Spring 5-2022

Negative Appraisals and Experiences of Thriving and Burnout at Work and School During the COVID-19 Pandemic: The Moderating Effect of Embeddedness

Kate Noel Warnock
Old Dominion University, kate.warnock16@gmail.com

NEGATIVE APPRAISALS AND EXPERIENCES OF THRIVING AND BURNOUT AT WORK AND SCHOOL DURING THE COVID-19 PANDEMIC: THE MODERATING EFFECT OF EMBEDDEDNESS

by

Kate Noel Warnock
B.S. May 2019, University of Utah

A Thesis Submitted to the Faculty of
Old Dominion University in Partial Fulfillment of the
Requirements for the Degree of

MASTER OF SCIENCE

PSYCHOLOGY

OLD DOMINION UNIVERSITY
May 2022

Approved by:

Dr. Konstantin P. Cigularov (Director)

Dr. Ian M. Katz (Member)

Dr. Abby L. Braitman (Member)

ABSTRACT

NEGATIVE APPRAISALS AND EXPERIENCES OF THRIVING AND BURNOUT AT WORK AND SCHOOL DURING THE COVID-19 PANDEMIC: THE MODERATING EFFECT OF EMBEDDEDNESS

Kate Noel Warnock
Old Dominion University, 2022
Director: Dr. Konstantin P. Cigularov

The current study examines the effects of negative appraisals of COVID-19 on thriving and burnout, and whether embeddedness moderates these effects. Specifically, I examined whether negative appraisals of COVID-19 at work and school are related to less thriving and more burnout in the respective domains, and whether the predicted effects of negative appraisals of COVID-19 on thriving and burnout were stronger among those who reported more embeddedness in their job or major compared to those who are less embedded. Additionally, I investigate potential spillover effects of negative COVID-19 appraisals in one domain into the thriving and burnout in the other domain. Survey data from employed college students were used to test the hypotheses. I expected negative appraisals of COVID-19 to negatively impact one's ability to thrive in both the work and school domains, and to be related to higher rates of burnout in both domains. It was also expected that employed students who are well embedded in their job or major would be protected against these effects, such that they would experience more thriving and less burnout in spite of their negative appraisals of COVID-19. I also expected to see spillover effects of negative appraisals of COVID-19 from one domain onto the outcomes in the other domain. Results showed support for the matching- and cross-domain hypotheses; negative appraisals of COVID-19 at work and school showed negative relationships with thriving and positive relationships with burnout in both domains. However, the moderating effects of major

embeddedness were not significant, and the moderating effect of job embeddedness was positive rather than negative, as hypothesized. This suggests that the association between negative appraisals of COVID-19 and thriving at work was strengthened by job embeddedness. University administrators and organizational leaders should focus on reducing demands and increasing resources for students or employees, especially while the pandemic continues, to promote thriving and prevent burnout. Further, additional attention should be paid to highly embedded employees, as they may require even more resources during times of high demand.

TABLE OF CONTENTS

Page

LIST OF FIGURES

Figure Page

CHAPTER I

INTRODUCTION

On March 11, 2020, the World Health Organization (2020) pronounced the coronavirus disease (COVID-19) outbreak caused by the SARS-CoV-2 virus a pandemic. Following this announcement, colleges and universities across the United States responded by closing campuses (*COVID-19: Higher Education Resource Center – Entangled Solutions*, 2020), and cancelling classes or moving classes online (*COVID-19 Data Dashboard*, n.d.). In fact, nearly 73% of students enrolled at a college or university took their courses partially or fully online following campus closures - a drastic change from 2019, during which almost the same percentage of students (63%) did not take any online classes (Lederman, 2021). These institutional responses presented challenges and changed the academic experience for many college students. For example, many students were forced to delay their graduation, withdraw from classes, or change their major (Aucejo et al., 2020). Additionally, students faced challenges with adapting to different teaching and assessment methods used in virtual learning, discontinued support services from the college or university, and restrictions on travel limiting participation in conferences, competitions, or overseas study programs (Sahu, 2020).

Although researchers have begun to investigate the psychological impacts of these changes on the motivation and well-being of college students at large (Browning et al., 2021; Higher Education Data Sharing Consortium, 2020; Son et al., 2020; Usher et al., 2020), research has yet to understand the unique challenges that working college students are facing during the pandemic. Among both full- and part-time college students, close to 70% hold a job while in school (Carnevale & Smith, 2018). The circumstances and experiences of dual-role students are especially important to examine during the COVID-19 pandemic, as their involvement in two

domains of daily life (i.e., school and work) that are heavily impacted by the pandemic puts them at increased risk for disruptions to their motivation and well-being (Bakker & van Wingerden, 2021). For example, the pandemic may impact students' ability to form relationships with their peers, instructors, and advisors at school (Vaterlaus et al., 2021), and their supervisors and coworkers at work (Paychex, 2020). The pandemic may also threaten students' financial aid or scholarships (Smalley, 2021) or their pay, benefits, or job security at work (Adisa et al., 2021; Parker et al., 2020).

Current research on the effects of the COVID-19 pandemic on college students has shown that many students reported decreases to their motivation and ability to focus on schoolwork, and thus had lower confidence in their academic abilities (Usher et al., 2020). Additionally, the pandemic has had significant impacts on the mental health of college students, with several reports indicating that students have experienced higher-than-normal levels of stress, anxiety, and loneliness (Browning et al., 2021; Higher Education Data Sharing Consortium, 2020; Son et al., 2020). Further, students have also reported negative changes to their sleeping and eating patterns (Son et al., 2020), decreases in physical activity (Browning et al., 2021), as well as increases in consumption of alcohol (Buckner et al., 2021) since the pandemic was declared.

The working world faced similar disruptions due to COVID-19. During the pandemic, telework became the "new normal" for many employees, with 50% of organizations reporting that at least 81% of their employees were working from home, and this rapid transition to remote work disrupted work life through changes to work-life balance, leadership, and teamwork and coworker interactions (Baker, 2020). Further, for many, working conditions deteriorated due to the shift to telework, including issues such as limited work space, poor internet connectivity, and

low quality hardware or tools (Kniffin et al., 2021). The shift to remote work also increased work-family conflict (Vaziri et al., 2020), increased isolation of workers (Klein, 2020), and introduced new hassles such as needing to wear masks and other PPE and conducting meetings and trainings virtually (Kniffin et al., 2021). Further, many employees faced layoffs as their organizations struggled to adapt to restricted in-person operations and governmental mandates (Jacobs & Ohinmaa, 2020). These work changes due to the COVID-19 pandemic did not come without consequences; the American Psychological Association (2020) reported that many Americans experienced higher levels of stress during 2020 than in previous years, and 70% of workers claimed that work was a significant source of stress for them in 2020, which was an increase from 64% in 2019.

The appraisal of the changes brought on by the COVID-19 pandemic as stressful because of their perceived harm and threat (Fugate et al., 2008) can have negative implications for working students' well-being and motivation. An abundance of stressors can lead to burnout in both the school and work domains (Cushman & West, 2006; Sonnentag & Michael, 2013), and an overload of work stressors has been associated with a lack of vitality and growth (together known as thriving; Cullen et al., 2018; Spreitzer et al., 2005).

The job demands-resources model (JD-R; Demerouti et al., 2001) is a useful framework for evaluating the impact of the COVID-19 pandemic at work and school on the well-being and motivation of working college students. The JD-R model delineates the positive association of job demands with strain. Job demands are defined as physical, psychological, social, or organizational characteristics of the job that require sustained physical or psychological effort. Strain, often operationalized as burnout, indicates a depletion of energy due to an exhaustion of emotional, mental, and physical resources (Bakker & Demerouti, 2007). Burnout is defined as a

syndrome comprised of emotional exhaustion, cynicism, and negative self-evaluation (Leiter & Maslach, 2018). Emotional exhaustion, defined as a feeling that one is no longer able to provide psychological effort, represents the core dimension of burnout (Maslach & Jackson, 1981), and as such, this dimension will be the focus of the current study. Burnout has not only been found to occur in the work domain (Maslach et al., 2001), but also in the school domain (Schaufeli et al., 2002; Schramer et al., 2020).

Additionally, the JD-R model outlines the positive association between job resources and motivation. Job resources are defined as physical, psychological, social, or organizational factors related to the job that aid to achieve goals, reduce job demands, and stimulate growth, learning, and development (Bakker & Demerouti, 2017). Motivation is most often operationalized as work engagement (Schaufeli & Taris, 2014), but can also be operationalized as other motivational outcomes such as commitment and flourishing (Bakker & Demerouti, 2017).

One motivational outcome that has yet to be tested in the JD-R framework is thriving at work. Thriving at work is defined as a feeling of both vitality and continual learning at work that stimulates growth and development (Spreitzer et al., 2005). This construct fits well within the motivational path of JD-R because it relates conceptually and empirically with work engagement (Kleine et al., 2019), but goes beyond the scope of work engagement by including the aspect of learning in addition to subjective vitality (Spreitzer et al., 2005). While work engagement has been previously found to apply to university students (Schaufeli et al., 2002), the current study will uniquely extend the application of thriving to the school domain. Further, grounded in the JD-R framework and drawing upon Lazarus and Folkman's (1987) transactional model of stress and coping, the current study will examine how negative appraisals of COVID-19 at work and school relate to working students' thriving and burnout in both their work and school lives.

Lazarus and Folkman's (1987) transactional model of stress and coping can be used to describe the negative appraisal of COVID-19 as a source of strain (i.e., a stressor or demand). According to the model, events are appraised as stressors if they are perceived to be capable of significantly impacting one's resources, and if one's current resources are perceived as insufficient for managing this potential loss. In the case of working students, the pandemic would be deemed stressful by the student if the pandemic was perceived as being capable of affecting their work or school resources (e.g., altered work/study hours, limited access to technology, etc.), and their current resources were deemed insufficient to manage its impact.

However, as also outlined in the JD-R model, resources can buffer the impacts of stressors on strain (Bakker & Demerouti, 2017). A collection of resources—with both intrinsic and instrumental value—that has yet to be tested in the JD-R framework is job embeddedness (Mitchell et al., 2001). Job embeddedness is defined as a collection of factors that exert influence on employees to stay in their jobs and organizations (Kiazad et al., 2015; Mitchell et al., 2001). These factors include the extent to which employees and their families have links to others at work or in the community, the extent to which they feel they are compatible or comfortable with their organization and job, and the perceived costs associated with leaving their job (Lee et al., 2014).

Though the embeddedness construct originated in the work domain, it has also recently been applied to higher education (Major et al., 2020), thus making it a suitable construct to examine within the working student population, who can experience embeddedness in both work and school domains simultaneously. Specifically, job embeddedness can be regarded as a resource for working students due to its promotion of additional benefits (e.g., better access to advice or assistance while working; Lee et al., 2014), and thus may buffer the impacts of

negative appraisals of COVID-19 at their work, decreasing their likelihood of burnout and increasing their ability to thrive at work. Likewise, major embeddedness, defined as a sense of being tied to one's major, may act as a buffering resource for working students in their student role, limiting the impact of negative appraisals of COVID-19 at school on their ability to thrive and their likelihood to burn out.

It is also possible that strain experienced in one domain (i.e., work or school) can spillover into the other domain and impact one's likelihood of thriving or burnout in that domain. Spillover is the within-person transmission of the effects of stressors across domains (Bakker & Demerouti, 2012). With working students in particular, spillover would entail the negative appraisals of COVID-19 at *work* impacting the student's thriving and burnout at *school*, and vice versa. Much research has been conducted on spillover effects from work to school (e.g., Benner & Curl, 2018; Cinamon, 2016, 2018; da Luz et al., 2012; McCoy & Smyth, 2007; Salamonson & Andrew, 2006). However, almost no research (see Calderwood & Gabriel, 2017 for an exception) has been conducted regarding spillover from school to work, thus the proposed study aims to fill this gap.

The purpose of the proposed study is three-fold: 1) to evaluate the effects of negative appraisals of COVID-19 on thriving and burnout among working college students in both the work and school domains, 2) to test job and major embeddedness as moderators in the relationships between negative appraisals of COVID-19 and thriving and burnout in the work and school domains, respectively, and 3) to examine potential spillover effects of negative appraisals of COVID-19 from the work domain into the school domain, and vice versa. Specifically, I hypothesized that negative appraisals of COVID-19 would be negatively related to thriving and positively related to burnout in both the work and school domains. Further, job and

major embeddedness would moderate these relationships, such that job and major embeddedness would weaken the relationships between negative appraisals of COVID-19 and thriving at burnout. And finally, I expected that spillover effects would be present, such that negative appraisals of COVID-19 in one domain (i.e., work or school) would be negatively related to thriving and positively related to burnout in the other domain. The proposed relationships are modeled in Figure 1 below.

To test the proposed hypotheses, I used archival survey data that I collected in April of 2021 from 216 working students at a large, public university in the Mid-Atlantic region of the United States. Zero-order correlations were examined, and path analyses were conducted to evaluate the main and moderating effects within the proposed model.

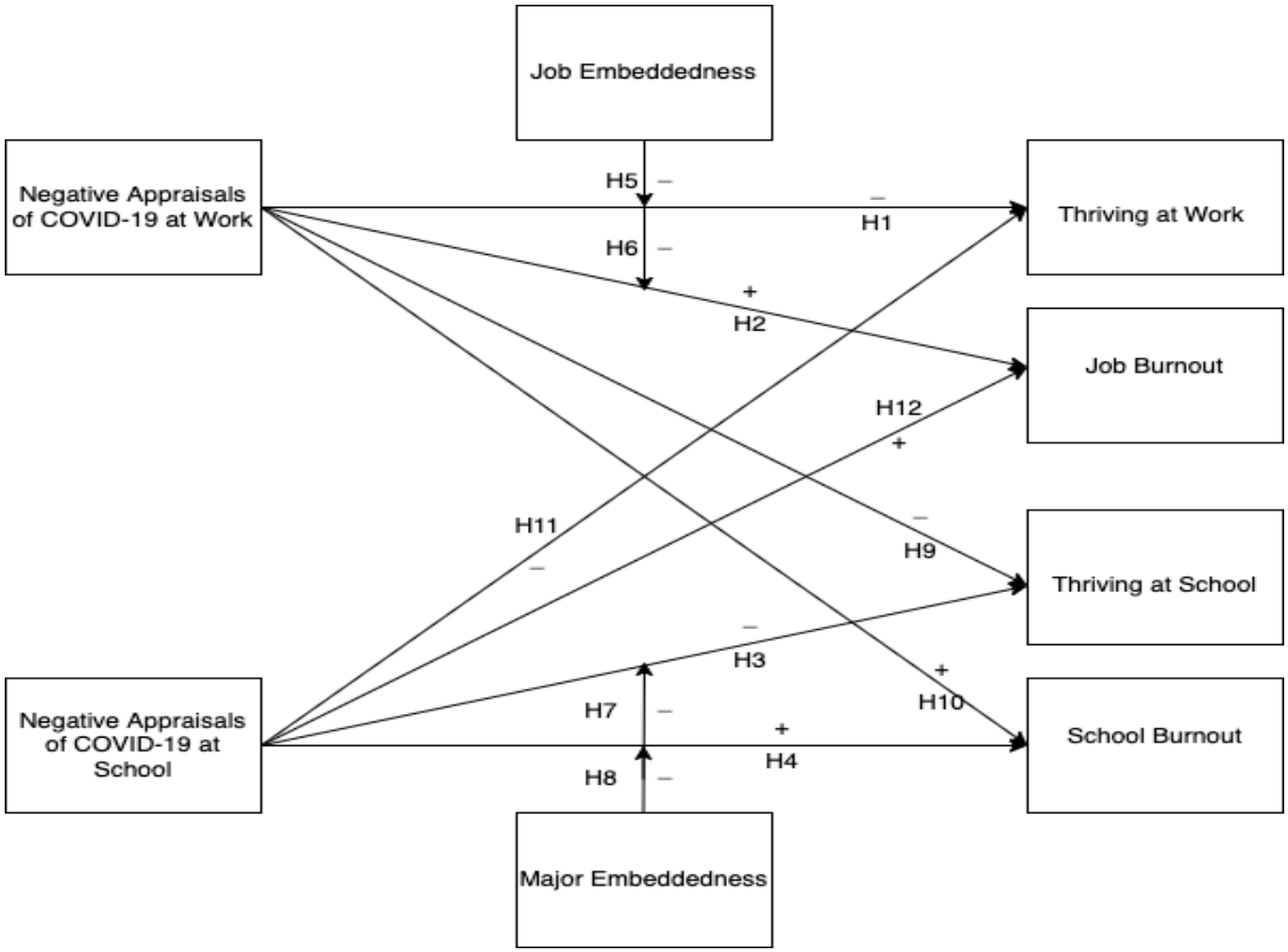
There are several potential theoretical contributions of the current study. First, this study attempted to understand the effects of the COVID-19 pandemic on the lives of working college students, an underrepresented population in the COVID-19 literature, by examining how the extent to which working college students appraise the COVID-19 pandemic as threatening and harmful to their work and academics can impact their ability to thrive and their likelihood to experience burnout in both their student and employee roles. Second, this study represented a first attempt to incorporate thriving as a motivational outcome into the broader JD-R framework. Further, this study was the first to test thriving in the school context. Third, this study also examined job and major embeddedness as resources that can buffer the negative effects of the COVID-19 pandemic on student motivation and well-being. The construct of embeddedness has been described as an amalgam of resources (Hobfoll, 2014; Wheeler et al., 2012), but has not yet been tested within the JD-R framework. Finally, the study was uniquely positioned to uncover potential spillover effects that may have added additional burden to working college students as

they attempted to balance two roles (i.e., student and employee), which were significantly impacted by the pandemic.

The current study can also contribute practically to the ever-present struggle with the COVID-19 pandemic. By focusing on the lens through which the COVID-19 pandemic is seen to negatively affect work and academics, this study can identify targets for organizational and institutional interventions and individual strategies to mitigate the threatening and harmful effects of the COVID-19 pandemic on important outcomes for workers and students alike (Rudolph et al., 2020). By exploring a potential resource—embeddedness—to help buffer the impacts of COVID-19 on well-being and motivation, tangible courses of action can be outlined and implemented by school administrators, faculty, and advisors, as well as organizational leaders and employers for combatting burnout and stimulating thriving.

Figure 1

Conceptual Model



CHAPTER II

BACKGROUND

THRIVING

Thriving at Work

Thriving at work is a two-dimensional motivational construct that has been defined as the "psychological state in which individuals experience both a sense of vitality and a sense of learning at work" (Spreitzer et al., 2005, p. 538). Vitality is a positive sense of feeling alive and having energy. Learning refers to a sense that one is gaining skills and knowledge, and that these skills and knowledge can be applied to one's work. The construct is similar yet distinct from related motivational constructs. For example, thriving at work is distinct from resilience because resilience is a behavioral response that focuses on rebounding from adversity (Masten & Reed, 2002), while thriving at work is a psychological experience and can occur in the absence of adversity (Spreitzer et al., 2005). Thriving is also distinguishable from flow. While flow and thriving are both positive psychological states that include a sense of vitality, a state of flow can be achieved without a sense of learning. That is, flow is described as a harmony between one's task and abilities, such that the level of challenge exists at the upper level of one's current capabilities, and not overextending one's skills (Nakamura & Csikszentmihalyi, 2014). In contrast, thriving at work necessarily includes the sense of learning as one of its key dimensions (Spreitzer et al., 2005).

A recent meta-analysis including 73 individual samples with 21,739 employees solidified the nomological network of thriving at work (Kleine et al., 2019). Various individual difference constructs were found to act as significant antecedents of thriving at work, such as psychological capital, core self-evaluations, proactive personality, positive affect, negative affect, perceived stress, and job engagement. Relational resources were also found to be predictive of thriving at

work, including heedful relating (i.e., attentive, purposeful, conscientious, and considerate interactions; Weick & Roberts, 1993), supportive coworker behavior, workplace civility/incivility, supportive leadership behavior, empowering leadership, transformational leadership, leader-member exchange quality, perceived organizational support, and trust.

Thriving at work was also found to have many significant positive outcomes for the employees and employers, including reduced burnout and turnover intentions, and increased subjective health, job satisfaction, organizational commitment, positive attitudes toward self-development, organizational citizenship behaviors, and creative performance (Kleine et al., 2019). Additional studies have linked thriving at work to life satisfaction (Flinchbaugh et al., 2015), voice behavior (Kim et al., 2020), and career adaptability (Jiang, 2017). Thriving at work has also been found to manifest at the unit level, and has been associated with increased collective affective organizational commitment and unit performance (Walumbwa et al., 2018). Additionally, thriving at work has also been examined as a mediator of the effect of low perceived organizational support on turnover intentions (Abid et al., 2015), and the effect of de-energizing work relationships on job performance (Gerbasi et al., 2015).

Thriving at work is mostly regarded as a temporary experience (rather than a disposition) as a result of personal and work environment characteristics (see Chaplin et al., 1988; Spreitzer et al., 2005). As mentioned above, personal and relational resources such as proactive personality and empowering leadership have been found to correlate positively with thriving at work (Kleine et al., 2019). However, job demands can also affect thriving at work. Challenge stressors (i.e., job demands that are perceived as rewarding and worth the stress) have been associated with increased thriving at work, while hindrance stressors (i.e., job demands that impose restraints on one's ability to achieve goals; Cavanaugh et al., 2000) have been associated with decreased

thriving at work (Flinchbaugh et al., 2015; Lin et al., 2020; Prem et al., 2017; Yang & Li, 2021). Given that the COVID-19 pandemic created new demands at work that were excessive and constraining in the completion of previous and newly-imposed work tasks/requirements (Ipsen et al., 2020), these demands functioned as hindrance stressors for many workers, and thus are likely to have negative effects on thriving at work. The current study will aim to determine how working students' negative appraisals of the COVID-19 pandemic at work may affect their thriving at work.

