STRESS AND SUPPORT IN HEALTH SERVICE PSYCHOLOGY STUDENTS: PREDICTORS OF BURNOUT AND VIGOR

by

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A Dissertation

Submitted to the University at Albany, State University of New York

in Partial Fulfillment of

the Requirements for the Degree of

Doctor of Philosophy

School of Education

Department of Educational & Counseling Psychology

2019

Abstract

Students in health service psychology (HSP) training programs (i.e., doctoral programs in clinical, counseling, or school psychology) have reported experiencing greater burnout (i.e., energetic exhaustion) and lower vigor (i.e., energetic arousal) than typical workers. Given that greater burnout and lower vigor are associated with negative outcomes like poor health and client care, the purpose of the present study was to understand burnout and vigor in HSP students. Specifically, the present study sought to test the Conservations of Resources theory of stress (CORT) by replicating previous findings that threatening work-related stress and the supervisory working alliance (SWA) predicted HSP students' burnout and vigor. The present study also sought to (a) understand the relation between burnout and vigor and (b) predict burnout and vigor by examining four sources of stress and support students commonly report: role ambiguity, role conflict, social support from family, and social support from academic friends.

Two hundred seventy-five HSP students currently receiving individual clinical supervision completed all measures. Students identified primarily as female (85.8%), White (74.5%), Ph.D. (75.3%) students. The relation between burnout and vigor in the sample was tested and a series of multiple multivariate regression analyses were performed to determine the variance of burnout and vigor explained uniquely and jointly by the predictors.

Burnout and vigor were found to be strongly inversely related (r = -.72, p < .001). Predictors collectively explained 22% of the variance in burnout and vigor, with threatening stress uniquely explaining 15%. No other predictors uniquely predicted a substantial amount of variance in burnout and vigor, though post hoc analyses suggest that threatening stress may mediate the relation of four of the predictors (i.e., role conflict, role ambiguity, academic friend social support, and the SWA) to burnout and vigor. Theoretical and practical implications are discussed, and recommendations are made for HSP students, faculty, and training directors.

Acknowledgements

This dissertation would not have been possible without the support of countless friends, family, and faculty throughout the years. I would like to thank my advisor and chair, Dr. Michael V. Ellis, for fostering my love of supervision and helping me gradually develop this document. I also want to thank my other committee members, Dr. Alex Pieterse and Warren Wallis for their insightful contributions during my proposal and defense.

I want to express my gratitude to my "social support from academic peers", without whom burnout during my doctoral training would have been assured. I am particularly grateful for my doctoral cohort members – now Drs. Laura Longo, Megan Cusick Brix, and Larissa Barbaro – for always being there for me and tolerating my sense of humor over the years. Their support has meant so much to me, and I doubt I would have had the strength to finish graduate school without their kindness and care. I also want to thank my program "buddy" Dr. Scott Wright, whom always had time to reflect with me about our work, our research, and our growth.

I want to express my sincere appreciation for my family, who always believed I would achieve great things. I want to give a special shout out to my sister Jessie, who has always taken credit for inspiring my ambition, whether I agree with her or not. I want to thank my father whose Goodwill and commitment to helping others' mental health inspired my own. Most importantly, I want to thank my mother, who worked hard every day to raise me and trusted me more than I ever trusted myself. Without her love (and stubbornness), I would never have gotten to where I am today.

Finally, I want to thank my wife, Rachel, for her patience beyond measure. She endured every stressful story, every year of meager pay, and every sudden move without a second thought. Her boundless love has carried me through and contributed directly to this achievement.

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Chapter I

Students in health service psychology (HSP) training programs (i.e., doctoral programs in clinical, counseling, or school psychology) report that training is critical to their professional growth (Hill, Charles, & Reed, 1981). However, HSP students report that their training can be negatively impacted by several stressors, including lack of social support, financial constraints, and academic, research, and teaching responsibilities (El-Ghoroury, Galper, Sawagdeh, & Bufka, 2012). HSP students experience stress in greater levels than other professions (e.g., Swords & Ellis, 2017), although the significance of some stressors vary by student characteristics (e.g., race/ethnicity; El-Ghoroury et al., 2012). Swords and Ellis (2017) found that HSP students' stress is positively associated with burnout, a state of high energy exhaustion (Hobfoll & Shirom, 2000), and inversely associated with vigor, a state of energetic arousal (Shirom, 2011). These findings are alarming, as lower vigor is linked to decreased job satisfaction, physical health, and mental well-being (Shirom, 2011), and greater burnout may lead to depression, cynicism, and poor physical health (e.g., Kahill. 1988). Burnout may also pose a risk to the clients of HSP students as it is associated with weakened therapeutic relationships, reduced empathy, and lower quality of client care in mental health professionals (e.g., Pakenham & Stafford-Brown, 2012).

Despite the potential consequences of burnout and vigor on HSP students and their clients, less than 4% of HSP programs address burnout or stress in their training documents (Bamonti et al., 2014). This inattention to burnout and vigor may be a result of the lack of research on the constructs among HSP students (Rummell, 2015). Moreover, much of the extant research has conceptual and methodological flaws and does not apply theory, which is necessary to understand complex psychological phenomena (Heppner, Wampold, & Kivlighan, 2007).

Swords and Ellis (2017) were the first to test and use the Conservation of Resources

theory (CORT; Hobfoll, 1989, 1998) to examine predictors of burnout and vigor among HSP students. Per CORT, people are driven to maintain and protect resources, with burnout and vigor representing a deficit or surplus of resources, respectively (Hobfoll & Shirom, 2000). Swords and Ellis examined the direct link between five factors and the burnout and vigor of 203 HSP students. The supervisory working alliance (SWA) and threatening work-related stress were found to be most predictive of HSP student burnout and vigor. Swords and Ellis's findings raised questions about the suitability of CORT to explain accurately HSP student burnout and vigor for two reasons. First, a strong inverse correlation between burnout and vigor was observed in HSP students (attributed to their high stress levels), which contradicts Shirom's (2011) original understanding of the constructs as only "obliquely-related" (p. 53). These discrepant findings warrant replication in a new sample to test and advance theory (Maxwell, Lau, & Howard, 2015). Second, support for some (but not all) of the predictors casts uncertainty over what stressors or support are most critical to HSP students' burnout and vigor. Other common stressors, such as role stress (i.e., job task ambiguity or conflict), and supports, such as social support (i.e., help from friends or family), should be tested as they are commonly associated with stress in graduate students (e.g., Rummell, 2015) and clinicians (e.g., Coyle, Edwards, Hannigan, Fothergill, & Burnard, 2005) and thus may better explain burnout and vigor in HSP students.

In sum, HSP students are likely to be vulnerable to high levels of burnout and low levels of vigor during their doctoral training (Swords & Ellis, 2017), which may impact their growth as professionals and clinical competence. Attempts to identify salient predictors of burnout and vigor in HSP students (e.g., Clark, Murdock, & Koetting, 2009) have yielded findings that are equivocal, have partially contradicted theory, and have overlooked or poorly measured resources relevant to HSP students (e.g., social support and role stress). Thus, the purpose of the present

study was to replicate and extend Swords and Ellis's application of CORT (Hobfoll, 1989, 1998) to understand prominent predictors of burnout and vigor in HSP students. Specifically, the present study sought to replicate Swords and Ellis's findings that link the SWA and threatening work-related stress to HSP student burnout and vigor. Additionally, the study investigated other theoretically important factors that may deplete HSP students' resources (i.e., role ambiguity and conflict) or facilitate resource gain (i.e., social support from friends and family).

Conservation of Resources Theory (CORT): Burnout and Vigor

According to the Conservation of Resources theory (CORT; Hobfoll; 1989, 1998) people are motivated to collect and protect resources. Resources can be objects (e.g., a car), personal characteristics (e.g., extroversion), conditions (e.g., a satisfying job), or energies (e.g., time) and possess instrumental (e.g., emotional support) or symbolic value. Because resources are valued, psychological stress arises from the actual or perceived loss of resources, threat of resource loss, or failure to regain sufficient resources after investment (Hobfoll & Shirom, 2000).

Burnout. In CORT, burnout represents the "the process of depletion of . . . emotional, physical, and cognitive energy," (Hobfoll & Shirom, 2000, p. 66). Because burnout depletes energetic resources, people are left with fewer resources to invest (Hobfoll & Shirom, 2000), making those with burnout more vulnerable to additional resource loss. Resource loss in burnout is related to physical (e.g., fatigue), emotional (e.g., depression), attitudinal (e.g., defensiveness), and behavioral (e.g., poor performance) problems (Kahill, 1988; Koeske & Koeske, 1991). In addition, burnt out individuals are more likely to feel trapped, hopeless, and less enthusiastic about work (Pines, Aronson, & Kafry, 1981). Because HSP students endorse higher levels of burnout (Swords & Ellis, 2017) than other workers (Shirom, 2008), they may be at greater risk to develop negative outcomes.

Vigor. In contrast to burnout, vigor represents a surplus of energetic resources – physical strength, emotional empathy, and cognitive liveliness (Shirom, 2011). Moreover, vigor is (a) a positive affective state that aids in resource acquisition, (b) linked theoretically to positive outcomes such as greater motivation, engagement, job satisfaction, job performance, and mental health, and (c) directly related to self-reported health (Shirom, 2011). HSP students (Swords & Ellis, 2017) appear to experience substantially less vigor than other workers (Shirom, 2008). Consequently, HSP students may be less likely to benefit from vigor's positive effects.

