healthcare professionals negatively evaluate their effectiveness at work, and question their ability to foster positive changes for clients (Maslach & Jackson, 1993; Morse et al., 2012; Stalker & Harvey 2002).

Models of Burnout

Several theoretical models, such the Conservation of Resources Model of Stress (Hobfoll & Freedy, 1993), Job Demand-Resources Model offer definitions, explanations, and methods of prevention for burnout (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001).

The Conservation of Resources (COR) theory is an approach used to define, understand, and predict burnout among clinicians working in organizations. COR is based on Freudenberger's argument that burnout was the result of an individual's loss of "energetic and social resources." COR theory places significance on individuals biological desires to acquire, maintain, and expand on resources necessary for survival. Resources include external needs such as income and the ability to provide for their family, in addition to internal resources such as self-esteem, personal identity, and social support. In addition, according to COR theory it is essential to maintain the energy and motivational levels required to build on resources and continue to work. COR describes burnout as a process whereby an individual's resources have been depleted over an extended period without having the opportunity to regain the mental and physical strength required to perform at work (Hobfoll & Freedy, 1993).

The first stage of resource loss occurs when an individual perceives themselves as gaining less from their job as compared to the energy expended. According to COR theory, workmates should provide the social support required to place the attention on the burnout individual's strengths. Secondly, an individual burning out in the workplace will expel more energy in an attempt to essentially keep their job, and thus may begin to suffer in other aspects of their life. The individual may limit their willingness to expel

energy and thus negatively impact their job performance. Lastly, according to COR theory an individual can increase their level of resources and strength through a serious of "loss and gain" cycles. In contrast to burning out the cycles of "loss and gain" foster the individual's ability to increase the necessary levels of energy and motivation required to overcome difficult experiences in the workplace. COR suggests that the period of cycles can have a positive influence on an individuals strength and endurance at work (Hobfoll & Freedy, 1993).

COR places an emphasis on conditions within organizational workplaces. COR acknowledges that the workplace is both a source of reward and stress as a result of job demands. Evidence gathered from research has shown that burnout is predicted with demands at work along with few resources and lack of social support (Schaufeli, & Bakker, 2004). COR theory suggests that providing resources that create a healthy and supportive environment can help to alleviate the onset of burnout. Examples include setting goals within the workplace, providing feedback, and offering opportunities for professional development. Social support can come in the form of positive interactions within the organization in an attempt to form a strong network in order to develop a sense of belonging (Hobfoll & Freedy, 1993).

The Job Demands - Resource model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) is theory based on COR that also promoted the use of positive resources in the workplace as essential to preventing burnout. The theory notes that burnout develops when job demands exceed job resources. Social support from supervisors and coworkers can reduce the risk of depersonalization and lack of professional accomplishment through the development of meaningful relationships in the workplace

and directly influencing job demands. Social support from family and friends, on the other hand can reduce emotional exhaustion by including person in leisure activities and offering perspective that is free from work context.

Rupert et al aimed to draw up recommendations for preventing burnout in a recent investigation. First, authors derived 4 critical questions from the COR and Job Demand-Resource models of burnout: What job demands increase risk for burnout? What job resources decrease risk for burnout? What personal resources decrease risk for burnout? How does home life influence risk for burnout? Further, the above questions were applied to analyze the results of several large-scale surveys conducted among practicing psychologists of masters and PhD level, as well as among licensed clinical/counseling psychologists employed in a range of clinical settings (Rupert, Miller, & Dorociak, 2015). As a result, authors revealed some consistent research findings, specifically:

Work demands such as working long hours, seeing difficult clients, and especially doing administrative/paperwork tasks may place psychologists at risk for experiencing emotional exhaustion and depersonalization. However, it was found that the work demands also provide opportunities for building a sense of personal accomplishment. Psychologists who are dissatisfied with their caseloads or who become overinvolved with clients are more likely to experience emotional exhaustion and depersonalization. This result confirms Maslach's suggestion about importance of "job-person fit" in understanding burnout (Maslach, 2003).

Support at work is important resource to reduce level of burnout in psychologists, since it allows to build a sense of personal accomplishment. Minimizing conflict between the demands of family life (e.g., housework, child or elder care) plus cultivating

resources outside of work such as a supportive friends/family and outside interests may help reduce risk for burnout. Drawing from the research of Rupert, Miller and Dorociak, (2005), authors recommend to encourage taking a proactive approach and striving to maximize a fit between demands and personal strengths, to develop resources at work and home, and to establish a balance between work and personal lives.

Significance of Burnout Research and its Prevalence

It is important to study burnout considering its detrimental effects on both clinicians and their clients (Hill, 2004; Puig, Yoon, Callueng, An, & Lee, 2014; Rossler, 2012; Steel, Macdonald, Schröder, & Mellor-Clark, 2015). International medical classification of diseases (ICD-10) recognizes burnout as mental illness, but surprisingly it is not included in DSM-5. Therefore individuals experiencing burnout in US are not getting sufficient attention. Consequently, treatment and prevention of burnout in US is heavily relying on work setting managers or family of the worker with burnout symptoms (Bährer-Kohler, 2013). Professional healthcare providers, such as physicians, social workers, psychologists, and counselors, practice under conditions that leave them susceptible to burnout (Eastburg, Williamson, Gorsuch, & Ridley, 1994; Greenglass, Fiksenbaum, & Burke, 1994; Han, Lee, & Lee, 2012; Koniarek & Dudek, 1996; Morse et al., 2012; Prosser et al., 1997; Puig, Yoon, Callueng, An, & Lee, 2014; Rossler, 2012; Russell, Altmaier, & Van Velzen, 1987; Zellars, Perrewe, & Hochwarter, 2000).

Previous research indicates that burnout is common among psychologists (Acker, 2012; Ackerley, Burnell, Holder, & Kurdek, 1988; Morse et al., 2012). More importantly, burnout can have a negative impact on the quality of health care that clients receive (Puig

et al., 2014). Surveys estimate that high levels of burnout, among helping professionals, affect about 30% of mental health workers (Morse et al., 2012), and estimates of at least moderate levels of burnout exceed 50% (Acker, 2012). Acker (2012) study sample included social workers, psychologists, and case managers with PhD, masters, undergraduate and associate degrees. The author conducted correlation analysis of workplace variables and socio-demographic variables with Emotional Exhaustion (EE). EE had positive correlation with level of education ($r = .21$, $p < .001$), and involvement with clients with severe mental illness ($r = .25$, $p < .001$). EE had negative correlation with workplace support ($r = -.28$, $p < .001$). Workers in private organizations demonstrated lower EE compared with workers in public agencies ($r = -.26$, $p < .001$). Furthermore, EE was correlated with intent to quit ($r = .32$, $p < .001$). Results are statistically significant but weak.

Acker (2012) hypothesized that role stress, which was defined as stress related to role ambiguity and low autonomy at work, would be a strong moderator between EE and other variables. Indeed his hierarchical regression analysis showed that when roles stress was added to the model, correlations between EE and other variables dropped below level of statistical significance. Criticism of these results, however can be great overlap between concept of role stress and burnout. Burnout is conceptualized as chronic work related stress. Similarly, role stress is defined as stress related to work related tasks. It would logically follow that these two concepts would have greater correlation compared with other work related variables or demographic characteristics.

Among licensed psychologists, signs of burnout are highly prevalent, with about 40% of psychologists reporting work-related exhaustion, and 34% indicating negative

and cynical attitudes toward their clients and workplace (Ackerley, Burnell, Holder, & Kurdek, 1988). In practice, the proportion of clinicians suffering from burnout may be higher, because of underreporting, due to stigma (Putnik, Jung, & Verdonk, 2011). In a study of individuals working in human services, the level of burnout did not remit, but, rather, worsened without treatment (Burke & Richardsen, 1993).

Effects of burnout on physical and mental health

Numbers of studies have linked burnout to poor physical and mental health (Burke & Richardsen, 1993; Cherniss, 1980; Maslach et al., 2001; Lee & Ashforth, 1993; Prosser et al., 1997; Smoot & Gonzolas, 1995; Sutherland & Cooper, 1990; Stalker & Harvey, 2002). In one study of over 3000 Finnish employees working in various professions, researchers found that individuals with mild levels of burnout have a 3.3 times higher risk of having major depressive disorder. Individuals with severe levels of burnout are 15 times more likely to report depression (Ahola et al., 2005). These results become questionable considering the recent debate on burnout, which suggest that the overlap between depression and burnout is caused by similarities between these concepts. Results are inconclusive weather depression and burnout are two distinct factors or they have same underlying meaning (Bakker et al., 2000; Bianchi, Schonfeld, & Laurent, 2014; Golembiewski, Munzenrider, Scherb, Billingsley, 1992; Iacovides, Fountoulakis, Moysidou, Ierodiakonou, 1997; Leiter and Durup, 1994).

Burnout negatively impacts quality of life. It is distressing and has been linked to many stress-related physical and mental health outcomes (Maslach, Schaufeli, & Leiter, 2001). For this reason it is of special interest researches designed to study the relationship between burnout and health.

In 2000-2001 a large-scale survey was conducted in Finland using population-based sample (Aromaa & Koskinen, 2004). The dataset of this study including burnout and the independently assessed diagnosed illnesses of the participants was later examined by Ahola in order to reveal the co-occurrence of burnout and mental and physical disorders. Among the sample of 3,276 working Finns, burnout was found to co-occur with depressive disorders including major depressive disorder, dysthymic disorder and minor depression (Ahola et al., 2005). Altogether 53% of all employees with severe burnout (odds ratio 14.1, 95% confidence interval 9.2-21.7), and 20% of all employees with mild burnout (OR = 3.2, 95% CI 2.6-4.0) satisfied the criteria of depressive disorders compared to 7% of employees without burnout (Ahola et al., 2005).

When analyses were stratified by gender, burnout was related to depressive disorders among both men and women. However, mild burnout was more strongly related to depressive disorders among men (OR = 4.8, 95% CI 3.26-7.0) than among women (OR = 2.5, 95% CI 1.7-3.26). When analyzed separately, the emotional exhaustion, cynicism, and professional efficacy subscales were all significantly related to depressive disorders. When minor depression (a depressive episode with two to four symptoms) was left out and the depressive disorders included only the International Classification of Diseases diagnosis (ICD-10; World Health Organization, 1992) the prevalence of depressive disorders was 3% among those without burnout, 11% among those with mild burnout, and 45% among those with severe burnout (Ahola, 2007). This means that burnout is related to depressive disorders in a dose-dependent manner.

It was also found that burnout may co-occur with anxiety disorders (n = 3,209) and alcohol dependence (n = 3,251). Anxiety disorders included panic disorder,

generalized anxiety disorder, social phobia, agoraphobia, and phobia not otherwise specified (DSM-IV; American Psychiatric Association, 1994). Altogether 21% of employees with severe burnout and 8% of those with mild burnout suited the criteria of an anxiety disorder compared to 2% of employees without burnout. Altogether, 10% of employees with severe and 8% of those with mild burnout fulfilled the criteria of alcohol dependence (DSM-IV; American Psychiatric Association, 1994) compared to 3% of employees without burnout (Ahola & Hakanen, 2014).

Honkonen examined the co-occurrence of burnout and physical disorders. He particularly found that burnout was related to musculoskeletal and cardiovascular disorders (Honkonen et al., 2006). Of the employees with severe burnout, 47% had a musculoskeletal disorder. The corresponding value was 36% among those with mild burnout and 28% among those without burnout. The association was statistically significant among both genders when adjusted for socio-demographic factors and health behavior, but after adjustment for depressive symptoms, the association remained significant only among women. When the emotional exhaustion, cynicism and professional efficacy were analyzed separately, it was found that all three burnout subscales were associated with musculoskeletal disorders.

Of the employees with severe burnout, 28% had a cardiovascular disease. The corresponding values were 20% among the employees with mild burnout and 14 % among those without burnout. When the burnout subscales were analyzed separately, emotional exhaustion, cynicism and professional efficacy were all associated with cardiovascular diseases (Honkonen et al., 2006).

Valuable results were obtained in studies in which burnout is examined as a predictor of health problems. As regards somatic health problems, burnout has been studied in relation to heart disease, diabetes, common infection, and musculoskeletal pain in prospective designs. In these epidemiological studies, the question has been whether burnout assessed at the beginning of the study, is related to new cases of future health problems after known risk factors are taken into account (Ahola & Hakanen, 2014).

In an eight-year prospective study among Israeli workers (n = 8,838), burnout predicted new cases of coronary heart disease (Toker et al., 2012). The apparently healthy employees participated in an annual routine health examination in a medical center. The protocol included filling out the Shirom-Melamed Burnout Measure (SMBM; Shirom, 1989; Shirom & Melamed, 2006) to assess burnout. Coronary heart disease, which included acute myocardial infarction, diagnosed ischemic heart disease, and diagnosed angina pectoris, was assessed during the visits to the medical center. The illness was confirmed by hospitalization date and a discharge diagnosis. A relationship was found between burnout and the risk of heart disease. Burnout was found to be an independent risk factor for heart disease but the risk was not linear. Instead, the risk of a new heart disease was pronounced in the upper quintile of the burnout sum score. Such a high level of burnout was related to a 1.8-fold risk (95% CI 1.1-3.0) of future heart disease after adjustment for socio-demographic factors, psychosocial factors at work, behavioral health risk factors, and depressive symptoms. The researchers proposed that high burnout could be associated with a dysregulation of the hypothalamic-pituitary-adrenal axis, which is a key stress-responsive endocrine system. The results also suggested that

burnout might be a stronger predictor of heart disease than job characteristics, such as subjective work load.