Thriving at School

This study will be the first to systematically study the construct of thriving in the context of higher education. While Porath et al. (2012) found support for their hypothesis that thriving varied across work and non-work contexts, suggesting that the experience of thriving can vary in different domains of life, thriving has yet to be tested specifically in the school domain. Consistent with thriving at work, thriving at school can be defined as a psychological state in which one experiences both a sense of vitality and a sense of learning at school.

The domain of school is a viable candidate for the experience of thriving because it has mechanisms for vitality and learning to occur. For vitality, if one is engaged and interested by one's school work, extracurricular activities, or student involvement activities (e.g., participation in research, volunteering, leadership positions, etc.) one is likely to gain a sense of energy from these activities (Schaufeli et al., 2002). If one is not engaged in these activities, a feeling of strain and fatigue may arise instead (Maslach & Jackson, 1981). As for learning, defined in the thriving at work model as a sense of mastery and growth in one's tasks, this feeling of mastery can also apply to tasks outside of work, such as school work (Porath et al., 2012). Additionally, despite learning being the central goal of schooling, students may experience different levels of learning

and mastery, allowing for between-person variance in this thriving dimension. The definition of learning through mastery and growth as presented in the thriving at work model (Spreitzer et al., 2005) is a distinct concept from simply gaining information, because it implies that what is learned feeds back into the task to improve performance over time (Dweck, 1986). Therefore, even though a student may be completing coursework, they may still lack a sense of growth and development, and rather feel that they are only checking off boxes toward the completion of a degree. It is thus the perception that the knowledge and skills one is mastering are leading to progress and development that will foster a sense of thriving (Spreitzer et al., 2005).

The COVID-19 pandemic has imposed new academic demands and threatened resources for university students and has likely compromised thriving at school for many students. Specifically, the pandemic created hindrance demands for university students including unclear instruction in online courses and isolation (Tasso et al., 2021), increased concerns about academic performance (Son et al., 2020), decreased instructional quality and communication (Usher et al., 2020), limited access to library services, technology, and counseling services, and limited interactions with peers and instructors (Zhou & Zhang, 2021). The proposed study seeks to examine how students' appraisals of these COVID-19-related threats and harms to school life and academics affect their thriving at school.

BURNOUT

Job Burnout

Burnout is defined as a psychological syndrome in response to chronic job stressors, characterized by emotional exhaustion, feelings of cynicism toward work, and a sense of reduced professional efficacy (Maslach & Jackson, 1981). Emotional exhaustion is the central facet of burnout (Maslach et al., 2001), and is defined as a feeling of being strained mentally and/or

physically by one's work. Cynicism, also known as depersonalization, is a detachment from one's work or coworkers. Finally, reduced professional efficacy is a perception of decreased personal competency or accomplishment (Maslach et al., 2001).

The construct of burnout was originally conceptualized in the 1970s within the context of "people work." The term "burnt-out" can be traced back to 1973, when Sommer articulated his frustrations with being a chairman of an academic department, labeling himself "the burnt-out chairman" (Sommer, 1973). Freudenberger (1975), working as a psychiatrist in a free clinic, noticed clinicians, including himself, becoming "inoperative" and losing their vitality. For these clinicians, burnout appeared to be a consequence of overworking. Maslach (1976) noticed similar patterns in employees of other human services fields such as social workers and childcare professionals, and identified coping behaviors that helped buffer the impacts of emotional stress at work. Meanwhile, Warnath and Shelton (1976) reported the same phenomenon in the field of counselling, describing the deterioration of commitment to the work and compassion for their patients in mid-career counselors.

The empirical research that followed this initial discovery focused on identifying and describing the construct of burnout, and quantifying the prevalence of the syndrome (Maslach et al., 2001). In 1981, Maslach and Jackson developed the Maslach Burnout Inventory (MBI), which came to be regarded as the most well-known and often-used self-report measure of burnout (Maslach & Jackson, 1981; Schaufeli & Taris, 2005). This questionnaire began to be used to advance the theoretical and nomological understanding of burnout, and led to advancements in the methodology and scope of burnout research (Maslach et al., 2001).

Due to the proliferation of primary studies on burnout in the following decades, many meta-analyses have been conducted on the topic. Lee and Ashforth (1996) investigated the

unique qualities of the three dimensions of burnout, suggesting that personal accomplishment developed independently of exhaustion and depersonalization, and was only weakly associated with most resources, except work friends and participation, contrary to hypotheses. Personal accomplishment was also found to be associated with control coping, while exhaustion and depersonalization were not. However, exhaustion and depersonalization were associated with turnover intentions and organizational commitment, and role stress and stressful events were strongly associated with depersonalization. In addition to expanding the understanding of the nomological networks of the separate dimensions of burnout, the study also suggested that emotional exhaustion might lead to a desire to withdraw, but this outcome could be offset by the desire to seek control that came from personal accomplishment.

Later meta-analyses were able to expand on these findings to further establish the nomological network of burnout and its dimensions. In their meta-analysis, Thoresen et al. (2003) found that positive affect was positively correlated with personal accomplishment and negatively correlated with emotional exhaustion and depersonalization. On the other hand, negative affect was negatively correlated with personal accomplishment and positively correlated with emotional exhaustion and depersonalization. Halbesleben's (2006) meta-analysis revealed that, overall, support was not differentially related to the dimensions of burnout. However, work sources of support, such as from a coworker or supervisor were more strongly related to emotional exhaustion, while non-work sources of support, such as from family and friends, were more strongly related to depersonalization and personal accomplishment. Alarcon et al.'s (2009) meta-analysis reported several individual differences that were related to each of the dimensions of burnout, including self-esteem, self-efficacy, internal locus of control, emotional stability, extraversion, conscientiousness, agreeableness, positive affectivity, negative affectivity,

optimism, proactive personality, and hardiness. Additionally, Type A personality was related to personal accomplishment only. Nahrgang et al.'s (2011) meta-analysis focused on occupational safety, and found support for the model's proposition that safety-related job demands were related to lower motivation and higher burnout. Additionally, job resources were found to promote engagement and mitigate burnout.

Primary studies on burnout have also provided further insight into the nomological network and nature of burnout. In terms of job performance and attitudes, burnout has been linked to outcomes such as increased turnover intentions, actual turnover, absenteeism, and lower organizational commitment (Shirom, 2003), as well as decreased job productivity and effectiveness, and job satisfaction (Maslach et al., 2001). Additionally, burnout has been found to be contagious, spreading from employee to employee, and can also have a negative spillover effect, such that burnout experienced at work can have a negative effect on the individual's home life (Burke & Greenglass, 2001; Maslach et al., 2001). Burnout can also have a profound impact on employee mental and physical health, with reported outcomes such as anxiety, depression, and substance abuse (Maslach et al., 2001).

Despite its conception in the human services, research has shown burnout to be relevant to many occupations. Since its inception, substantial sub-literatures for burnout in specific populations have been curated, including populations such as nurses (e.g., Dall'Ora et al., 2020), athletes and sport staff (e.g., Goodger et al., 2007), high school students (e.g., Walburg, 2014), medical students (e.g., IsHak et al., 2013), teachers (e.g., Ghanizadeh & Jahedizadeh, 2015), pilots (e.g., Demerouti et al., 2019) and physicians (e.g., Rotenstein et al., 2018).

As mentioned above, emotional exhaustion is considered the core dimension of burnout as it is most representative of the syndrome, can influence the other dimensions, and is most

often reported by those experiencing burnout (Maslach et al., 2001). For these reasons, emotional exhaustion is the most frequently analyzed dimension of burnout (Maslach et al., 2001). Consequently, the current study will focus on the emotional exhaustion dimension of burnout in working college students.

School Burnout

Burnout is a syndrome that is also relevant to university students (Schaufeli, Martínez, et al., 2002), and school burnout has been shown to have a similar nomological network as job burnout (Moneta, 2011). Burnout at school would entail becoming emotionally exhausted, cynical, and pessimistic about one's performance in response to school stressors. In line with job burnout, school burnout is also a predictor of student turnover intention (Moneta, 2011), and academic workload is a commonly reported antecedent of school burnout for students (Cushman & West, 2006; Jacobs & Dodd, 2003). Other factors such as daily hassles (Shankland et al., 2019) and instructor attitudes and behaviors (Cushman & West, 2006) have also been shown to be associated with higher levels of burnout in college students. Additionally, personal characteristics of students have also been linked to school burnout. Some of these identified personal characteristics include negative temperament (Jacobs & Dodd, 2003), verbal aggression (Yaratan & Uludag, 2012), mental and physical health, and lack of personal motivation (Cushman & West, 2006).

Research has also identified numerous internal and external factors that are preventative of school burnout. In regard to internal factors, need for achievement (Moneta, 2011), coping flexibility (Gan et al., 2007), and self-efficacy (Capri et al., 2012) have been linked to decreases in school burnout. External factors such as social support (Jacobs & Dodd, 2003; Kim et al., 2018), teacher support for autonomy (Ljubin-Golub et al., 2020), and participation in

extracurricular activities (Jacobs & Dodd, 2003) have been identified as protective factors against school burnout.

THE JOB DEMANDS-RESOURCES MODEL

Since its inception, the job demands-resources (JD-R) model has inspired hundreds of empirical studies (Bakker & Demerouti, 2017). The JD-R model (Demerouti et al., 2001) was originally proposed as a model of burnout, asserting that burnout could occur in any profession when the job demands are high and the job resources are low, because job demands deplete one's energy, and lack of resources hinder one's motivation. This model of burnout differs from the prominent conceptualization of burnout proposed by Maslach and Jackson (1981) in that it specifies the unique contributions of job demands and resources to the development of burnout, while also maintaining a broad conceptualization of job demands and resources in order to allow the model to be applied to any occupation (Demerouti et al., 2001).

The model was expanded to include work engagement in addition to burnout as an outcome of job demands and job resources (Schaufeli & Bakker, 2004). This expanded model proposed that work engagement acted as a counterpart to burnout, following from reduced job demands and increased job resources (Schaufeli & Taris, 2014). Additionally, the expanded model positioned burnout and work engagement as mediators between job demands and job resources and the negative and positive outcomes of health problems and decreased turnover intentions, respectively (Schaufeli & Bakker, 2004). This expansion of the JD-R model put a positive psychology twist on the original model and acted as the basis upon which additional expansions were built.

The next version of the JD-R model organized the components in two dual pathways that ultimately impacted organizational outcomes: the health-impairment pathway and the motivation

pathway (Bakker & Demerouti, 2007). The health-impairment pathway leads from job demands through increased strain, or burnout, to negatively impact organizational outcomes. The relationship between job demands and strain can be buffered by increased job resources, and the experience of work engagement can help to decrease the experience of burnout. The motivation pathway includes a positive relationship between job resources and motivation, or work engagement, which in turn has a positive impact on organizational outcomes. The relationship between job resources and motivation can be hindered by high job demands, and the experience of burnout can also hinder the experience of work engagement (Bakker & Demerouti, 2007).

Shortly after, Xanthopoulou and colleagues (Xanthopoulou et al., 2007, 2009) identified personal resources (i.e., self-efficacy, organizational-based self-esteem, and optimism) as impacting the motivation pathway by acting as a partial mediator between job resources and work engagement, and also impacting the health impairment pathway by fully mediating the relationship between job resources and emotional exhaustion (i.e., burnout). Personal resources are defined as psychological characteristics of an individual that influence their ability to take control of their environment, buffer the effects of job demands on burnout, and exacerbate the impact of job resources on engagement (Schaufeli & Taris, 2014). Additionally, personal and job resources were found to be reciprocally related to work engagement, such that personal and job resources at Time 1 were predictive of work engagement at Time 2, and work engagement at Time 1 was predictive of personal and job resources at Time 2 (Xanthopoulou et al., 2009).

The findings of these two studies were reflected in the next iteration of the JD-R model, along with the inclusion of feedback loops within the motivation and health-impairment pathways, with job crafting as a mediator between work engagement and job and personal resources, as well as between exhaustion and job demands. This updated model also added job

performance as an organizational outcome dependent on the motivation and health-impairment pathways (Bakker et al., 2014). The most current version of the JD-R model maintains most of the previous model, only adding self-undermining as the mediating construct between strain and job demands in the feedback loop of the health-impairment pathway (Bakker & Demerouti, 2017). Recent meta-analyses have found that JD-R is an excellent theoretical basis through which to evaluate employee well-being (Lesener et al., 2019), and that the additive model proposed through JD-R (i.e., job demands and resources have unique, non-interactive main effects on strain) fit the meta-analytic data of over 141,000 individuals better than multiplicative models suggested by theories such as the job demands-control model (Gonzalez-Mulé et al., 2020; Karasek, 1979).

Job Demands

Job demands are defined as physical, psychological, and social aspects of a job that lead to sustained physical or psychological effort (Bakker & Demerouti, 2017). Job demands can include job characteristics such as work overload, risks and hazards, and job complexity (Schaufeli & Taris, 2014). Job demands can be characterized as either challenges or hindrances. Challenge demands, while perceived as pressuring and straining, are also seen to be rewarding and worth the effort to overcome, and thus can positively impact employee motivation while also increasing strain (Crawford et al., 2010). Challenge stressors can include demands such as time pressure, high levels of responsibility, and high workload. Conversely, hindrance demands are those which mainly impose restraints and unnecessary difficulty on one's tasks and impede goal accomplishment, without leading to any sense of growth or achievement, thus only increasing strain (Cavanaugh et al., 2000; Crawford et al., 2010). Examples of hindrance stressors include role conflict and ambiguity, daily hassles, and organizational bureaucracy and politics (Crawford

et al., 2010). As mentioned previously, the COVID-19 pandemic created demands in the workplace that were excessive and hindered the completion of previous and newly-imposed responsibilities (Ipsen et al., 2020). Thus, the demands brought on by the COVID-19 pandemic are likely to act as hindrance stressors for many workers, and thus contribute to increased strain and decreased motivation.

Job Resources

Job resources are defined as job aspects that aid in achieving work goals and stimulate learning and growth (Bakker & Demerouti, 2017). Job resources can include performance feedback, job control, and supervisor support (Demerouti et al., 2001). In the JD-R model, job resources serve two purposes. First, job resources begin the motivation process, which suggests that abundant job resources lead to motivation, often operationalized as work engagement, which in turn impact organizational outcomes such as performance and organizational commitment (Schaufeli & Taris, 2014). Second, job resources can also act as a buffer to excessive job demands, protecting against psychological strain, such as burnout (Bakker et al., 2005).

Burnout within the JD-R Model

The original JD-R model (Demerouti et al., 2001) was a model of burnout, indicating that job demands were most highly correlated with the emotional exhaustion dimension of burnout, and low job resources associated with cynicism (Bakker & Demerouti, 2017). Later, the model was further defined to include two processes—the health-impairment process and the motivational process (Bakker et al., 2003). Burnout was then positioned as the outcome of the health-impairment process as an indicator of the strain that results from high job demands that exhaust mental and physical resources (Bakker et al., 2005). Further, recent a meta-analysis has

shown that job demands are the primary predictor of burnout, independent of the level of job resources available (Gonzalez-Mulé et al., 2020).

Recent meta-analyses (Guthier et al., 2020; Lesener et al., 2019) have also reported a reciprocal relationship between job demands and burnout over time, such that the increase in emotional exhaustion that follows from job demands in turn increases future job demands, thus further increasing emotional exhaustion, and so on. However, this negative cycle can be buffered by the increase of job resources such as social support (Gonzalez-Mulé et al., 2020).

Thriving within the JD-R Model

The motivation pathway of the JD-R model outlines the effect job resources have on motivation at work (Bakker & Demerouti, 2017). While work engagement has become the most common operationalization of motivation in JD-R research (Bakker & Demerouti, 2007), the model itself does not limit the motivational outcomes to only work engagement. As mentioned above, thriving at work is a qualified candidate for a motivational outcome within the JD-R model because it is conceptually and empirically related to work engagement (Kleine et al., 2019), but goes beyond the scope of work engagement by including the aspect of learning in addition to vitality (Spreitzer et al., 2005). This learning dimension fits well with the JD-R model's proposition that job resources fulfill basic psychological needs (Bakker et al., 2014) that lead to growth, development, and learning (Bakker & Demerouti, 2007). Additionally, the positive relationship between job resources and thriving at work has been empirically established (Kleine et al., 2019), thus supporting the use of thriving at work as an outcome in the motivation pathway of the JD-R model.

Distinction Between Thriving and Engagement. Engagement is defined as a state of being in which an employee or student experiences vigor or high physical energy, dedication to or

enthusiasm about their tasks, and absorption in their job or school work, respectively (Schaufeli, Martínez, et al., 2002; Schaufeli & Bakker, 2003). Thriving, which is made up of vitality and learning, is similar to engagement in that they both contain an aspect of high energy—in engagement this is labeled as vigor, and in thriving this is named vitality. However, engagement lacks the aspect of learning that makes up the second dimension of thriving. This is an important distinction because individuals can be engaged in their tasks, energized in the moment by their job or school work, but still not see themselves as learning (Porath et al., 2012). Thriving is a sense of progress or development that leads one to grow (Spreitzer et al., 2005). Thus, while thriving is similar to engagement and other constructs that fit in the motivation pathway of JD-R (e.g., commitment, flourishing, etc.; Bakker & Demerouti, 2017; Spreitzer et al., 2005) due to its consideration of vitality and positive relationship with resources, it is different in its focus on the combination of both energy *and* growth.

THE TRANSACTIONAL THEORY OF STRESS AND COPING

The transactional theory of stress and coping (Lazarus & Folkman, 1987) posits a two-part appraisal process that is applied to the experience of significant events before they are deemed as either stressful or not stressful. First, the encounter is evaluated for its relevance to the individual's well-being. Primary appraisal can take three forms: harm (something is already lost), threat (expected future harm), and challenge (opportunity for gain). Secondary appraisal includes evaluating if the individual possesses enough resources to cope with the event. Stress, finally, is experienced when the change is perceived in the primary appraisal as a harm or threat, and when, in the secondary appraisal, the resources for possible coping strategies are deemed insufficient.

This theory pairs well with the JD-R model, as it describes the appraisal process that delineates how workplace attributes are appraised as demands. Additionally, in line with

Cavanaugh et al.'s (2000) expansion to the transactional theory of stress and coping, demands can also be further appraised as either challenge demands—having the potential to promote growth, mastery, or gains—or hindrance demands—having the potential to thwart goals, learning, or growth. This distinction also specifies that challenge demands are positively associated with both strain and motivation, whereas hindrance demands are positively associated with strain, but negatively associated with motivation (Crawford et al., 2010).

In a meta-analysis of 101 independent samples from 82 primary studies, Lepine et al. (2005) tested the transactional model of stress and coping framework by examining the relationships of challenge and hindrance stressors with strain and motivation, and the indirect effects of the two types of stressors on performance through motivation and strain. Their results found support for the framework, showing positive relationships between hindrance stressors and strain and negative relationships between hindrance stressors and motivation. Additionally, challenge demands had a positive relationship with both strain and motivation. Finally, challenge stressors demonstrated a positive effect on performance through motivation, and hindrance stressors showed a negative effect on performance through strain.

COVID-19 THREATS AND HARMS

Negative Appraisals of COVID-19 at Work

Fugate et al. (2008) used Lazarus and Folkman's (1987) primary appraisals of threat and harm to describe employees' appraisals of events that occur in their workplace. In line with Lazarus and Folkman's definitions, threat appraisals convey expected loss of a resource in the future, while harm appraisals indicate that a resource has already been lost.

Threat and harm appraisals reflect responses to organizational events, such as the hiring of a new supervisor or a sudden restructuring of work roles. The wide-spread responses of U.S.

organizations to COVID-19 occurred around mid-March 2020 following the World Health Organization's (WHO) classification of the event as a pandemic (World Health Organization, 2020). This event aligns with Fugate et al.'s (2008) conceptualization of organizational events that may be appraised negatively by employees, as this event was discrete and sudden and had the potential to harm one's resources. Further, Fugate et al. identified several of these resources that may be perceived as threatened or harmed, including pay and benefits, working conditions, job security, job opportunities, relationships with supervisor and coworkers, ability to perform job, and desirability of one's job. When threatened or harmed, these resources reflect changes to social and physical aspects of the work environment that are known to impact thriving at work (Spreitzer & Hwang, 2019). Thus, the current study will examine negative appraisals of actual or potential resource loss in the workplace brought on by the COVID-19 pandemic.

Negative Appraisals of COVID-19 at School

School resources can also be appraised as threatened or harmed. For example, resources such as financial aid, academic opportunities, access to school services and resources, relationships with professors or advisors, ability to perform well in courses, and relationships with classmates reflect social and physical aspects of the school environment with the potential to be threatened or harmed. Additionally, the COVID-19 pandemic also had a swift impact on universities (Mervosh & Swales, 2020) following the WHO's declaration of the pandemic (World Health Organization, 2020), necessitating the assessment of the appraisals of the negative effects of the COVID-19 pandemic on school life. Therefore, to assess the impact of the COVID-19 pandemic on working students in both the work and school domains and their appraisals of this impact, the concepts of threat and harm to resources, modified for the school domain, will be used to capture such negative appraisals.