Burnout and Vigor Relation. Although burnout and vigor may seem to reflect opposite ends of the same energetic resource pool, Shirom (2011) conceptualized the constructs as only "obliquely related" (p. 53). Shirom theorized that Burnout and vigor function independently and may occur concurrently (e.g., a student feels motivated for clinical practice yet exhausted by coursework). Thus, burnout and vigor in HSP students would be expected to function separately and demonstrate only a mild relation, at best. In contrast, extant research on burnout and vigor in HSP students (Swords & Ellis, 2017) observed a strong inverse relation between the constructs. Shirom argued that such a strong inverse relation is only likely when stress levels are high. Because HSP students reported greater stress than other workers (Swords & Ellis, 2017), a competing prediction is that HSP students' levels of burnout and vigor may be more closely related than Shirom theorized, displaying at least a moderate inverse relation.

Predictors of Burnout and Vigor

Hobfoll and Shirom (2000) differentiate between factors that cause stress and therefore deplete resources (i.e., resource consuming factors; RCFs) and those that provide or protect resources (i.e., resource facilitating factors; RFFs). RCFs and RFFs are examined separately below as they are expected to be associated with burnout and vigor in distinct ways.

Resource Consuming Factors (RCFs). Stress that is significant in intensity threatens energetic resources and increases the likelihood of developing burnout and inhibiting vigor (Hobfoll & Shirom, 2000). "Threatening" work-related stress (hereafter referred to as threatening stress; Stanton, Balzer, Smith, Parra, & Ironson, 2001) represents a negative type of job stress where one feels "overwhelmed" by one's work environment. Swords and Ellis (2017) found that HSP students experience threatening stress more than typical workers, and that threatening stress explained a moderate amount of student burnout and vigor ($\hat{\rho}^2_{MV}$= .12). HSP students may be prone to threatening stress because they invest significant resources during doctoral training (e.g., time and money) that may be endangered by real or feared failure of professional benchmarks (e.g., internship, dissertation; El-Ghoroury et al., 2012; Rummell, 2015). Thus, threatening stress was predicted to explain a moderate amount of HSP students' resource levels.

HSP students are also susceptible to chronic stress, which can inhibit resource gain and activate a loss spiral (Hobfoll, 1989, 1998). Chronic stress may result from uncertainty about how students should invest their resources in the multiple roles they take on during their doctoral training (e.g., clinician, student; Rummell, 2015). Role-related uncertainty can arise from role ambiguity, when expectations for a role are not clearly defined, and role conflict, when roles compete for the same resources (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). When HSP students experience role ambiguity (e.g., do not receive role induction for supervision) or role conflict (e.g., split time and energy between projects), students may fear investing resources incorrectly and deplete their resources to fulfill all their obligations.

Prior research on HSP student burnout (Clark et al., 2009) did not consider role ambiguity, used a role conflict scale that was not psychometrically validated, and did not assess the intra-role conflict between students' academic responsibilities, which is a common stressor in

graduate students (Grady, LaTouche, Oslawski-Lopez, Powers, & Simacek, 2013). Because role conflict and ambiguity are commonly linked to burnout in work settings (Haly, 2009) and are cited by clinicians (e.g., Coyle et al., 2005) as major stressors, role conflict and ambiguity were expected to be associated directly with resource loss and inversely with resource gain.

Resource Facilitating Factors (RFFs). Per CORT (Hobfoll, 1989, 1998), fostering positive relationships and receiving help when needed can increase the likelihood of resource gain as aid from others can serve as a direct resource or help foster future resources. Thus, if people perceive greater social support from others' in their lives (e.g., family and friends) they may perceive themselves as having greater access to psychological and material resources (Hobfoll & Shirom, 2000). Those with greater social support are likely to experience more vigor (Shirom, 2011) and less burnout (e.g., Haly, 2009). This is unfortunate for HSP students as graduate training is associated with reduced social support (e.g., Grady et al., 2013).

CORT (Hobfoll, 1989, 1998) posits that social support is an effective resource when it accounts for situational needs. In HSP training, students most often report turning to family and academic friends (e.g., peers in the program) to cope with stress (El-Ghoroury et al., 2012). This may be because family and academic friends can provide relevant emotional or practical support (Nelson, Dell'Oliver, Koch, & Buckler, 2001). Prior attempts to examine HSP students' social support from friends and family have been methodologically flawed due to the use of social support measures that lacked psychometric data (Clark et al., 2009) and narrowly operationalized the construct (Swords & Ellis, 2017), which compromised the validity of their findings. Because the support of family and academic friends may provide HSP students with situation-relevant resources, these types of support were expected to be inversely related to resource loss.

Support from HSP students' clinical supervisors may be important as supervisors occupy

a unique collaborative, evaluative, and often emotion-focused role (Bernard & Goodyear, 2019). Poor clinical supervision is reported by HSP students as a considerable source of stress (Ellis et al., 2014), and thus represents potential resource loss. Supervisor support is often understood through the supervisory working alliance (SWA; Bordin, 1983), which includes the supervisor and supervisee's emotional bond and agreements on tasks and on goals. The SWA is the best predictor of effective clinical supervision and is related positively to supervisees' satisfaction and client outcomes (e.g., Ladany, Ellis, & Friedlander, 1999). HSP students may be protected against resource loss when supervisors offer emotional, informational, and practical support (Bernard & Goodyear, 2019). Moreover, a strong SWA may reflect supervisor engagement, with supervisors modeling vigor to supervisees and subsequently energizing them (Shirom, 2011). Prior research has found the SWA is one of the strongest predictors of burnout and vigor in HSP students (Swords & Ellis, 2017), explaining a moderate to large amount of burnout and vigor ($\hat{\rho}^2_{MV}$= .09 -.16). As such, SWA was expected to help preserve resources in HSP students.

Research Hypotheses

In sum, CORT (Hobfoll, 1989, 1998) and previous research (e.g., Swords & Ellis, 2017) help to explain how HSP students may experience burnout and vigor. Following the rationale provided above, the presented study consisted of several hypotheses:

Hypothesis 1-a. Given their theorized relation (Shirom, 2011), burnout is expected to have no more than a small inverse relation (r < -.10; Cohen, 1988) with vigor.

Hypothesis 1-b. Given recent findings in HSP students (Swords & Ellis, 2017), burnout is expected to have at least a moderate inverse relation with vigor ($r \geq$ -.30; Cohen, 1988).

Hypothesis 2. The combination of all the predictor variables (i.e., threatening stress, role ambiguity, role conflict, social support from academic friends, social support from family, and

the supervisory working alliance) will predict a significant and substantive amount of variance in burnout and vigor as a multivariate construct.

Hypothesis 3 & 4. The set of RFFs (i.e., social support from academic friends, social support from family, and the supervisory working alliance; Hypothesis 3), and the set of RCFs (i.e., threatening stress, role ambiguity, and role conflict; Hypothesis 4) controlling for the other set, will each uniquely explain a significant and substantive amount of variance in the multivariate construct of burnout and vigor.

Hypothesis 3 and 4 Sub-Hypotheses. Controlling for all other predictor variables, social support from academic friends (Hypothesis 3a), social support from family (Hypothesis 3b), the supervisory working alliance (Hypothesis 3c), threatening stress (Hypothesis 4a), role ambiguity (Hypothesis 4b), and role conflict (Hypothesis 4c) will each uniquely explain a significant and substantive amount of variance in the multivariate construct of burnout and vigor.

Chapter II

Method

Participants

Power analysis. An a priori statistical power analysis was conducted to minimize Type II error and determine an adequate sample size to detect an effect. Consistent with Serlin and Lapsley's (1985) good-enough principle, a semi-partial effect size of $\hat{\rho}^2 = .05$ was sought as it is consistent with the median effect size found in clinical supervision research ($\hat{\rho}^2 = 0.048$; Ellis & Ladany, 1997). The per-comparison alpha level was set at .016 after a modified Bonferroni correction (Holland & Copenhaver, 1988). To achieve 95% power, 266 participants were needed.

Participant characteristics. Students enrolled in HSP programs (counseling, clinical, or school psychology pre-doctoral training programs; i.e., Ph.D., Psy.D., Ed.D.) that were over the age of 18, studying within the US, currently performing clinical work, and had attended four or more individual supervision sessions with their current clinical supervisor were eligible to participate in the study. Four supervision sessions were needed to account for SWA fluctuation in initial sessions (Ybrandt, Sundin, & Capone, 2016). Participants were 275 clinical (51.3%), counseling (30.9%), school (17.1%), and combined counseling/school (0.7%) psychology students enrolled in Ph.D. (75.3%), Psy.D. (24.4%), and Ed.D. (0.4%) programs. Participants ranged from 22 to 58 years old ($M = 27.99$, $SD = 4.57$, $Mdn = 27.0$), identified mainly as female (85.8%), and identified their race/ethnicity as European American/White (74.5%), Multiracial (8%), Asian/Asian-American (7.3%), African-American/Black (4%), Latinx or Hispanic (4%), American Indian/Alaskan Native (0.4%), or preferred not to answer/preferred to self-describe (1.4%). Seventy-six percent (76.0%) of the sample held a master's degree. Masters degrees included: Clinical Psychology (20.6%), General Psychology (14.4%), Counseling Psychology (11.5%), Mental Health Counseling (5.7%), School Psychology (4.3%), non-terminal master's

during doctoral program (3.3%), Educational Psychology (2.9%), Child Psychology (1.4%), Clinical and Counseling Psychology (1.4%), other (9.6%; e.g., Forensic Psychology, Social Work), and unspecified (19.1%). An additional 5.7% reported multiple advanced degrees.

Within their doctoral programs, 97.8% of participants indicated they were full-time students. They ranged from their first to eighteenth year in their doctoral program (*M* = 3.71, *SD* = 1.57, *Mdn* = 4.0). Participants reported their current clinical placement: first practicum (20.4%), advanced practicum (63.6%), pre-doctoral internship (14.2%), post-internship, pre-dissertation defense (0.7%), and other or did not specify (1.1%). Participants were at different stages in their dissertation: pre-proposal (59.6%), data collection (18.9%), preparing final defense (8.4%), defended (8.7%), and other, or not applicable (4.3%).