In a prospective Israeli study using two different samples (total n = 677), burnout, assessed using SMBM, predicted the onset of type two diabetes (Melamed, Shirom, Toker, & Shapira, 2006). The first sample comprised apparently healthy employees who took part in a health checkup at their workplace and the second sample comprised employees recruited for a study on job strain and burnout. The occurrence of diabetes was assessed using a self-report of diagnosed and treated disease in the follow-up questionnaire. During the follow-up period, which lasted from three to five years, each one-unit increase in the burnout sum score was related to 1.8-fold odds ratio (95% CI 1.2-2.9) of the onset of type two diabetes after adjustment for socio-demographic factors and behavioral health risk factors. The risk of diabetes was even higher (OR = 4.3, 95% CI 1.8-10.6) in a sub-sample in which the blood pressure of the employees was also controlled for. This suggests that the link between burnout and diabetes was not mediated by hypertension. Burnout scores were found to be relatively consistent over the follow-up. The researchers argued that prolonged burnout may set the stage for various pathophysiological processes, such as chronic acute phase response, inflammatory processes, and metabolic events, which may culminate in health impairment.

To conclude, burnout has been found to relate to heart disease, diabetes, common infections, and musculoskeletal pain in prospective studies lasting from three to eight years after adjustment for some of the other known risk factors of these health problems. Existing studies indicate that burnout at baseline is related to 1.2-2.1-fold risk of a new illness. The results concerning heart disease and musculoskeletal pain are in accordance

with those obtained regarding the co-occurrence of burnout and these diseases (Ahola & Hakanen, 2014).

Effects of burnout on clinicians and their clients

Equally important, the research suggests that burnout, in clinicians, adversely affects clients. Absenteeism and turnover, related to burnout, were correlated with reduced adherence to evidence-based practices (Rollins et al., 2010). In addition, burnout leads to negative attitudes towards consumers, inversely correlates with consumer satisfaction scores, and predicts poor mental health outcomes (Garman, Corrigan, & Morris, 2002; Holmquist & Jeanneau, 2006; Gowdy, Carlson, & Rapp, 2003).

On a more global level, burnout appears to be detrimental to organizations that deliver mental health services. Employee burnout has been associated with low commitment to work, negative attitudes, absenteeism, and turnover. It has also been correlated with job dissatisfaction and has been shown to discourage co-workers (Eriksson, Starrin, & Janson, 2008). In this context, burnout carries a significant economic burden for mental health professionals, as a result of the costs associated with turnover. The United States government named burnout as the main reason treatment organizations lack the necessary numbers of skilled staff members (Hoge et al., 2007).

The American Psychological Association (2015) published online guidelines about professional health and well-being for psychologists. Guidelines were prepared by the American Psychological Associations' board of professional affairs' Advisory Committee on Colleague Assistance (ACCA). According to the guidelines, all psychologists are at risk of burnout because of the demands of clinical responsibility. Psychologists have a high level of stress as a result of working in close contact with

people in distress. Often, psychologists deal with challenging roles and have the responsibility for maintaining sensitive, confidential and nonreciprocal relationship with client. The responsibility of providing healthcare to people, having limited control over outcomes, and limited resources increase the risk of professional stress and burnout. Furthermore, psychologists are vulnerable to vicarious traumatization as a result of empathic engagement with trauma survivors. Additionally, professional standards are changing for psychologists. Legal and business concerns are imposing increasing demands of therapeutic practice and increased paperwork requirements. Moreover, managed care demands limit level of autonomy of psychologists (ACCA, 2015).

ACCA guidelines described number of risk factors for occupational stress of psychologists. Professional isolation and insufficient professional support such as a lack of supervision or absence of clinical case consultation were stated as the major factors associated with occupational stress of psychologists. Moreover, risk factors include poor self-care, excessive caseload, lack of leisure activities, stigma on acknowledging distress, unrealistic self-expectation and focusing on others needs on expense to own needs. Finally, over involvement and working with homogeneous population (i.e. only PTSD, HIV and etc.) increase risk of burnout (ACCA, 2015).

ACCA guidelines discussed three types of consequences of ignoring occupational hazards: damage to psychologists, damage to clients and damage to profession. Damage for psychologists involve depression or stress-related illnesses, diminished job satisfaction, suicide or substance use. Ignoring chronic stress might lead to relationship conflicts with coworkers, supervisors, family and friends. It can also lead to unprofessional behavior and ethical violations. Damage to client includes malpractice,

boundary violations, loss of faith in therapy, increase in symptoms and despair. Damage on profession of psychology can be manifested in loss of credibility, lawsuits, negative media attention, cynicism and disillusionment (ACCA, 2015). Clinicians in training are exposed to same demands as all psychologists as discussed in the guidelines. However clinicians in training get different amount of support in various work settings and have to tackle same demands with much smaller experience compared with clinicians with many years of clinical experience. It has to be noted however, that although ACCA guidelines offered valuable summary of the professional hazards of psychologists, it is unclear if the authors based their suggestions in empirical evidence. Further research is needed to explore risk and preventative factors of psychologists' burnout, especially among clinicians in training.

Risk factors of burnout

According to the early studies of Koeske and his colleagues, over-involvement of clinicians increased levels of burnout and decreased levels of job satisfaction. Over-involvement can be defined as thinking about clients outside the work setting and prioritizing clinical practice over other aspects of life (Koeske & Kelly, 1995). Additionally, high exposure to clients with severe mental illness has also been correlated with higher burnout (Acker, 2010). Crowley and Avdi (1999) measured psychologists' feelings towards their clients, and found that therapists experienced feelings of tiredness, exhaustion, incompetence, worry, or irritation towards more than half of their clients. These results suggest that negative emotions towards clients are highly prevalent.

Organizational and environmental variables of burnout include an extreme workload, tight deadlines, and unclear or conflicting roles. Additionally, lack of support

from supervisors and coworkers, absence of feedback, and exclusion from the decision-making process lead to burnout among clinicians. Limited autonomy, unjust treatment, and absence of positive rewards at the workplace also influence burnout (Hannigan, Edwards, & Burnard, 2004; Maslach et al., 2001; Morse et al., 2012; Paris & Hoge, 2010).

Preventative factors of burnout

Researchers conducted a meta-analysis examining antecedents and consequences of burnout in American psychotherapists (Lee, Lim, Yang, & Lee, 2011). The researchers examined 10 variables including emotional exhaustion, depersonalization, and personal accomplishment. They also examined job stress ("Every hour of the work day is filled with an appointment"), self-control ("I have control over what I do and when I do it during the work day"), over- involvement ("I feel that at times I'm working harder for change than the client"), and job support ("I receive constructive feedback from coworkers or supervisors"). The researchers also looked at professional identity, job satisfaction ("Are you satisfied with the working conditions?"), and turnover intention ("What is the probability that you will seek employment outside your organization within the next year?"), in regards to burnout. Three subscales of burnout, emotional exhaustion, depersonalization, and lack of personal accomplishment, were measured using the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981). The results showed that psychotherapists with high levels of self-control and professional identity showed less emotional exhaustion than psychologists with low control and professional identity. Additionally, self-control, over-involvement, and job support were positively correlated with personal accomplishment. Over-involvement was also strongly and positively

related with emotional exhaustion. Over-involvement had a dual effect on therapists. It caused professional exhaustion, but at the same time, increased feelings of personal accomplishment (Lee, Lim, Yang, & Lee, 2011).

Older clinicians, with lower levels of education, were found to have lower levels of burnout, in comparison to clinicians with PhD (Acker, 2012; Lim, Kim, Kim, Yang, & Lee, 2010; Vredenburgh, Carlozzi, & Stein, 1999). Relationship with age could be interpreted in two different ways: 1. Burned out clinicians might be leaving field early so those who remain have the low burnout level. 2. From the framework of conservation of resources model of burnout, young professionals have fewer resources due to lack of experience and are more prone to burnout compared with older clinicians who accumulated cycles of resources and are well equipped to cope with job stress. Environments in which peers and supervisors endorse positive humor in the workplace were further found to ameliorate, or prevent, the effects of burnout (Galek, Flannelly, Greene, & Kudler, 2011; Kay-Eccles, 2012; Mesmer-Magnus, Glew, &Viswesvaran, 2012). Hospital settings were associated with the highest levels of burnout. Additionally, the amount of hours spent in clinical contact with clients was associated positively with having a sense of personal accomplishment (Vredenburgh, Carlozzi, & Stein, 1999). This could mean that working many hours with clients creates sense of being busy and competent (sense of personal accomplishement) but in a long run exhausts clinician's resources (emotional exhaustion). Counselors in private practices reported the lowest levels of burnout (Vredenburgh, Carlozzi, & Stein, 1999). Work setting seems to play an important role in development of burnout. It is noteworthy that private practice offers clinicians a higher level of control over the structure of work. A sense of autonomy might

be influencing the process of burnout by possibly ameliorating it. However, these interpretations need additional exploration.

Demographic factors related to burnout

Age, gender, and level of education are the primary demographic factors that correlate with burnout (Acker, 2012; Lim et al., 2010; Vredenburgh, Carlozzi, & Stein, 1999). Since existing research was inconclusive, regarding gender differences on burnout, a meta-analysis was conducted to test the hypothesis that women experience higher levels of emotional exhaustion than men. On the other hand, men were hypothesized to experience higher levels of depersonalization, compared to women (Purvanova & Muros, 2010). The authors also hypothesized that gender differences would be stronger in countries with more conservative labor policies. The meta-analysis consisted of 183 studies and did not specify amongst professions. Study findings confirmed the hypotheses.

Women experienced slightly higher levels of emotional exhaustion, compared to men. Men demonstrated slightly higher levels of depersonalization, compared to women (Purvanova & Muros, 2010). Additionally, the authors compared overall indices of burnout between males and females. The results showed that women had statistically higher burnout levels, compared to men. Furthermore, the authors confirmed their hypothesis that gender differences in burnout were more profound in countries with more conservative labor policies, as opposed to countries with more liberal labor policies. Gender differences of burnout were greater in the US compared with the EU.

Gender differences in levels of burnout can offer many interpretations. It is possible that similar to depression, expressions of emotional exhaustion is more culturally

acceptable from women than men and depersonalization and lack of personal accomplishment are more expected from men than women. Gender roles could be more equal in countries with liberal labor policies thus promoting less polarized reactions to burnout. However this interpretation requires confirmation. Research has shown that psychologists who had experience with personal therapy, and clinicians who were single or divorced, experienced greater work-related stress (Darongkamas, Burton, & Cushway, 1994). Single and divorced clinicians might experience fewer supportive relationships outside of the work setting. The lack of support might increase the likelihood of burnout. Findings about clinicians in personal therapy are more controversial. Clinicians might seek therapy when they are already burned out, and this correlation might be a reflection of therapists' motivation to go to therapy when they feel emotionally exhausted, cynical, and lacking of sense of accomplishment. While seeking therapy is highly recommended for all clinicians, in the context of burnout being in therapy is considered as a red flag as it indicates to presence of burnout. However, this correlation may also mean that individuals with mental health challenges are more vulnerable to burnout, compared to individuals who do not have mental health challenges. This interpretation raises the question of comorbidity of mental illness and burnout.

Personal characteristics and burnout

Freudenberger (1977) argued that overly dedicated employees, who perceive their work as a way to prove their personal worth, are most vulnerable to burnout. Among personal characteristics of clinical psychologists, perfectionism was found to enhance risk of burnout (D'Souza, Egan, & Rees, 2011). Swider & Zimmerman (2009) conducted a meta-analysis exploring the relationships between personality, burnout, and work

outcomes, and found that all three dimensions of burnout (emotional exhaustion, depersonalization, and lack of personal accomplishment) correlated with the five-factor model of personality traits. The meta-analysis consisted of 115 articles and did not differentiate between professions. The authors found that neuroticism (anxious, fearful, and nervous) was positively correlated with burnout. Furthermore, extraversion, agreeableness (warm, supportive and good-natured), conscientiousness (individual with work ethic and perseverance), and openness (intellectually curious and open minded) were negatively correlated with burnout. Burnout was also correlated with absenteeism, turnover, and job performance (Swider & Zimmerman, 2009).

The results about personality traits and burnout directly contradict the idea of Freudenberger that enthusiastic and over-involved employees are vulnerable to burnout. If traits such as work ethic and perseverance negatively correlates with burnout enthusiastic employees should be less prone to burnout. More research is needed to explain this contradiction. Factors such as stress coping styles, work-leisure balance or expectations from the field of choice could be related to this discrepancy.