Main Effect Hypotheses – Matching Domain. Threat and harm appraisals represent negative cognitive appraisals of an event in one's life as causing a loss of valued resources (harm) or having the potential to cause a loss of valued resources in the future (threat; Lazarus & Folkman, 1987). Events can be threatening or harmful to individuals due to the actual or perceived loss of resources that can accompany such events (Fugate et al., 2008), and this perceived harm or threat to resources can lead to the experience of stress (Hobfoll, 1989; Lazarus & Folkman, 1987). Loss of resources is stressful due to the instrumental and symbolic value of resources (Hobfoll, 1989). Resources are required to achieve goals, reduce the impact of demands, and stimulate development (Bakker et al., 2005).

Demands, or stressors, can lead to a loss of resources (Bakker et al., 2005). Hindrance demands are those demands that undermine motivational outcomes such as engagement (Bakker et al., 2005, 2014; Crawford et al., 2010; Lee & Ashforth, 1996; Nahrgang et al., 2011) and thriving (Flinchbaugh et al., 2015; Lin et al., 2020; Prem et al., 2017; Yang & Li, 2021) and exacerbate strain (Bakker et al., 2005; Lee & Ashforth, 1996; Nahrgang et al., 2011; Sonnentag & Frese, 2013; Thoresen et al., 2003). The COVID-19 pandemic has harmed many valuable resources for students and employees alike. For students, the pandemic impacted students' opportunities to form relationships with their peers, instructors, and advisors (Vaterlaus et al., 2021), utilize university support services (Sahu, 2020), and receive financial aid or scholarships (Smalley, 2021). For employees, the pandemic impacted the work conditions of many employees who could no longer go to work in-person or attend meetings (Baker, 2020). For many, the closing of physical work spaces limited their access to ergonomic work spaces, strong internet connection, and access to computers or other equipment and tools (Kniffin et al., 2021).

Additionally, for many employees the pandemic impacted their pay, benefits, and job security (Adisa et al., 2021; Parker et al., 2020).

The COVID-19 pandemic is a hindrance stressor, rather than a challenge stressor, in that it has led to decreases in motivation and ability to complete work for both students (Usher et al., 2020) and employees (Ipsen et al., 2020). In a multi-national survey, Aristovnik et al. (2020) found that in-person classes were cancelled for 87% of students, and 62% had lost an employed position. Students also faced challenges due to internet issues and lack of access or experience with the technology required for remote courses. These demands hindered these students by making it difficult for them to stay motivated and focused during online instruction and having significant impacts on their performance and satisfaction with school.

Similar findings have been reported for employees. Hitka et al. (2021) studied Slovakian small enterprise employees and found that motivation was significantly decreased during the COVID-19 pandemic due to decreases in teamwork, communication, and effective leadership. In a study with German employees, Reinwald et al. (2021) found that the rising death tolls impacted the engagement of employees whose leaders were not personally invested in their wellbeing. Finally, Adisa et al. (2021) found that the transition to remote work negatively impacted employee engagement through difficulties adapting to working from home, work intensification, job insecurity, and the pressure to always be available online.

Therefore, negative appraisals (i.e., threat and harm) of the COVID-19 pandemic as a hindrance stressor are expected to exhibit a negative relationship with motivational outcomes (i.e., thriving) and a positive relationship with strain outcomes (i.e., job burnout). The following hypotheses are proposed:

H1: Negative appraisals of COVID-19 at work will be negatively correlated with thriving at work.

H2: Negative appraisals of COVID-19 at work will be positively correlated with job burnout.

H3: Negative appraisals of COVID-19 at school will be negatively correlated with thriving at school.

H4: Negative appraisals of COVID-19 at school will be positively correlated with school burnout.

EMBEDDEDNESS

Job Embeddedness

Job embeddedness — a construct created to shift focus from reasons for *leaving* a job or an organization to reasons for *staying* in a job or an organization — is a network of ties that influence employee retention (Mitchell et al., 2001). These ties include links, fit, and sacrifices (Lee et al., 2014). Links describe formal or informal connections between an employee and their institution or other people in it. Fit is defined as an employee's perceived compatibility of their abilities, skills, and values with their job and organization. Finally, sacrifice is the perceived cost, in the form of material or psychological benefits, that may be forfeited by leaving a position or a company.

Major Embeddedness

Embeddedness has also been applied to academics to understand why students stay within their major or at their university (Morganson et al., 2015). Major embeddedness is defined as the degree to which students perceive their abilities to match the demands of their major (fit), the ties they have to other people in their major (links), and the resources they would forfeit if

they were to leave their major (sacrifices; Morganson et al., 2015). The three factors of links, fit, and sacrifices likely manifest differently for students than they do for employees, and thus a separate, context-specific measure that is unique to college students has been developed and validated (Major et al., 2020).

Moderating Effect of Embeddedness Hypotheses. Although job embeddedness was originally created and examined as a mediator between shocks (i.e., an unexpected event that causes one to reflect on one's position) and turnover (Mitchell et al., 2001), over the years it has also proven itself to be useful as a moderating variable (Lee et al., 2014). For example, job embeddedness has been found to buffer the relationships between abusive supervision and job frustration (Avey et al., 2015), volitional absences and turnover (Lee et al., 2004), job stressors (e.g., role ambiguity, lack of autonomy, job insecurity) and receptivity to change (Chetty et al., 2016), and both quality of change communication and procedural fairness in restructuring and threat appraisal (Biggane et al., 2017). The buffering role of job embeddedness is attributed to its nature as a collection of instrumental and intrinsic resources that an employee can use to prevent the loss of valuable resources or gain other valuable resources (Hobfoll, 2014; Lesener et al., 2019; Singh et al., 2020). Sacrifices and links represent instrumental resources that an employee can use to gain resources and buffer demands. For example, having a mentor (i.e., an example of a link) can provide access to other resources, such as promotional and developmental opportunities (Eby et al., 2013). Having a mentor could also provide a source of social and task support that can buffer the effects of job demands. Additionally, investments made in a job over time, such as completing trainings or taking on additional responsibilities, which represent sacrifices, can build over time and enhance job performance and career development, thus presenting opportunities for other investments (Kiazad et al., 2015). These investments can also

act as buffers against job demands by making employees more equipped to manage the demands of the job. Fit is an intrinsic job resource (Schaufeli, 2017) that is valued for its own sake, because it represents a perception of how well passions and interests align with the position, which makes work intrinsically rewarding and motivating (Kiazad et al., 2015; Warr & Inceoglu, 2012). Further, job fit has been found to increase employee's core self-evaluations (i.e., self-esteem, self-efficacy, emotional stability, and locus of control; Judge et al., 1998; Nguyen & Borteyrou, 2016), which in turn can help buffer the effects of job demands (Hentrich et al., 2017).

The potential moderating effect of job embeddedness as a resource aligns well with JD-R's health-impairment pathway in which job and personal resources can buffer the effects of job demands on burnout and motivation (Bakker & Demerouti, 2017). Being embedded in one's job could act as a resource that buffers against stressors like the COVID-19 pandemic by 1) providing connections in one's network such as mentorship or task and social support (links), 2) increasing personal resources through perceived alignment between one's abilities and interests and the demands and characteristics of the job (fit), and 3) providing return on investments made at work and opportunities for additional career investments (sacrifices). These resources can be used to maintain motivation (Bakker & Demerouti, 2017), enhance core self-evaluations (Nguyen & Borteyrou, 2016), and manage demands of the job (Bakker et al., 2005), as well as to acquire additional resources over time (Bakker & Demerouti, 2017). Thus, I expect job embeddedness to act as a buffer against negative COVID-19-appraisals, such that those who are more embedded in their jobs will have more personal, social, and instrumental resources necessary to prevent burnout and to thrive at work in spite of negative appraisals of COVID-19.

Major embeddedness, having only just been introduced to the field (Major et al., 2020; Morganson et al., 2015), is much less established, and thus no studies have yet tested its role as a moderator. However, the construct of major embeddedness was grounded in embeddedness theory, and the application of the theory in a university context was supported with both qualitative (Morganson et al., 2015) and quantitative (Major et al., 2020) methods. Therefore, it is expected that the dimensions of links, fit, and sacrifices will represent similar resources for university students, and thus will also help buffer the impacts of negative COVID-19 appraisals on the experience of thriving and burnout in the school domain.

Given the above, job and major embeddedness are expected to buffer the effects of negative appraisals of COVID-19 on thriving and burnout in the work and school domains, respectively. The following hypotheses are proposed:

H5: Job embeddedness will moderate the negative relationship between negative appraisals of COVID-19 at work and thriving at work, such that the effects of negative appraisals of COVID-19 at work on thriving will be weaker for those who are more embedded in their jobs.

H6: Job embeddedness will moderate the positive relationship between negative appraisals of COVID-19 at work and job burnout, such that the effects of negative appraisals of COVID-19 at work on job burnout will be weaker for those who are more embedded in their jobs.

H7: Major embeddedness will moderate the negative relationship between negative appraisals of COVID-19 at school and thriving at school, such that the effects of negative appraisals of COVID-19 at school on thriving will be weaker for those who are more embedded in their majors.

H8: Major embeddedness will moderate the positive relationship between negative appraisals of COVID-19 at school and school burnout, such that the effects of negative appraisals of COVID-19 at school on school burnout will be weaker for those who are more embedded in their majors.

SPILLOVER

Spillover is the within-person passing of strain from one domain of life to another (Bakker & Demerouti, 2018). Spillover occurs when stressors from one domain impact outcomes in a different domain (Bakker & Demerouti, 2012). According to the work-home resource model, demands in one domain affect outcomes in another domain by reducing personal resources (ten Brummelhuis & Bakker, 2012). However, the influence of stressors on outcomes in different domains is not as strong as the influence of stressors on outcomes within the same domain (Amstad et al., 2011). While spillover is usually studied in the context of work-home conflict (Eby et al., 2005), ten Brummelhuis and Bakker (2012) advocate for the utility of the work-home resource model in other non-work contexts, especially the school context. Hence, for the current study, I will examine the spillover effects of stressors on motivation and strain between the domains of work and school. More specifically, I aim to investigate how negative appraisals of COVID-19 at work are related to thriving at school and school burnout, and, also, how negative appraisals of COVID-19 at school affect thriving at work and job burnout.

Work-to-School Spillover Hypotheses. Work-to-school spillover occurs when work demands begin to impact school outcomes (ten Brummelhuis & Bakker, 2012). The experience of demands at work depletes personal resources, such as time, energy, and affect (ten Brummelhuis & Bakker, 2012), and this depletion of personal resources creates difficulty for the individual in managing additional demands, including those in different domains, such as school

(S. E. Hobfoll et al., 2018). The spillover of stressors from the workplace into the school domain is a topic that has garnered much attention. Most intuitively, a working position has been shown to negatively affect grades (Soliz & Terry Long, 2016) and school involvement (Steinberg et al., 1981). Additionally, working while in school has been related to school dissatisfaction (Markel & Frone, 1998), increased strain (Benner & Curl, 2018; Cinamon, 2016, 2018; da Luz et al., 2012) and decreased motivation (Benner & Curl, 2018; Cinamon, 2018), and working a large amount of hours can increase a student's likelihood of cutting class (Barling et al., 1995).

The hindrance demands that emerged in the workplace due to the COVID-19 pandemic depleted employees' personal resources such as motivation, time, and energy (Ipsen et al., 2020). The spillover model (Bakker & Demerouti, 2012) suggests that such a depletion of personal resources could affect other domains of life, and for working students the school domain is likely to be affected by this spillover effect.

School-to-Work Spillover Hypotheses. Conversely, school-to-work spillover occurs when school demands impact work outcomes by decreasing personal resources (ten Brummelhuis & Bakker, 2012). For example, a heavy course load could deplete the student's personal resources such energy, making it then difficult for them to perform well at work after attending classes. Despite the abundant work-to-school spillover research, there is surprisingly scant research on the school-to-work spillover effects. A recent paper by Calderwood and Gabriel (2017a) made a valiant effort to address this gap in the literature, but failed to find support for their hypotheses proposing that school demands and resources would have meaningful impacts on emotional exhaustion, work engagement, and job performance. However, the authors argued that their findings should be taken with a grain of salt, as their study did not have sufficient statistical

power to rule out Type II error. Therefore, the gap in the literature remains gaping, and the current study will attempt to address it.

Despite the lack of empirical evidence for school-to-work spillover, the same theoretical rationale illustrated above applies to school-to-work spillover, as the spillover model (Bakker & Demerouti, 2012) is not specific to any particular domains. That is, the model can be applied to the relationship between any two or more domains of life, such that the stressors of one domain impact personal resources, and in turn, personal resources impact outcomes in other domains. Therefore, it is likely that stressors faced at school could decrease students' personal resources, thus impacting their performance at work. The hindrance demands faced by students during the COVID-19 pandemic impacted personal resources such as motivation and confidence (Usher et al., 2020), as well as mental health (Browning et al., 2021). For working students, changes to such personal resources are likely to impact their performance at work by limiting their ability to manage additional work stressors (ten Brummelhuis & Bakker, 2012). The proposed hypotheses regarding spillover are as follows:

H9: Negative appraisals of COVID-19 at work will be negatively correlated with thriving at school.

H10: Negative appraisals of COVID-19 at work will be positively correlated with school burnout.

H11: Negative appraisals of COVID-19 at school will be positively correlated with thriving at work.

H12: Negative appraisals of COVID-19 at school will be positively correlated with job burnout.

CHAPTER III

METHOD

PARTICIPANTS

The current study used an archival data set containing a sample of 333 college students that I collected in April of 2021. There were no inclusion criteria for participation in this study. However, as I was interested in the experiences of working college students, 117 cases of non-working students were excluded from the sample, resulting in a total of 216 participants. Participants were 79.3% women, 18.8% men, and 0.5% transgender men. Additionally, 0.5% identified as gender fluid, and 1.0% chose not to disclose their gender. The mean age of the sample was 23.2 years (SD = 6.46, Min. = 18, Max. = 49). With the option of selecting multiple categories, 50.0% of the sample selected White, 44.7% selected Black, 6.3% selected Asian or Asian American, 6.3% selected Hispanic or Latinx, 2.4% selected Native American or Alaska Native, and 1.4% selected Native Hawaiian or other Pacific Islander. Additionally, 2.4% of the sample preferred not to disclose their race, and 1.0% preferred to self-report their race. Most of the sample (76.4%) were single, never married. Of the remaining, 11.5% were married, 7.7% were in a domestic partnership, 2.9% were divorced, 1.0% were separated, and 0.5% were widowed.

A total of 39 majors were represented by the sample. The three most represented majors were psychology (54.8%), nursing (8.2%), and criminal justice (5.8%). Almost half of the participants were second-year students (41.8%), followed by students in their fifth-year or higher (22.6%), third-year students (16.8%), fourth-year students (12.0%), and finally first-year students (6.7%). More than half of the sample (54.8%) was employed part-time, working between one and 34 hours a week, and the rest (45.2%) was employed full-time, working 35 hours a week or

more. Overall, participants worked an average of 29.9 hours per week (*SD* = 14.38, Min. = 2, Max. = 83). After additional exclusions (described below), the final sample used for hypotheses testing analyses included 204 participants.

PROCEDURE

An anonymous, online survey hosted in Qualtrics was administered to undergraduate students at a large public university in the Mid-Atlantic region of the United States approximately one year after the transition to online classes due to the COVID-19 pandemic. The survey was launched on April 9, 2021 and was closed on April 28, 2021. Students were recruited through the Psychology Department research participant pool in which students gained course credit for their participation. Before gaining access to the survey, participants read and agreed to the informed consent form (see Appendix A). The study was reviewed by the College of Sciences Human Subjects Committee and was granted exempt status.

MEASURES

As part of a larger survey, the measures of interest to this study, described in detail below, included: thriving at school and work, school and job burnout, major and job embeddedness, appraisals of COVID-19 threat and harm to school and work, and measures of covariates, such as demographics and neuroticism. The full measures used in this study can be found in Appendix B.

Thriving

Thriving at Work. Thriving at work was measured by Porath et al.'s (2012) 10-item scale; five items assessed vitality and five items assessed learning. The general instructions for the measure read, “Please indicate how you feel as an employee.” The items were rated on a Likert-type scale that ranges from 1 *Disagree Strongly* to 7 *Agree Strongly*, consistent with the original

response scale. Sample items included, “I feel alive and vital” (vitality) and “I find myself learning often” (learning). To differentiate this scale from the thriving at school scale, the short stem, “As an employee,” was added before each item statement. Because I was interested in thriving at work as a whole, a composite thriving at work scale score was calculated by averaging responses on the 10 items, as has been done in previous thriving at work research (e.g., Gerbasi et al., 2015; Niessen et al., 2012; Paterson et al., 2014; Walumbwa et al., 2018).

Scores on this measure have exhibited evidence of convergent and discriminant validity as well as acceptable internal consistency reliability in the original validation studies (α = .88 - .94; Porath et al., 2012). More recent studies have corroborated the convergent and discriminant validity of thriving at work scale scores (Flinchbaugh et al., 2015; Mansour & Tremblay, 2020; Yang & Li, 2021), and a recent meta-analysis found support for the predictive validity of the thriving at work scale scores in explaining variance in work outcomes such as task performance and job satisfaction (Kleine et al., 2019). The Cronbach’s alpha value for the thriving at work scale with the current sample was .93.

Thriving at School. The thriving at school scale consisted of five vitality items and five learning items slightly modified for this study based on the thriving at work scale (Porath et al., 2012). All items remained the same; only the item stem was changed to, “As a student,” to orient participants to their student role. The instructions for the measure read, “Please indicate how you feel as a student.” The items were rated on a Likert-type scale that ranges from 1 *Disagree Strongly* to 7 *Agree Strongly.* Sample items included, “I have energy and spirit” (vitality) and “I am not learning” (learning, reverse coded). A thriving at school scale score was represented by the mean score of the responses to the 10 items. The Cronbach’s alpha value for the thriving at school scale with the current sample was .94.

Burnout

Job Burnout. This study utilized three items from the emotional exhaustion scale of Maslach and Jackson's (1981) Maslach Burnout Inventory, which demonstrated high factor loadings (.65 - .84) and had non-redundant wording in the original study. The instructions for the measure read, "Please rate your level of agreement with the following statements. There are no right or wrong answers, so please answer openly and truthfully." The items in the current study were rated on a 5-point Likert-type scale ranging from 1 *Strongly Disagree* to 5 *Strongly Agree.* A sample item included, "I feel emotionally drained from work." The original scale has been found to produce scores with high internal consistency reliability (α = .72 - .89) and acceptable convergent and discriminant validity (Maslach & Jackson, 1981; Schaufeli et al., 2009; Schramer et al., 2020). Additionally, support has been found for the scale scores' predictive validity for relevant work outcomes such as turnover intentions and coworker satisfaction (Maslach et al., 1996). The Cronbach's alpha value for the job burnout scale with the current sample was .92.

School Burnout. School burnout was measured with the three job burnout items described above slightly modified by replacing the words "job" and "work" with "schoolwork." The instructions read, "Please rate your level of agreement with the following statements. There are no right or wrong answers, so please answer openly and truthfully." As with the job burnout measure, the items were rated on a 5-point Likert-type scale ranging from 1 *Strongly Disagree* to 5 *Strongly Agree.* A sample item for this scale was, "I feel emotionally drained from my schoolwork." The Cronbach's alpha value for the school burnout scale with the current sample was .91.

Negative Appraisals of COVID-19

Negative Appraisals of COVID-19 at Work. To measure negative appraisals of COVID-19 at work, the current study used an expanded, 10-item COVID-19-specific version of Fugate et al.'s (2008) negative appraisal scale. The scale was originally designed to measure negative appraisals of organizational change, breaking appraisals down into two subscales: threat (likely to be harmed in the future) and harm (already harmed).

The original instructions for the threat appraisal subscale read, "Due to the changes, to what extent do you feel that each of the following is threatened—a possibility that it will get worse in the future?" The current study altered the instructions to address changes due to COVID-19 rather than changes in general. The instructions for the COVID-19 threat appraisal subscale in the current study read, "Due to the COVID-19 pandemic, to what extent do you feel that each of the following at work is threatened (there is a possibility that it will get worse in the future)?" This was followed by five descriptors: pay and benefits (original item), general work conditions (original item), job security (original item), personal job opportunities (original item), and job resources (item created for the current study). The five items were rated on a Likert-type scale that ranged from 1 *Not at all threatened* to 5 *Threatened to a very great extent.*

The original instructions for the harm appraisal subscale read, "Due to the changes, to what extent do you feel that the following aspects of your work life were harmed (got worse than they were)?" In the current study, the instructions for the COVID-19 harm appraisal subscale read, "Due to the COVID-19 pandemic, to what extent do you feel that each of the following aspects of your work life were harmed (got worse than they were)?" This header was followed with five descriptors: relationship with your supervisor (original item), ability to perform your job (original item), relationships with coworkers (original item), desirability of your job (original

item), and motivation to perform your job (created for the current study). The five items were rated on a Likert-type scale that ranged from *1 Not at all harmed* to *5 Harmed to a very great extent.*

Scores on the original composite negative appraisal scale have shown acceptable internal consistency reliability (α = .79), discriminant validity, and convergent validity (Fugate et al., 2008). Additionally, there is evidence to support the predictive validity of the negative appraisal scale in explaining variance in relevant work outcomes such as sick time used and turnover intentions (Fugate et al., 2008). Consistent with Fugate et al. (2008), the current study used a composite score of both threat and harm appraisal subscales as the indicator of negative COVID-19 appraisals. The Cronbach's alpha value for the negative appraisals of COVID-19 at work scale with the current sample was .88.

Negative Appraisals of COVID-19 at School. Negative appraisals of COVID-19 at school were measured by 14-items adapted from the above-mentioned negative appraisal scale (Fugate et al., 2008) to be COVID-19-specific, assessing threat and harm relevant to the school context.