Participants engaged in a broad range of activities during their doctoral training: coursework (72.7%), research (excluding dissertation, 69.5%), teaching (33.8%), professional organizational roles (39.6%), and assistantships not covered in the above categories (34.2%). Participants reported spending, on average per week, 10.6 hours on coursework (*SD* = 9.44, *Mdn* = 10.0), 16.65 hours on practicum/externship/clinical placements (*SD* = 10.08, *Mdn* = 17.0), 4.63 hours performing research unrelated to their dissertations (*SD* = 5.75, *Mdn* = 2.0), 3.22 hours working on their dissertations (*SD* = 4.76, *Mdn* = 2.0), 8.11 hours working for their fellowship/ assistantship (*SD* = 12.51, *Mdn* = 5.0), and 6.04 hours on other activities related to graduate school not covered in the other categories (*SD* = 10.04, *Mdn* = 3.0). Participants also reported on average spending 2.89 hours per week at a job not connected with graduate school (*SD* = 5.51, *Mdn* = 0), and 8.46 hours on activities related to self-care (*SD* = 6.58, *Mdn* = 7.0). Participants were given the definitions of burnout, vigor, role ambiguity, and role conflict and asked to report whether they had experienced these feelings at any point during their doctoral training and to

what degree (on a Likert scale of 1 'Not at All' to 5 'Totally'). Burnout was experienced by 79.6% of respondents, 77.5% experienced vigor (*M* = 3.39, *SD* = .80), 48% experienced role ambiguity (*M* = 3.33, *SD* = .95), and 60.4% experienced role conflict (*M* = 3.58, *SD* = 1.02). Participants were also given the definition of self-care and asked if, during their doctoral training, they experienced it (Yes: 91.6%) and how frequently they practiced it on a Likert scale of 1 'Never' to 7 'Always' (*M* = 4.81, *SD* = 1.27).

Participants indicated their primary career focus after graduation was to be a clinician (70.5%), researcher (16.4%), instructor (6.5%), or other (6.5%). Participants, on average, reported 33.25 months (*SD* = 23.81, *Mdn* = 30.0) of previous clinical experience and were currently working in the following settings: college counseling centers (29.4%), community clinics or agencies (21.8%), outpatient clinics in medical centers (17.5%), K-12 public or private schools (11.3%), inpatient units at hospitals (4.4%), VA medical centers (3.3%), independent practice (2.5%), forensic settings (2.5%, e.g., adult or juvenile prisons), other or multiple hospital settings (2.5%, e.g., military hospitals, combined inpatient and outpatient placements), university departments (1.8%), primary care (1.1%), adolescent residential group homes (1.1%), or Other (0.7%). At these settings, interventions provided included: individual therapy (86.5%), group therapy (48%), assessments (66.9%), couples/family counseling (3.3%), and consultation services (4.4%). On average, participants reported 9.82 hours of direct client contact per week (*SD* = 5.67, *Mdn* = 9.0), seeing 7.58 clients per week (*SD* = 6.11, *Mdn* = 6.0).

Participants reported, on average, 18.33 supervision sessions (*SD* = 23.41, *Mdn* = 10.0) with their current primary clinical supervisor, spending 1.88 hours (*SD* = 1.42, *Mdn* = 1.5) per week in individual supervision. Most participants (72.9%) had multiple clinical supervisors (*M* = 2.24, *SD* = 1.09, *Mdn* = 2.0). Participants with multiple supervisors reported feeling closest to

their primary supervisor (51.6%), a supplemental supervisor (24.9%), or all supervisors (2.2%).

Design

This study used an *ex post facto* cross-sectional single group design with burnout and vigor as the dependent variables. Predictors were social support from friends and family, role ambiguity, role conflict, the SWA, and threatening stress. A series of norm comparison *t* tests were used to understand participants' experiences relative to other samples by comparing scores in the present study to scores from previous studies. The family-wise alpha for these *t* tests was set at .05 and a modified Bonferroni correction procedure was used to reduce the likelihood of a Type I error caused by the use of multiple statistical tests (Holland & Copenhaver, 1988).

Instruments

Social support from friends and family. Social support from friends and family were measured using the Family (4 items) and Friends (4 items) subscales from the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS subscales use a 7-point Likert scale of 1 (*Very Strongly Disagree*) to 7 (*Very Strongly Agree*) to assess perceived adequacy of support. Subscale items are averaged, with higher scores indicating greater perceived social support. Both subscales showed evidence of strong psychometric validity (Zimet et al., 1988): Family $\alpha = .87$; Friends $\alpha = .85$. Both subscales are inversely related to depression and anxiety (Zimet et al., 1988) yet only the Family subscale shows a high correlation with the Family Caring Scale (Canty-Mitchell & Zimet, 2000), which suggests the subscales assess unique relationships. In the present study, Cronbach's alphas for the Family and Friends subscales were 0.94 and 0.96, respectively. Participants in the present study reported significantly less social support from Family ($M = 5.52$, $SD = 1.39$) than in Zimet et al. (1988; $M = 5.80$, $SD = 1.12$), $t(274) = -3.34$, $p = .001$, $\hat{\rho}^2 = .04$, 95% CI [0.01, 0.08] but not

significantly different social support from Friends (M = 5.76, SD = 1.25) than Zimet et al. (M = 5.85, SD = 0.94), $t(274) = -1.19$, $p = .23$, $\hat{\rho}^2 < .01$, CI [0.00, 0.02].

Supervisory working alliance. The 36-item self-report Supervisory Working Alliance Inventory-Trainee Version (SWAI-T; Bahrick, 1989) was used to measure the SWA, based on Bordin's (1983) theory of the working alliance. The SWAI-T is best interpreted as a unidimensional measure (Ellis, Russin, & Deihl, 2003). Items are rated on a 7-point Likert-type scale from 1 (*Never*) to 7 (*Always*). After reverse scoring 14 items, summing the items yields a total score, with higher scores signifying a stronger SWA. SWAI-T total scores have ample psychometric support and demonstrated high internal consistency amongst supervisees (α = .97; Swords & Ellis, 2017), consistent with the current sample (α = .97). In the present study, participants reported their SWA (M = 198.1, SD = 32.11) similar to HSP students from a normative sample (M = 196.93, SD = 20.23; Lehrman-Waterman & Ladany, 2001), $t(274)$ = .604, $p = .55$, $\hat{\rho}^2 = .00$, 95% CI [0.00, 0.02] as well as Swords and Ellis (2017) study of HSP students (M = 193.26, SD = 33.98;) $t(274) = 2.50$, $p = .01$, $\hat{\rho}^2 = .02$, CI [0.003, 0.060].

Threatening work stress. Doctoral program-induced stress was operationalized using the 8-item Threat subscale (SIG-II) of the 15-item Stress in General Scale (SIG; Stanton et al., 2001). The SIG asks respondents to indicate if adjectives adequately describe their stress at work on a 3-point scale – 0 (*No*), 1.5 (*?; Cannot decide*), and 3 (*Yes*). Higher summed scores (after reverse scoring some items) indicate greater threatening stress. Cronbach's alpha for Threat was high in its validation study (α = .82; Stanton et al., 2001), in HSP students (α = .81; Swords & Ellis, 2017), and in the present study (α = .83). Participants in the present study reported substantially greater threatening stress (M = 12.2, SD = 7.39) than subjects in the developmental sample (M = 9.24, SD = 6.99; Stanton et al., 2001), $t(274) = 6.64$, $p < .001$, $\hat{\rho}^2 = .14$, 95% CI

[0.08, 0.21], yet no significant differences compared to other HSP students (M = 11.59, SD = 7.32; Swords & Ellis, 2017) $t(274) = 1.37$, $p = .17$, $\hat{\rho}^2 < 0.01$, CI [0.00, 0.02].

Role conflict and role ambiguity. Role conflict and role ambiguity were measured using the scales designed by Rizzo, House, and Lirtzman (1970) that are based on role theory (Kahn et al., 1964). The scales are widely used to measure role conflict and ambiguity in work settings (González-Romá & Lloret, 1998) and are broadly written to apply to many types of roles. The role ambiguity scale (RA; 6 items) assesses perceptions that one's work expectations are clear, while the role conflict scale (RC; 8 items) assesses perceptions that one's multiple work roles are compatible with one other (Rizzo et al., 1970). Responses measure agreement with items using a 7-point Likert scale from 1 (*Very False*) to 7 (*Very True*), with some reverse scored items. Total scores are the mean of items in each scale, with higher scores indicating greater role ambiguity and role conflict, respectively. The scales demonstrate strong psychometric support (González-Romá & Lloret, 1998). Cronbach's alpha the present study was high for the RA scale (α = .85) and the RC scale (α = .85), exceeding levels found in Rizzo et al.'s (1970)validation study (RC α = .82; RA α = .81). In the present study, participants reported substantially less role ambiguity (M = 2.87, SD = 1.03) than in Rizzo et al. (M = 3.79, SD = 1.08), $t(274) = -14.82$, $p < .001$, $\hat{\rho}^2$ = 0.44, 95% CI [0.36, 0.51], as well as substantially less role conflict (M = 3.33, SD = 1.25) than Rizzo et al. (M = 4.19, SD = 1.21), $t(274) = -11.41$, $p < .001$, $\hat{\rho}^2 = 0.32$, CI [0.24, 0.40].