Burnout encompasses a number of subfields, which have developed over the last four decades. The research has clearly demonstrated the negative effects of burnout on the physical and mental health of employees (Burke & Richardsen, 1993; Cherniss, 1980; Maslach et al., 2001; Lee & Ashforth, 1993; Prosser et al., 1997; Smoot & Gonzolas, 1995; Sutherland & Cooper, 1990; Stalker & Harvey, 2002). Studies have shown that levels of burnout vary depending on demographic characteristics (Acker, 2012; Lim et al., 2010; Vredenburgh, Carlozzi, & Stein, 1999), personality traits (Swider & Zimmerman, 2009), and work conditions (Hannigan, Edwards, & Burnard, 2004;

Maslach et al., 2001; Morse et al., 2012; Paris & Hoge, 2010). Human service providers were historically the most widely studied group for symptoms of burnout (Muheim, 2013). Maslach and Jackson (1981) developed the most commonly used scale of burnout based on definition coined by Maslach. While there are a few different versions of the Maslach Burnout Inventory (BMI), the Student Survey was designed to measure burnout among student populations. Students have been understudied until recently (Alarcon, Edwards, & Menke, 2011; Boren, 2013; Grigsby, 2015; Jacobs & Dodd, 2003; Lushington & Luscri, 2001; Wilczek-Ruzyczka & Jableka, 2013). Many questions remain to be explored in burnout research, especially in the field of student burnout.

Conservation of Resources Model and Job Demand Resource Model in Relation to Burnout of Students

The Conservation of Resources Model was tested in relation to academic burnout among students (Alarcon, Edwards, & Menke, 2011; Boren, 2013; Clark, Murdock, & Koetting, 2009; Jacobs & Dodd, 2003; Robins, Roberts, & Sarris, 2015). The results of the studies are inconsistent in regards to the role of social support in regards to buffering burnout. While some studies on academic burnout of students did not find any significant relationships between social support and burnout (Alarcon, Edwards, & Menke, 2011; Clark, Murdock, & Koetting, 2009), others found support for COR model of burnout in relation to students (Boren, 2013; Jacobs & Dodd, 2003; Robins, Roberts, & Sarris, 2015). The results of the relationship between demographics and burnout are also inconclusive. Body of the research suggests relationship between age (Robins, Roberts, & Sarris, 2015), gender (Dahlin, Fjell, & Runeson, 2010) and burnout among students and other studies could found no such relationship (Clark, Murdock, & Koetting, 2009).

Social support and academic burnout among students in fields related to mental health were explored in two studies. Both studies used burnout questionnaires that addressed academic stress and did not explore burnout experiences at the practicum or internship placements of participant students. Clark, Murdock, and Koetting, (2009) hypothesized that perceived level of social support would moderate relationship between general stress and burnout. They suggested that students with higher level of social support would be more satisfied with their career choice and experience less burnout compared with students with low level of perceived social support. The sample consisted of 284 counseling psychology doctoral students from 53 training programs in the United States. Thirty percent of the sample was in the second year of their program, the other third was their third year, 25% was on their fourth year and the remainder on their fifth to eight years of the program. The authors used 27-item Meier Burnout Assessment tool to measure students' academic burnout. The battery uses five point Likert scale ranging from one to five with higher score indicating greater burnout. Concurrent Validity of Meier Burnout Assessment tool was tested Maslach Burnout Inventory - Human Service Survey.

Clark, Murdock, and Koetting, (2009) selected Meier Burnout Assessment tool because it was focusing on student burnout unlike clinical focus of Maslach Burnout Inventory - Human Service Survey. The authors did not mention student version of Maslach Burnout Inventory, which was well established since 2001. Hierarchical multiple regression was used for the analysis. Descriptive statistics did not show significant correlation between students' demographic characteristics and burnout. These results are very different from other studies of burnout that found small but significant

relationship between burnout and demographics. Results of hierarchical multiple regression suggested that social support did not moderate relationship between general stress and burnout. However it should be noted that there was direct negative correlations between all four social support variables and burnout (Advisor support with burnout: $r = -.34$, $p < .001$; Student support with burnout: $r = -.30$, $p < .001$; Family/friend support: $r = -.15$, $p < .01$). Nevertheless, in the model, role conflict and global stress accounted for 29% of the variance of burnout ($F(2,267) = 52.92$, $p<.001$). In the final step of the equation, advisor support was significant predictor of burnout (Beta = -.12; $p<.05$). The strong relationship between role conflict and burnout replicates results of Acker, (2012) study.

Interestingly, mean burnout score of the sample in Clark et al., (2009) research was 2.54 that can be interpreted as low burnout score. Without estimates of burnout level related to students clinical work, it is hard to assert whether students perceived having low level of burnout in general or it was a reaction on their academic demands that are progressively decreasing compared with clinical demands. Clark, Murdock, and Koetting, (2009) research studied exquisitely academic burnout. They did not explore stress related to students' clinical practice. My research aims to measure both clinical and academic burnout separately and explore difference between these two dimensions of burnout of mental health clinicians in training.

Robins, Roberts, and Sarris, (2015) explored Conservation of Resources model of burnout and its subsequent Job Demand-Resource theory with nursing, social work, occupational therapy and psychology students in Australia. Study tested following hypotheses: 1. Study demands would be positively related to burnout; 2. Study resources

would be negatively related to burnout; 3. Personal resources would be negatively related to burnout; 4. Personal resources would moderate effect of study demands on burnout; and 5. Study demands would partially moderate relationship between personal resources and burnout. Emotional Exhaustion (EE) subscale of Maslach Burnout Inventory - Student Survey was used to measure burnout. EE was higher among final year students compared to students in their earlier years of study ($F=5.85$; $p<.01$). Younger students below age 29 exhibited higher EE scores than older students over age 30 ($F=6.87$; $p<.01$). No significant relationship was found between EE, disciplines of study, gender or relationship status. This results show that psychology students and students from other health related disciplines had similar level of Emotional Exhaustion.

Hierarchical multiple regression analyses were conducted to test first three hypotheses. The hypotheses were confirmed. Forty-one percent of the variance in EE was explained by the model. The last two hypotheses were tested using two-step hierarchical regression. The results of the first three hypotheses and descriptive statistics of the study are of a high importance for my proposed study because it confirmed relationship between burnout and age and year of study. It also confirmed Conservation of Resources and Job Demand-Resource models by suggesting that social support and study demands have direct impact on level of burnout.

As seen from those studies, the results are inconsistent about differences between levels of burnout within disciplines. Clark, Murdock, and Koetting (2009) suggested that counseling psychologists have lower level of burnout while Robins, Roberts, and Sarris, (2015) claim that psychologists had same level of burnout as nurses, social workers or occupational therapists. The results are also inconsistent regarding relationships between

demographics and burnout. Moreover, the results additionally differ about association of social support with burnout. More studies are needed to explore these variables in the context of clinical work of mental health professionals in training.

The proposed study aims to measure levels of academic and clinical burnout, in mental health professionals in training, using clinical and student versions of Maslach Burnout Inventory (MBI) (Maslach et al., 1996; Schaufeli et al, 2001). Additionally, it will explore the relationships between burnout and demographics of students in training to become helping professionals. Furthermore, this research will study the relationship between social support from family, friends, peer students, supervisors and level of burnout among clinicians in training.

To our knowledge, the proposed study will be the first research study to explore burnout correlates separately for both clinical and academic work of mental health professionals in clinical training. The study will contribute to the field of psychology by offering a deeper understanding of burnout in novice clinicians. The results of this study will give insight into specific needs of students in the mental health field, which will be valuable for higher education programs that prepare student clinicians.

Conclusions

Burnout is a syndrome that affects professionals of all occupations; however, mental health providers are especially vulnerable to its detrimental consequences. High levels of burnout affect mental health providers in general (Acker, 2012), and in particular, affect psychologists (Ackerley, Burnell, Holder, & Kurdek, 1988). Burnout poses a threat to the mental and physical health of clinicians (Ahola et al., 2005; Boren, 2013; Chandola, Brunner, & Marmot, 2006; Pruessner, Hellhamer, & Kirschbaum,

1999). Because of the adverse effects of burnout on mental health providers, the clinician harms the clients, especially those seeking mental health at community mental health clinics (Rollins et al. 2010).

Postgraduate students of mental health are at a high risk of burnout, due to their academic and clinical demands (Boren, 2013; Maslach et al., 2001). Graduate students demonstrate more drastic negative change in expectations, regarding their field of study, compared to experienced clinicians (Kahill, 1986). There are very few studies about burnout related to clinical work of students studying mental health services. Considering the fact that there is high number of student clinicians who serve clients as a part of their training, it is important to explore levels of clinical versus academic burnout of students to improve experiences during their training and support them in providing a high standard of care for their clients.

CHAPTER 3

METHODS

Overview

This chapter will outline research design and procedures of the study. Sampling and statistical data analysis methods will be addressed along with instruments of this study. Moreover, ethical considerations of the study will be addressed at the end of this chapter. This study aimed to explore difference between academic and clinical burnout and correlations between burnout, demographic characteristics and social support.

Participants

Master and PhD students enrolled in classes and practicum/internship sites were recruited for this study. Graduate students of psychology, social work and counseling programs who are training to be clinicians in US were recruited in this study. This population was selected because mental health internship/practicum sites are mostly populated with master or PhD students of these three disciplines. Students were recruited through internship or practicum databases and lists of mental health programs.

Sampling Design and Procedure

A stratified random sampling design offers equal likelihood of participant selection, which allows generalization of results to student clinicians in selected areas. Practicum and internship sites from APPIC database and mental health programs were categorized by their geographic locations. Total of hundred practicum and internship sites were randomly selected from each stratified location in US. Another hundred university programs in mental health related fields were selected. Power analysis for correlation determined that sample size of 84 participants was necessary for testing a hypothesis

about difference between clinical and academic burnout. To test hypothesis that academic burnout are higher than clinical burnout, sample size of 67 is necessary. Analysis was based on Cohen's (1992) estimates for effect size.

Emails were sent to randomly selected practicum and internship training program directors as well as university program directors. Program directors then forwarded call for research participations to the student trainees at their sites and academic programs.

Students received emails with invitation letter and link to online survey with informed consent, demographic form, social support inventory, Maslach burnout inventory clinical survey and Maslach burnout inventory student survey. A summarized version of results were offered to interested participants. Students who decided to participate in this study were volunteers and were included in a raffle for four 50$ gift card of self-care activity of choice (Yoga class, gym membership, spa, theatre or sports event tickets etc).

Each individual in the sample were assigned identification number. After surveys were filled out, participants identification information was removed and stored separately from the remaining questionnaires. Data entry and analysis was conducted with SPSS 12.0 and R.

Instrumentation

The proposed study used three self-report surveys and a demographic questionnaire. Demographic questions included: age, gender, ethnic and racial background, marital status, whether the participant was the first generation student, if they were currently enrolled in classes, type of academic program, if they had paid job outside academic or practicum/internship, type of internship/practicum, number of

clinical hours at the placement, type of populations served and the severity of their issues, theoretical orientation used, level of autonomy at placement, level of perceived clinical competency and whether student attends therapy for self-care.

After demographic questions, students were asked to complete three measures: Social Support Survey, the Maslach Burnout Inventory (MBI) - Human Service Survey, and the MBI General Survey – Students. Participants were asked to report level of their burnout separately for their academic work and their clinical practice. Self-report surveys are described below. Three additional questions were developed for this study. Two of them measure burnout level caused by combination of responsibilities. The third question measures level of perceived students' competency in their clinical work.

Social Support Scale

Social Support scale of Caplan, Cobb, French, Van Harrison, and Pinneau (1975) was used to measure social support from advisor, other students and family/friends. The survey was later modified by Ray and Miller (1994). Modified version of this survey was used by various studies including Greenglass, Fiksenbaum, and Burke, (1994). Clark, Murdock and Koetting (2009). Survey consists of eighteen items. Participants were asked to rate level of support from given source (advisor, other students and family/friends) on four point Likert-type scale ranging from zero (not at all) to three (very much). Scores were averaged within subscales and create a mean response score for supervisor support, other student support, and family/friend support. Sample items include: "How much can (source) be relied on when things get tough for you at school/work?", or "How easy is it to talk with your (source)?".

Confirmatory factor analysis of Social Support Scale found that subscales were one-dimensional (Ray & Miller, 1994). Factor loadings for supervisor support ranged from .70 to .89, for coworker support they ranged from .63 to .90, and for family support .79 to .93. Alpha coefficients demonstrating reliability were .92 for supervisor, .90 for co-workers, and .92 for family.

Maslach Burnout Inventory -Human Service Survey

MBI-HSS (Maslach & Jackson, 1981) consists of 22 items and measures three subscales of burnout: emotional exhaustion, depersonalization and personal accomplishment. High scores on emotional exhaustion (27 or greater), depersonalization (13 or grater) and low scores on personal accomplishment (31 or less) reflect severe level of burnout. Moderate level of burnout is estimated by moderate scores on all three scales (EE between 17-26, depersonalization between 7-12 and personal accomplishment between 32-38). Low level of burnout is determined by low scores on EE (16 or less), depersonalization (6 or less) and high scores on personal accomplishment (39 or greater). Items are assessed by the frequency of occurrence on Likert type scale where zero is "never" and six is "every day". Emotional exhaustion assesses feeling of exhaustion by one's job. Sample item for emotional exhaustion subscale is "I feel emotionally drained from my work". Depersonalization measures cynical and dehumanizing attitudes towards clients. Sample item from depersonalization subscale is " I feel I treat some recipients as if they were impersonal objects". Personal accomplishment subscale measures feelings of competence and success at one's work with clients. Sample item from personal accomplishment is "I have accomplished many worthwhile things in this job" (Maslach & Jackson, 1981).