The threat appraisal at school subscale was comprised of eight items. The instructions read, "Due to the COVID-19 pandemic, to what extent do you feel that each of the following at school is threatened (there is a possibility that it will get worse in the future)?" The response items, which were created for the purpose of this study, included: financial aid and scholarships, your GPA, your graduation, campus safety, personal academic opportunities, personal financial security, access to school services and resources, and career opportunities. These items were created based on their meaningful implications for university students in regard to successful completion of a degree (Chen & Hossler, 2017; Flynn & MacLeod, 2015; Maier & DePrince, 2020; Trowler, 2010; Zepke & Leach, 2010) and getting a significant return on one's investment

in higher education post-college (Ost et al., 2018; Richards, 1984). These items were rated on a Likert-type scale that ranged from 1 *Not at all threatened* to 5 *Threatened to a very great extent.*

The harm appraisal at school subscale had six items and was also adapted for this study using the COVID-19-specific version of the harm appraisal at work scale (Fugate et al., 2008). The instructions read, "Due to the COVID-19 pandemic, to what extent do you feel that each of the following aspects of your school life were harmed (got worse that they were)?" The items included: relationships with your advisor, ability to perform well academically, relationships with classmates, desirability of your major, relationships with your professors/instructors, and motivation to perform well academically. These items were chosen as academic equivalents of the harm items from the work scale. These items were rated on a Likert-type scale that ranged from 1 *Not at all harmed* to 5 *Harmed to a very great extent.* Scale scores were created by averaging responses to all 14 items. The Cronbach's alpha value for the negative appraisals of COVID-19 at school scale with the current sample was .91.

Embeddedness

Job Embeddedness. Job embeddedness was measured using Mitchell and Lee (2001) original job embeddedness scale. There were six items in the fit subscale, nine items in the sacrifice subscale, and seven items in the links subscale, for a total of 22 items. The instructions for this measure read, "Please indicate your level of agreement to the following statements with regards to your job." Each of the items of the fit and sacrifice subscales was rated on a Likert-type scale ranging from *1 Strongly disagree* to *5 Strongly agree.* Responses to the links subscale items used a free-response format and were coded, standardized using Z-scores, and summed to create the subscale score. The three subscale scores were then averaged to create an overall score for job embeddedness (Reitz & Smith, 2019). Sample items from the scale included, "I feel like I

am a good match for this organization" (fit), "My promotional opportunities are excellent here" (sacrifice), and "How many coworkers are highly dependent on you?" (links). Responses to the full scale have been found to show acceptable internal consistency reliability (α = .85 - .87) and predictive, convergent, and discriminant validity (Lee et al., 2014; Mitchell et al., 2001). The Cronbach's alpha value for the job embeddedness scale with the current sample was .92.

Major Embeddedness. Major embeddedness was measured using Major et al.'s (2020) major embeddedness scale, which contained a total of 14 items: five items for fit, five items for links, and four items for sacrifice. The instructions for the scale read, "Please rate the extent to which you agree or disagree with the following statements with regards to your major." The items were rated on a Likert-type scale ranging from 1 *Strongly disagree* to 5 *Strongly agree.* Sample items from the scale included, "My major is my passion (fit)," "I like that people in my major think the same way I do (links)," and "I've invested a great deal in my major (sacrifice)." The full scale has produced responses that demonstrated acceptable internal consistency reliability (α = .89 - .90) and convergent, discriminant, concurrent criterion-related, and predictive criterion-related validity (Major et al., 2020). Responses to items on the three subscales were averaged to create an overall score for major embeddedness (Major et al., 2020). The Cronbach's alpha value for the major embeddedness scale with the current sample was .91.

Covariates

The current study considered four variables as potential covariates based on the burnout and thriving literatures: age, gender, average hours worked/studied per week, and neuroticism.

Age. Age was considered a potential covariate following previous work in which it has demonstrated significant associations with burnout (Brewer & Shapard, 2004; Lim et al., 2010; Maslach et al., 2001; Prieto et al., 2008; Reichl et al., 2014; Schutte et al., 2000; Shoji et al.,

2016). Age has also been included as a covariate in studies of thriving because work might become more exhausting as workers aged, thus impacting the vitality aspect of thriving (Abid et al., 2020; Niessen et al., 2012; Uchino et al., 2006). Age has also been shown to reduce one's ability to learn, which could impact the learning facet of thriving (Abid et al., 2018; Kanfer & Ackerman, 2004; Yang & Li, 2021). Age was assessed by asking participants to select their age in years from a drop-down menu at the time of survey completion.

Gender. In a meta-analysis of gender differences in burnout, men and women were found to exhibit burnout differentially across the subdimensions. Specifically, women were more likely to report emotional exhaustion, and men were more likely to report cynicism (Purvanova & Muros, 2010). Gender has been examined as a covariate in other burnout literature, noting that gender might impact general feelings of well-being, and thus affect experiences of burnout (Prieto et al., 2008; Schutte et al., 2000). Gender has also been frequently used as a control variable in the thriving literature, as women tended to experience more exhaustion at work, and thus might be less likely to feel vitality at work (Abid et al., 2018, 2020; Purvanova & Muros, 2010; Yang & Li, 2021). In the current study, gender was measured by asking participants to select their current gender expression from a drop-down menu at the time of survey completion, including the following options: woman, man, trans woman, trans man, transgender, gender fluid, agender, genderqueer, non-binary, questioning or unsure, additional gender identity not listed, and prefer not to disclose. Because 98.10% of the participants in the sample identified as either women or men (only 1.90% [$N = 4$] reported other gender expressions) and gender plays a significant role in occupational health research, I decided to focus on self-identified women and men in my hypotheses testing analyses, and excluded the four participants who reported otherwise.

Work/Study Hours. Meta-analytic findings indicated that number of work hours could be one of the most significant predictors of burnout (Lim et al., 2010). As such, many empirical studies have examined the relationship between work hours and burnout (e.g., Bergeron et al., 2014; Beschoner et al., 2020; Deng et al., 2017; Gabbe et al., 2008; Gingras et al., 2010). For this reason, the current study included a question that asked participants for the number of hours they typically worked per week. Additionally, a question asking participants to indicate the number of hours typically spent on schoolwork per week was also included to address the commonly-reported relationship between school workload and burnout in students (Cushman & West, 2006; Jacobs & Dodd, 2003).

Neuroticism. Neuroticism was measured as a potential covariate in the study because previous work has found neuroticism to account for a significant amount of variance in burnout above and beyond work stress and relationships (Goddard et al., 2004). Additionally, emotional stability (i.e., reverse-coded neuroticism) has been shown to impact thriving at work (Ren et al., 2015). For these reasons, the current study included four items measuring neuroticism from Donnellan et al.'s (2006) mini-IPIP scales. The Cronbach's alpha value for the neuroticism scale with the current sample was .52.

Data Quality Check

One data quality check item was included in the survey, specifically within the job embeddedness scale. The item read, "*For data quality purposes, please select 'Strongly disagree' for this item."* Participants who did not select "strongly disagree" on this item [$N = 44$] were further examined for potential response sets or careless responding. Four of these cases were identified as including careless responses, and these cases were excluded from the analyses.

CHAPTER IV

RESULTS

PRELIMINARY ANALYSES

Data Screening

Prior to analyses, the data were examined and cleaned to create the final data set following recommendations by Tabachnick et al. (2019). First, the data were inspected for out-of-range values for the items that required the participant to type in a response. Plausible means and standard deviations for the scales of interest were also examined. This was done to identify any issues with coding or scoring and to aid in identifying any potential univariate outliers. No issues were identified in this step.

Univariate Outliers

Univariate outliers are data points that do not fit with the rest of the data and are thus considered atypical (Cohen et al., 2003). Univariate outliers were examined by computing z-scores. There were no z-scores that exceeded an absolute value of 3.29 (i.e., 3.29 standard deviations above or below the mean; Tabachnick et al., 2019).

Missing Data

Next, the data set was evaluated for missing data. A Missing Values Analysis using SPSS was conducted to detect any non-random patterns of missingness in the data. This test computes a *t*-test for variables with at least 5% of data missing to determine if the variable's missing values are related to missing values on other variables. However, with the current sample, there were no variables with 5% or more missing values, thus the *t*-test was not conducted. Four participants (1.8%) did not provide responses to any of the major embeddedness items, and thus these cases were dropped from the sample used in the final hypotheses testing analyses.

Linearity

Linearity suggests that there is a straight-line relationship between two variables (Tabachnick et al., 2019). The assumption of linearity was assessed using scatterplots of the unstandardized predicted values against the unstandardized residuals for each of the four dependent variables: thriving at work, thriving at school, job burnout, and school burnout. A loess line was added to each graph to assess the form of the residuals. Nonlinearity is implied by a curved loess line, indicating that residuals fall above zero at some predicted values and below zero at other predicted values (Tabachnick et al., 2019). The loess lines for each of the dependent variables were adequately straight, indicating that the assumption of linearity was not violated for any of the dependent variables.

Homoscedasticity

The assumption of homoscedasticity suggests that the variability of one variable is consistent across all levels of another variable (Tabachnick et al., 2019). Homoscedasticity was assessed using the Van der Waerden formula, which regresses the normalized squared standardized residuals onto the predictors of the model. A significant test suggests that the residuals can be explained by the predictors in the model, and thus there are significant differences in variance between the predictors and no homoscedasticity. For thriving at work, thriving at school, and job burnout, these tests were not significant, indicating that the assumption of homoscedasticity has not been violated for these variables. However, the test for school burnout was significant ($F(6, 201) = 2.72$, $p = .015$), suggesting that heteroscedasticity may be a problem for this variable, and results should be interpreted with caution.

Normality

Normality of the distribution was assessed by examining the skewness and kurtosis of the study variables. Due to the relatively large size of the sample, skewness and kurtosis were evaluated using absolute values and histograms rather than with formal inference tests, as small deviations from normality were likely to be deemed significant due to the large *N* (Tabachnick et al., 2019). Further, with a large sample size (i.e., samples over 100), minor deviations from normality in terms of skewness and kurtosis were not likely to make a substantial difference in the analyses (Tabachnick et al., 2019). None of the study variables showed substantial skewness (i.e., skewness > 1), and thus no transformations were performed on the data (Tabachnick et al., 2019).

Multivariate Outliers

Multivariate outliers are cases with an unusual combination of scores on multiple variables (Tabachnick et al., 2019). Multivariate outliers were examined using leverage, discrepancy, and influence. Leverage values were obtained using Mahalanobis distance. Cases that exceeded the pre-determined X^2 critical value ($\alpha = .01$) of 9.21 were considered a multivariate outlier in terms of leverage. Discrepancy was assessed using unstandardized studentized residuals. Cases that exceeded the pre-determined *t*-distribution critical value ($\alpha = .01$, Bonferroni adjusted) of 2.25 were considered a multivariate outlier. Finally, influence was assessed using Cook's distance. Each case's Cook's D value was compared to a pre-determined *f*-distribution critical value ($\alpha = .05$) of 2.63, and cases that exceeded this critical value were considered outliers. Only one case had high influence (i.e., both high discrepancy and high leverage), thus no transformations were performed (Tabachnick et al., 2019).

Statistical Power

The power of a statistical test represents the probability of avoiding Type II error (Cohen, 1988). That is, it is the probably of correctly rejecting a false null hypothesis (Darlington & Hayes, 2017). An a priori power analysis was conducted using G*Power software prior to conducting hypothesis-testing analyses. An alpha level of .05 and a power level of .80 were used in the a priori power analysis. Based on the average correlation of .27 reported in Crawford et al.'s (2010) meta-analysis of the effects of job demands on employee burnout, and Kleine et al.'s (2019) reported meta-analytic correlation of -.31 for the effects of work stressors on thriving at work, a correlation of .29 (the average of these two correlations) was used to determine the effect size to be used in the power analysis. A correlation of .29 translates to a medium effect size, and an f^2 of equivalent magnitude would be .15 (Cohen, 1988). Therefore, an effect size of .15 was used in the power analysis. The regressions conducted in the path analyses to test the hypotheses (outlined in the section below) would contain at most seven predictors. Thus, to obtain the effect size of .15 with power of .80, a sample size of 103 would be needed. Given the sample size of 208, it is very likely that the sample size would be sufficient to provide adequate statistical power to test my hypotheses.

HYPOTHESIS TESTING ANALYSES

To test the study hypotheses, I conducted a series of path analyses of models outlined in Figures 2-4. Path analysis uses simultaneous multiple regression analyses to examine relationships between exogenous variables and multiple dependent or endogenous variables (Klem, 1995). This analytic method is widely used and is suitable for theory testing (MacCallum & Austin, 2000). The analyses were run in Mplus 8 (Muthen & Muthen, 1998-2017) after first cleaning the data and computing composites in SPSS using syntax. Missing values were recoded into -999 and unneeded variables (i.e., variables not used in the proposed study) and cases (i.e.,

non-working students) were removed. This new data set was saved as a tab delimited file, excluding the variable names, so it could be used in Mplus. Mplus syntax was used to create variable names with eight or fewer characters and specify values of -999 as missing values.

Prior to conducting the path analysis, the potential covariates to be used in each path analysis (i.e., age, gender, average work hours per week, average schoolwork hours per week, and neuroticism) were identified based on their zero-order correlations with the dependent variables (see Table 1). To maintain model parsimony and adequate statistical power, only the variables that were significantly correlated with the dependent variables in the current sample were included as covariates in each tested model (Becker, 2005).

Additionally, I also examined model identification prior to path analysis. This is necessary to determine the degrees of freedom of the model, which indicates whether there are enough observations to estimate the parameters (Clavel, 2014). The path models that were tested in the proposed study were just-identified, because there were just enough observations to estimate the necessary parameters, leaving zero degrees of freedom (Clavel, 2014). Thus, only the path coefficients were examined, and model fit was not investigated as the models fit the data perfectly (Klem, 1995). Overall, I tested six path models.

Matching-Domain Main Effect Results

Work Domain. Hypotheses 1 and 2 predicted a negative main effect of negative appraisals of COVID-19 at work on thriving at work, and a positive main effect on job burnout. As expected, negative appraisals of COVID-19 at work displayed a negative zero-order correlation with thriving at work (r = -.29, p < .001) and a positive zero-order correlation with job burnout (r = .42, p < .001, see Table 1). These findings were consistent with Path Model 1 results displayed in Figure 2. Negative appraisal of COVID-19 at work was negatively related to

thriving at work (B = -0.26, p < .001) and positively related to job burnout (B = 0.36, p < .001) while controlling for neuroticism, work hours, and age, supporting Hypotheses 1 and 2. These findings suggest that working students who appraised COVID-19 as more harmful and threatening to their work lives also reported less thriving and more burnout at work. Additionally, neuroticism was negatively related to thriving at work (B = -0.15, p = .022) and positively related to job burnout (B = 0.15, p = .017). Age was positively related to thriving at work (B = 0.15, p = .036), and hours worked per week was positively related to job burnout (B = 0.20, p = .003). Finally, there was a significant negative correlation between job burnout and thriving at work (B = -0.44, p < .001). Overall, the model explained 13% of the variance of thriving at work (R^2 = .13, p = .003) and 23% of the variance of job burnout (R^2 = .23, p < .001).

Table 1

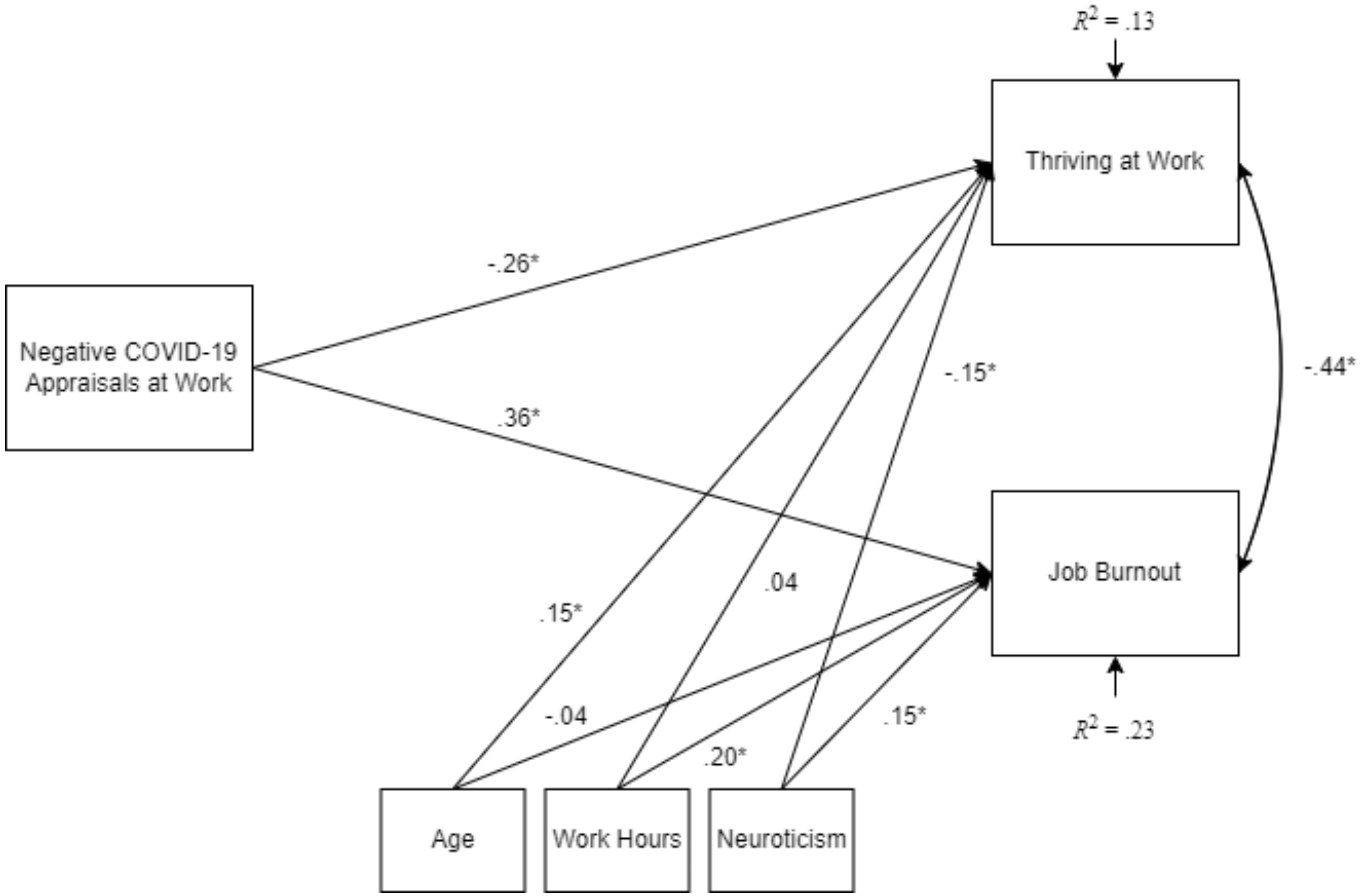
Descriptive Statistics and Correlations for Study Variables

Variable	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Neg App Work	2.07	0.86	.88												
2. TAW	4.86	1.22	-.29*	.93											
3. JB	3.14	1.15	.42*	-.49*	.92										
4. JE	0.04	0.54	-.28*	.73*	-.40*	.92									
5. Neg App School	2.52	0.91	.41*	-.29*	.21*	-.28*	.91								
6. TAS	4.87	1.26	-.22*	.51*	-.22*	.32*	-.58*	.94							
7. SB	3.72	1.06	.27*	-.24*	.26*	-.19*	.47*	-.49*	.91						
8. ME	3.94	0.56	-.13	.51*	-.27*	.35*	-.24*	.45*	-.21*	.91					
9. Neuroticism	3.08	0.73	.20*	-.20*	.24*	-.11	.18*	-.23*	.26*	-.12	.52				
10. Age	23.20	6.46	.00	.16*	.03	.38*	-.37*	.31*	-.30*	-.00	-.01	-			
11. Gender	1.19	.394	-.15*	.01	-.12	.02	.19*	.08	-.25*	.14*	-.31*	.00	-		
12. Work Hours	29.93	14.39	.15*	.04	.25*	.14*	-.13	.10	-.11	.03	.12	.37*	-.04	-	
13. Schoolwork Hours	13.78	12.01	-.03	.11	-.09	.10	-.04	.12	.02	.03	.03	.02	-.12	-.03	-

Note. N = 204. Neg App Work=Negative Appraisals of COVID-19 at Work; TAW=Thriving at Work; JB=Job Burnout; JE=Job Embeddedness; Neg App School=Negative Appraisals of COVID-19 at School; TAS=Thriving at School; SB=School Burnout; ME=Major Embeddedness. Gender was coded as 1=Woman, 2=Man. Cronbach's alphas are on the diagonal.