Burnout. The 14-item Shirom-Melamed Burnout Measure (SMBM; Shirom, 2005) assesses burnout at work in the past 30 days. Items use a 7-point Likert scale ranging from 1 (*Never or Almost Never*) to 7 (*Always or Almost Always*). The mean of all items produces a total score, with higher scores indicating more burnout. The SMBM was constructed according to CORT (Hobfoll, 1989, 1998). Cronbach's alpha for the SMBM was high in the general public (α

= .93; Armon, Shirom, Shapira, & Melamed, 2008), for HSP students (α = .94; Swords & Ellis, 2017), and in the present study (α = .93). Normative SMBM data is separated by gender using 6,714 men and 3,952 women (Shirom, 2008). Men in the present study reported substantially higher burnout (M= 3.15, SD = 1.05) than men in Shirom's study (2008; M = 2.05, SD = 0.79), $t(38) = 6.55$, $p < .001$, $\hat{\rho}^2 = 0.52$, 95% CI [0.32, 0.69]. Women also reported substantially higher burnout (M = 3.53, SD = 1.01) than Shirom's study (M = 2.33, SD = 0.87), $t(235) = 18.33$, $p < .001$, $\hat{\rho}^2 = 0.59$, CI [0.52, 0.65]. Differences in burnout levels between the present sample (M = 3.48, SD = 1.03) and a comparison sample of HSP students (M = 3.37, SD = 0.99; Swords & Ellis, 2017) were not significant, $t(274) = 1.77$, $p = .08$, $\hat{\rho}^2 = 0.01$, CI [0.00, 0.04].

Vigor. The 12-item Shirom-Melamed Vigor Measure (SMVM; Shirom, 2005) assesses feelings of vigor at work in the past 30 days. The SMVM is based on CORT (Hobfoll, 1989, 1998) and uses a 7-point Likert scale of 1 (*Never or Almost Never*) to 7 (*Always or Almost Always*). The SMVM total score reflects the mean of all items; a higher score indicates more vigor at work. High Cronbach's alphas have been found in workers (α = .92; Shirom et al., 2008), HSP students (α = .90; Swords & Ellis, 2017) and in the present study (α = .90). SMBM normative data is separated by gender (6,714 men and 3,952 women; Shirom, 2008). Men in the present study reported substantially lower vigor (M = 4.75, SD = 0.99) than men in Shirom's study (2008; M = 5.58, SD = 0.90), $t(38) = -4.66$, $p < .001$, $\hat{\rho}^2 = 0.35$, 95% CI [0.16, 0.55] as did the women in the present study (M = 4.64, SD = 0.82) than Shirom's study (M = 5.46, SD = 0.90), $t(235) = -15.38$, $p < .001$, $\hat{\rho}^2 = 0.50$, CI [0.42, 0.57]. Participants in the present study (M = 4.67, SD = 0.84) reported substantially lower vigor than Swords & Ellis's (2017) sample of HSP students (M = 4.89, SD = 0.92;), $t(274) = -4.34$, $p < .001$, $\hat{\rho}^2 = 0.06$, CI [0.03, 0.12].

Procedure

Participants were recruited from HSP training programs via convenience and snowball sampling. The study invitation was sent to professional listservs (e.g., APA Division 17 listserv) as well as to training/program directors who were asked to forward the invitation to students in their programs. Students were also asked to forward the study hyperlink to others. The study was described as a chance to learn about HSP student stress and support (Appendix B). The survey was password-protected on psychdata.com and, upon entering the password, participants were provided a brief overview of the study (e.g., completion instructions, informed consent) and directions that clarified language used in the study to make the measures more relevant to HSP students (see Appendix C). Participants were randomly assigned to one of four orders of the predictor and outcome measures (to reduce the likelihood of order effects), with the demographic questionnaire always following the randomly ordered measures. As an incentive, participants were offered to enter a raffle for a chance to win a $10 Amazon gift card (awarded to one in every ten participants up to $300). Participation was voluntary and anonymous.

Chapter III

Results

Preliminary Analyses

Missing data. The online study survey was started by 451 individuals. Participants were removed from the study if they left more than 5% of any measure blank (n = 44, 9.76%) left more than 5% of all questions blank (n = 46, 10.20%), or failed to meet or did not report inclusion criteria (n = 86, 19.07%). Of note, 60 (13.3% of total) individuals failed to meet the criteria of at least four supervision sessions, despite this criterion being stated twice within the informed consent. Of the 275 remaining participants, 247 had no missing values (89.8%) and 28 (10.2%) had one missing value. Logical imputation was used to substitute for missing data.

Tests of assumptions. A series of preliminary analyses were conducted to determine if the data violated the assumptions of normality, linearity, and homoscedasticity of errors. On a multivariate level, no violations were present. However, because univariate normality appeared to be violated in the six predictors (e.g., significant skew), Pillai's V was used for the major analyses as it is robust to violations of normality when sample sizes are equal (Field, 2013).

The data were also screened for outliers and multicollinearity among the variables. Leverage, discrepancy, and influence values were calculated to identify multivariate outliers – none appeared to be present. Although correlations amongst some predictors were moderately high (e.g., role conflict and threatening stress; r = .49), indicating a large amount of confounding, the correlations fell below the cutoff of $|r > .70|$ for extreme multicollinearity (Cohen, Cohen, West, & Aiken, 2003). Amongst the predictors, tolerance values were all above .50 and VIF scores fell between 1.15 and 1.57, below the conservative cutoff of 2 (Cohen et al., 2003). These scores indicate no extreme multicollinearity amongst predictors.

Counterbalancing. To ensure participants' responses were not influenced by the order in which participants took the measures, a one-way multivariate analysis of variance (MANOVA) was conducted using the survey order they were given as the predictor variable and their scores on all eight measures as the outcome variables. Results of the MANOVA indicated that no order effects were present, Pillai's $V = .11$, $F(24, 798) = 1.32$, $p = .14$, $\hat{\rho}^2_{MV} = 0.0$, 95% CI [.00, .05].

Descriptive Statistics

Means, standard deviations, and Cronbach's alpha coefficients were calculated to help describe the sample (Table 1). Table 1 also highlights correlations between the study variables.

Table 1

Descriptive, Reliability, and Bivariate Correlation Data of Study Variables (N = 275)

Variables	M	SD	1	2	3	4	5	6	7	8
1. Burnout	3.48	1.03	.93							
2. Vigor	4.67	0.84	-.72*	.90						
3. Role Ambiguity	2.87	1.03	.46*	-.48*	.85					
4. Role Conflict	3.33	1.25	.42*	-.37*	.43*	.85				
5. Threat	12.20	7.39	.57*	-.51*	.49*	.41*	.83			
6. SWA	198.10	32.11	-.28*	.29*	-.34*	-.31*	-.24*	.97		
7. Family	5.52	1.39	-.07	.15	-.15	-.13	-.06	.07	.94	
8. Friends	5.76	1.25	-.27*	.32*	-.35*	-.19*	-.22*	.28*	.34*	.96

Note. Burnout =SMBM ; Vigor =SMVM; Role Ambiguity = RA scale; Role Conflict = RC scale, Threat = Threatening Stress; SWA= Supervisory Working Alliance, SWAI-T; Family = MSPSS Family Social Support; Friend = MSPSS Friends Social Support.

* = $p < .001$. Cronbach's alpha coefficients are reported on the diagonal.

Major Analyses

In the present study, burnout was strongly inversely correlated with vigor, r = -.72, p < .0001, $\hat{\rho}^2$ = .52, 95% CI [-0.77, -0.66]. Thus, Hypothesis 1-a was rejected and Hypothesis 1-b was not rejected.

A series of multivariate multiple regressions were used to analyze the unique and combined effects of the six predictors on the set of burnout and vigor. A substantial association was found between the set of all predictor variables and the criterion set, Pillai's V = .48, F(12, 536) = 14.02, p < .0001, $\hat{\rho}^2_{MV}$ = .22, 95% CI [.16, .31], supporting Hypothesis 2. The resource facilitating set (i.e., family and friends' social support, SWA) did not uniquely predict the criterion set of burnout and vigor when controlling for the RCF set, V = .05, F(6, 536) = 2.20, p = .04, $\hat{\rho}^2_{MV}$ < .001, CI [.00, .05]. Thus, Hypothesis 3 was not supported. Hypothesis 4 was supported as the resource consuming set (i.e., role conflict and ambiguity, threatening stress) substantially uniquely predicted burnout and vigor when controlling for the RFF set, V = .36, F(6, 536) = 19.75, p < .0001, $\hat{\rho}^2_{MV}$ = .16, CI [.11, .25].

At the individual predictor level (controlling for the other predictors), no substantial unique prediction was observed between the criterion set (i.e., burnout and vigor) and the SWA, Pillai's V = .01, F(2,267) = 1.17, p = .31, $\hat{\rho}^2_{MV}$ = 0.0, 95% CI [.00, .03]; family social support, V = .01, F(2, 267) = 1.13, p = .33, $\hat{\rho}^2_{MV}$ = 0.0, CI [.00, .05]; friend social support, V = .02, F(2, 267) = 2.75, p = .07, $\hat{\rho}^2_{MV}$ = 0.0, CI [.00, .03], role ambiguity, V = .04, F(2, 267) = 5.89, p < .01, $\hat{\rho}^2_{MV}$ = .02, CI [.01, .09], or role conflict, V = .03, F(2, 267) = 4.44, p = .01, $\hat{\rho}^2_{MV}$ = .01, CI [.00, .07]. Thus, Hypotheses 3a, 3b, 3c, 4b, and 4c were not supported. Threatening stress substantially uniquely predicted the criterion set, V = .17, F(2, 267) = 28.19, p < .0001, $\hat{\rho}^2_{MV}$ = .15, CI [.10, .24], supporting Hypothesis 4a.

Post Hoc Analyses

Post hoc analyses were conducted to better understand the unexpected findings that several predictors did not uniquely explain variance in burnout and vigor. Per Table 1, significant and substantive zero order correlations were found between several predictors (i.e., role ambiguity, role conflict, friend social support, and the SWA) and each criterion variable (i.e., burnout and vigor), yet none uniquely predicted the criterion set when all other predictors were controlled for. Because role ambiguity, role conflict, friend social support, and the SWA are also significantly and substantially correlated with threatening stress, the pattern of correlations observed may suggest threatening stress mediates the association between the listed predictors and burnout and vigor (Hayes, 2017), which has intuitive appeal.