Maslach, Jackson, and Leiter (1996) measured internal consistency of MBI-HSS. Crobach's alpha reliability coefficients were .90 for emotion exhaustion, .79 for depersonalization and .71 for personal accomplishment. Test retest coefficients for five samples were r=.82 for EE, r=.60 for depersonalization and r=.80 for personal accomplishment.

Maslach Burnout Inventory - Student Survey

MBI General Survey – Students (Schaufeli et al., 2002) modified Maslach Burnout Inventory to use with university students. Modified scale consists of 16 items and similarly to original scale measures three subscales of burnout: emotional exhaustion, cynicism (equivalent of depersonalization) and efficacy (equivalent of personal accomplishment). Similarly to original MBI scale, items are assessed by the frequency of occurrence on Likert type scale where zero is "never" and six is "every day".

High scores on exhaustion (16 or more), cynicism (11 or more) and low scores on efficacy (23 or less) reflect severe level of burnout. Moderate level of burnout is estimated by moderate scores on all three scales (EX between 11-15, cynicism between 6-10 and efficacy between 24-29). Low level of burnout is determined by low scores on EX (10 or less), cynicism (5 or less) and high scores on efficacy (30 or over). Terms such as "work" and "clients" are substituted with "school", and "studying" in the wording of items of Maslach Burnout Inventory - Student Survey.

The MBI General Survey – Students was acknowledged as valid and reliable battery of burnout by Mental Measurement Yearbook (Fitzpatrick, 2005). Internal consistency was estimated as .88 for Exhaustion, .97 for Cynicism and .79 for Efficacy. Test-retest reliability ranged from .54 to .80, which is acceptable since level of burnout is

expected to change overtime. Consensual validity was established by comparing self-report level of burnout with observers' rating of burnout (Fitzpatrick, 2005).

Research Design

This study used quantitative correlational and comparative research methods. The following section will explain methods used to address each research hypothesis. Hypotheses 1: The rates of clinical and academic burnout were expected to be significantly different from each other for the same sample of student clinicians. Academic burnout was hypothesized to be significantly higher than clinical burnout of student clinicians.

After completion of the MBI General study – Student Version and the MBI-HSS questionnaires, students' burnout was evaluated by three subscales: 1. Emotional Exhaustion 2. Depersonalization/Cynicism and 3. Lack of Personal Accomplishment/professional accomplishment. To evaluate severity of burnout Maslach provided cutoff scores for all three subscales, which indicate low, moderate and severe burnout. Student and clinical burnout surveys have different scoring. To compare those six subscales, I converted data into nominal table where six sells represented low, moderate or severe burnout level for clinical and academic burnout. Detecting differences in the marginal probabilities using McNemar's test allowed comparison between academic and clinical burnout rates.

Hypotheses 2: Clinical burnout was expected to be higher in females, negatively correlated with age and more prevalent in settings with lack of autonomy and clients with acute mental illness. Linear regression analysis, ANOVA, and two group comparisons were implemented to measure relationship between burnout and demographic

characteristics. Additionally hierarchical regression model was used to determine which variable brings unique variance to the model. Number of clinical hours were entered as the first variable in the model and age was entered the second.

Hypothesis 3: Burnout was expected to be negatively correlated with social support from friends and family, peers and supervisors. Pearson's r correlation and linear regression analyses were conducted to test this hypothesis. Social support was independent variable and burnout subscales were dependent variables. Furthermore, perceived level of social support was added to the hierarchical regression model proposed for the analysis of the demographics and burnout.

Hypothesis 4: Burnout due to balance of multiple responsibilities would not be correlated with clinical and academic burnout separately.

In order to test hypothesis I did procedure similar to construct analysis. I correlated subscales of burnout with items "I feel emotionally drained with the combination of my clinical and academic responsibilities" and "I feel emotionally drained with the combination of all responsibilities in my life". If those items were not correlated I would assume that academic and clinical burnout were distinguishable from combination of various responsibilities. If they were highly correlated I would conclude that combination of responsibilities has impact on academic and clinical burnout separately.

Hypothesis 5: In order to distinguish burnout from not having developed skills yet to cope with new and difficult challenges in clinical practice, I did procedure similar to construct analysis. I correlated item about rate of competence with burnout subscales. If those items were not correlated I would assume that burnout was separate from

frustration caused by feeling of competency. If they were highly correlated I would conclude that it was impossible to separate burnout from frustration caused by feeling of competency.

Robust nonparametric statistical methods were alternatively utilized were the collected data did not meet assumptions of normality, absence of multicollinearity and homoscedasticity necessary for implementation of parametric tests.

Ethical Considerations

To meet ethical rules and regulations of research in psychology, consent was obtained from each participant. Consent form explained nature and purpose of the study. It also outlined participant's rights to confidentiality, right to anonymity and right to privacy. Informed consent also ensured participant's right to withdraw in any given moment of the study and provided information about questionnaires. Study was approved by Institutional Revenue Board of Umass Boston (study number 2016086).

CHAPTER 4

RESULTS

The study examined the role of several factors in academic and clinical burnout. All tests were performed in SPSS and R. Analyses adhered to two-tailed procedures that tested hypotheses at the 0.05 significance, unless otherwise specified. Histograms were created and correlations were observed for continuous variables; Levene's tests of equality of error variance were performed. Nonparametric tests were used when variables were not normally distributed. To examine the effects at low, moderate and high burnout levels, burnout subscale values were recoded as low, moderate and high according to the MBI General Student and MBI Human Service scoring key cutoff values.

The results chapter reviews the baseline descriptive demographic characteristics of the sample. It addresses each of the five research questions, detailing the statistical tests that were used, and the results of those tests as they relate to the hypotheses of this study.

Description of the Sample and Rates of Burnout

Participants not currently enrolled or not currently conducting clinical or practicum hours were excluded. An additional 14 participants were excluded for incomplete responses to questions of three surveys (Clinical burnout, Academic burnout, Social support). The final sample comprised of the total of 164 respondents. Data was collected during October of 2016.

Participants' demographics are presented in Table 1. The racial composition of this sample included: 18 (11%) African origin, 6 (3.7%) Asian/Pacific islander, 23 (14%) Latino/Hispanic, 4 (2.4%) multiracial, 2 (1.2%) Native American/American Indian, 109

(66.5%) White. Descriptive statistics of burnout subscale totals are available in Table 2. Burnout-HSS Subscale Norms Published in Maslach Burnout Inventory Manual (Maslach, Jackson, & Leiter, 1996) are presented in Table 3. The average age was 28.68 with a standard deviation of 6.32.

Table 1
Demographic Frequencies

	Frequency(%)	Frequency(%)
Gender	Male 26 (15.9%)	Female 138 (84.1%)
Marital Status	Single 62 (37.8%)	Committed/married 99 (60.4%)
1st generation student	Yes 57 (34.8%)	No 107 (65.2%)
International student	Yes 6 (3.7%)	No 158 (96.3%)
Unrelated paid employment	Yes 65 (39.6%)	No 99 (60.4%)

Table 2

Burnout Subscale Descriptives of This Study

	Clinical			Academic	
	Mean	Std. Dev		Mean	Std. Dev
Personal Accomplishment	36.85 (Moderate)	6.13	Professional Efficacy	26.74 (Moderate)	6.29
Emotional Exhaustion	20.54 (Moderate)	9.46	Exhaustion	18.30 (High)	7.86
Depersonalization	3.98 (Low)	3.98	Cynicism	14.05 (High)	4.47

Table 3

Burnout-HSS Subscale Norms Published in Maslach Burnout Inventory Manual

Clinical (Mental Health Practitioners)		
	Mean	Std. Dev
Personal Accomplishment	30.87 (Low)	6.37
Emotional Exhaustion	16.87 (Low)	8.9
Depersonalization	5.72 (Low)	4.62

The study sample was compared to the published norms of mental health practitioners using a one-sample t-test. The study participants experienced statistically significantly higher emotional exhaustion (M = 20.54, SD = 9.46) when compared to the seasoned mental health clinicians, t (163) = 4.9682, p< .0001.

Had the current study used only emotional exhaustion, as did some previous published studios (Rohland, Kruse, & Rohrer, 2004), as an indicator of burnout, then the findings would suggest that students experience higher level of burnout when compared to seasons clinicians. However the inclusion of both the sub scale of depersonalization/cynicism and the sub scale of lack of personal accomplishment/professional efficacy did not fully confirm this finding.

The mean depersonalization subscale score was statistically significantly lower in the study sample (M = 3.98, SD = 3.98) relative to the published norms, t (163) = 5.5987, p< .0001, indicating lower level of burnout. Students in the current study experienced statistically significantly higher sense of personal accomplishment (M = 36.85, SD =

6.13) as compared to the mental health clinicians, t (163) = 12.4929, p< .0001. The higher scores on personal accomplishment subscale indicate lower level of burnout.

With respect to academic burnout, The Maslach Burnout Inventory (MBI) Manual (Maslach, Jackson, & Leiter, 1996) did not offer norms specific to student population. The MBI published cutoff scores of low, moderate and high levels for both clinical and academic burnout (see Table 4). Based on the academic burnout cutoff scores, students in the current study scored high range on the exhaustion and cynicism subscales and in the moderate range on the professional efficacy subscale.

Table 4

MBI General Student Cutoff Scores Published in Maslach Burnout Inventory Manual

	Academic		
	Professional Efficacy	Exhaustion	Cynicism
Low	0-23	0-10	0-5
Moderate	24-29	11-15	6-10
High	30 or over	16 or over	11 or over

Burnout-HSS Cutoff Scores Published in Maslach Burnout Inventory Manual

	Clinical		
	Personal Accomplishment	Emotional Exhaustion	Depersonalization
Low	0-31	0-16	0-6
Moderate	32-38	17-26	7-12
High	39 or over	27 or over	13 or over

Hypotheses testing results

Difference between clinical and academic burnout

The first research question examined rates of academic and clinical burnout using two different versions of the MBI. It was predicted that academic burnout would be higher than clinical burnout.

To explore the first research question, rates of clinical and academic burnout were compared, using a 3x3 McNemar test performed in R. Burnout subscale values were recoded as low, moderate and high according to the MBI General Student and MBI Human Service scoring key cutoff values. All three subscales were distributed significantly unequally among academic and clinical scale types. Efficacy/accomplishment subscales $\chi^2(3, N=164)=8.031$, $p=.0453$; Exhaustion $\chi^2(3, N=164)=59.830$, $p<0001$; Cynicism/depersonalization $\chi^2(3, N=164)=103.580$, $p<0001$. For a comparison of the clinical and academic burnout level distribution, see Table 5.

Table 5 *Comparison between academic and clinical burnout scores*

	Clinical Low	Academic Low	Clinical Moderate	Academic Moderate	Clinical High	Academic High
Emotional Exhaustion	33%	19.50%	44.50%	15.90%	22.60%	64.60%
Depersonalization / Cynicism	78%	21.30%	16.50%	17.70%	5.50%	61%
Personal accomplishment/ Professional efficacy	15.90%	26.80%	41.50%	32.30%	42.70%	40.90%

Academic burnout was higher in our sample than clinical burnout as demonstrated by higher rates on the Emotional Exhaustion and Cynicism subscales and lower rates of professional accomplishment subscale of academic burnout when compared to clinical burnout. The clinical and academic scores were distributed across the Low, Moderate and High burnout levels with an opposite skew for two of the sub-scales: Emotional Exhaustion and Depersonalization/cynicism. For these sub-scales, the proportion of participants reporting Low levels of burnout was much higher on the clinical than the academic measure (i.e., Emotional Exhaustion: 33% clinical versus 19.5% academic; Depersonalization/ Cynicism: 78% clinical versus 21.3% academic). Consistently, on the High burnout level, the difference in proportions was reversed (i.e., Emotional Exhaustion: 22.6% clinical versus 64.6% academic; Depersonalization/ Cynicism: 5.5% clinical versus 61% academic). Thus, in these domains, the data indicate a much higher level of academic than clinical burnout. In

the case of personal accomplishment, the difference between the distributions appeared less dramatic, with approximately equal proportions of participants reporting scores in the High level, although some difference in rate was noted on the lower end of the distributions (15.9% clinical versus 26.8% academic). Keeping the reverse scoring in mind for this sub-scale, this result is consistent with a higher academic burnout; however, the difference seems much smaller relative to the other sub-scales.

Relationship between demographic characteristics and burnout

The second research question examined the role of demographic factors in relation to clinical and academic burnout. The role of gender, age and weekly internship hours were explored relative to both academic and clinical burnout. Analysis assessed whether burnout was related to marital status, race, perceived autonomy, degree of clients' mental functioning. Degree of burnout was further analyzed by clinical population, program type, internship/practicum type.