Figure 2

Main Effects of Negative Appraisals of COVID-19 at Work on Thriving at Work and Job Burnout, Controlling for Age, Work Hours, and Neuroticism

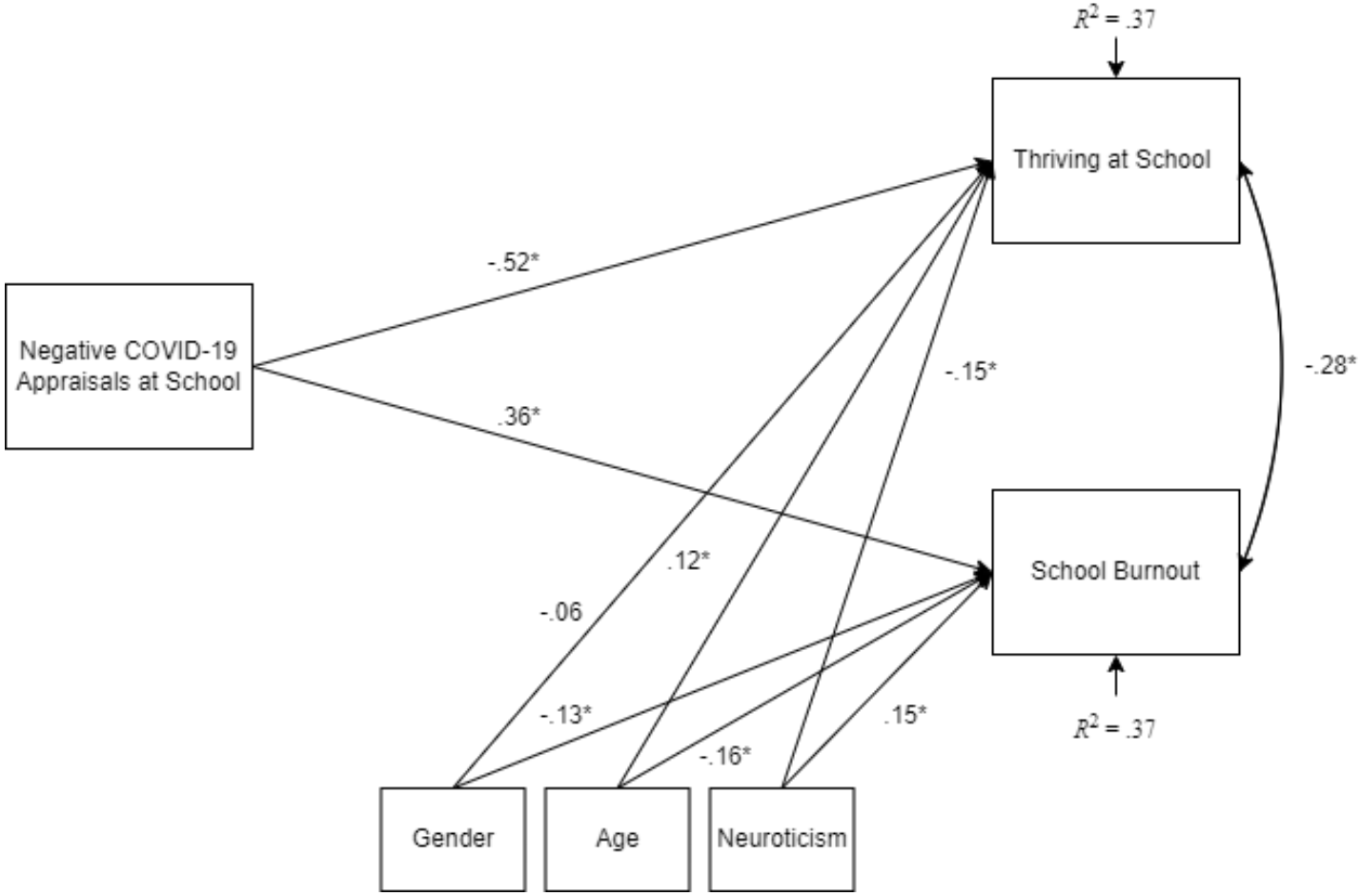


Note. Significant paths are marked with an asterisk.

School Domain. Hypotheses 3 and 4 predicted a negative main effect of negative appraisals of COVID-19 at school on thriving at school, and a positive main effect on school burnout, respectively. Negative appraisals of COVID-19 at school displayed a negative zero-order correlation with thriving at school (r = -.58, p < .001) and a positive zero-order correlation with school burnout (r = .47, p < .001, see Table 1), as expected. Path Model 2 results are displayed below in Figure 3. Negative appraisal of COVID-19 at school was negatively related to thriving at school (B = -0.52, p < .001) and positively related to school burnout (B = 0.36, p < .001) while controlling for neuroticism, age, and gender, supporting Hypotheses 3 and 4. These findings suggest that working students who appraised COVID-19 as more harmful and threatening to their school lives also reported less thriving and more burnout at school. Additionally, there was a negative relationship between thriving at school and neuroticism (B = -0.15, p = .009), and a marginal positive relationship between thriving at school and age (B = 0.12, p = .052). Neuroticism was also positively related to school burnout (B = 0.15, p = .016), and age (B = -0.16, p = .011) and gender (B = -0.13, p = .034) were positively related to school burnout. Finally, there was a significant negative correlation between school burnout and thriving at school (B = -0.28, p < .001). Overall, the model explained 37% of the variance of thriving at school (R^2 = .37, p < .001), and 29% of the variance of school burnout (R^2 = .29, p < .001).

Figure 3

Main Effects of Negative Appraisals of COVID-19 at School on Thriving at School and School Burnout, Controlling for Gender, Age, and Neuroticism



Note. Gender was coded as: 1=Woman, 2=Man. Significant paths are marked with an asterisk.

Results for the Moderating Effects of Embeddedness

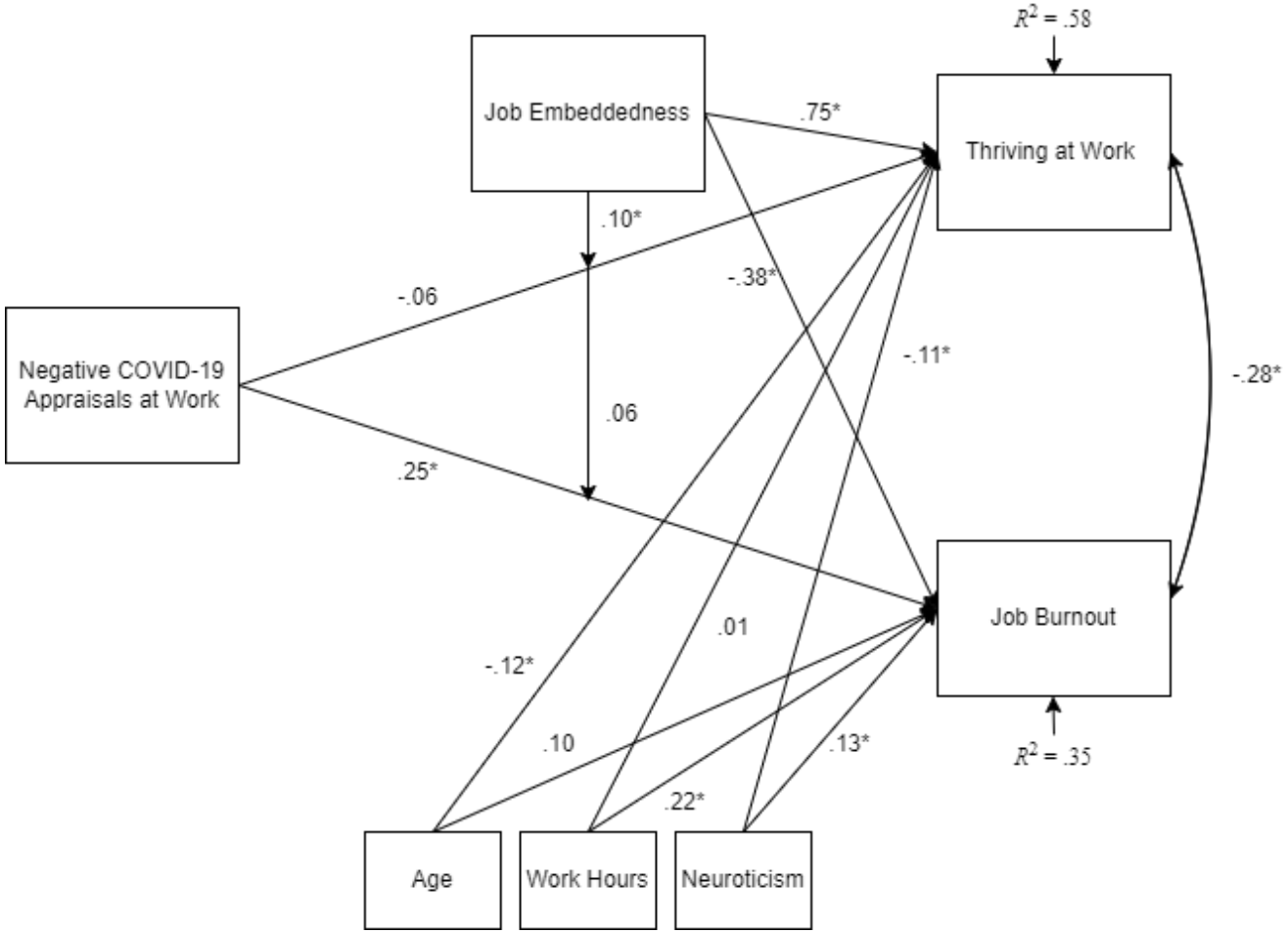
Work Domain. Hypotheses 5 and 6 predicted a negative moderating effect of job embeddedness in the relationships between negative appraisals of COVID-19 at work and thriving and burnout at work, respectively, such that job embeddedness would weaken the relationships between negative appraisals of COVID-19 at work and thriving and burnout at work. Job embeddedness displayed a positive zero-order correlation with thriving at work (r = .73, p < .001), a negative zero-order correlation with job burnout (r = -.40, p < .001), and a negative zero-order correlation with negative appraisals of COVID-19 at work (r = -.28, p < .001, see Table 1), as expected. Path Model 3 results are displayed below in Figure 4. There was a significant positive main effect of job embeddedness on thriving at work (B = 0.75, p < .001) while controlling for neuroticism, work hours, and age. Additionally, job embeddedness showed a significant moderating effect on the relationship between negative appraisals of COVID-19 at work and thriving at work (B = 0.10, p = .027), though this moderating effect was in the opposite direction than was hypothesized. Simple slopes analysis revealed that at high job embeddedness (i.e., one standard deviation above the mean) the relationship between negative appraisals of COVID-19 at work and thriving at work was negative (B = -0.26, p = .027), while at low job embeddedness (i.e., one standard deviation below the mean) the relationship was positive (B = 0.09, p = .028). These results suggest that those who were embedded in their job experienced less thriving in the face of negative appraisals of COVID-19 at work than those who were less embedded. Thus, Hypothesis 5 was not supported. This interaction effect is shown in Figure 5.

There was a negative main effect (B = -0.38, p < .001) of job embeddedness on job burnout, however there was no moderation effect of job embeddedness on the relationship between negative appraisals of COVID-19 at work and job burnout (B = 0.06, p = .268), thus

Hypothesis 6 was not supported. Overall, the model explained 58% of the variance of thriving at work (R^2 = .58, $p < .001$), and 35% of the variance of job burnout (R^2 = .35, $p < .001$).

Figure 4

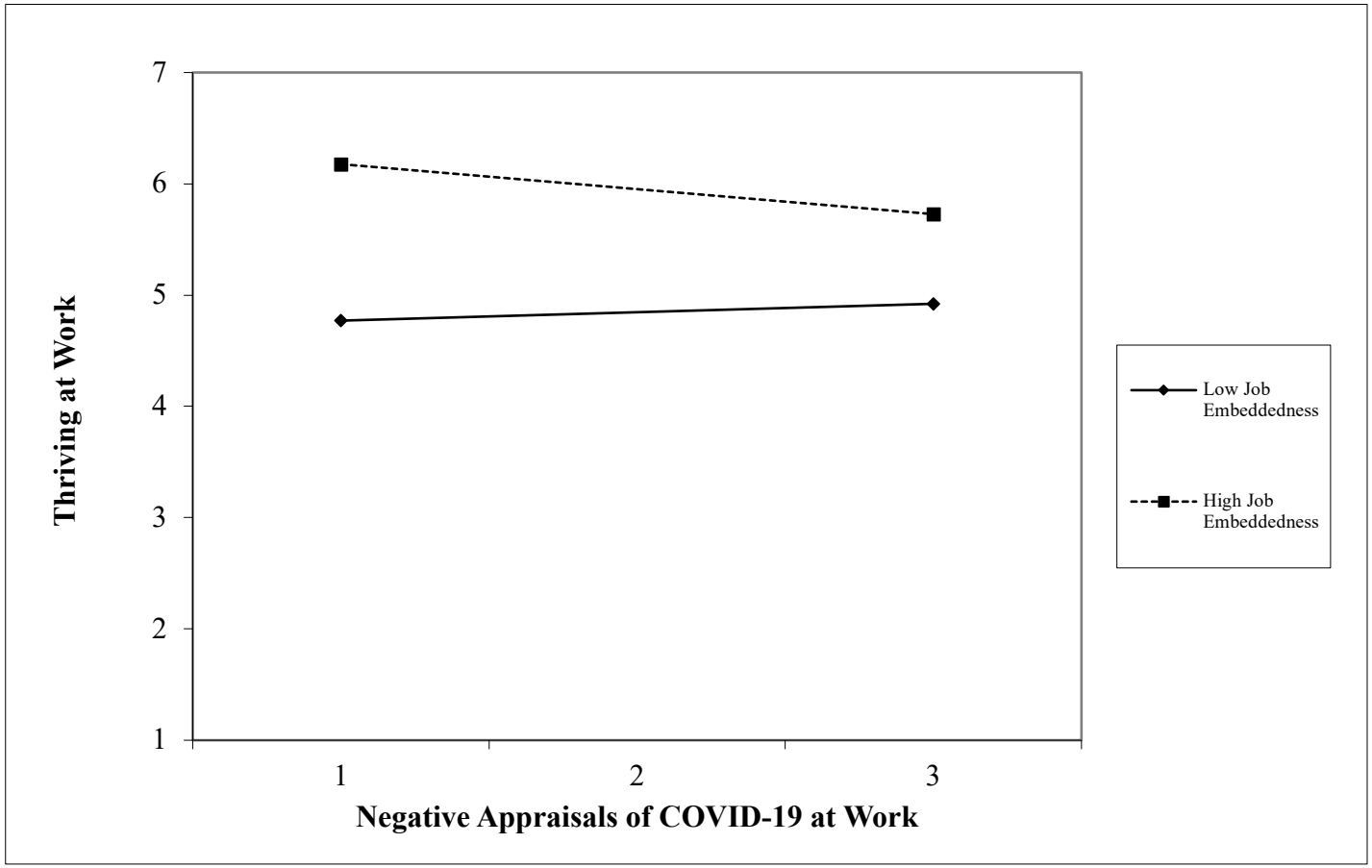
Moderating Effects of Job Embeddedness on the Relationships Between Negative Appraisals of COVID-19 at Work and Thriving at Work and Job Burnout, Controlling for Age, Work Hours Per Week, and Neuroticism



Note. Significant paths are marked with an asterisk.

Figure 5

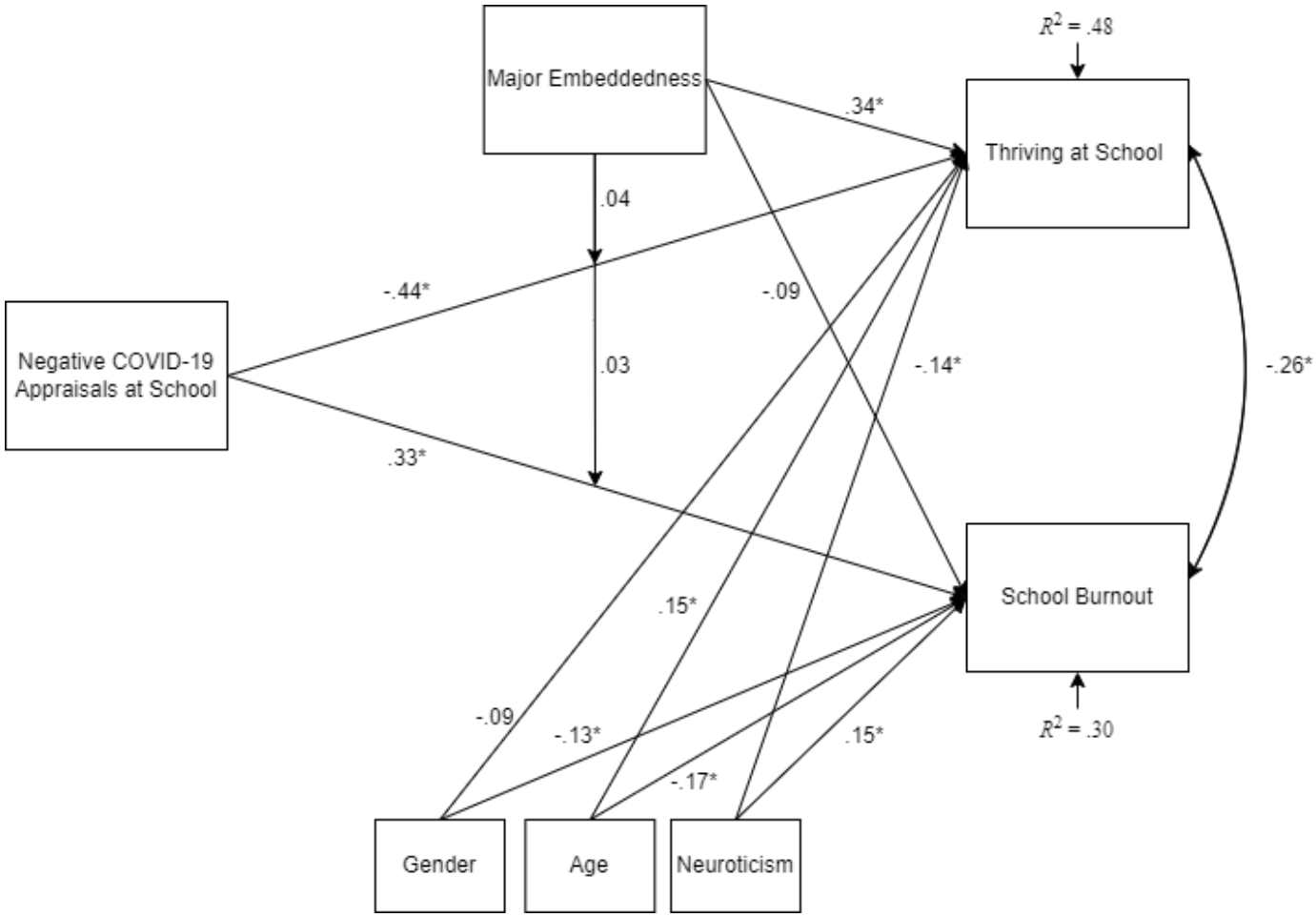
Moderating Effect of Job Embeddedness on the Relationship Between Negative Appraisals of COVID-19 at Work and Thriving at Work



School Domain. Hypotheses 7 and 8 predicted a negative moderating effect of major embeddedness in the relationships between negative appraisals of COVID-19 at school and thriving and burnout at school, respectively, such that major embeddedness would weaken the relationships between negative appraisals of COVID-19 at school and thriving and burnout at school. Major embeddedness displayed a positive zero-order correlation with thriving at school (r = .45, p < .001), a negative zero-order correlation with school burnout (r = -.21, p = .003), and a negative zero-order correlation with negative appraisals of COVID-19 at school (r = -.24, p < .001, see Table 1), as expected. The results for Path Model 4 are displayed below in Figure 6. There was a significant positive main effect of major embeddedness on thriving at school (B = 0.34, p < .001) while controlling for neuroticism, age, and gender, however there was no significant moderating effect of major embeddedness on the relationship between negative appraisals of COVID-19 at school and thriving at school (B = 0.04, p = .470). Thus, Hypothesis 7 was not supported. Additionally, there was no significant main effect (B = -0.10, p = .134) or moderating effect (B = 0.03, p = .561) of major embeddedness on school burnout, thus Hypothesis 8 was also not supported. Overall, the model explained 48% of the variance of thriving at school (R^2 = .48, p < .001), and 30% of the variance of school burnout (R^2 = .30, p < .001).

Figure 6

Moderating Effect of Major Embeddedness on the Relationships Between Negative Appraisals of COVID-19 at School and Thriving at School and School Burnout, Controlling for Gender, Age, and Neuroticism



Note. Gender was coded as: 1=Woman, 2=Man. Significant paths are marked with an asterisk.