I hypothesized, post hoc, that threatening stress would mediate the relations between four predictors (i.e., role conflict, role ambiguity, friend social support, and the SWA) and burnout and vigor. To determine whether relations between each predictor and the criterion set of burnout and vigor were stronger as a single predictor, four additional multivariate regression analyses were conducted. Each predictor substantially (α_{PC} = .004) predicted the criterion set of burnout and vigor): supervisory working alliance, Pillai's V = .10, $F(2,272)$ = 14.41, p < .0001, $\hat{\rho}^2_{MV}$ = .09, 95% CI [.04, .15]; friend social support, V = .11, $F(2, 272)$ = 16.14, p < .0001, $\hat{\rho}^2_{MV}$ = .10, CI [.05, .17], role ambiguity, V = .25, $F(2, 272)$ = 46.53, p < .0001, $\hat{\rho}^2_{MV}$ = .25, CI [.17, .32], and role conflict, V = .18, $F(2, 272)$ = 31.15, p < .0001, $\hat{\rho}^2_{MV}$ = .18, CI [.12, .26]. Thus, when controlling for threatening stress, the path coefficients (here effect sizes) between each predictor and the criterion set dropped substantially for role conflict ($\hat{\rho}^2_{MV}$ = .18 to $\hat{\rho}^2_{MV}$ = .01), role ambiguity, ($\hat{\rho}^2_{MV}$ = .25 to $\hat{\rho}^2_{MV}$ = .02), friend social support ($\hat{\rho}^2_{MV}$ = .10 to $\hat{\rho}^2_{MV}$ = 0.0), and the SWA ($\hat{\rho}^2_{MV}$ = .09 to $\hat{\rho}^2_{MV}$ = 0.0). These findings offer tentative support for the hypothesis that

threatening stress mediates the association between four of the study's predictors (i.e., role ambiguity, role conflict, the SWA, and academic friend social support) and burnout and vigor.

Given that the supervisory working alliance had previously been found to uniquely predict burnout and vigor among HSP students (controlling for threatening stress; Swords & Ellis, 2017), two further post hoc analyses were performed to understand this discrepancy. Students are theorized to use and experience clinical supervision differently as their training and experience increase (Rønnestad & Skovolt, 2003). Thus, it is possible that for students earlier in their training and who may be engaged in less clinical work, supervision may look different and be less protective from burnout and facilitative of vigor than more clinically experienced students. I hypothesized, post hoc, that two indicators of participants' clinical experience (i.e., direct client hours per week and year in graduate program) would predict (α_{PC} = .002) the criterion set of burnout and vigor. I performed two MANOVAS and found neither year in program, Pillai's V = .04, $F(2,272) = 5.22$, p = .006 *ns*, $\hat{\rho}^2_{MV}$ = .03, 95% CI [.01, .08], nor direct client hours per week, V = .03, $F(2,270) = 3.39$, p = .04 *ns*, $\hat{\rho}^2_{MV}$ = .02, CI [.001, .06], substantively predicted the criterion set of burnout and vigor.

Chapter IV

Discussion

Overview of Present Study

The purpose of the present study was to (a) replicate and extend Swords and Ellis's (2017) application of CORT to a new sample of HSP students, (b) test Hobfoll (1989, 1998) and Shirom's (2011) theorizing, and (c) gain a greater understanding of HSP student burnout and vigor. To fully understand this study's findings, its strengths and limitations are discussed first.

Limitations

Results from the present study should be interpreted in the context of its limitations. The study used an *ex post facto* cross-sectional single-group design that prevents causal or temporal inferences from being made. The use of post hoc hypotheses and analyses may introduce error and bias (Nestor & Schutt, 2019) and thus post hoc results must be interpreted tentatively until tested in a new sample. Findings should be generalized with caution as convenience sampling was used, meaning the sample obtained may not accurately reflect the heterogeneity of the HSP population—the experience of stress and support may vary due to individual (e.g., racial/ethnic identity; El-Ghoroury et al., 2012) or program (e.g., Psy.D., school psychology) characteristics. Methodological choices that also restrict generalizations include (a) the exclusive use of self-report instruments that may introduce mono-method bias (Shadish, Cook, & Campbell, 2002), (b) the use of measures designed for a general work environment that may introduce error in item responses due to the novelty of HSP students' work, and (c) the use of the MSPSS, which does not assess the type (e.g., emotional or informational support) or affective quality of support (e.g., focus on negative feelings) that may enhance or negate support's impact (e.g., Haly, 2009).

Strengths

The primary strength of the present study is its firm roots in existing research and theory. The study is a replication and extension of Swords and Ellis's (2017) study of HSP burnout and vigor and is heavily informed by CORT (Hobfoll, 1989, 1998). The use of competing hypotheses to test some predictions allowed for greater advancement of theory by ruling out alternative theoretical explanations (e.g., Platt, 1964). Additionally, Type I and II error were controlled for by adjusting per-comparison alpha levels to ensure the experiment-wise alpha did not exceed 5% (Type I) and by performing an a priori power analysis to ensure the sample size was large enough to detect differences if present (Type II).

Major Findings

Descriptive results. Compared to past research on workers and college students, HSP students in the present sample reported substantially fewer resources. That is, consistent with past research (Swords & Ellis, 2017), HSP students reported substantially higher burnout (Shirom, 2008), higher threatening stress (Stanton et al., 2001), and lower vigor (Shirom, 2008b) than typical workers and substantially lower social support from family (Zimet et al., 1988) than typical students. HSP students' perceptions that they have limited resources is concerning, as HSP students may also be more susceptible to common correlates of resource loss, such as poorer physical health (e.g., Kahill, 1988), intention to quit school (Koeske & Koeske, 1991), and reduced quality of client care (Pakenham & Stafford-Brown, 2012). Furthermore, HSP students' perceptions of their learning environment are highly predictive of their learning outcomes (Lizzio, Wilson, & Simons, 2010). That is, a training program perceived as overwhelmingly stressful may negatively impact HSP students' education and training.

HSP students in the present study also reported substantially lower vigor than students in

Swords and Ellis's (2017) sample, despite experiencing similar burnout. The difference in vigor but not burnout supports that the constructs are at least partially distinct (Shirom, 2011). It also suggests heterogeneity in how HSP students' experience vigor, possibly due to the possession of different individual or organizational resources (Shirom, 2011) as the present sample differed from Swords and Ellis's sample on some organizational (e.g., fewer Psy.D. students) and individual (e.g., fewer months of clinical experience) variables. Further research may elucidate more precisely what contributes to differential experiences of vigor in HSP students.

Ratings of the supervisory working alliance in the present sample were consistent with prior research (Lehrman-Waterman & Ladany, 2001; Swords & Ellis, 2017), as were ratings of social support from academic friends (Zimet et al., 1988). Levels of role ambiguity and role conflict in the present sample were substantially lower than levels in typical workers (Rizzo et al., 1970). Given that graduate students commonly report problems due to role conflict and ambiguity (e.g., Grady et al., 2013), HSP programs may do a better job of preparing students for the multiple roles they will occupy during training (e.g., researcher, student, clinician) than other academic or professional settings. HSP students may be able to capitalize on the resources they do have to help buffer the impact of resource loss (Hobfoll & Shirom, 2000).

Relation of burnout and vigor. In the present sample, burnout and vigor were substantially inversely related, consistent with past research in HSP students (Swords & Ellis, 2017), yet inconsistent with how burnout and vigor are theorized and observed (Shirom, 2011) to behave in the general workforce (i.e., minimally related). Shirom (2011) hypothesized that a strong inverse relation between burnout and vigor may only occur when stress is significantly high. Given that threatening stress in the present sample was rated more highly than in average workers, HSP students may have limited resources to invest in activities that promote vigor (e.g.,

a loss spiral; Hobfoll, 1989, 1998) and are thus more susceptible to burnout. The strong inverse correlation observed in HSP students between burnout and vigor also suggests the constructs should continue to be analyzed together using multivariate analysis to address their potential multicollinearity (Haase & Ellis, 1987).

Predictors of burnout and vigor. The present study, in combination with Swords and Ellis (2017), provides further evidence that CORT (Hobfoll, 1989, 1998) can at least partially explain HSP students' burnout and vigor. As expected, all six predictors together explained a substantial amount of burnout and vigor, with threatening stress explaining the most unique variance, consistent with prior research (Swords & Ellis, 2017). The importance of threatening stress to burnout and vigor makes sense, as CORT asserts that the perception of resource loss is foundational to the experience of stress. Thus, threatening stress, representing a severe and "overwhelming" concern, would logically tie to perceptions of greater resource loss and lower perceptions of resource gain. With perceptions of low resources, a surplus of energetic resources (vigor) is unlikely and further depletion of energetic resources (burnout) would be expected (Hobfoll & Shirom, 2000).

Surprisingly, the present study found that, inconsistent with initial hypotheses, threatening stress may mediate the association between four of the predictors and burnout and vigor. The supervisory working alliance, social support from academic friends, role ambiguity, and role conflict each failed to uniquely predict burnout and vigor, yet post hoc testing revealed substantial effect sizes of each predictor and the criterion set of burnout and vigor. Thus, the level of threatening stress perceived in a doctoral program may be important to HSP students' experience of burnout and vigor insomuch as it may explain how and why students' perceptions of role conflict, role ambiguity, the supervisory working alliance, and social support from

academic friends predict burnout and vigor. Given that burnout is the perception that one's energetic resources are depleted and cannot be replenished (Hobfoll & Shirom, 2000), it makes logical sense that this would occur largely when stress is perceived as serious or overwhelming (i.e., threatening stress). Similarly, perceptions of overwhelming stress may lower perceptions that resources can be gained, reducing the likelihood of vigor (Shirom, 2011).