Our hypotheses predicted that women would report significantly higher degrees of burnout than men, that burnout would be positively related to age, that higher perceived autonomy would predict significantly lower clinical burnout, and that participants working with lower functioning clients would report higher levels of burnout. The relationship between burnout and other demographic factors were examined to test for potential confounding variables in the sample. To account for multiple comparisons related to the six burnout subscales, a Bonferroni correction was applied to each test, reducing the new alpha level for determining significance to p=.0083.

An independent T-test was used to compare the six mean clinical burnout scores between males and females. No significant results were found in clinical subscale

comparisons. Emotional Exhaustion men (M=20.115, SD=8.325) and women (M=20.623, SD=9.680), t(162)=-.205, p=.803. Personal Accomplishment men (M=35.4231, SD=7.295) and women (M=37.116, SD=5.871), t(162)=-1.295, p=.197. Depersonalization men (M=4.923, SD=4.270) and women (M=3.797, SD=3.919), t(162)=1.325, p=.187. Similarly, analysis did not find significant differences between men and women in the mean academic burnout scores across all three subscales. Exhaustion men (M=16.385, SD=9.278) and women (M=18.667, SD=7.546), t(162)=-1.362, p=.175. Professional Efficacy men (M=26.615, SD=5.615) and women (M=26.761, SD=6.423), t(162)=-0.108, p=.914. Cynicism men (M=13.808, SD=7.415) and women (M=14.101, SD=8.674), t(162)=0.-162, p=.872. The current study did not find evidence of a relationship between gender and burnout level.

A linear regression with age as the predictor variable and clinical burnout as the outcome variable was performed to test the hypothesis that age is significantly related to clinical burnout.

Contrary to our hypothesis, there were no significant relationships between age and any type of burnout. (Clinical Emotional Exhaustion subscale, F(1,158)=0.754, p=.387. Personal Accomplishment subscale, F(1,158)=0.001, p=.982, and the Depersonalization subscale, F(1,158)=1.942, p=.165. Academic Exhaustion subscale, F(1,158)=0.467, p=.495, the Professional Efficacy subscale, F(1,158)=3.790, p=.053, or the Cynicism subscale, F(1,158)=0.246, p=.621). Additionally, as seen in Table 6, most subscales of burnout were significantly correlated with each other. The magnitude of these correlations were weak to moderate. The strongest positive correlations were observed between academic Exhaustion and academic Cynicism ($r = .530$, $p < 0.01$),

clinical Depersonalization and clinical Emotional Exhaustion ($r = .464$, $p < 0.01$). The strongest negative correlation was found between academic Cynicism and academic Professional Efficacy ($r = -.444$, $p < 0.01$) which suggests that lower levels of efficacy correlates with higher levels of cynicism.

It is important to note that the current study had a restricted age range with mean 28.68 and a standard deviation of 6.32. Previous studies that found a relationship between clinicians' age and burnout had a larger age range. For example, meta-analysis of Lim et al., (2010) included studies with age means ranging from 20 to 50 with standard deviations ranging from 8 to 15. Restricted age range could limit the power of the present analysis, accounting for the null result.

Table 6

Correlations Between Participants' Age and Burnout Score for Academic and Clinical Burnout Subscales

	Age	Emotional Exhaustion	Personal Accomplishment	Depersonalization	Exhaustion	Professional Efficacy	Cynicism
Age	-						
Emotional Exhaustion (Clinical)	-.069	-					
Personal Accomplishment (Clinical)	.002	-.299**	-				
Depersonalization (Clinical)	-.110	.464**	-.283**	-			
Exhaustion (Academic)	.054	.399**	-.095	.077	-		
Professional Efficacy (Academic)	-.153	-.123	.330**	-.027	-.265*	-	
Cynicism (Academic)	-.039	.331**	-.107	.222**	.530**	-.444**	-

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

A linear regression with number of internship hours as the predictor variable and

clinical burnout as the outcome variable was computed to determine the relationship between internship hours per week and clinical burnout. There was no significant relationship between clinical burnout and weekly internship hours for the Emotional Exhaustion subscale, $F(1,162)=.134$, $p=.715$, the Personal Accomplishment subscale, $F(1,162)=.022$, $p=.882$, or the Depersonalization subscale, $F(1,162)=3.746$, $p=.055$. There was also no significant relationship between academic burnout and weekly internship hours for the Exhaustion subscale, $F(1,162)=1.727$, $p=.191$, the Professional Efficacy Subscale, $F(1,162)=2.211$, $p=.139$, or the Cynicism subscale, $F(1,162)=1.704$, $p=.194$. The current study found no evidence of a relationship between number of internship hours and burnout level of student clinicians.

Analysis of race/ethnicity is presented in Tables 7-10. ANOVA was used for this analysis. As demonstrated by the Tables 7-10, no significant differences emerged among the mean burnout scores of the race/ethnicity groups in either the clinical or academic burnout subscales. The result contradicts our hypothesis that race correlates with burnout.

Table 7

Group comparisons between race/ethnicity by subscales of burnout

	Clinical	Academic
Emotional Exhaustion	F(6, 157)=0.621, p=.713	F(6,157)=0.784, p=.584
Depersonalization/Cynicism	F(6, 157)=2.220, p=.044	F(6,157)=0.784, p=.584
Personal accomplishment/ Professional efficacy	F(6, 157)=.921, p=.482	F(6,157)=0.728, p=.628

Note that adjusted significant alpha =.0083

Table 8

Mean burnout scores by race/ethnicity for Emotional Exhaustion/Exhaustion subscales

		Clinical		Academic	
Race/Ethnicity	N	Mean	Std. Dev	Mean	Std. Dev
African origin	18	19.78	9.04	19.11	6.61
Asian/Pacific islander	6	24.33	11.99	24.00	7.23
Latino/Hispanic	23	22.39	10.62	17.39	8.52
Multiracial	4	17.75	13.52	18.75	12.42
Native American	2	25.5	6.36	13.50	3.54
White	109	19.99	9.13	18.07	7.82
Other	2	25.50	7.78	21.00	9.90

Table 9

Average burnout by race/ethnicity for the Personal Accomplishment/Professional Efficacy subscales

		Clinical		Academic	
Race/Ethnicity	N	Mean	Std. Dev	Mean	Std. Dev
African origin	18	37.00	6.02	28.17	6.28
Asian/Pacific islander	6	35.17	7.08	24.33	8.45
Latino/Hispanic	23	35.39	6.99	27.26	5.28
Multiracial	4	38.50	2.38	29.25	5.38
Native American	2	36.50	3.53	31.50	2.12
White	109	37.30	6.03	26.31	6.47
Other	2	29.50	3.54	28.50	2.12

Table 10

Average burnout by race/ethnicity for the Depersonalization/Cynicism subscales

		Clinical		Academic	
Race/Ethnicity	N	Mean	Std. Dev	Mean	Std. Dev
African origin	18	2.06	2.80	9.78	6.05
Asian/Pacific islander	6	2.17	3.06	17.17	10.94
Latino/Hispanic	23	4.78	5.18	13.17	7.92
Multiracial	4	0.75	1.50	7.75	5.56
Native American	2	8.50	2.12	10.00	7.07
White	109	4.29	3.85	15.09	8.72
Other	2	2.00	0.00	13.50	2.12

The average burnout score per program type for academic and clinical burnout is presented in Tables 11-14. ANOVA test was used with all subscales except for the

Exhaustion measure of academic burnout. A nonparametric test (Kruskal-Wallis) was utilized for the above mentioned subscale instead of ANOVA because Levene's test for equality of variances indicated that the ANOVA assumption of homoscedasticity was violated. No significant differences were found in mean burnout scores among program types in either the clinical or academic burnout subscales. Similarly, no significant differences were found between program types in the academic exhaustion subscale. There is not enough evidence to suggest that program type affects burnout level of student clinicians.

Table 11

Burnout Subscales by Program Type

	Clinical	Academic
Emotional Exhaustion	$F(5,158)=0.813$, $p=.542$	$\chi^2(5, N=164)=12.662$, p=.027. (Cruskal Wallis)
Depersonalization/Cynicism	F(5,158)=.665, p=.651	F(5,158)=3.079, p=.011
Personal accomplishment/ Professional efficacy	F(5,158)=.859, p=.510	F(5,158)=1.624, p=.157

Note that adjusted significant alpha =.0083

Table 12

Average Burnout by Program Type for the Emotional Exhaustion/Exhaustion subscales

		Clinical		Academic	
Program Type	N	Mean	Std. Dev	Mean	Std. Dev
Master in Mental Health counseling	13	18.08	9.00	14.62	10.00
Master in Social work	41	20.00	9.51	20.17	5.23
PhD counseling psychology	36	22.44	8.41	17.50	7.56
PhD clinical psychology	26	19.00	11.23	15.50	9.67
PsyD clinical psychology	31	21.97	10.21	21.61	6.85
Other	17	19.47	7.37	16.59	8.25

Table 13

Average Burnout by Program Type for the Personal Accomplishment/Professional Efficacy subscales

		Clinical		Academic	
Program Type	N	Mean	Std. Dev	Mean	Std. Dev
Master in Mental Health counseling	13	38.23	5.09	28.23	4.88
Master in Social work	41	36.22	6.04	27.71	5.81
PhD counseling psychology	36	37.11	5.83	26.17	5.79
PhD clinical psychology	26	38.54	6.76	24.65	8.22
PsyD clinical psychology	31	35.97	6.31	25.90	6.56
Other	17	35.76	6.42	29.18	4.56

Table 14

Average Burnout by Program Type for the Depersonalization/Cynicism subscales

		Clinical		Academic	
Program Type	N	Mean	Std. Dev	Mean	Std. Dev
Master in Mental Health counseling	13	3.92	3.77	10.77	9.08
Master in Social work	41	3.67	3.70	12.02	8.37
PhD counseling psychology	36	3.64	3.64	16.72	7.01
PhD clinical psychology	26	3.62	3.62	16.81	9.77
PsyD clinical psychology	31	4.91	4.91	14.84	8.44
Other	17	4.35	4.35	10.18	8.47

Average burnout score per internship/practicum type for academic and clinical burnout is presented in Tables 15-18. No significant differences were found in mean burnout scores among the internship/practicum types in either the clinical or academic burnout subscales.

Table 15

Burnout by Internship/Practicum Type

	Clinical	Academic
Emotional Exhaustion	*F(5,158)=.739, p=.595*	F(5,158)=.877, p=.498
Depersonalization/Cynicism	F(5,158)=.215, p=.956	F(5,158)=.562, p=.729
Personal accomplishment/ Professional efficacy	F(5,158)=1.64, p=.152	F(5,158)=.330, p=.894

Note that adjusted significant alpha =.0083

Table 16

Average Burnout by Internship/Practicum Type for the Emotional Exhaustion/Exhaustion subscales

		Clinical		Academic	
Internship/Practicum Type	N	Mean	Std. Dev	Mean	Std. Dev
College counseling center	39	22.23	8.61	18.10	8.27
Outpatient clinic	32	19.44	8.73	16.84	8.53
Mental inpatient unit	13	23.15	12.71	18.62	7.29
Community based acute treatment	9	21.78	7.71	15.78	8.09
Veterans administration	18	19.39	9.76	17.67	9.97
Other	53	19.51	9.89	19.91	6.34

Table 17

Average Burnout by Internship/Practicum Type for the Personal Accomplishment/Professional Efficacy

		Clinical		Academic	
Internship/Practicum Type	N	Mean	Std. Dev	Mean	Std. Dev
College counseling center	39	36.72	6.89	26.87	5.33
Outpatient clinic	32	37.38	3.70	26.25	6.61
Mental inpatient unit	13	35.46	7.49	28.62	6.21
Community based acute treatment	9	35.46	8.71	27.22	6.10
Veterans administration	18	39.11	5.91	26.00	7.84
Other	53	35.94	5.76	26.64	6.41

Table 18

Average Burnout by Internship/Practicum Type for the Depersonalization/Cynicism

		Clinical		Academic	
Internship/Practicum Type	N	Mean	Std. Dev	Mean	Std. Dev
College counseling center	39	4.15	3.86	14.10	8.72
Outpatient clinic	32	3.94	4.01	14.03	8.22
Mental inpatient unit	13	4.62	6.32	12.85	7.36
Community based acute treatment	9	3.11	3.02	11.33	9.54
Veterans administration	18	3.50	3.55	16.61	9.86
Other	53	4.02	3.77	13.92	8.16

A series of independent samples T-tests were performed to examine the differences in academic and clinical burnout scores between individuals who are single versus individuals who are in a committed relationship; who are a first generation college student versus those who are not; individuals who are international students versus those who are not. Additionally, employment status, unrelated to participants' academic and clinical responsibilities was also taken into account. No significant findings emerged in this analysis. Descriptive statistics, t-statistics and p values for the independent samples T-Tests appear in Tables 19-22.