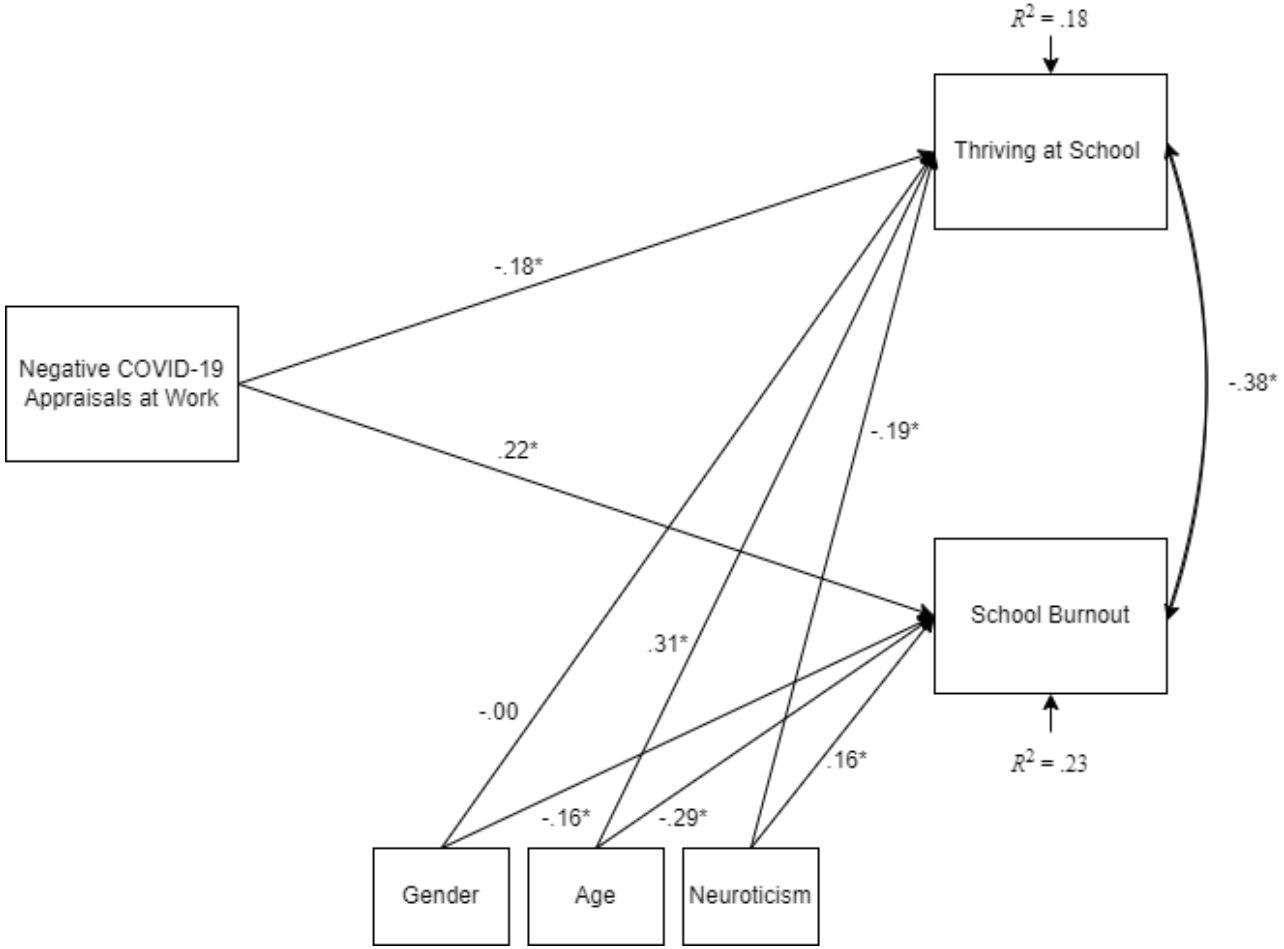
Cross-Domain Main Effects Results

Work-to-School. Hypotheses 9 and 10 predicted a negative main effect of negative appraisals of COVID-19 at work on thriving at school, and a positive main effect on school burnout, respectively. Negative appraisals of COVID-19 at work displayed a negative zero-order correlation with thriving at school (r = -.22, p = .002) and a positive zero-order correlation with school burnout (r = .27, p < .001, see Table 1), as predicted. Path Model 5 results are displayed below in Figure 7. There was a positive relationship between negative appraisals of COVID-19 at work and thriving at school (B = -0.18, p = .005), and a positive relationship between negative appraisals of COVID-19 at work and school burnout (B = 0.22, p < .001) while controlling for neuroticism, age, and gender, supporting Hypotheses 9 and 10.

Additionally, as in the matching domain models, neuroticism was negatively related to thriving at school (B = -0.19, p = .004) and positively related to school burnout (B = 0.16, p = .012). Age was positively related to thriving at school (B = 0.31, p < .001) and negatively related to school burnout (B = -0.29, p < .001). Gender was negatively related to school burnout (B = -0.16, p = .011). Finally, there was a significant negative correlation between school burnout and thriving at school (B = -0.38, p < .001). Overall, the model explained 18% of the variance of thriving at school (R^2 = .18, p < .001), and 23% of the variance of school burnout (R^2 = .23, p < .001).

Figure 7

Spillover Effects of Negative Appraisals of COVID-19 at Work on Thriving at School and School Burnout, Controlling for Gender, Age, and Neuroticism



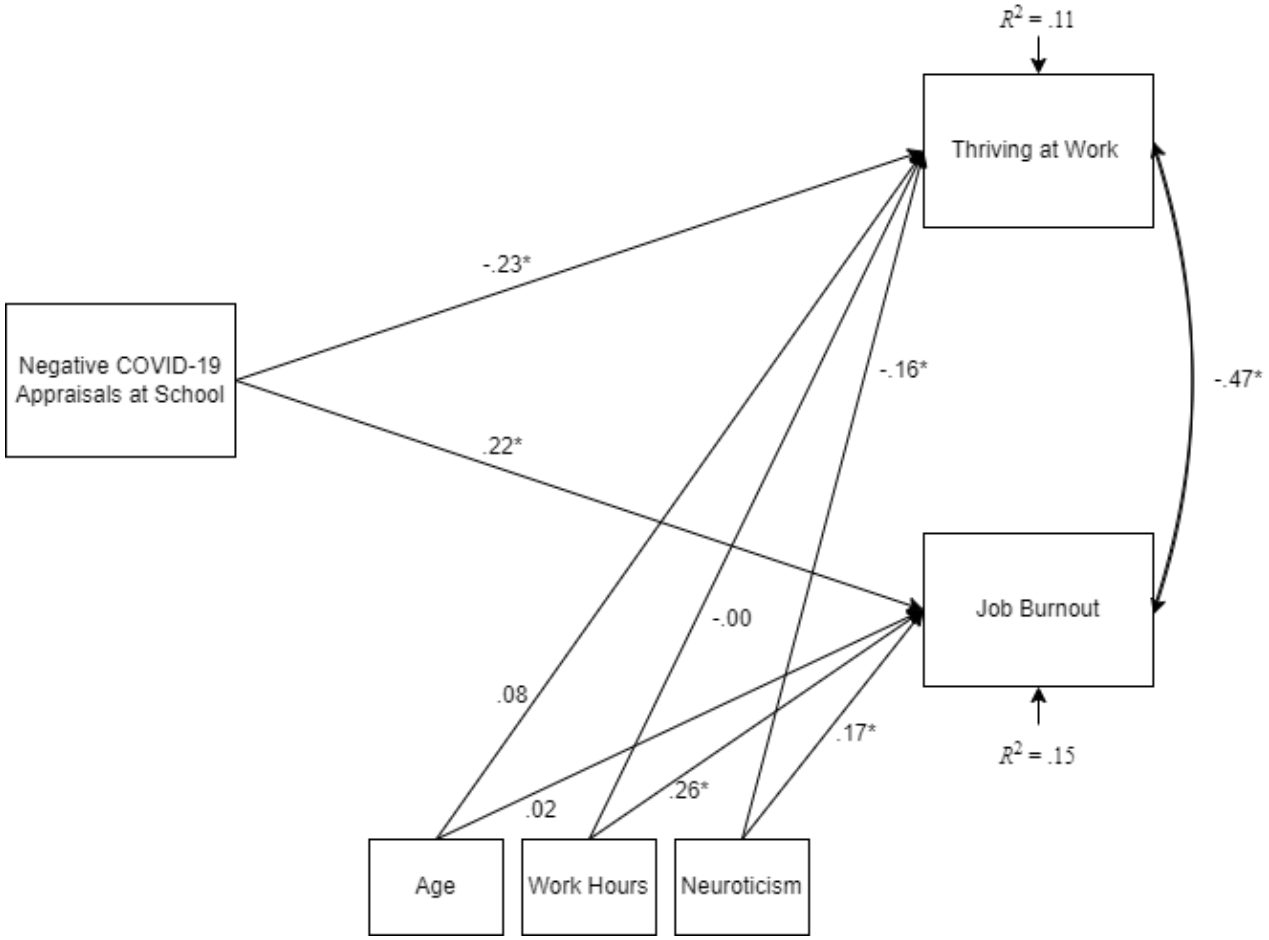
Note. Gender was coded as: 1=Woman, 2=Man. Significant paths are marked with an asterisk.

School-to-Work. Hypotheses 11 and 12 predicted a positive effect of negative appraisals of COVID-19 at school on thriving at work, and a negative effect on job burnout, respectively. Negative appraisals of COVID-19 at school displayed a negative zero-order correlation with thriving at work (r = -.29, p < .001) and a positive zero-order correlation with job burnout (r = .21, p = .002, see Table 1), as expected. The results of Path Model 6 are displayed below in Figure 8. There was a negative relationship between negative appraisals of COVID-19 at school and thriving at work (B = -0.23, p = .001), and a positive relationship between negative appraisals of COVID-19 at school and job burnout (B = 0.22, p = .001) while controlling for neuroticism, work hours, and age, supporting Hypotheses 11 and 12.

Additionally, as in the matching domain models, neuroticism was negatively related to thriving at work (B = -0.16, p = .020) and positively related to job burnout (B = 0.17, p = .009). Work hours was also positively related to job burnout (B = 0.26, p < .001). Finally, there was a significant negative correlation between job burnout and thriving at work (B = -0.47, p < .001). Overall, the model explained 11% of the variance of thriving at work (R^2 = .11, p = .008), and 15% of the variance of job burnout (R^2 = .15, p = .001).

Figure 8

Spillover Effects of Negative Appraisals of COVID-19 at School on Thriving at Work and Job Burnout, Controlling for Age, Work Hours Per Week, and Neuroticism



Note. Significant paths are marked with an asterisk.

CHAPTER V

DISCUSSION

The COVID-19 pandemic has created many obstacles and caused many challenges for university students and employees alike. For students, the pandemic brought on difficulties related to reduced access to university resources and services (Sahu, 2020), threats to financial aid (Smalley, 2021), and limited opportunities to form academic relationships (Vaterlaus et al., 2021). Employees faced their own set of hardships, including deteriorations in working conditions (Kniffin et al., 2021), increases in work-family conflict (Vaziri et al., 2020), and threats to pay and benefits (Jacobs & Ohinmaa, 2020). Working students have been at increased risk for the negative impacts of the COVID-19 pandemic due to their participation in both of these domains (Bakker & van Wingerden, 2021). And yet, research has largely failed to examine and understand working students' unique circumstances during the pandemic. The current study addressed this gap by investigating the within- and cross-domain impacts of negative appraisals of COVID-19 at work and school on working students' thriving and burnout in both domains. Additionally, job and major embeddedness were examined as moderators in these relationships within the work and school domains, respectively.

SUMMARY OF RESULTS

Matching-Domain Main Effects Results

Work Domain. The results showed that working students who appraised the COVID-19 pandemic as more harmful or threatening to their work lives also reported lower levels of thriving at work and higher levels of job burnout, while controlling for neuroticism, work hours per week, and age. These results support the classification of the COVID-19 pandemic as a hindrance demand for working students in their working domain by revealing a negative

relationship with motivational work outcomes (i.e., thriving at work; Flinchbaugh et al., 2015; Lin et al., 2020; Prem et al., 2017; Yang & Li, 2021) and a positive relationship with strain work outcomes (i.e., job burnout; Bakker et al., 2005; Lee & Ashforth, 1996; Nahrgang et al., 2011; Sonnentag & Frese, 2013; Thoresen et al., 2003). Additionally, these results align with previous research on the impacts of the COVID-19 pandemic on employees, which have found that employees experienced increases in strain-related outcomes such as stress (American Psychological Association, 2020), work-family conflict (Vaziri et al., 2020), and burnout (Kniffin et al., 2021), and decreases in motivational outcomes such as work engagement (Reinwald et al., 2021).

School Domain. In line with the working domain, working students who appraised the COVID-19 pandemic as more harmful or threatening to their school lives also reported lower thriving at school and higher school burnout, while controlling for neuroticism, age, and gender. These results indicate that the COVID-19 pandemic can be viewed as a hindrance demand in the school domain as well, showing a similar pattern of relationships with thriving and burnout in both the work and school domains. Moreover, these results are consistent with previous research on the impacts of the COVID-19 pandemic on college students, which have found decreases in students' motivation (Usher et al., 2020) and increases in strain-related outcomes such as anxiety, stress, and loneliness (Browning et al., 2021; Higher Education Data Sharing Consortium, 2020; Son et al., 2020).

Results for the Moderating Effects of Embeddedness

Work Domain. Job embeddedness unexpectedly showed a positive moderation effect on the relationship between negative appraisals of COVID-19 at work and thriving at work, such that the relationship between negative appraisals of COVID-19 at work and thriving at work was

negative when job embeddedness was high, but positive when job embeddedness was low (see Figure 5). That is, being embedded in one's job strengthened the negative relationship between negative appraisals of COVID-19 at work and thriving at work. For those who were not as embedded, negative appraisals of COVID-19 at work were actually associated with higher levels of thriving at work. This positive moderation effect is even more surprising given the positive main effect of job embeddedness on thriving at work, consistent with previous literature (Harunavamwe et al., 2020; Ringl, 2013). This finding suggests that job embeddedness may play a more complicated role than expected for employed students' thriving at work during the COVID-19 pandemic. Similar "dark sides" of embeddedness have been reported in previous research. Being embedded in jobs or work environments with negative qualities, such as abusive supervision (Allen et al., 2016), work-family conflict (Peltokorpi, 2020), or incivility (Holm et al., 2019) can put an employee at increased risk for negative outcomes such as emotional exhaustion (Allen et al., 2016; Peltokorpi, 2020), decreased physical health and sleep quality/quantity (Allen et al., 2016; Ng & Feldman, 2014), negative affect (Ng & Feldman, 2014; Peltokorpi, 2020), and decreased turnover intentions in the face of these adverse conditions (Allen et al., 2016; Peltokorpi, 2020; Rubenstein et al., 2020; Treuren, 2019). Thus, during the COVID-19 pandemic work environments may have been more straining than normal, putting embedded employees at increased risk for negative outcomes, such as decreases in thriving at work.

In the current study, there was a negative main effect of job embeddedness on job burnout, but no significant moderation effect of job embeddedness on the relationship between negative appraisals of COVID-19 at work and job burnout. This suggests that being embedded in their job did not make working students more or less susceptible to burnout in the face of

negative appraisals of COVID-19 at work. The main effect results are consistent with previous findings suggesting that job resources have a negative relationship with burnout (e.g., Schaufeli & Bakker, 2004), but the non-significant moderation effect of job embeddedness does not align with previous research using the JD-R framework that suggests that job resources buffer the positive relationship between job demands and strain (Bakker & Demerouti, 2007; Gonzalez-Mulé et al., 2020).

School Domain. Major embeddedness showed a significant positive main effect on thriving at school while controlling for neuroticism, age, and gender. That is, the working students who were more embedded in their major also reported higher thriving at school. This finding aligns with previous literature suggesting that relational resources positively correlate with thriving (Kleine et al., 2019). However, major embeddedness did not show a significant main effect on school burnout, and there were no significant moderation effects of major embeddedness on the relationships between negative appraisals of COVID-19 at school and thriving at school or school burnout. While major embeddedness has not previously been tested as a moderator due to its having been conceptualized only recently (Major et al., 2020; Morganson et al., 2015), it was expected to behave similarly to job embeddedness due to its foundation in the same embeddedness theory (Mitchell et al., 2001). However, the non-significant moderation effects of major embeddedness observed in the current study do not align with previous findings suggesting that job embeddedness moderates the effects of job demands (e.g., Chetty et al., 2016).

Cross-Domain Main Effect Results

Work-to-School. Negative appraisals of COVID-19 at work were negatively related to thriving at school and positively related to school burnout, while controlling for neuroticism, age,

and gender. That is, working students who appraised COVID-19 as more harmful and threatening to their working lives also reported less thriving and more burnout at school. The cross-domain relationship from negative appraisals of COVID-19 at work to school burnout was significantly weaker than the matching domain (i.e., from negative appraisals of COVID-19 at work to job burnout; $Z = 1.82$, $p = .034$), which is consistent with past research (Amstad et al., 2011). However, for thriving, while the standardized coefficient for the matching domain (i.e., from negative appraisals of COVID-19 at work to thriving at work) was higher than the cross-domain coefficient (i.e., from negative appraisals of COVID-19 at work to thriving at school), these coefficients were not significantly different from one another ($Z = -.84$, $p = .201$). The main effect results support previous findings regarding the impacts of demands in the working domain on outcomes in the school domain (Barling et al., 1995; Benner & Curl, 2018; Cinamon, 2016, 2018; da Luz et al., 2012; Markel & Frone, 1998; Soliz & Terry Long, 2016; Steinberg et al., 1981).

School-to-Work. Spillover may also be present in the school-to-work direction given the results of this study. Specifically, negative appraisals of COVID-19 at school were negatively related to thriving at work and positively related to school burnout while controlling for neuroticism, work hours per week, and age. The cross-domain effect of negative appraisals of COVID-19 at school on thriving at work was weaker than the corresponding matching domain effects (i.e., from negative appraisals of COVID-19 at school to thriving at school; $Z = -3.18$, $p < .001$), which is again consistent with past research (Amstad et al., 2011). However, for burnout, the standardized coefficient for the matching domain (i.e., from negative appraisals of COVID-19 at school to school burnout) was higher than that of the cross domain (i.e., from negative

appraisals of COVID-19 at school to job burnout, though these coefficients were not significantly different from one another ($Z = 1.15$, $p = .125$).

The main effect results are consistent with the notion that spillover can occur between the school and work domains of one's life, as predicted by the spillover-crossover model (Bakker & Demerouti, 2012). This finding also addresses the gap in the literature that remained following Calderwood and Gabriel's (2017) nonsignificant results for school-to-work spillover. Similar to the current study, this previous work examined the spillover of school demands onto JD-R-based work outcomes (specifically, work engagement, emotional exhaustion, and job performance) using a sample of similar size and demographic makeup to the sample used in the current study. However, Calderwood and Gabriel's (2017) study examined weekly work hours and various hindrance demands (e.g., role ambiguity) as job demands, and supervisor social support and occupational self-efficacy as job and personal resources, respectively. Additionally, this study did not have sufficient power to rule out Type II error. Therefore, the current study offers support for Calderwood and Gabriel's theory-based hypotheses using different operationalizations of job demands and resources, motivation, and well-being, and with sufficiently powered tests.

THEORETICAL AND RESEARCH IMPLICATIONS

There are several theoretical implications for the current study. This study was the first to examine the effects of the COVID-19 pandemic on working college students' experiences in both their school and work roles. The results revealed that the thriving and well-being of working college students were adversely impacted by the COVID-19 pandemic both at work and school. These findings clarify the role of the pandemic as a hindrance demand, rather than a challenge demand (Cavanaugh et al., 2000), in the lives of working college students, extending previous findings that the pandemic created demands that were excessive and hindering in both the work

(Ipsen et al., 2020) and school (Sahu, 2020) domains. Additionally, these results support the applicability of the transactional theory of stress and coping (Lazarus & Folkman, 1987) to the study of the COVID-19 pandemic, as the perception of the pandemic as threatening or harmful seems to be critical in how the pandemic affects thriving and well-being at work and school.

Furthermore, these adverse effects of the pandemic were observed across domains (i.e., work-to-school and school-to-work), suggesting the possibility of spillover from one domain to another (Bakker & Demerouti, 2012). These findings add support to the spillover-crossover theory (Bakker & Demerouti, 2012) and work-home resource theory (ten Brummelhuis & Bakker, 2012), both suggesting that demands in one domain can impact outcomes in another domain. Additionally, these findings are useful in advancing our understanding of the continued impact of the COVID-19 pandemic on college students' experiences. It is evident that examining the relationships between demands, resources, and outcomes in only the school domain may not reflect the full experience of college students at large and of working college students in particular. The conditions and circumstances of their other domains of life (e.g., work, family, social) should also be considered to capture the full scope of their experiences.

This study also confirmed thriving (Spreitzer et al., 2005) as a viable indicator of motivation within the JD-R framework (Demerouti et al., 2001). In both the school and work domains, thriving showed relationships consistent with the JD-R framework, namely negative relationships with the demand (i.e., negative appraisals of COVID-19 at work and school) and outcome (i.e., job and school burnout) variables, as well as positive relationships with the resource variables (i.e., job and major embeddedness). Positioning thriving within the JD-R model also presents a useful framework for the nomological network of thriving by suggesting potential new correlates of thriving at work (i.e., opportunities for professional development,

team cohesion, and task variety) that have been tested with other motivational constructs using the JD-R framework.

The findings of the current study also add to the discussion of the potential "dark sides" of job embeddedness. In the current study, job embeddedness appeared to make it increasingly difficult for working students to thrive at work if they appraised COVID-19 negatively. While most research on job embeddedness focuses on its positive effects (Lee et al., 2014), more attention has recently been paid to the negative effects of job embeddedness (e.g., Allen et al., 2016; Holm et al., 2019; Peltokorpi, 2020). The findings of the current study show support for these negative effects, suggesting that job embeddedness may promote further positive work outcomes when the environment in positive, but may hinder employees further when the environment is straining. It is possible that this exacerbated demand felt by embedded employees is a result of their connection to others in their organization, and acting as a support for their colleagues. Highly embedded employees are likely experiencing new demands of their own during the pandemic, and due to their close links with those around them, they may feel added strain as they provide support for or adapt to their colleagues' strain.

Additionally, those who were less embedded in their jobs experienced higher levels of thriving at work while appraising the pandemic as a threat or harm. This result may suggest that those working students not heavily embedded in their job may have perceived the COVID-19 pandemic as a challenge stressor, rather than a hindrance stressor (Cavanaugh et al., 2000). Challenge stressors are those that are seen as rewarding to overcome, and have been shown to have a positive relationship with motivation (Crawford et al., 2010). Thus, working students who are not highly embedded in their job, who potentially have fewer resources at stake and less connection to the strain of those around them than those who are highly embedded, may have

perceived the pandemic as a demand that they could overcome and that would be worth overcoming, and thus experienced increased motivation (i.e., thriving) in response to this stressor.