Post hoc analyses indicated that the most significant drops in effect size when threatening stress was included occurred for role ambiguity ($\hat{\rho}^2_{MV}$ = .25 to $\hat{\rho}^2_{MV}$ = .02) and role conflict ($\hat{\rho}^2_{MV}$ = .18 to $\hat{\rho}^2_{MV}$ = .01). This finding is novel as extant research focuses primarily on direct effects between role ambiguity and conflict with burnout (Haly, 2009). As Kahn and colleagues (1964) conceptualized role ambiguity and role conflict as forms of stress, it makes sense they may predict burnout and vigor in HSP students by means of contributing to perceptions of an overwhelmingly stressful training environment. Although role ambiguity and role conflict have been identified as major stressors by mental health workers (e.g., Coyle et al., 2005), limited research on the constructs have occurred in HSP students. Additional research may inform how and why role ambiguity and conflict may contribute to students' threatening stress and subsequently their burnout and vigor levels.

The finding that, when threatening stress was included in the model, the supervisory working alliance did not uniquely significantly predict burnout and vigor was unexpected as it contradicted Swords' and Ellis's (2017) previous findings in HSP students. Given that the present study found evidence that threatening stress may mediate the association of SWA on burnout and vigor, it is possible that threatening stress also mediated SWA differently in Swords and Ellis's sample. One explanation may be that in the present sample, the supervisory working alliance was only measured with students' primary clinical supervisor, defined as the supervisor

with whom one spends the most time, despite 24.9% of participants feeling "closest" with a supplemental supervisor. It is possible that the SWA may predict burnout and vigor in different ways based on different characteristics of the supervisory relationship. More nuanced research is needed to understand in what contexts the SWA may uniquely predict burnout and vigor and when the SWA is more likely to be mediated by threatening stress.

The discrepant findings between social support from academic friends and family are also notable. Although no evidence was found that either form of support uniquely predicted burnout and vigor in HSP students, threatening stress was found to mediate social support from academic friends' prediction of burnout and vigor. According to CORT (Hobfoll, 1989, 1998), social support only protects against resource loss and contributes to resource gain when it effectively attends to situational needs. Furthermore, resource loss is more consequential to and predictive of distress than resource gain (Hobfoll & Shirom, 2000). Thus, the lack of evidence that social support from family predicted burnout and vigor suggests that support from family may not provide adequate resources to counteract the significant resource loss that HSP students face during doctoral study (i.e., compared to the average, higher threatening stress and burnout, lower vigor) and may not substantially contribute to resource gain. In contrast, support from academic friends may better predict threatening stress (and subsequent burnout and vigor) as HSP students perceive support from friends and peers most helpful in coping with their biggest stressors – coursework and dissertation work (Nelson et al., 2001). In other words, academic friends' social support may account for situational needs and thus be a more effective coping strategy for HSP students to manage their high resource loss and foster resource gain. Additional research on how HSP students use different types of social support to account for situational needs may provide beneficial guidance on how students can minimize resource loss and maximize resource gain.

Implications and Future Directions

As more attention is being paid to the characteristics of "model training programs" in health service psychology (HSPEC, 2013), the present study, as well as Swords and Ellis (2017), shines a light on some conditions that contribute to burnout and vigor within HSP training. This study also illuminates the high degree of burnout, low level of vigor, and the mediating role of threatening stress within HSP students. Previous research suggests high burnout and low vigor are associated with significant negative outcomes, (e.g., poorer job performance and health; Kahill, 1988; Shirom, 2011) -- researchers are invited to investigate if HSP students' threatening stress, burnout and vigor impacts their work, health, quality of life, or other important outcomes.

Training directors may want to consider employing interventions that can help HSP students identify burnout symptoms, reduce workplace threatening stress, and foster student vigor. Given the present findings, interventions that enhance students' supervisory alliance and social support from academic friends or reduce students' role ambiguity and role conflict may be key. Students' perceptions of important benchmarks (e.g., qualifying exams, internship, dissertation defenses) may also shed light on what HSP students perceive as stressful and what is "threatening" stress. Past success in reducing/preventing stress has been found using psychoeducational program for workers (Kagan, Kagan, & Watson, 1995) and group interventions for counseling trainees (e.g., Lindo et al., 2015). Students and training programs may also benefit by gathering information on how to adapt interventions based on HSP student characteristics that impact their perceptions of stress (e.g., race; El-Ghoroury et al., 2012).

The finding that threatening stress is a unique predictor of HSP students' burnout and vigor and may mediate other predictors has several practical and research applications. The present findings offer initial evidence that CORT (Hobfoll, 1989, 1998) may not fully explain

how burnout and vigor function in HSP students. Specifically, the present study offers initial evidence that common stressors (i.e., role ambiguity conflict) and support (i.e., academic friends, supervisors) may help to explain HSP students' burnout and vigor via their association with threatening stress. Although researchers have examined how resource facilitating factors may moderate the association between resource consuming factors and distress (Hobfoll & Shirom, 2000), the present study may be the first evidence that threatening stress may mediate the associations between stressors/supports on burnout and vigor. Correlations found between past predictors (i.e., financial strain, pressuring stress, and relationship conflict) and burnout and vigor in HSP students (Swords & Ellis, 2017) may also point to threatening stress as a mediator and is worthy of additional investigation. Because mediation in the present study was found post hoc, the results should be interpreted cautiously (Nestor & Schutt, 2019), and further research using a priori theorizing and experimental, longitudinal data is needed (Shadish et al., 2002) before more definitive conclusions can be made.

In sum, the present study advanced the application of CORT (Hobfoll, 1989, 1998) by finding evidence that threatening stress mediates how stressors (i.e., role conflict, role ambiguity) and supports (i.e., the SWA, academic friend support) predict burnout and vigor. These findings represent a promising beginning to a line of inquiry which may lead to more effective and more supportive clinical training for students in HSP programs.

References

Armon, G., Shirom, A., Shapira, I., & Melamed, S. (2008). On the nature of burnout-insomnia relationships: A prospective study of employed adults. *Journal of Psychosomatic Research, 65,* 5-12. doi:10.1016/j.jpsychores.2008.01.012

Bahrick, A. S. (1989). *Role induction for counselor trainees: Effects on the supervisory working alliance* (Unpublished doctoral dissertation). The Ohio State University, Columbus, OH.

Bamonti, P. M., Keelan, C. M., Larson, N., Mentrikoski, J. M., Randall, C. L., Sly, S. K., … McNeil, D. W. (2014). Promoting ethical behavior by cultivating a culture of self-care during graduate training: A call to action. *Training and Education in Professional Psychology, 8,* 253–260. doi:10.1037/tep0000056

Bernard, J. M., & Goodyear, R. K. (2019). *Fundamentals of clinical supervision* (6th ed.). Upper Saddle River, N.J.: Pearson Education Inc.

Bordin, E. S. (1983). A working alliance-based model of supervision. *The Counseling Psychologist, 11,* 35-42. doi:10.1177/0011000083111007

Canty-Mitchell, J., & Zimet, G. D. (2000). Psychometric properties of the Multidimensional Scale of Perceived Social Support in urban adolescents. *American Journal of Community Psychology, 28,* 391–400. doi:10.1023/A:1005109522457

Clark, H. K., Murdock, N. L., & Koetting, K. (2009). Predicting burnout and career choice satisfaction in counseling psychology graduate students. *The Counseling Psychologist, 37,* 580-606. doi:10.1177/0011000008319985

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences.* Hillsdale, NJ: Erlbaum.

Cohen, J., & Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Hillsdale, NJ:

Lawrence Erlbaum Associates.

Coyle, D., Edwards, D., Hannigan, B., Fothergill, A., & Burnard, P. (2005). A systematic review of stress among mental health social workers. *International Social Work, 48,* 201–211. doi:10.1177/0020872805050492

El-Ghoroury, N. H., Galper, D. I., Sawaqdeh, A., & Bufka, L. F. (2012). Stress, coping, and barriers to wellness among psychology graduate students. *Training and Education in Professional Psychology*, *6*, 122–134. doi:10.1037/a0028768

Ellis, M. V., Berger, L., Hanus, A. E., Ayala, E. E., Swords, B. A., & Siembor, M. (2014). Inadequate and harmful supervision: Testing a revised framework and assessing occurrence. *The Counseling Psychologist, 42*, 434-472. doi:10.1177/0011000013508656

Ellis, M. V., & Ladany, N. (1997). Inferences concerning supervisees and clients in clinical supervision: An integrative review. In C. E. Watkins (Ed.), *Handbook of psychotherapy supervision* (pp. 447–507). Hoboken: John Wiley & Sons.

Ellis, M. V., Russin, A., & Deihl, L. M. (2003, August). *Dimensionality of the supervision working alliance: Supervisees' perceptions.* Paper presented at the 111th Annual Convention of the American Psychological Association, Toronto, Canada.

Field, A. (2013). *Discovering statistics using IBM SPSS* (4th ed.). London, UK: Sage.

González-Romá, V., & Lloret, S. (1998). Construct validity of Rizzo et al.'s (1970) Role Conflict and Ambiguity Scales: A multisample study. *Applied Psychology: An International Review, 47,* 535–545. doi:10.1080/026999498377737

Grady, R. K., La Touche, R., Oslawski-Lopez, J., Powers, A., & Simacek, K. (2013). Betwixt and between: The social position and stress experiences of graduate students. *Teaching Sociology, 42*, 5-15. doi:10.1177/0092055X13502182

Haase, R. F., & Ellis, M. V. (1987). Multivariate analysis of variance. *Journal of Clinical Psychology, 34*, 404-413. doi:10.1037/0022-0167.34.4.404

Haly, M. K. (2009). A review of contemporary research on the relationship between occupational stress and social support: Where are we now? *The Australian and New Zealand Journal of Organisational Psychology*, *2*, 44–63. doi:10.1375/ajop.2.1.44

Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). New York, NY: The Guilford Press.