Table 19

Descriptives, t-statistics and p-values for Emotional Exhaustion/Emotional subscales

			Clinical					Academic				
		N	Mean	SD	t	Df	p	Mean	SD	t	df	p
Marital Status					0.994	159	.322			0.224	159	.023
	Single	62	21.35	10.08				18.50	8.07			
	Committed	99	19.84	8.98				18.21	7.87			
1st Gen. Student					1.463	162	.145			0.075	162	.940
	Yes	57	22.02	9.78				18.37	7.71			
	No	107	19.76	9.23				18.27	7.97			
International Student					-1.289	162	.199			-0.413	162	.680
	Yes	6	15.67	12.50				17.00	11.44			
	No	158	20.73	9.32				18.34	7.74			
Paid Job					0.164	162	.870			-0.381	162	.704
	Yes	65	20.69	10.14				18.02	7.721			
	No	99	20.44	9.03				18.49.	7.98			

Table 20

Descriptives, t-statistics and p-values for Personal Accomplishment, Professional Efficacy

			Clinical					Academic				
		N	Mean	SD	t	df	p	Mean	SD	t	df	p
Marital Status					0.008	159	.993			1.142	159	.255
	Single	62	36.89	6.32				27.50	6.84			
	Committed	99	36.89	6.10				26.33	5.95			
1st Gen. Student					0.098	162	.922			1.491	162	.138
	Yes	57	36.91	6.34				27.74	6.08			
	No	107	36.81	6.04				26.21	6.36			
International Student					0.808	162	.420			-0.292	162	.771
	Yes	6	38.83	5.38				26.00	8.41			
	No	158	36.77	6.13				26.77	6.22			
Paid Job					-0.236	162	.814			-0.303	162	.762
	Yes	65	36.71	6.39				26.55	5.76			
	No	99	36.94	5.98				26.86	6.64			

Table 21

Descriptives, t-statistics and p-values for Depersonalization, Cynicism

			Clinical					Academic				
		N	Mean	SD	t	df	p	Mean	SD	t	df	p
Marital Status					0.078	159	.938			-1.525	159	.129
	Single	62	4.00	3.69				12.82	9.12			
	Committed	99	3.95	4.15				14.92	8.07			
1st Gen. Student					0.921	162	.358			-0.505	162	.614
	Yes	57	4.37	4.64				13.60	8.45			
	No	107	3.77	3.59				14.30	8.51			
International Student					-0.714	162	.476			-0.114	162	.909
	Yes	6	2.83	3.31				13.67	10.33			
	No	158	4.02	4.01				14.07	8.43			
Paid Job					0.864	162	.389			-1.276	162	.204
	Yes	65	4.31	3.90				13.02	8.89			
	No	99	3.76	4.05				14.74	8.15			

A Spearman's rank-order correlation was calculated to determine the relationship between academic and clinical burnout and degree of autonomy. Autonomy was measured with a single item consisting of a seven point Likert scale: "How much autonomy do you have at your practicum/internship placement?" This analysis did not find significant relationships between perceived autonomy and burnout in either the academic or clinical burnout subscales. The hypothesis that autonomy is related to clinical and academic burnout was not supported (See Table 22).

Table 22

Correlations between participant Autonomy and burnout score for Academic and Clinical burnout subscales

	Emotional Exhaustion (Clinical)	Personal Accomplishment (Clinical)	Depersonalization (Clinical)	Exhaustion (Academic)	Professional Efficacy (Academic)	Cynicism (Academic)
Autonomy	-.04	.103	.066	.003	-.043	-.024
p values	.608	.189	.400	.965	.584	.758

*. Correlation is significant at the 0.008 level (2-tailed).

To test the hypothesis that burnout is significantly higher when working with clients with acute mental illness, Spearman's rank-order correlations were calculated. Level of functioning was measured with a single 7-point-Likert scale item: "What is the average level of functioning of clients at your placement?". There was no significant relationship between degree of client functioning and burnout for either the academic or clinical burnout subscales. The hypothesis that settings with lower functioning clients result in higher clinical and academic burnout was not supported with this sample (See Table 23).

Table 23

Correlations between level of client functioning and burnout score for Academic and Clinical burnout subscales

	Emotional Exhaustion (Clinical)	Personal Accomplishment (Clinical)	Depersonalization (Clinical)	Exhaustion (Academic)	Professional Efficacy (Academic)	Cynicism (Academic)
Client functioning	-.005	-.027	.039	-.020	.008	-.015
p values	.946	.743	.624	.732	.921	.864

*. Correlation is significant at the 0.008 level (2-tailed).

A series of nonparametric tests (Mann-Whitney U) were performed to examine differences in the distributions of clinical and academic burnout scores, based on clinical population type. Population types included whether clients were students, adults, veterans, children or adolescents. No significant findings emerged in these comparisons (See Table 24).

Table 24

Correlations between client population and burnout score for Academic and Clinical burnout subscales

	Emotional Exhaustion	Personal Accomplishment	Depersonalization	Exhaustion	Professional Efficacy	Cynicism
	(Clinical)	(Clinical)	(Clinical)	(Academic)	(Academic)	(Academic)
	Mann-Whitney U	Mann-Whitney U	Mann-Whitney U	Mann-Whitney U	Mann-Whitney U	Mann-Whitney U
College Students	3112.5	3216	3120	3007	3276.5	3246.5
p values	.53	.776	.544	0.328	.934	.855
Adults	3040	3064	2771.5	3038.5	3010.5	3071.5
p values	.515	.568	.118	.512	.453	.585
Veterans	2267.5	2127	2151.5	2288.5	2196.5	2046.5
p values	.885	.481	.541	.951	.669	.306
Children	2891.5	2921.5	2888.5	2002	2548	2795
p values	.646	.722	.636	.939	.098	.427
Adolescents	3160	2751	3116	3175.5	2744.5	2735.5
p values	.893	.129	.775	.934	.124	.117

*. Correlation is significant at the 0.008 level (2-tailed).

The Relationship between burnout and perceived social support

The third research question examined the impact of perceived social support on the burnout level of student clinicians. A univariate linear regression analysis was used to examine academic and clinical burnout scores and social support scale totals, using age and direct clinical hours per week as covariates. The study predicted that perceived level of social support would be a significant predictor of clinical and academic burnout. Bonferroni correction reduced the alpha level for determining significance to p=.0083. See Table 25

Table 25

The relationship between burnout and perceived social support

Clinical Burnout		Academic Burnout	
Emotional Exhaustion	$F(1,155)=7.945$, $p=.005$, $\eta 2=.049$	Exhaustion	$F(1,155)=5.432$, $p=.021$
Depersonalization	$F(1,155)=7.752$, $p=.006$, $\eta 2=.048$	Cynicism	$F(1,155)=21.647$, $p<.000001$, $\eta 2=.069$
Personal accomplishment	$F(1,155)=8.339$, $p=.004$, $\eta 2=.051$	Professional Efficacy	$F(1,155)=11.513$, $p=.001$, $\eta 2=.069$

Level of social support significantly predicted degree of clinical burnout across all three subscales. For every 1 point decrease in social support, Emotional Exhaustion score increased by .21 points. On average 4.9% of variance in Emotional Exhaustion scores can be explained by social support scores. For every 1 point decrease in social support, Depersonalization score increased by .09 points. On average 4.8% of variance in Depersonalization scores can be predicted by social support scores. For every 1 point decrease in social support, Personal Accomplishment score decreased by .14 points. On average 5.1% of variance in Personal Accomplishment scores can be explained by social support scores. These data suggest that social support is a significant but weak predictor of clinical burnout subscales.

After applying Bonferroni correction, Social support scores significantly predicted degree of subscales of academic burnout except academic Exhaustion subscale. For every 1 point decrease in social support, Professional Efficacy score decreases by .17

points. On average 6.9% of variance in Professional Efficacy scores can be explained by social support scores. Thus, social support is a significant but weak predictor of professional efficacy. For every 1 point decrease in social support, Cynicism score increases by .31 points on average. 12.3% of variance in Cynicism scores can be explained by social support scores. Social support level was the strongest predictor for cynicism subscale as compared to all other subscales of clinical and academic burnout.

Confounding variables such as the overall load and perceived competency

The Fourth research question examined the relationship between burnout subscales and the balance of multiple responsibilities. The objective was to test if the overall burden of responsibilities on students contributes to their level of burnout. This was measured by correlating burnout subscales with a-7-point-Likert scale items "I feel emotionally drained with the combination of my clinical and academic responsibilities" and "I feel emotionally drained with the combination of all responsibilities in my life." Our hypothesis was that the above mentioned items and academic and clinical burnout would not be significantly related. To test this hypothesis, Spearman's rank-order correlations were computed. To account for multiple comparisons related to the six burnout subscales, a Bonferroni correction was applied to each of these tests, making the new alpha level to determine significance, p=.0083.

The analysis showed that the item "I feel emotionally drained with the combination of my clinical and academic responsibilities" was significantly negatively associated with the personal accomplishment subscale ($r_s(164)=-.221$, $p=.004$). Personal accomplishment and efficacy subscales have reverse scoring compared to other subscales of burnout. Similar results were found for academic burnout, as measured by the

professional efficacy subscale ($r_s(164) = -.209$, $p=.007$). Self-reported feelings of being emotionally drained from clinical and academic responsibilities were significantly positively correlated with both Emotional Exhaustion ($r_s(164)= .554$, $p<.000001$) and Exhaustion ($r_s(164)= .577$, $p<.000001$). Likewise, Depersonalization ($r_s(164) =.228$, $p =.003$) and Cynicism ($r_s(164) = .386$, $p<.000001$.) were significantly positively correlated with being emotionally drained from clinical and academic responsibilities. This suggests that being emotionally drained from the combination of clinical and academic responsibilities contributes to the overall experience of burnout.

After applying Bonferroni correction, burnout was not significantly associated with feeling emotionally drained by combination of all life responsibilities as measured by the Personal Accomplishment subscale ($r_s(164)=-.186$, $p =.017$). Burnout was significantly negatively correlated with Professional Efficacy subscale ($r_s(164)=-.237$, $p =.002$). Feeling emotionally drained by combination of all life responsibilities was significantly positively associated with both clinical and academic burnout as measured by the Emotional Exhaustion ($r_s(164)=.477$, $p<.000001$) and Exhaustion ($r_s(164)=.566$, $p<.000001$) subscales; feeling emotionally drained by combination of all life responsibilities was significantly associated with academic burnout as measured by the Cynicism subscale ($r_s(164) =.427$, $p<.000001$), but not significantly associated with clinical burnout as measured by the Depersonalization subscale ($r_s(164) =.199$, $p =.011$).

The data indicates that the combined responsibilities of student clinicians somewhat affected rates of both clinical and academic burnout.

Relationship between burnout and perceived competency

The fifth research question examined the relationship between feelings of competency and burnout. The goal of the analysis was to test if perception of competence correlated to burnout. Our hypothesis was that self-reported feelings of competence would not be significantly correlated with clinical and academic burnout, indicating that feelings of lack of competency are separate from burnout. The Spearman's rank-order correlations indicated that self-reported feelings of competence are not correlated with academic burnout; there was no statistically significant correlation between competence and either the Professional Efficacy ($r_s(164) = .149$, $p = .056$), Exhaustion ($r_s(164) = -.056$, $p = .477$), or Cynicism ($r_s(164) = -.042$, $p = .593$) burnout subscales. Likewise, feelings of competence were not significantly correlated with clinical burnout, as measured by the Emotional Exhaustion ($r_s(164) = -.174$, $p = .026$) or Depersonalization ($r_s(164) = .007$, $p = .593$) subscales. However, the positive relationship between the Personal Accomplishment subscale and self-reported competence was statistically significant, although weak ($r_s(164) = .341$, $p < .000001$), suggesting that individuals who believe they are more competent have a greater sense of accomplishment.

These results somewhat support our hypothesis; competency is unrelated to academic burnout and generally unrelated to clinical burnout with the exception of Personal Accomplishment.

Summary of Results

The analyses yielded several significant findings regarding clinical and academic burnout. Students experienced academic burnout, demonstrated by high levels of cynicism and exhaustion and moderate levels of professional efficacy. Students' clinical burnout was demonstrated by moderate levels of emotional exhaustion and personal accomplishment; and low level of depersonalization.

When comparing clinical burnout of our sample with published data, our participants experienced higher levels of emotional exhaustion and personal accomplishment, along with lower levels of depersonalization than norms of mental health providers (Maslach, Jackson, & Leiter, 1996). Clinical and academic burnout had a significantly different distribution of scores for all subscales, particularly the Cynicism and Depersonalization distributions which had opposite skews. The data demonstrates that 22.60% of students in their clinical practice and 64.60% of students in their academic life experienced high levels of emotional exhaustion. High levels of depersonalization/cynicism were reported by 5.5% of students in their clinical practice and 61% of students in their academic life. 15.90% of student in their clinical practice and 26.80% of students in their academic life reported low levels of personal accomplishment/professional efficacy.

Neither clinical nor academic burnout was significantly correlated with the degree of autonomy nor with the level of functioning of clients. Feelings of competency were not related to clinical or academic burnout with the exception of clinical personal accomplishment. Clinical and academic burnout was affected by students' combined

responsibilities across most subscales.