Finally, the adapted scales used in the current study—thriving at school, school burnout, and negative appraisals of COVID-19 at work and school—all performed well psychometrically with the current sample, and thus may be useful and applicable in future research with similar aims.

PRACTICAL IMPLICATIONS

This study also has important practical implications. First, this study's findings echo the insights provided by two decades of research using JD-R theory—motivation can be protected, and strain avoided, by ensuring that resources are protected against events or situations that are perceived as threatening and/or harmful. Thus, during the pandemic, organizational leaders should focus on enhancing resources, such as promoting positive relationships with supervisors and coworkers, providing acceptable working conditions, ensuring job security, and providing developmental opportunities (Fugate et al., 2008). Likewise, school administrators and instructors should also aim to improve students' resources, by offering financial aid and scholarships, providing academic opportunities, ensuring campus safety, and encouraging positive relationships with professors, classmates, and academic advisors.

Second, the implications of the spillover effects found in the current study can also be used by universities and organizations to protect working students during the COVID-19 pandemic. The current study found that excessive demands in one domain can impact the motivation and well-being experienced in another domain. Thus, by providing student workers the support needed to manage excessive demands in their other domains of life, such as by

offering flexible schedules, job crafting or redesign, or more variety in course times and delivery method, universities and organizations can protect working students' motivation and well-being across various domains of their lives.

Finally, this study suggests that extra attention be paid to embedded employees during times of increased demands. Being embedded during straining circumstances may increase the negative effect of demands on one's motivation, and thus employers should aim to build work environments that are flexible and accommodating enough to persevere during excessively straining situations like the COVID-19 pandemic. Additionally, organizations may need to provide embedded employees additional resources during times of high demand, such as additional social support, work or schedule flexibility, or autonomy.

LIMITATIONS AND FUTURE DIRECTIONS

As with all research, this study has limitations. First, this study was cross-sectional in nature, and thus the directionality of the tested effects between variables in the models cannot be ascertained. Future research should expand upon the model by utilizing a longitudinal design to gather more robust and compelling support for the hypothesized relationships by demonstrating increases or decreases in thriving and burnout in response to stressors such as the COVID-19 pandemic.

Second, the current sample showed evidence of range restriction within major embeddedness, potentially skewing the results. First, the sample reported higher major embeddedness than job embeddedness (job embeddedness – Mode = 2.5 (out of 5), SD = 4.95; major embeddedness – Mode = 4.0 (out of 5), SD = .56). Additionally, upon further analysis, 76.4% of the sample considered themselves students who work, rather than workers who attend school. Thus, the current sample was saturated with working students whose student role was

their primary role and who were highly embedded in their major. This reduced variance may have made it difficult to tease out moderating effects of major embeddedness, as well as reduced the generalizability of the results. Thus, a different sample with a wider range of major embeddedness may be needed in future research to examine its moderating effect on school outcomes like thriving and burnout.

Finally, the neuroticism scale showed low internal consistency reliability, possibly due to two of the four questions being negatively worded, which has been found to impact reliability (Krosnick & Presser, 2010; Podsakoff et al., 2003). This low internal consistency may have attenuated the relationships found between neuroticism and the outcomes in the tested models.

There are also many avenues for future research to expand upon these results. First, it may be illuminating to investigate the influence of the perception of primary role when examining the relationships between variables across two or more domains of life. For example, like with the current sample, working students may perceive their working role as secondary to their student role. It is possible that demands and resources, such as the COVID-19 pandemic and job or major embeddedness, may impact one's primary role differently from a secondary role.

Future research could further test thriving as a motivational construct in the JD-R framework by examining its mediating role between job demands and resources and additional work outcomes, such as job performance. Additionally, the current study found a strong positive main effect of job embeddedness on thriving at work (B = .75). Future research should further examine this strong positive relationship between job embeddedness and thriving at work, possibly by looking at specific relationships between subdimensions of each scale. Moreover, additional examination of the positive moderating effect of job embeddedness in the relationship

between job demands and motivational outcomes, as found in the current study, could help tease apart the complex role of job embeddedness in this relationship. Finally, as this is the first study, to my knowledge, that has found support for school-to-work spillover, this relationship between the school and work domains should be tested again, especially using longitudinal data, to provide more robust support.

CONCLUSION

The current study examined the impact of the COVID-19 pandemic on working students' work and school lives. The appraisal of the COVID-19 pandemic as a threat or harm to resources was associated with less thriving and more burnout in both the work and school domains. Additionally, negative appraisals of COVID-19 in one domain were related to outcomes in the other domain and being embedded in one's job could make it even more difficult to thrive at work in the face of negative appraisals of COVID-19. This study extends research in support of the job demands-resources, spillover-crossover, and embeddedness theories, as well as presents practical insights for employers and university faculty and administrators who care to improve the motivation and well-being of working college students as they continue to navigate their dual roles during the pandemic.

REFERENCES

Abid, G., Ahmed, S., Fiaz Qazi, T., & Sarwar, K. (2020). How managerial coaching enables thriving at work. A sequential mediation. *Journal of Entrepreneurship, Management and Innovation*, *16*(2), 132–160. https://doi.org/10.7341/20201625

Abid, G., Sajjad, I., Elahi, N. S., Farooqi, S., & Nisar, A. (2018). The influence of prosocial motivation and civility on work engagement:The mediating role of thriving at work. *Cogent Business & Management*, *5*(1), 1493712. https://doi.org/10.1080/23311975.2018.1493712

Abid, G., Zahra, I., & Ahmed, A. (2015). Mediated mechanism of thriving at work between perceived organization support, innovative work behavior and turnover intention. *Pakistan Journal of Commerce and Social Sciences*, *9*(3), 982–998.

Adisa, T. A., Ogbonnaya, C., & Adekoya, O. D. (2021). Remote working and employee engagement: A qualitative study of British workers during the pandemic. *Information Technology & People*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/ITP-12-2020-0850

Alarcon, G., Eschleman, K. J., & Bowling, N. A. (2009). Relationships between personality variables and burnout: A meta-analysis. *Work & Stress*, *23*(3), 244–263. https://doi.org/10.1080/02678370903282600

Allen, D. G., Peltokorpi, V., & Rubenstein, A. L. (2016). When “embedded” means “stuck”: Moderating effects of job embeddedness in adverse work environments. *Journal of Applied Psychology*, *101*(12), 1670–1686. https://doi.org/10.1037/apl0000134

American Psychological Association. (2020). *Stress in the Time of COVID-19: Volume One*. 3.

Amstad, F. T., Meier, L. L., Fasel, U., Elfering, A., & Semmer, N. K. (2011). A meta-analysis of work–family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology*, *16*(2), 151–169. https://doi.org/10.1037/a0022170

Aristovnik, A., Keržič, D., Ravšelj, D., Tomaževič, N., & Umek, L. (2020). Impacts of the COVID-19 Pandemic on Life of Higher Education Students: A Global Perspective. *Sustainability*, *12*(20), 8438. https://doi.org/10.3390/su12208438

Aucejo, E., M., French, J., Araya, M. P. U., & Zafar, B. (2020). The impact of COVID-19 on student experiences and expectations: Evidence from a survey | Elsevier Enhanced Reader. *NBER Working Paper*, *No. 27392*. https://doi.org/10.1016/j.jpubeco.2020.104271

Avey, J. B., Wu, K., & Holley, E. (2015). The influence of abusive supervision and job embeddedness on citizenship and deviance. *Journal of Business Ethics*, *129*(3), 721–731. https://doi.org/10.1007/s10551-014-2192-x

Baker, M. (2020, April). *Gartner HR Survey Reveals 41% of Employees Likely to Work Remotely at Least Some of the Time Post Coronavirus Pandemic*. Gartner. https://www.gartner.com/en/newsroom/press-releases/2020-04-14-gartner-hr-survey-reveals-41--of-employees-likely-to-

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, *22*(3), 309–328. https://doi.org/10.1108/02683940710733115

Bakker, A. B., & Demerouti, E. (2012). The Spillover–Crossover model. In C. Cooper (Ed.), *Current Issues in Work and Organizational Psychology* (1st ed., pp. 140–152). Routledge. https://doi.org/10.4324/9780429468339-8

Bakker, A. B., & Demerouti, E. (2017). Job demands–resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, *22*(3), 273–285. https://doi.org/10.1037/ocp0000056

Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology*, *10*(2), 170–180. https://doi.org/10.1037/1076-8998.10.2.170

Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: The JD–R approach. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*(1), 389–411.

Bakker, A. B., & van Wingerden, J. (2021). Rumination about COVID-19 and employee well-being: The role of playful work design. *Canadian Psychology/Psychologie Canadienne*.

Bakker, A., Demerouti, E., & Schaufeli, W. (2003). Dual processes at work in a call centre: An application of the job demands – resources model. *European Journal of Work and Organizational Psychology*, *12*(4), 393–417. https://doi.org/10.1080/13594320344000165

Barling, J., Rogers, K.-A., & Kelloway, E. K. (1995). Some effects of teenagers' part-time employment: The quantity and quality of work make the difference. *Journal of Organizational Behavior*, *16*(2), 143–154. https://doi.org/10.1002/job.4030160205

Becker, T. E. (2005). Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations. *Organizational Research Methods*, *8*(3), 274–289. https://doi.org/10.1177/1094428105278021

Benner, K., & Curl, A. L. (2018). Exhausted, stressed, and disengaged: Does employment create burnout for social work students? *Journal of Social Work Education*, *54*(2), 300–309. https://doi.org/10.1080/10437797.2017.1341858

Bergeron, D. M., Schroeder, T. D., & Martinez, H. A. (2014). Proactive personality at work: Seeing more to do and doing more? *Journal of Business and Psychology*, *29*(1), 71–86. https://doi.org/10.1007/s10869-013-9298-5

Beschoner, P., von Wietersheim, J., Jarczok, M. N., Braun, M., Schönfeldt-Lecuona, C., Jerg-Bretzke, L., & Steiner, L. (2020). Changes in working conditions and mental health among intensive care physicians across a decade. *Frontiers in Psychiatry*, *11*, 145. https://doi.org/10.3389/fpsyt.2020.00145

Biggane, J. E., Allen, D. G., Amis, J., Fugate, M., & Steinbauer, R. (2017). Cognitive Appraisal as a mechanism linking negative organizational shocks and intentions to leave. *Journal of Change Management*, *17*(3), 203–227. https://doi.org/10.1080/14697017.2016.1219379

Brewer, E. W., & Shapard, L. (2004). Employee burnout: A meta-analysis of the relationship between age or years of experience. *Human Resource Development Review*, *3*(2), 102–123. https://doi.org/10.1177/1534484304263335

Browning, M. H. E. M., Larson, L. R., Sharaievska, I., Rigolon, A., McAnirlin, O., Mullenbach, L., Cloutier, S., Vu, T. M., Thomsen, J., Reigner, N., Metcalf, E. C., D'Antonio, A., Helbich, M., Bratman, G. N., & Alvarez, H. O. (2021). Psychological impacts from

COVID-19 among university students: Risk factors across seven states in the United States. *PLOS ONE*, *16*(1), e0245327. https://doi.org/10.1371/journal.pone.0245327

Buckner, J. D., Lewis, E. M., Abarno, C. N., Morris, P. E., Glover, N. I., & Zvolensky, M. J. (2021). Difficulties with emotion regulation and drinking during the COVID-19 pandemic among undergraduates: The serial mediation of COVID-related distress and drinking to cope with the pandemic. *Cognitive Behaviour Therapy*, *50*(4), 261–275. https://doi.org/10.1080/16506073.2020.1861084

Burke, R. J., & Greenglass, E. R. (2001). Hospital restructuring, work-family conflict and psychological burnout among nursing staff. *Psychology & Health*, *16*(5), 583–594. https://doi.org/10.1080/08870440108405528

Calderwood, C., & Gabriel, A. S. (2017). Thriving at school and succeeding at work? A demands-resources view of spillover processes in working students. *Journal of Vocational Behavior*, *103*, 1–13. https://doi.org/10.1016/j.jvb.2017.07.010

Capri, B., Ozkendir, O. M., Ozkurt, B., & Karakus, F. (2012). General Self-efficacy beliefs, life satisfaction and burnout of university students. *Procedia - Social and Behavioral Sciences*, *47*, 968–973. https://doi.org/10.1016/j.sbspro.2012.06.765

Carnevale, A. P., & Smith, N. (2018). Balancing work and learning: Implications for low-income students. *Georgetown University Center on Education and the Workforce*, 40.

Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., & Boudreau, J. W. (2000). An empirical examination of self-reported work stress among U.S. managers. *Journal of Applied Psychology*, *85*(1), 65–74. https://doi.org/10.1037/0021-9010.85.1.65

Chaplin, W. F., John, O. P., & Goldberg, L. R. (1988). Conceptions of states and traits: Dimensional attributes with ideals as prototypes. *Journal of Personality and Social Psychology*, *54*(4), 541–557. https://doi.org/10.1037/0022-3514.54.4.541

Chen, J., & Hossler, D. (2017). The effects of financial aid on college success of two-year beginning nontraditional students. *Research in Higher Education*, *58*(1), 40–76. https://doi.org/10.1007/s11162-016-9416-0

Chetty, P. J., Coetzee, M., & Ferreira, N. (2016). Sources of job stress and cognitive receptivity to change: The moderating role of job embeddedness. *South African Journal of Psychology*, *46*(1), 101–113. https://doi.org/10.1177/0081246315591308

Cinamon, R. G. (2016). Integrating work and study among young adults: Testing an empirical model. *Journal of Career Assessment*, *24*(3), 527–542. https://doi.org/10.1177/1069072715599404

Cinamon, R. G. (2018). Navigating work and study: Antecedents and outcomes of conflict and facilitation aspects of the work-school interface. *Journal of Vocational Behavior*, *104*, 31–43. https://doi.org/10.1016/j.jvb.2017.09.009

Clavel, F. (2014, May 3). Disentangling degrees of freedom for SEM. *Fred Clavel, Ph.D.* https://fredclavel.org/2014/05/03/disentangling-degrees-of-freedom-for-sem/

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed). L. Erlbaum Associates.

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

COVID-19 Data Dashboard. (n.d.). Retrieved September 22, 2021, from https://collegecrisis.org/covid-19-data-dashboard/

COVID-19: Higher Education Resource Center – Entangled Solutions. (2020). https://www.entangled.solutions/coronavirus-he/

Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology*, *95*(5), 834–848. https://doi.org/10.1037/a0019364

Cullen, K. L., Gerbasi, A., & Chrobot-Mason, D. (2018). Thriving in central network positions: the role of political skill. *Journal of Management*, *44*(2), 682–706. https://doi.org/10.1177/0149206315571154

Cushman, S., & West, R. (2006). Precursors to college student burnout: developing a typology of understanding. *Qualitative Research Reports in Communication*, *7*(1), 23–31. https://doi.org/10.1080/17459430600964638

da Luz, A. A., Vergueiro da Silva, M. C. M., Turte, S. L., Lopes, M. de O., & Fischer, F. M. (2012). Effects of working full-time and studying in the evening hours among young apprentices and trainees. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, *54*(6), 952–963. https://doi.org/10.1177/0018720812463146

Dall'Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: A theoretical review. *Human Resources for Health*, *18*(1), 41. https://doi.org/10.1186/s12960-020-00469-9

Darlington, R. B., & Hayes, A. F. (2017). *Regression analysis and linear models: Concepts, applications, and implementation*. Guilford Press.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499–512. https://doi.org/10.1037//0021-9010.86.3.499

Demerouti, E., Veldhuis, W., Coombes, C., & Hunter, R. (2019). Burnout among pilots: Psychosocial factors related to happiness and performance at simulator training. *Ergonomics*, *62*(2), 233–245. https://doi.org/10.1080/00140139.2018.1464667

Deng, Y., Liu, J., Zhang, J., Huang, B., Yi, T., Wang, Y., Zheng, B., Luo, D., Du, P., & Jiang, Y. (2017). A multicenter study on the validation of the Burnout Battery: A new visual analog scale to screen job burnout in oncology professionals: Validation of the Burnout Battery in oncology. *Psycho-Oncology*, *26*(8), 1120–1125. https://doi.org/10.1002/pon.4291

Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). *The Mini-IPIP Scales: Tiny-Yet-Effective Measures of the Big Five Factors of Personality*. 13.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, *41*(10), 1040.

Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. (2005). Work and family research in IO/OB: Content analysis and review of the literature (1980–2002). *Journal of Vocational Behavior*, *66*(1), 124–197. https://doi.org/10.1016/j.jvb.2003.11.003

Eby, L. T. de T., Allen, T. D., Hoffman, B. J., Baranik, L. E., Sauer, J. B., Baldwin, S., Morrison, M. A., Kinkade, K. M., Maher, C. P., Curtis, S., & Evans, S. C. (2013). An interdisciplinary meta-analysis of the potential antecedents, correlates, and consequences of protégé perceptions of mentoring. *Psychological Bulletin*, *139*(2), 441–476. https://doi.org/10.1037/a0029279

Flinchbaugh, C., Luth, M. T., & Li, P. (2015). A challenge or a hindrance? Understanding the effects of stressors and thriving on life satisfaction. *International Journal of Stress Management*, *22*(4), 323–345. https://doi.org/10.1037/a0039136

Flynn, D. M., & MacLeod, S. (2015). Determinants of happiness in undergraduate university students. *College Student Journal*, *49*(3), 452–460.

Freudenberger, H. J. (1975). The staff burn-out syndrome in alternative institutions. *Psychotherapy: Theory, Research & Practice*, *12*(1), 73–82. https://doi.org/10.1037/h0086411

Fugate, M., Kinicki, A. J., & Prussia, G. E. (2008). Employee coping with organizational change: an examination of alternative theoretical perspectives and models. *Personnel Psychology*, *61*(1), 1–36. https://doi.org/10.1111/j.1744-6570.2008.00104.x

Fugate, M., Prussia, G. E., & Kinicki, A. J. (2012). Managing employee withdrawal during organizational change: The role of threat appraisal. *Journal of Management*, *38*(3), 890–914. https://doi.org/10.1177/0149206309352881

Gabbe, S. G., Webb, L. E., Moore, D. E., Harrell, F. E., Spickard, W. A., & Powell, R. (2008). Burnout in medical school deans: An uncommon problem. *Academic Medicine*, *83*(5), 476–482. https://doi.org/10.1097/ACM.0b013e31816bdb96

Gan, Y., Shang, J., & Zhang, Y. (2007). Coping flexibility and locus of control as predictors of burnout among Chinese college students. *Social Behavior and Personality: An International Journal*, *35*(8), 1087–1098.

Gerbasi, A., Porath, C. L., Parker, A., Spreitzer, G., & Cross, R. (2015). Destructive de-energizing relationships: How thriving buffers their effect on performance. *Journal of Applied Psychology*, *100*(5), 1423–1433. https://doi.org/10.1037/apl0000015

Ghanizadeh, A., & Jahedizadeh, S. (2015). Teacher Burnout: A review of sources and ramifications. *British Journal of Education, Society & Behavioural Science*, *6*(1), 24–39. https://doi.org/10.9734/BJESBS/2015/15162

Gingras, J., De Jonge, L.-A., & Purdy, N. (2010). Prevalence of dietitian burnout. *Journal of Human Nutrition and Dietetics*, *23*(3), 238–243. https://doi.org/10.1111/j.1365-277X.2010.01062.x

Goddard, R., Patton, W., & Creed, P. (2004). The importance and place of neuroticism in predicting burnout in employment service case managers. *Journal of Applied Social Psychology*, *34*(2), 282–296. https://doi.org/10.1111/j.1559-1816.2004.tb02548.x

Gonzalez-Mulé, E., Kim, M. (Mia), & Ryu, J. W. (2020). A meta-analytic test of multiplicative and additive models of job demands, resources, and stress. *Journal of Applied Psychology*. https://doi.org/10.1037/apl0000840

Goodger, K., Gorely, T., Lavallee, D., & Harwood, C. (2007). Burnout in sport: A systematic review. *The Sport Psychologist*, *21*(2), 127–151. https://doi.org/10.1123/tsp.21.2.127

Guthier, C., Dormann, C., & Voelkle, M. C. (2020). Reciprocal effects between job stressors and burnout: A continuous time meta-analysis of longitudinal studies. *Psychological Bulletin*, *146*(12), 1146–1173. https://doi.org/10.1037/bul0000304

Halbesleben, J. R. B. (2006). Sources of social support and burnout: A meta-analytic test of the conservation of resources model. *Journal of Applied Psychology*, *91*(5), 1134–1145. https://doi.org/10.1037/0021-9010.91.5.1134

Harunavamwe, M., Nel, P., & Van Zyl, E. (2020). The influence of self-leadership strategies, psychological resources, and job embeddedness on work engagement in the banking industry. *South African Journal of Psychology*, *50*(4), 507–519. https://doi.org/10.1177/0081246320922465

Hentrich, S., Zimber, A., Sosnowsky-Waschek, N., Gregersen, S., & Petermann, F. (2017). The role of core self-evaluations in explaining depression and work engagement among

managers. *Current Psychology*, *36*(3), 516–529. https://doi.org/10.1007/s12144-016-9439-x

Higher Education Data Sharing Consortium. (2020). *HEDS COVID-19 Institutional Response Student Survey*.

Hitka, M., Štarchoň, P., Caha, Z., Lorincová, S., & Sedliačiková, M. (2021). The global health pandemic and its impact on the motivation of employees in micro and small enterprises: A case study in the Slovak Republic. *Economic Research-Ekonomska Istraživanja*, 1–21. https://doi.org/10.1080/1331677X.2021.1902365

Hobfoll, S. (2014). Resource caravans and resource caravan passageways: A new paradigm for trauma responding. *Intervention*, *12*(1), 21–32.