Health Service Psychology Education Collaborative. (2013). Professional psychology in health care services: A blueprint for education and training. *American Psychologist, 68*, 411-426. doi:10.1037/a0033265

Heppner, P. P., Wampold, B. E., & Kivlighan, D. M., Jr. (2007). *Research design in counseling* (3rd ed.). Belmont, CA: Thomson Brooks/Cole.

Hill, C. E., Charles, D., & Reed, K. G. (1981). A longitudinal analysis of changes in counseling skills during doctoral training in counseling psychology. *Journal of Counseling Psychology, 28*, 428-436. doi:10.1037/0022-0167.28.5.428

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*, 513-524. doi:10.1037/0003-066X.44.3.513

Hobfoll, S. E. (1998). *The psychology and philosophy of stress, culture, and community*. New York, NY: Plenum.

Hobfoll, S. E., & Shirom, A. (2000). Conservation of resources theory: Applications to stress and management in the workplace. In R. T. Golembiewski (Ed.), *Handbook of organizational behavior* (2nd ed.; pp. 57–80). New York, NY: Dekker.

Holland, B. S., & Copenhaver, M. D. (1988). Improved Bonferroni type multiple testing

procedures. *Psychological Bulletin, 104*, 145-149. doi:10.1037/0033-2909.104.1.145

Kagan, N. I., Kagan, H., & Watson, M. G. (1995). Stress reduction in the workplace: The effectiveness of psychoeducational programs. *Journal of Counseling Psychology, 42*, 71-78. doi:10.1037/0022-0167.42.1.71

Kahill, S. (1988). Symptoms of professional burnout: A review of the empirical literature. *Canadian Psychology, 29,* 284-297. doi:10.1037/h0079772

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., & Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity*. New York, NY: John Wiley & Sons.

Koeske, G. F., & Koeske, R. D. (1991). Student "burnout" as a mediator of the stress-outcome relationship. *Research in Higher Education, 32*, 415–431. doi:10.1007/BF00992184

Ladany, N., Ellis, M. V., & Friedlander, M. L. (1999). The supervisory working alliance, trainee self-efficacy, and satisfaction. *Journal of Counseling & Development, 4*, 447-455. doi:10.1002/j.1556-6676.1999.tb02472.x

Lehrman-Waterman, D., & Ladany, N. (2001). Development and validation of the Evaluation Process Within Supervision Inventory. *Journal of Counseling Psychology, 48,* 168-177. doi:10.1037/0022-0167.48.2.168

Lindo, N. A., Meany Walen, K. K., Cellabos, P., Ohrt, J. H., Prosek, E., Yousef, D., . . . Blalock, S. (2015). Wellness and burnout prevention: Perceptions of a group supervision intervention. *Journal of Professional Counseling: Practice, Theory, and Research, 42*, 28-42. Retrieved from https://www.tandfonline.com/loi/ujpc20

Lizzio, A., Wilson. K., & Simons, R. (2002). University students' perceptions of the learning environment and academic outcomes: Implications for theory and practice. *Studies in*

Higher Education, 27, 27-52. doi:10.1080/03075070120099359

Maxwell, S. E., Lau, M. Y., & Howard, G. S. (2015). Is psychology suffering from a replication crisis? What does "failure to replicate" really mean? *American Psychologist, 70,* 486-498. doi:10.1037/a0039400.

Nelson, N. G., Dell'Oliver, C., Koch, C., & Buckler, R. (2001). Stress, coping, and success among clinical psychology graduate students. *Psychological Reports, 88,* 759-767. doi:10.2466/pr0.2001.88.3.759

Nestor, P. G., & Schutt, R. K. (2019). *Research methods in psychology: Investigating human behavior* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Pakenham, K. I., & Stafford-Brown, J. (2012). Stress in clinical psychology trainees: Current research status and future directions. *Australian Psychologist, 47,* 147–155. doi:10.1111/j.1742-9544.2012.00070.x

Pines. A., Aronson. E., & Kafry, D. (1981). *Burnout: From tedium to personal growth*. New York, NY: Free Press.

Platt, J. R. (1964). Strong inference. *Science, 146,* 347–353. doi:10.1126/science.146.3642.347

Rizzo, J. R., House, R. J., & Lirtzman, S. I. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly, 15,* 150-163. doi:10.2307/2391486

Rønnestad, M. H., & Skovolt, T. M. (2003). The journey of the counselor and therapist: Research findings and perspectives on professional development. *Journal of Career Development, 30,* 5-44. doi:10.1177/089484530303000102

Rummell, C. M. (2015). An exploratory study of psychology graduate student workload, health, and program satisfaction. *Professional Psychology: Research and Practice, 46,* 391–399. doi:10.1037/pro0000056

Serlin, R. C., & Lapsley, D. K. (1985). Rationality in psychological research: The good-enough principle. *American Psychologist, 40,* 73-83. doi:10.1037/0003-066X.40.1.73

Shadish, W., Cook, T., & Campbell, D. (2002). *Experimental and quasi-experimental designs for generalized causal inference.* Boston, MA: Houghton Mifflin.

Shirom, A. (2005). *Burnout and Vigor Scales (SMBM & SMVM)*. Retrieved from http://shirom.org/arie/index.html

Shirom, A. (2008). *Norms for the SMBM and SMVM, healthy female and male employees.* Retrieved from http://www.shirom.org/arie/index.html#.

Shirom, A. (2011). Vigor as a positive affect at work: Conceptualizing vigor, its relations with related constructs, and its antecedents and consequences. *Review of General Psychology, 15*, 50–64. doi:10.1037/a0021853

Stanton, J. M., Balzer, W. K., Smith, P. C., Parra, L. F., & Ironson, G. (2001). A general measure of work stress: The stress in general scale. *Educational and Psychological Measurement, 61*, 866-888. doi:10.1177/00131640121971455

Swords, B. A., & Ellis, M. V. (2017). Burnout and vigor among health service psychology doctoral students. *The Counseling Psychologist, 45,* 1141-1161. doi:10.1177/0011000017747548

Ybrandt, H., Sundin, E. C., & Capone, G. (2016) Trainee therapists' views on the alliance in psychotherapy and supervision: A longitudinal study. *British Journal of Guidance & Counselling, 44*, 530-539. doi:10.1080/03069885.2016.1153037

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment, 52,* 30-41. doi:10.1207/s15327752jpa5201_2

Appendix A

Demographic Questionnaire

1. To which gender do you most identify?
    - Female
    - Male
    - Transgender Female
    - Transgender Male
    - Gender Variant/Non-Conforming
    - Prefer Not to Answer
    - Prefer to self-describe (please specify below): _____
2. Please indicate your age (in years): _____
3. Please indicate your race/ethnicity
    - African-American / Black
    - American Indian/Alaska Native
    - Asian/Asian-American
    - European American / White
    - Latino-a or Hispanic
    - Native Hawaiian / Pacific Islander
    - Multi-racial
    - Prefer Not to Answer
    - Prefer to self-describe (please specify below): _____
4. Current graduate training program of which you are enrolled:
    - Counseling Psychology
    - Clinical Psychology
    - School Psychology
    - Other (please specify below): ____
5. Type of doctoral degree you will earn from your current program:
    - Ph.D.
    - Psy.D.
    - Ed.D.
    - I am not currently enrolled in a doctoral program
    - Other (please specify below): ____
6. Do you have a Masters' degree?
    - No
    - Yes (please specify in what field/discipline you hold the degree): ___
7. What is your current year in your graduate program? ___
8. What is your enrollment status?
    - Full-time student
    - Part-time student
    - Other (please specify below):
9. What is your status in your doctoral program?
    - Pre-Internship (1st practicum)

- Pre-Internship (advanced practicum)
- Completing Internship
- Internship Finished but Dissertation not defended
- Other (please specify below): _____

10. What is the status of your doctoral dissertation?
    - Pre-proposal
    - Proposed and/or collecting data
    - Data collected and/or preparing for final defense
    - Defended/Finished
    - N/A
    - Other (please specify below): ____
11. What tasks are you currently performing during your training program? (please check all that apply)
    - Taking courses
    - Performing clinical work
    - Performing research (not including dissertation)
    - Teaching
    - Assistantship (that is not covered in categories above)
    - Professional organization roles (e.g., student leader in APA
    - Other (please specify below): ___
12. On average, approximately how many hours per week do you spend:
    - on coursework and in courses ___
    - on practicum/externship/clinical placement
        - interacting with clients (i.e., direct client contact hours) ___
        - in individual clinical supervision with your primary clinical supervisor ___
    - performing research (excluding dissertation)
    - performing dissertation research
    - working for your assistantship/fellowship
    - working at your internship site
    - on activities you identify as self-care (see definition above):
    - working at a job not connected with you graduate work (do not include hours reported above for assistantships or fellowships): _____
13. On average, approximately how many hours per week do you spend working on activities related to graduate school that were not covered in the categories listed above? Please include the activity and the number of hours per week, on average, spent on the activity. ___
14. After graduation, which role do you intend to focus PRIMARILY on in your career?
    - Researcher
    - Clinician
    - Instructor
    - Other (please specify below): ____
15. Approximately how many months have you been doing clinical work (including clinical work outside of doctoral training program)? ___
16. Please indicate the setting that best describes your current primary clinical placement:
    - College/university counseling center
    - VA medical center

- Outpatient clinic in a medical center
- Inpatient unit in a medical center or state hospital
- Community clinic or agency
- Adolescent residential group home
- Adult residential group home
- Adult Assisted Living Facility
- Public or private school (K-12)
- Independent practice
- Other (please specify): _____

17. What type of clinical work are you currently performing? Please check all that apply:
    - Individual Therapy
    - Group Therapy
    - Assessment
    - Not currently completing clinical work
    - Other (please specify below): ___
18. How many clients do you see per week, on average? ___
19. What type of clinical supervision are you currently receiving? Please check all that apply:
    - Individual Supervision
    - Group Supervision
    - Not currently receiving supervision
    - Other (please specify below): ____
20. How many clinical supervisors are currently providing you supervision? ___
21. If you have more than one clinical supervisor, which clinical supervisor do you feel closest to?
    - Primary clinical supervisor (i.e., supervisor you spend most time with)
    - Supplemental clinical supervisor
    - Other (please specify below): ___
22. To date, approximately how many individual clinical supervision sessions have you had with your current primary clinical supervisor? _____

Please read the following definition of burnout and then answer the corresponding questions: "*An affective reaction to ongoing stress whose core content is the gradual depletion over time of individuals' intrinsic energetic resources, including the expression of emotional exhaustion, physical fatigue, and cognitive weariness."*

23. Do you believe you have experienced burnout while in your doctoral program?
    - Yes
    - No (please skip to next page)
24. To what degree do you feel you have experienced burnout during your doctoral program?