The participants' ratings of social support were significantly negatively associated with feelings of academic and clinical burnout as indicated by the Emotional Exhaustion, Depersonalization and Cynicism subscales, and significantly positively related to self-reported measures of Personal Accomplishment and Professional Efficacy. The only burnout subscale not significantly associated with social support was academic Exhaustion. Taken together, these findings suggest that social support may provide a buffer for burnout experienced by student clinicians.

The correlation matrix between academic and clinical burnout scales showed significant weak to moderate correlations. A correlation between burnout subscales might suggest an overlap of constructs. Emotional Exhaustion, Depersonalization and Personal Accomplishment are three subscales of clinical burnout, while Exhaustion, Cynicism and Professional Efficacy are three subscales of academic burnout. Although they aim to measure burnout in two different settings, clinics and universities, the content of the subscales are similar. They are expected to correlate; however, if they were indistinguishable, the correlation between them would be very strong (close to 1). In our case, the correlation between subscales ranged between weak to moderate levels. The above-mentioned subscales with similar constructs correlated moderately. Further discussion of these results continues in chapter 5.

CHAPTER 5

DISCUSSION

In this chapter the results of the hypotheses will be discussed and analyzed in relation to the preexisting theories and research related to student burnout. The results will also be interpreted irrespective of their concordance with the established knowledge in the field. The chapter further discusses the study implications for practice of student clinicians. Finally, the chapter will present the limitations of this study and explore possible future directions for student burnout research.

Discussion of the results of the hypotheses

This study set out to explore five hypotheses about the differences between academic and student burnout and the factors that influence clinical and academic burnout.

Hypothesis 1 stated that the rates of clinical and academic burnout would be significantly different from each other for student clinicians who participated in the study. Academic burnout was expected to be higher than clinical burnout for student clinicians. This hypothesis was confirmed by the results. Clinical and academic burnout scores were distributed significantly unequally among all three subscales. Subscale distributions indicated that high levels of emotional exhaustion and cynicism are more prevalent for academic burnout in comparison with clinical burnout. Low level of professional efficacy, which is the third indicator of burnout, was also more prevalent within academic burnout compared with clinical burnout. Currently, this is the only study that compared students' clinical and academic burnout.

Subscales were recoded as low, moderate and high level based on the published cutoff scores. Burnout level is considered significant when Emotional Exhaustion and Depersonalization/Cynicism subscales are high and when Personal Accomplishment/Professional Efficacy level is low. High emotional exhaustion was observed in 22.6% of students on the clinical burnout scale, while the academic burnout scale demonstrated that 64.6% scored at the high level. Sixteen percent of students experienced a low level of clinical personal accomplishment while 26.8% of students experienced a low level of academic professional efficacy. Overall the results of this study suggest that students experience a higher degree of academic burnout than clinical burnout.

The most dramatic difference was observed between depersonalization/cynicism subscales of burnout. Depersonalization and cynicism both measure cynical attitude; depersonalization subscale is related to clinical burnout while cynicism subscale is related to academic burnout. Depersonalization was defined as an impersonal, cynical response toward clients that are provided services, treatment, or therapy (Maslach & Jackson, 1981). Cynicism was conceptualized as a cynical attitude towards one's academic work (Schaufeli et al., 2002). As can be observed from the data, a significant number of students (61%) experience above high cutoff scores on academic cynicism while in clinical practice only small number of students (5.5%) report depersonalization levels above high cutoff scores.

The most important finding of this study is that student clinicians feel burned out. Students experience higher emotional exhaustion in their clinical practice when compared to published norms of licensed clinicians. Student clinicians also demonstrated acute

academic burnout. It is significant that student clinicians start their practice by feeling burned out. The study suggests that the combination of academic and clinical demands as well as a full range of life responsibilities play into the overall level of student burnout.

High demands, multiple responsibilities, performance anxiety, peer competition and imposter syndrome offer possible explanations for high levels of burnout among student clinicians. Students additionally struggle with aspects of clinical work such as boundary and ethics issues with clients, institutional demands, and countertransference in their practice. Personal and professional relationships can also contribute to burnout (Badali, & Habra, 2003).

High levels of clinical and academic burnout can have a deleterious effect on the health and wellbeing of student clinicians. Existing research of licensed clinicians suggested connection between burnout and mental as well as physical health (Ahola et al., 2005; Ahola & Hakanen, 2014; Burke & Richardsen, 1993; Chandola, Brunner, & Marmot, 2006; Cherniss, 1980; Maslach et al., 2001; Melamed, Shirom, Toker, & Shapira, 2006; Honkonen et al., 2006; Lee & Ashforth, 1993; Prosser et al., 1997; Pruessner, Hellhamer, & Kirschbaum, 1999; Smoot & Gonzolas, 1995; Sutherland & Cooper, 1990; Stalker & Harvey, 2002; Toker et al., 2012).

The implications for employment included low job satisfaction (Eriksson, Starrin, & Janson, 2008), and high absenteeism and turnover (Rollins et al., 2010; Swider & Zimmerman, 2009). The field lacks specific information about above factors among the student clinician population in the US. The causes and consequences of student burnout requires further study.

It is concerning that student clinicians in our research experience a higher level of emotional exhaustion in their practice as compared to licensed clinicians. Mental health practitioners' work is process oriented and heavily dependent on the rapport between the therapist and the client (Hubble, Duncan, & Miller, 1999). Fatigued student clinicians may be compromised in their ability to be fully present during the sessions and may model poor self-care for their clients. It is safe to suggest that exhausted clinicians can negatively affect clients' therapeutic outcome. It is essential to recognize that the burnout of student clinicians is real and deserves attention.

Hypothesis 2 predicted that burnout would be higher in females, negatively correlated with age and more prevalent in settings restricting autonomy. Moreover, treating clients with acute mental illness was hypothesized to increase the risk of burnout. Analysis also included demographic characteristics specific to clinical practice such as type of practicum placement, number of clients in caseload, clients' level of functioning, as measured by seven point Likert scale item "What is the average level of functioning of clients at your placement?" etc. Hypothesis 2 was not supported by the study. Our analysis explored the relationship between demographics and clinical burnout as well as demographics and academic burnout separately. Demographic characteristics were not found to be associated with academic or clinical burnout.

Although, the results of the meta-analysis indicated that gender would be a predictor of level of burnout (Purvanova & Muros, 2010), the current study did not support that result. This contradiction may be explained by the fact that the meta-analysis explored licensed clinicians and did not target student clinicians.

There is an abundance of evidence that explores the interaction between age and

burnout in clinicians (Acker, 2012; Lim, Kim, Kim, Yang, & Lee, 2010; Vredenburgh, Carlozzi, & Stein, 1999), showing that young age was associated with a high level of burnout. Less data is available concerning the correlation between age and levels of burnout among students (Robins, Roberts, and Sarris, 2015). This study did not find a relationship between age and burnout. This result, nevertheless, could be attributed to the restricted age range of the existing dataset, as discussed in limitations section of the study.

Lack of autonomy did not correlate with clinical burnout. This finding differs from the results of previous studies of clinicians in the mental health field (Acker, 2012; Lim, Kim, Kim, Yang, & Lee, 2010; Vredenburgh, Carlozzi, & Stein, 1999). Existing studies have not investigated the relationship between autonomy at practicum placements and burnout of student clinicianse. Thus, the results of this study might suggest that autonomy is not associated with burnout for the student clinician population. One of many possible explanations of these result could be that student clinicians are rarely in a position of authority. As practicum interns, students are given less autonomy.

Burnout was not correlated with having clients with acute mental illness. This result is different from that of the previous studies about burnout levels among clinicians (Acker, 2012; Lim, Kim, Kim, Yang, & Lee, 2010; Vredenburgh, Carlozzi, & Stein, 1999). The possible explanation for this finding may be the nature of student training. Unlike expert clinicians who are solely responsible for their clients who exhibit acute conditions, students get support from their supervisors when they treat high-risk clients or those with acute mental illness. Moreover, students' supervisors are formally responsible for all of students' cases. Thus, students' option to delegate responsibility might

ameliorate the burnout associated with having clients with acute conditions. It should be noted, however, that the number of clients with acute illness was not measured in this study. This problem is addressed in the limitations section of this chapter.

Additionally, this study analyzed demographic characteristics in relation to the student burnout level. Supplemental analyses included questions regarding students' marital status, status of being a first generation or an international student, race/ethnicity, type of program, number of clinical hours at practicum placement, type of practicum placement, and type of served population. None of the abovementioned factors correlated with the level of burnout. These results contradict the established knowledge about the relationship between these demographics and burnout (Acker, 2012; Hamama, 2012; Lent & Schwartz, 2012; Lim, Kim, Kim, Yang, & Lee, 2010; Vredenburgh, Carlozzi, & Stein, 1999). Such a diversion from preexisting studies could be specific to the population of student clinicians. Although we have information about students and clinicians separately, student clinicians as a group might be more diverse and multifaceted and therefore may not share the demographic risk factors with seasoned clinicians or students in other academic fields. It could also be hypothesized that oppression, discrimination or unequal distribution of power among minority students takes years to translate into burnout. Thus, disparities do correlate with the level of burnout but they might reach a critical level later in the clinicians' career.

Hypothesis 3 stated that burnout would be negatively correlated with social support from friends, family, peers and supervisors. The results confirmed the hypothesis, which demonstrated that social support from supervisors, peers, friends and family was negatively correlated with subscales of burnout. Additionally, these findings align with

studies on the role of social support in buffering burnout among clinicians (Galek, Flannelly, Greene, & Kudler, 2011; Hamama, 2012; Rzeszutek & Schier, 2014) as well as students (Alarcon, Edwards, & Menke, 2011; Boren, 2013; Clark, Murdock, & Koetting, 2009; Jacobs & Dodd, 2003; Robins, Roberts, & Sarris, 2015).

It is understandable that supervisors have the resources necessary for students to overcome challenges in the workplace. Supervisors can assist students to attain professional goals and help them feel positive about their accomplishments at their practicum placement or in academia. Friends and family can offer support in the form of companionship, finances, and promotion of self-care as a buffer against emotional exhaustion. Both friends and family have the potential to take part in students' self-care activities thus enhancing their quality of life. Fellow peers within practicum placements can offer support with immediate tasks of the practicum and academia and also participate in extracurricular/recreational activities. Thus, they have the ability to ameliorate all three subscales of burnout.

Through hypotheses 4 and 5, this study attempted to control for confounding variables such as the overall burden of responsibilities and perceived competency, which could mask the results of our first three hypotheses. The hypotheses stated that questions about competency and the overall burden of responsibilities would not be correlated with burnout subscales. This finding would provide evidence that there is no overlap between perceived competency and burnout and that outcome can be attributed to what the burnout scales intended to measure.

Hypothesis 4 was not confirmed by the results. Burnout related to an overall load of responsibilities correlated with both clinical and academic burnout subscales. These

results suggest that there is overlap between clinical and academic burnout constructs. Although correlations were statistically significant, most of them were small in magnitude. The strongest relationship was found between item "I feel emotionally drained with the combination of my clinical and academic responsibilities" and both clinical Emotional Exhaustion ($r_s(164)= .554,\ p<.000001$) as well as academic Exhaustion ($r_s(164)= .577,\ p<.000001$) subscales. This result indicates a moderate level of overlap between exhaustion subscales and overall load. This correlation is understandable considering the wording of the item which is very close to the first item in the Exhaustion subscales. Moderate level of correlation was also observed between the item "I feel emotionally drained with the combination of my clinical and academic responsibilities" and academic cynicism ($r_s(164) = .386, p<.000001$.) This result might indicate that the combination of academic and clinical responsibilities has a moderate influence on the level of academic cynicism.

The overall load was also measured with the second item "I feel emotionally drained with the combination of all responsibilities in my life". Similarly to the previous analysis, the strongest correlation was found between this item and the Exhaustion subscales of both clinical ($r_s(164)=.477,\ p<.000001$) and academic($r_s(164)=.566$, $p<.000001$) burnout. Moreover, moderate correlation was found between this item and the academic cynicism subscale ($r_s(164) =.427, p<.000001$). In summary, there is evidence of weak to moderate influence of overall burden of responsibilities on the levels of academic and clinical burnout.

Hypothesis 5 was partially confirmed. Levels of perceived competency was not correlated with Exhaustion and Depersonalization/cynicism subscales of burnout. Thus,

the experience of Exhaustion and Depersonalization/cynicism subscales cannot be explained by perceived lack of competency by student clinicians. However, personal accomplishment sub-scales of burnout were correlated with levels of competency. It is logical that students who feel competent in their practice also experience a sense of personal accomplishment. However, the study lacks sufficient evidence to suggest that burnout and competency constructs overlap.