Not at All	Slightly	Moderately	Very	Totally
1	2	3	4	5

25. What factors contributed to your experience of burnout (i.e., what do you perceive helped cause your burnout)? _____
26. What has suffered the most as a result of your feeling of burnout? ___

Please read the following definition of vigor and then answer the corresponding questions: *"A positive affective response to one's ongoing interactions with significant elements in one's job and work environment that comprises the interconnected feelings of physical strength, emotional energy, and cognitive liveliness*."

27. Do you believe you have experienced vigor while in your doctoral program?
    - Yes
    - No (please skip to next page)

28. To what degree do you feel you have experienced vigor during your doctoral program?

Not at All	Slightly	Moderately	Very	Totally
1	2	3	4	5

29. What factors contributed to experiencing vigor (i.e., what do you perceive helped cause your vigor)?

30. What were the greatest benefits of feeling full of vigor? ___

Please read the following definition of role conflict and then answer the corresponding questions: *the condition in which an individual is assigned multiple work tasks that are incompatible with one another* (*e.g., insufficient time or resources, contradictory needs)*.

31. Do you believe you have experienced role conflict while in your doctoral program?
    - Yes
    - No (please skip to next page)

32. To what degree do you feel you have experienced role conflict during your doctoral program?

Not at All	Slightly	Moderately	Very	Totally
1	2	3	4	5

33. What factors contributed to your experience of role conflict (e.g., in what domains did role conflict occur, what contradictory expectations did you encounter)? _____

34. How do you believe your role conflict impacted you or others? ___

Please read the following definition of role ambiguity and then answer the corresponding questions: *the condition in which an individual is unclear about the expectations or tasks of a given work role* (*e.g., lack of clarity on what to do, how to best complete work tasks).*

35. Do you believe you have experienced role ambiguity while in your doctoral program?
    - Yes
    - No (please skip to next page)

36. To what degree do you feel you have experienced role ambiguity during your doctoral program?

Not at All	Slightly	Moderately	Very	Totally
1	2	3	4	5

37. What factors contributed to your experience of role ambiguity (e.g., in what domains did role ambiguity occur, what unclear expectations did you encounter)? _____

38. How do you believe your role ambiguity impacted you or others? ___

Please read the following definition of self-care and then answer the corresponding questions: "*providing adequate attention to one's own physical and psychological wellness.*"

39. Do you believe you have practiced self-care while in your doctoral program?

- Yes
- No (please skip to next page)

40. To what extent do you feel you have practiced self-care during your doctoral program?

Never	Very infrequently	Quite infrequently	Sometimes	Quite frequently	Very frequently	Always
1	2	3	4	5	6	7

41. In what ways have you engaged in self-care? ___
42. What factors contributed to your practice of self-care (e.g., what inhibited or encouraged self-care)? ___
43. How do you believe your self-care impacted you or others? ___
44. If you have anything else you would like to add to help me better understand your responses in this study, please comment in the space below:

Appendix B

Cover Letter

Hello fellow graduate trainees!

My name is Dylan Corp, and I am a doctoral candidate in the Division of Counseling Psychology at the University at Albany. Under the supervision of Dr. Michael V. Ellis, I am currently conducting a study to help fulfill the requirement of my doctoral dissertation. I am pleased to invite you to participate in this brief study about trainee stress and support that has been approved by the University at Albany's Institutional Review Board.

The purpose of this study is to better understand how students in health service psychology (i.e., clinical, counseling, and school psychology) training programs experience academic engagement and stress. I am seeking pre-licensure doctoral trainees from clinical, counseling, and school psychology doctoral programs within the US who currently perform clinical work and receive at least one hour of individual clinical supervision per week. To be eligible to participate, you must have had at least four individual supervision sessions with your current primary clinical supervisor. The online study, including the demographic questionnaire, should take approximately 15 minutes to complete.

For every 10 people who complete the survey, one person will be randomly chosen to receive a $10 Amazon.com gift card (up to $300).

If you are interested in participating in my voluntary and anonymous study, please click on the following link and submit the password 'hspstress':

https://www.psychdata.com/s.asp?SID=176157

I know that doctoral training can be a busy and stressful experience (hence, my study) and recognize how valuable your time is. I would genuinely appreciate if you could spare approximately 15 minutes to help contribute to a better understanding of your (and other doctoral students) stress.

I would also appreciate if you could forward this invitation to at least 5 of your colleagues who you believe may be eligible and interested in participating.

If you have any questions or concerns about the study, please contact me using the information provided below.

With sincere regards,

Dylan Corp, B. A. | Doctoral Candidate
Division of Counseling Psychology | University at Albany, SUNY
ED 220 | 1400 Washington Avenue Albany, NY 12222
(518) 442-5040 | dcorp@albany.edu

Appendix C

Informed Consent

Thank you for your interest in participating in the study entitled 'Stress and Support in Health Service Psychology Students: Predictors of Burnout and Vigor.' The primary goal of this research study is to identify what types of student stress and support contribute to students' physical, mental, and emotional energy during doctoral training.

I am seeking doctoral students in counseling, clinical, or school psychology doctoral programs in the U.S. who are currently receiving weekly clinical supervision from a licensed practitioner and have attended at least four individual supervision sessions with their primary clinical supervisor. The online survey should only take approximately 15 minutes to complete. There is no anticipated risk in participating in the study, other than potential discomfort in answering questions about your current levels of stress.

Your participation in this study is voluntary, anonymous, and will be kept confidential. You may choose to withdraw your participation from the study at any time or leave any answers blank you do not wish to answer. Some notes about confidentiality:

- Your responses will be stored on a password-protected account on Psychdata.com or in a password-protected encrypted folder. No identifying information will be paired with your responses so participation is anonymous.
- Please close your web browser upon completing the study, and do not leave the survey unattended when opened to ensure an external party does not view your responses.
- All information obtained in this study is strictly confidential unless disclosure is required by law. In addition, the Institutional Review Board and University or government officials responsible for monitoring this study may inspect these records.

After you complete the online survey, you will be asked to forward the survey to five peers/colleagues who may be eligible and interested in the study. Forwarding the survey is completely voluntary and not a requirement to participate in the study. Additionally, you will be given the opportunity to enter your email address after completing the survey to be entered into a raffle to receive a $10 Amazon gift card. Gift cards will be offered to one in every ten participants. The contact information supplied for this raffle will be kept separate from your survey responses to ensure confidentiality.

I know that doctoral work can be exhausting and your time is valuable – I sincerely appreciate your participation in my study. Although you will not receive a direct benefit for participating, the information gleaned from this study will inform and hopefully improve health service psychology training and to help reduce students' stress in the future. Thank you for your help.

Dylan Corp, B. A. | Doctoral Candidate
Division of Counseling Psychology | University at Albany, SUNY
ED 220 | 1400 Washington Avenue Albany, NY 12222
(518) 442-5040 | dcorp@albany.edu

Contact Information:
If you have any questions about this study, please contact the Principal Investigator: Dylan Corp, Doctoral Candidate, (518) 442-5040, dcorp@albany.edu or his faculty advisor Michael V. Ellis, Professor, mvellis@albany.edu. Please save a copy of this screen to keep.

Voluntary Participation:
Your participation in this project is voluntary. Even after you agree to participate in the research or sign the informed consent document, you may decide to leave the study at any time without penalty or loss of benefits to which you may otherwise have been entitled. I will retain and analyze the information you have provided up until the point you have left the study unless you request that your data be excluded from any analysis and/or destroyed.

IRB contact about your rights in the study or to report a complaint:
Research at the University Albany involving human participants is carried out under the oversight of the Institutional Review Board (IRB). This research has been reviewed and approved by the IRB. If you have any questions concerning your rights as a research subject or if you wish to report any concerns about the study, you may contact University at Albany Office for Pre-Award and Compliance Services at 1-866-857-5459 or hsconcerns@albany.edu.

By participating in the study, you agree that you are

- At least of 18 years of age
- Currently attending a counseling, clinical, or school psychology doctoral program in the United States
- Receiving weekly individual clinical supervision from a licensed practitioner and have attended at least four sessions of weekly supervision with your primary supervisor.

Directions:

Please complete the materials based on your current experience in your doctoral training program. When asked, consider your role as a doctoral student your 'job' and all the responsibilities associated with it (e.g., research, practicum, teaching) your 'work.' Additionally, please treat the word 'friend' as peer colleagues from your doctoral program (e.g., fellow supervisees, classmates) and 'customers' as your clients, students, or others who depend on you at 'work.' Questions related to your clinical supervisor should be answered with your current primary clinical supervisor (i.e., supervisor you spend most time with) in mind if you currently receive clinical supervision from more than one person.

By clicking NEXT on this survey, you are acknowledging your agreement with the following statement "I have read, or been informed of, the information about this study. I am at least 18 years of age, am enrolled in an HSP training program in the U.S., and currently perform clinical work and receive weekly individual clinical supervision (at least four sessions to date). I hereby consent to participate in the study."