The relationship of the results to Conservation of Resources (COR) theory

The findings of this study are inconclusive with regards to the core principles of Conservation of Resources (COR) theory. According to COR theory, humans are governed by motivation to gain and protect resources that serve as means for survival (Gorgievski & Hobfoll, 2008; Hobfoll, 1989). Threat of loss of resources or inability to gain resources after resource investment causes significant stress. Key principles of COR influence motivation to gain and secure available resources. One of these principles stipulates that individuals have to invest available resources in order to gain more resources, prevent loss of resources or rehabilitate after loss of resources (Gorgievski & Hobfoll, 2008; Hobfoll, 1989). Individuals with more resources are more protected from continuous resource loss and have a stronger ability to invest available resources for further gain of resources, compared to those with fewer resources (Gorgievski & Hobfoll, 2008; Hobfoll, 1989). This principle has serious social justice implications. It states that people with fewer social connections, less money, fewer physical belongings and less systemic support are more vulnerable to resource loss and have fewer opportunities to gain resources. In work or academic settings it translates into higher achievement potential for individuals with privilege and for those with better access to available

resources.

The results of this study, which addressed the link between demographic characteristics and burnout, did not confirm COR theory. Young student clinicians have less available coping mechanisms to avoid resource loss and have less available resources to invest towards resource gain than older, more experienced student clinicians. Thus, young people should be more susceptible to burnout than older individuals. However, age was not correlated with burnout. Race was not significantly linked with the level of burnout either. Members of minority groups were expected to be prone to higher levels of burnout in comparison to white students. Systemic characteristics of the practicum placement such as autonomy was also expected to play role in preventing burnout. Student clinicians with a higher level of autonomy at their practicum placements were expected to experience lower level of burnout than students with lower level of autonomy. Nevertheless, autonomy was not correlated with burnout. First generation students, who sometimes come from less advantageous families were hypothesized to experience higher level of burnout as compared to students whose parents had higher education. There was no such relationship found in this study. Moreover, higher level of burnout experienced by women as compared to men can also be explained from a COR perspective. Females are less privileged group and have access to fewer resources compared with men. Contrary to expectation, no relationship was found between gender and burnout.

Another principle of COR states that resource loss and gain creates cycles. Resource loss has a stronger influence on people and happens more quickly than resource gain cycles. The individual has to possess a wealth of resources in order to be able to risk

resource investment for potential resource gain. The fact that outside factors such as positive or negative events have a temporal influence on human wellbeing and that most individuals typically regain their baseline functioning is explained by the concept of homeostasis. COR explains homeostasis as a set of resources that were accumulated over one's lifetime, including personal coping mechanisms as well as available system resources such as the environment, family, friends, and social groups (Gorgievski & Hobfoll, 2008; Hobfoll, 1989).

Systemic resources such as supervisory and social support enhance individuals' resilience and are predictors of individuals' workplace wellbeing and success (Xanthopoulou, Bakker, Demerouti, and Schaufeli, 2007). Results of the current study only confirmed the COR principle about the importance of social support. Social support from supervisors, family, friends and peers were associated with lower level of burnout compared to the rates of burnout of students with no such support. Still, the study has not provided us with enough evidence to support the COR theory of burnout.

Implications for Practice

Student clinicians provide supervised treatment to their clients at various clinical settings. The quality of student-provided treatment greatly depends on their self-care. Burnout can greatly affect student clinicians, which in turn might affect the quality of care as well as adherence to evidence-based practices (Rollins et al. 2010). This study showed significant burnout experienced by student–clinicians. Among many adverse effects, burnout can negatively affect students' learning, their performance at the university and more importantly, their effectiveness at their practicum placements. If students start off burned out, this might have adverse effects on their entire career. They

might choose ineffective interventions as trainees and later as mature clinicians. Effectively handling burnout during training years might help acquire strategies to better handle stress at later stages of their career.

This study explored risks and protective factors of burnout. Social support was found to be the most important protective factor among all measured factors of burnout. Increased awareness of factors that are correlated with burnout can help academic and clinical supervisors to create an environment that is more conducive to the healthy functioning of student clinicians. Based on the results of this study, creating conditions of supervisory and peer support can serve as a buffer from burnout and encourage healthy functioning of student clinicians. It is important that faculty and supervisors acknowledge student burnout as a real problem and check in with their students about their level of stress and means of self-care.

Supervisors and faculty who are invested in the prevention and reduction of student burnout should take into consideration all three facets of burnout. Emotional exhaustion, depersonalization and lack of sense of personal accomplishment are equally important in conceptualization of burnout. Therefore, effort should be made to encourage students to address all three factors.

Reduction of workload can help ameliorate emotional exhaustion but can negatively affect the sense of personal accomplishment among students, who might consequently conclude that they are failing. Extracurricular activities and more interaction with friends and family can positively affect all three subscales of burnout but they might fail to provide instrumental and systemic support needed to tackle challenges at practicum placement and academia. Support from academic as well as clinical

supervisors can offer substantial resources, which will allow successful resolution of obstacles at practicum and academic settings.

Limitations

The generalizability of the study could be affected by two factors. First, this study used a random sampling design. However, not all areas of the country might be represented in the results due to a low response rate of internship placements and mental health programs. Second, volunteer bias could affect results: students who volunteered to participate could be interested in the topic due to higher level of burnout than other members of the student population.

Sample size for this research was determined using Cohen's (1992) estimates of medium effect sizes. Had more conservative small effect size estimates been used, the required sample size would have been larger. This statistical decision was made in order to collect enough data to make the study feasible, but it also increased the risk of making type II error. A smaller sample could have underpowered the study, which would otherwise be observed in a larger sample.

Our study sample had a restricted age range. Restricted age range limited the variance of our predictor variable and could be masking an association between age and burnout that would exist if the study sample included the full age range. No correlation between age and burnout could be caused by this limitation. Additionally, we did not know the number of acute clients that students had. Lack of relationship between having clients with acute illness and burnout could be attributed to this limitation.

Another consideration for this study is the appropriateness of comparison of the Maslach Burnout Inventory for Human Services with Maslach Burnout Inventory

General Survey for Students to determine the relationship between academic and clinical burnout. Comparing two different scales, even if they have similar constructs raises a question of comparability of these two scales. However, this comparison was conceptualized as a comparison between two different scales that measure two facets of the same phenomenon. For example, it would be appropriate to measure and compare attention and memory of the respondent to analyze the state of their cognitive functioning. Similarly, clinical burnout and academic burnout were measured and compared to each other as two constructs under the bigger umbrella of burnout.

Future direction of student burnout research

The current research presented is one of the first studies investigating academic and clinical burnout of student clinicians. Findings indicate that burnout can be an issue of concern for student clinicians during their graduate clinical training. However, many questions remain to be explored in this area. The finding of a negative correlation between social support and burnout require further research to allow for causal interpretation. It is possible that burnout triggers a sense of perceived isolation and lack of social support from friends, family, supervisors and peers. It is also possible that social support buffers burnout and works as a preventative factor. Intervention studies could help determine if social support plays a role of a preventative factor for burnout among student clinicians. Nevertheless, this paper adds to the body of scientific literature addressing burnout of student clinicians, which in turn will allow for bigger scale meta-analyses yielding more robust results due to their higher statistical power.

Furthermore, this study explored the role of demographic characteristics and the level of burnout among student clinicians. Due to the fact that some subgroups, such as

minorities, are underrepresented among the study respondents, it was difficult to run correlations on all demographic characteristics. Creating a study which deliberately oversamples groups of interest such as male minority groups or international students would allow us to better understand burnout among a more diverse subset of students. In addition, demographic characteristics that might affect burnout such as having children, gross income and other environmental factors require additional research. More studies addressing characteristics of student burnout would be beneficial to address multiple risk and preventative factors of burnout.

Conclusions

This research is among the first studies describing factors of burnout among student clinicians. The analysis demonstrated statistically significant results describing the relationship between clinical and academic burnout. Results suggested that students experience moderate level of emotional exhaustion in their clinical practice which was higher than published norms of licensed professionals. Students' academic burnout, on the other hand, was very high. These results indicate that student burnout is real and deserves serious attention.

This study suggested that students in mental health related fields experience higher level of burnout associated with their academic responsibilities than their clinical practice. On the other hand, demographic characteristics were not correlated with levels of burnout in this study.

Furthermore, the study confirmed the relationship between social support and levels of burnout. Social support from supervisors, peers, family and friends foster prevention of burnout among student clinicians. The results suggest that social support

might act as a primary preventative factor against development of this condition endangering the mental health and well-being of both student clinicians and potentially their patients.

APPENDIX
STUDY QUESTIONNAIRES

Q1. Consent form
Q2. Race/ethnicity

a. African origin
b. Asian / pacific islander
c. Latino/Hispanic
d. Multiracial
e. Native American-American Indian
f. White
g. Other – please specify:

Q3. Age:

Q4. Gender

a. Transgender
b. Gender fluid
c. Female
d. Male
e. Other – please specify:

Q5. Marital status

a. Single
b. In a committed relationship or married
c. Separated or divorced
d. Widowed
e. Other – please specify:

Q6. Are you a first generation college student?

a. yes
b. no

Q7. Are you an international student?

a. yes
b. no

Q8. Are you currently enrolled in classes?

a. yes
b. no

Q9. How many classes are you enrolled in?

Q10. What type of program are you enrolled in?

a. Master in mental health counseling
b. Master in Social Work
c. PhD in counseling psychology
d. PhD in clinical psychology
e. PsyD of clinical psychology
f. Other - please specify

Q10.2. What year are you in at your program?

Q11. Do you have a paid job unrelated to your clinical or academic responsibilities?

a. yes
b. no

If Yes Q12. How many hours do you work at your job?

Q13. Are you currently conducting clinical hours at practicum or internship placement?

a. yes
b. no

Q14. How many practicum or internship hours do you have per week?

Q15. How many How many direct client hours (individual therapy, group therapy and assessment) do you provide per week?

Q16. What type of practicum or internship placement is it?

a. College counseling center
b. Outpatient clinic
c. Mental inpatient unit
d. Community based acute treatment
e. Veterans administration
f. Other – please specify

Q17. Who is your served population? Please mark all that apply

a. College students
b. Adults with various mental health issues
c. Veterans
d. Children
e. Adolescents
f. Other - please specify

Q18. What type of services are you providing? Please mark all that apply

a. Individual therapy
b. Group therapy
c. Family therapy
d. Case management
e. Crisis management

Q19. What theoretical orientation do you use most often in your clinical practice?

a. CBT
b. Client-centered
c. Psychodynamic
d. Systemic
e. DBT
f. Narrative therapy
g. Other – please specify

Q20. How much autonomy do you have at your practicum/internship placement?

Very little Moderate Very much

0----------1----------2----------3----------4----------5----------6

Q21. What is the average level of functioning of clients at your placement?

We serve high functioning clients Mixed We serve clients with severe mental illness

0----------1----------2----------3----------4----------5----------6

Q22. How competent do you feel in your clinical work?

Not at all competent Moderately Extremely competent

0----------1----------2----------3----------4----------5----------6

Q23. Do you attend therapy for your own self-care?

a. Yes
b. No

Q24. MBI – Human Services Survey (MBI – HSS): Copyright@1981 Christina Maslach & Susan E. Jackson. All rights reserved in all media. Published by Mind Garden, Inc., www.mindgarden.com

Q25. MBI – General Survey – Students (MBI-GS (S)): Copyright @ 1996 Wilmar B. Schaufeli, Michael P. Leiter, Christina Maslach & Susan E. Jackson. All rights reserved in all media. Published by Mind Garden, Inc., www.mindgarden.com

Q26. I feel emotionally drained with the combination of my clinical and academic responsibilities.

Very little moderately Very much

0----------1----------2----------3----------4----------5----------6

Q27. I feel emotionally drained with the combination of all responsibilities in my life.

Very little moderately Very much

0----------1----------2----------3----------4----------5----------6

Social Support Scale

For each question, indicate the score that corresponds to your response.

	Very much	Somewhat	A little	Not at all	Don't have any such person
	4	3	2	1	0
Q28. How much does each of these people go out of their way to do things to make your practicum or internship work life easier for you?					
Your practicum or internship supervisor					
Other people at your practicum or internship.					
Your significant other/partner, friends and relatives					
Q29. How much does each of these people go out of their way to do things to make your academic work life easier for you?					
Your academic supervisor					
Your peers at the university					
Your significant other/partner, friends and relatives					

	Very much	Somewhat	A little	Not at all	Don't have any such person
	4	3	2	1	0
Q30. How easy is it to talk with each of the following people?					
Your practicum or internship supervisor					
Other people at your practicum or internship.					
Your academic Supervisor at the university					
Your peers at the university					
Your significant other/partner, friends and relatives					

	Very much	Somewhat	A little	Not at all	Don't have any such person
	4	3	2	1	0
Q31. How much can each of these people be relied on when things get tough at your practicum or internship?					
Your practicum or internship supervisor					
Other people at your practicum or internship.					
Your significant other/partner, friends and relatives					
Q32. How much can each of these people be relied on when things get tough at your university?					
Your academic Supervisor at the university					
Your peers at the university					
Your significant other/partner, friends and relatives					

	Very much	Somewhat	A little	Not at all	Don't have any such person
	4	3	2	1	0
Q33. How much is each of the following people willing to listen to your personal problems?					
Your practicum or internship supervisor					
Other people at your practicum or internship.					
Your academic Supervisor at the university					
Your peers at the university					
Your significant other/partner, friends and relatives					

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