Hobfoll, S. E. (1989). Conservation of Resources. *American Psychologist*, 12.

Hobfoll, S. E., Halbesleben, J., Neveu, J.-P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, *5*(1), 103–128. https://doi.org/10.1146/annurev-orgpsych-032117-104640

Holm, K., Torkelson, E., & Bäckström, M. (2019). Exploring links between witnessed and instigated workplace incivility. *International Journal of Workplace Health Management*, *12*(3), 160–175. https://doi.org/10.1108/IJWHM-04-2018-0044

Ipsen, C., Kirchner, K., & Hansen, J. P. (2020). Experiences of working from home in the times of COVID-19: International survey conducted the first months of the national lockdowns March-May, 2020. *DTU, Department of Management*. https://doi.org/10.11581/dtu:00000085

IsHak, W., Nikravesh, R., Lederer, S., Perry, R., Ogunyemi, D., & Bernstein, C. (2013). Burnout in medical students: A systematic review. *The Clinical Teacher*, *10*(4), 242–245. https://doi.org/10.1111/tct.12014

Jacobs, P., & Ohinmaa, A. P. (2020). What industries received COVID-19 closure orders? A cross-state comparison in the US. *F1000Research*, *9*, 772. https://doi.org/10.12688/f1000research.25199.1

Jacobs, S. R., & Dodd, D. (2003). Student burnout as a function of personality, social support, and workload. *Journal of College Student Development*, *44*(3), 291–303. https://doi.org/10.1353/csd.2003.0028

Jiang, Z. (2017). Proactive personality and career adaptability: The role of thriving at work. *Journal of Vocational Behavior*, *98*, 85–97. https://doi.org/10.1016/j.jvb.2016.10.003

Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, *83*(1), 17–34. https://doi.org/10.1037/0021-9010.83.1.17

Kanfer, R., & Ackerman, P. L. (2004). Aging, adult development, and work motivation. *Academy of Management Review*, *29*(3), 440–458. https://doi.org/10.5465/amr.2004.13670969

Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, *24*(2), 285. https://doi.org/10.2307/2392498

Kiazad, K., Holtom, B. C., Hom, P. W., & Newman, A. (2015). Job embeddedness: A multifoci theoretical extension. *Journal of Applied Psychology*, *100*(3), 641–659. https://doi.org/10.1037/a0038919

Kim, B., Jee, S., Lee, J., An, S., & Lee, S. M. (2018). Relationships between social support and student burnout: A meta-analytic approach. *Stress and Health*, *34*(1), 127–134. https://doi.org/10.1002/smi.2771

Kim, J., Lee, S., & Byun, G. (2020). Building a thriving organization: The antecedents of job engagement and their impact on voice behavior. *Sustainability*, *12*(18), 7536. https://doi.org/10.3390/su12187536

Klein, E. (2020, March 12). *Coronavirus will also cause a loneliness epidemic*. Vox. https://www.vox.com/2020/3/12/21173938/coronavirus-covid-19-social-distancing-elderly-epidemic-isolation-quarantine

Kleine, A., Rudolph, C. W., & Zacher, H. (2019). Thriving at work: A meta-analysis. *Journal of Organizational Behavior*, *40*(9–10), 973–999. https://doi.org/10.1002/job.2375

Klem, L. (1995). Path analysis. In L. G. Grimm & P. R. Yarnold (Eds.), *Reading and understanding multivariate statistics* (1st ed). American Psychological Association.

Kniffin, K. M., Narayanan, J., Anseel, F., Antonakis, J., Ashford, S. P., Bakker, A. B., Bamberger, P., Bapuji, H., Bhave, D. P., Choi, V. K., Creary, S. J., Demerouti, E., Flynn, F. J., Gelfand, M. J., Greer, L. L., Johns, G., Kesebir, S., Klein, P. G., Lee, S. Y., … Vugt, M. van. (2021). COVID-19 and the workplace: Implications, issues, and insights for future research and action. *American Psychologist*, *76*(1), 63–77. https://doi.org/10.1037/amp0000716

Krosnick, J. A., & Presser, S. (2010). Question and questionnaire design. In P. V. Marsden & J. D. Wright (Eds.), *Handbook of survey research* (Second edition). Emerald.

Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality*, *1*(3), 141–169. https://doi.org/10.1002/per.2410010304

Lederman, D. (2021). *New data offer sense of how COVID expanded online learning*. Inside Higher Ed. https://www.insidehighered.com/news/2021/09/16/new-data-offer-sense-how-covid-expanded-online-learning

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology*, *81*(2), 123–133.

Lee, T., Burch, T. C., & Mitchell, T. R. (2014). The story of why we stay: A review of job embeddedness. *Annual Review of Organizational Psychology and Organizational Behavior*, *1*(1), 199–216. https://doi.org/10.1146/annurev-orgpsych-031413-091244

Lee, T. W., Mitchell, T. R., Sablynski, C. J., Burton, J. P., & Holtom, B. C. (2004). The effects of job embeddedness on organizational citizenship, job performance, volitional absences, and voluntary turnover. *Academy of Management Journal*, 13.

Leiter, M. P., & Maslach, C. (2018). Interventions to prevent and alleviate burnout. In *Current issues in work and organizational psychology* (1st edition, p. 19). Routledge.

Lepine, J. A., Podsakoff, N. P., & Lepine, M. A. (2005). A meta-analytic test of the challenge stressor-hindrance stressor framework: An explanation for inconsistent relationships among stressors and performance. *The Academy of Management Journal*, *48*(5), 764–775. https://doi.org/10.2307/20159696

Lesener, T., Gusy, B., & Wolter, C. (2019). The job demands-resources model: A meta-analytic review of longitudinal studies. *Work & Stress*, *33*(1), 76–103. https://doi.org/10.1080/02678373.2018.1529065

Lim, N., Kim, E. K., Kim, H., Yang, E., & Lee, S. Ivi. (2010). Individual and work-related factors influencing burnout of mental health professionals: A meta-analysis. *Journal of Employment Counseling*, *47*, 12.

Lin, C. pei, Xian, J., Li, B., & Huang, H. (2020). Transformational leadership and employees' thriving at work: The mediating roles of challenge-hindrance stressors. *Frontiers in Psychology*, *11*, 1400. https://doi.org/10.3389/fpsyg.2020.01400

Ljubin-Golub, T., Rijavec, M., & Olčar, D. (2020). Student flow and burnout: The role of teacher autonomy support and student autonomous motivation. *Psychological Studies*, *65*(2), 145–156. https://doi.org/10.1007/s12646-019-00539-6

MacCallum, R. C., & Austin, J. T. (2000). Applications of structural equation modeling in psychological research. *Annual Review of Psychology*, *51*(1), 201–226. https://doi.org/10.1146/annurev.psych.51.1.201

Maier, S. L., & DePrince, B. T. (2020). College students' fear of crime and perception of safety: The influence of personal and university prevention measures. *Journal of Criminal Justice Education*, *31*(1), 63–81. https://doi.org/10.1080/10511253.2019.1656757

Major, D. A., Cigularov, K. P., Litano, M. L., Streets, V. N., Henson, J. M., & Reynoldson, K. R. (2020a). The development and validation of STEM major embeddedness and university embeddedness scales. *Human Performance*, *33*(5), 378–405. https://doi.org/10.1080/08959285.2020.1802727

Mansour, S., & Tremblay, D.-G. (2020). How can organizations foster job crafting behaviors and thriving at work? *Journal of Management & Organization*, 1–18. https://doi.org/10.1017/jmo.2020.31

Markel, K. S., & Frone, M. R. (1998). Job characteristics, work-school conflict, and school outcomes among adolescents: Testing a structural model. *Journal of Applied Psychology*, *83*(2), 277.

Maslach, C. (1976). Burned-out. *Human Behavior*, *5*, 16–22.

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Organizational Behavior*, *2*(2), 99–113. https://doi.org/10.1002/job.4030020205

Maslach, C., Jackson, S. E., Leiter, M. P., Schaufeli, W. B., & Schwab, R. L. (1996). *Maslach Burnout Inventory 3rd edition manual*. Mountain View, CA: CPP Inc.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, *52*, 397–422.

Masten, A. S., & Reed, M.-G. J. (2002). Resilience in development. In C. R. Snyder & S. J. Lopez (Eds.), *Oxford Handbook of Positive Psychology* (pp. 74–88). Oxford University Press.

McCoy, S., & Smyth, E. (2007). So much to do, so little time: Part-time employment among secondary students in Ireland. *Work, Employment and Society*, *21*(2), 227–246. https://doi.org/10.1177/0950017007076630

Mervosh, S., & Swales, V. (2020, March 10). Colleges and universities cancel classes and move online amid coronavirus fears. *The New York Times*. https://www.nytimes.com/2020/03/10/us/coronavirus-closings.html

Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablynski, C. J., & Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal*, *44*(6), 1102–1121.

Mitchell, T. R., & Lee, T. W. (2001). 5. The unfolding model of voluntary turnover and job embeddedness: Foundations for a comprehensive theory of attachment. *Research in Organizational Behavior*, *23*, 189–246. https://doi.org/10.1016/S0191-3085(01)23006-8

Moneta, G. B. (2011). Need for achievement, burnout, and intention to leave: Testing an occupational model in educational settings. *Personality and Individual Differences*, *50*(2), 274–278. https://doi.org/10.1016/j.paid.2010.10.002

Morganson, V. J., Major, D. A., Streets, V. N., Litano, M. L., & Myers, D. P. (2015). Using embeddedness theory to understand and promote persistence in STEM majors. *The Career Development Quarterly*, *63*(4), 348–362. https://doi.org/10.1002/cdq.12033

Muthen, L. K., & Muthen, B. O. (1998). *Mplus User Guide, Eighth Edition*. Muthen & Muthen.

Nahrgang, J. D., Morgeson, F. P., & Hofmann, D. A. (2011). Safety at work: A meta-analytic investigation of the link between job demands, job resources, burnout, engagement, and safety outcomes. *Journal of Applied Psychology*, *96*(1), 71–94. https://doi.org/10.1037/a0021484

Nakamura, J., & Csikszentmihalyi, M. (2014). The concept of flow. In M. Csikszentmihalyi, *Flow and the Foundations of Positive Psychology* (pp. 239–263). Springer Netherlands. https://doi.org/10.1007/978-94-017-9088-8_16

Ng, T. W. H., & Feldman, D. C. (2014). Embeddedness and well-being in the United States and Singapore: The mediating effects of work-to-family and family-to-work conflict. *Journal of Occupational Health Psychology*, *19*(3), 360–375. https://doi.org/10.1037/a0036922

Nguyen, N., & Borteyrou, X. (2016). Core self-evaluations as a mediator of the relationship between person–environment fit and job satisfaction among laboratory technicians.

Personality and Individual Differences, *99*, 89–93. https://doi.org/10.1016/j.paid.2016.04.079

Niessen, C., Sonnentag, S., & Sach, F. (2012). Thriving at work-A diary study: THRIVING AT WORK-A DIARY STUDY. *Journal of Organizational Behavior*, *33*(4), 468–487. https://doi.org/10.1002/job.763

Ost, B., Pan, W., & Webber, D. (2018). The returns to college persistence for marginal students: Regression discontinuity evidence from university dismissal policies. *Journal of Labor Economics*, *36*(3), 779–805. https://doi.org/10.1086/696204

Parker, K., Horowitz, J. M., & Brown, A. (2020, April 21). About half of lower-income americans report household job or wage loss due to COVID-19. *Pew Research Center's Social & Demographic Trends Project*. https://www.pewresearch.org/social-trends/2020/04/21/about-half-of-lower-income-americans-report-household-job-or-wage-loss-due-to-covid-19/

Paterson, T. A., Luthans, F., & Jeung, W. (2014). Thriving at work: Impact of psychological capital and supervisor support. *Journal of Organizational Behavior*, *35*(3), 434–446. https://doi.org/10.1002/job.1907

Paychex. (2020). *Employee Manager Relationships Amid COVID-19*. https://www.paychex.com/articles/human-resources/employee-manager-relationships-during-covid-19

Peltokorpi, V. (2020). When embeddedness hurts: The moderating effects of job embeddedness on the relationships between work-to-family conflict and voluntary turnover, emotional exhaustion, guilt, and hostility. *The International Journal of Human Resource Management*, 1–33. https://doi.org/10.1080/09585192.2020.1803948

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *88*(5), 879–903. https://doi.org/10.1037/0021-9010.88.5.879

Porath, C., Spreitzer, G., Gibson, C., & Garnett, F. G. (2012). Thriving at work: Toward its measurement, construct validation, and theoretical refinement. *Journal of Organizational Behavior*, *33*(2), 250–275. https://doi.org/10.1002/job.756

Prem, R., Ohly, S., Kubicek, B., & Korunka, C. (2017). Thriving on challenge stressors? Exploring time pressure and learning demands as antecedents of thriving at work: Thriving on Challenge Stressors. *Journal of Organizational Behavior*, *38*(1), 108–123. https://doi.org/10.1002/job.2115

Prieto, L. L., Soria, M. S., Martínez, I. M., & Schaufeli, W. (2008). Extension of the Job Demands-Resources model in the prediction of burnout and engagement among teachers over time. *Psicothema*, *20*(3), 354–360.

Purvanova, R. K., & Muros, J. P. (2010). Gender differences in burnout: A meta-analysis. *Journal of Vocational Behavior*, *77*(2), 168–185. https://doi.org/10.1016/j.jvb.2010.04.006

Reichl, C., Leiter, M. P., & Spinath, F. M. (2014). Work–nonwork conflict and burnout: A meta-analysis. *Human Relations*, *67*(8), 979–1005. https://doi.org/10.1177/0018726713509857

Reinwald, M., Zimmermann, S., & Kunze, F. (2021). Working in the eye of the pandemic: Local COVID-19 infections and daily employee engagement. *Frontiers in Psychology*, *12*, 654126. https://doi.org/10.3389/fpsyg.2021.654126

Reitz, O. Ed., & Smith, E. V. (2019). Psychometric assessment of the job embeddedness instrument: A Rasch perspective. *Western Journal of Nursing Research*, *41*(2), 258–278. https://doi.org/10.1177/0193945918778593

Ren, H., Yunlu, D. G., Shaffer, M., & Fodchuk, K. M. (2015). Expatriate success and thriving: The influence of job deprivation and emotional stability. *Journal of World Business*, *50*(1), 69–78. https://doi.org/10.1016/j.jwb.2014.01.007

Richards, E. W. (1984). Undergraduate preparation and early career outcomes: A study of recent college graduates. *Journal of Vocational Behavior*, *24*(3), 279–304. https://doi.org/10.1016/0001-8791(84)90013-7

Ringl, R. W. (2013). The relationship between job embeddedness and work engagement [Master of Science, San Jose State University]. https://doi.org/10.31979/etd.bqe4-2gdb

Rotenstein, L. S., Torre, M., Ramos, M. A., Rosales, R. C., Guille, C., Sen, S., & Mata, D. A. (2018). Prevalence of burnout among physicians: A systematic review. *JAMA*, *320*(11), 1131. https://doi.org/10.1001/jama.2018.12777

Rubenstein, A. L., Peltokorpi, V., & Allen, D. G. (2020). Work-home and home-work conflict and voluntary turnover: A conservation of resources explanation for contrasting moderation effects of on- and off-the-job embeddedness. *Journal of Vocational Behavior*, *119*, 103413. https://doi.org/10.1016/j.jvb.2020.103413

Rudolph, C. W., Allan, B., Clark, M., Hertel, G., Hirschi, A., Kunze, F., Shockley, K., Shoss, M., Sonnentag, S., & Zacher, H. (2020). Pandemics: Implications for research and practice in industrial and organizational psychology. *Industrial and Organizational Psychology*, *14*(1–2), 1–35.

Sahu, P. (2020). Closure of universities due to Coronavirus Disease 2019 (COVID-19): Impact on education and mental health of students and academic staff. *Cureus*. https://doi.org/10.7759/cureus.7541

Salamonson, Y., & Andrew, S. (2006). Academic performance in nursing students: Influence of part-time employment, age and ethnicity. *Journal of Advanced Nursing*, *55*(3), 342–349. https://doi.org/10.1111/j.1365-2648.2006.03863_1.x

Schaufeli, W. B. (2017). Applying the job demands-resources model. *Organizational Dynamics*, *46*(2), 120–132. https://doi.org/10.1016/j.orgdyn.2017.04.008

Schaufeli, W. B., & Bakker, A. B. (2003). Utrecht work engagement scale: Preliminary manual. *Occupational Health Psychology Unit, Utrecht University, Utrecht*, *26*(1), 64–100.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, *25*(3), 293–315. https://doi.org/10.1002/job.248

Schaufeli, W. B., Bakker, A. B., van der Heijden, F. M. M. A., & Prins, J. T. (2009). Workaholism, burnout and well-being among junior doctors: The mediating role of role conflict. *Work & Stress*, *23*(2), 155–172. https://doi.org/10.1080/02678370902834021

Schaufeli, W. B., Martínez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology*, *33*(5), 464–481. https://doi.org/10.1177/0022022102033005003

Schaufeli, W. B., Salanova, M., Lez-Roma, V. G., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, *3*(1), 71–92.

Schaufeli, W. B., & Taris, T. W. (2005). The conceptualization and measurement of burnout: Common ground and worlds apart The views expressed in *Work & Stress* Commentaries are those of the author(s), and do not necessarily represent those of any other person or organization, or of the journal. *Work & Stress*, *19*(3), 256–262. https://doi.org/10.1080/02678370500385913

Schaufeli, W. B., & Taris, T. W. (2014). A critical review of the job demands-resources model: Implications for improving work and health. In G. F. Bauer & O. Hämmig, *Bridging Occupational, Organizational and Public Health* (pp. 43–68). Springer Netherlands. https://doi.org/10.1007/978-94-007-5640-3_4

Schramer, K. M., Rauti, C. M., Kartolo, A. B., & Kwantes, C. T. (2020). Examining burnout in employed university students. *Journal of Public Mental Health*, *19*(1), 17–25. https://doi.org/10.1108/JPMH-05-2019-0058

Schutte, N., Toppinen, S., Kalimo, R., & Schaufeli, W. (2000). The factorial validity of the Maslach Burnout Inventory-General Survey (MBI-GS) across occupational groups and nations. *Journal of Occupational and Organizational Psychology*, *73*(1), 53–66. https://doi.org/10.1348/096317900166877

Shankland, R., Kotsou, I., Vallet, F., Bouteyre, E., Dantzer, C., & Leys, C. (2019). Burnout in university students: The mediating role of sense of coherence on the relationship between daily hassles and burnout. *Higher Education*, *78*(1), 91–113. https://doi.org/10.1007/s10734-018-0332-4

Shirom, A. (2003). Job-related burnout: A review. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of Occupational Health Psychology* (pp. 245–264). American Psychological Association. https://doi.org/10.1037/10474-012

Shoji, K., Cieslak, R., Smoktunowicz, E., Rogala, A., Benight, C. C., & Luszczynska, A. (2016). Associations between job burnout and self-efficacy: A meta-analysis. *Anxiety, Stress, & Coping*, *29*(4), 367–386. https://doi.org/10.1080/10615806.2015.1058369

Singh, B., Shaffer, M., & Selvarajan, T. T. R. (2020). Outcomes of organizational and community embeddedness: A conservation of resources perspective. *Group & Organization Management*, 105960112096356. https://doi.org/10.1177/1059601120963560

Smalley, A. (2021, March 22). *Higher Education Responses to Coronavirus (COVID-19)*. https://www.ncsl.org/research/education/higher-education-responses-to-coronavirus-covid-19.aspx

Soliz, A., & Terry Long, B. (2016). Does working help or hurt college students? The effects of federal work-study participation on student outcomes. A CAPSEE working paper. *Center for Analysis of Postsecondary Education and Employment*.

Sommer, R. (1973). The burnt-out chairman. *American Psychologist*, 536–537.

Son, C., Hegde, S., Smith, A., Wang, X., & Sasangohar, F. (2020). Effects of COVID-19 on college students' mental health in the United States: Interview survey study. *Journal of Medical Internet Research*, *22*(9), e21279. https://doi.org/10.2196/21279

Sonnentag, S., & Frese, M. (2013). Stress in organizations. In I. Weiner (Ed.), *Handbook of Psychology* (2nd ed., pp. 560–592). John Wiley & Sons, Inc.

Spreitzer, G., Sutcliffe, K., Dutton, J., Sonenshein, S., & Grant, A. M. (2005). A socially embedded model of thriving at work. *Organization Science*, *16*(5), 537–549. https://doi.org/10.1287/orsc.1050.0153

Steinberg, L. D., Greenberger, E., Garduque, L., & McAuliffe, S. (1981). High school students in the labor force: Some costs and benefits to schooling and learning. *Educational Evaluation and Policy Analysis*, *4*(3), 363–372.

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2019). *Using multivariate statistics* (Seventh edition). Pearson.

Tasso, A. F., Hisli Sahin, N., & San Roman, G. J. (2021). COVID-19 disruption on college students: Academic and socioemotional implications. *Psychological Trauma: Theory, Research, Practice, and Policy*, *13*(1), 9–15. https://doi.org/10.1037/tra0000996

ten Brummelhuis, L. L., & Bakker, A. B. (2012). A resource perspective on the work–home interface: The work–home resources model. *American Psychologist*, *67*(7), 545–556. https://doi.org/10.1037/a0027974

Thoresen, C. J., Kaplan, S. A., Barsky, A. P., Warren, C. R., & de Chermont, K. (2003). The affective underpinnings of job perceptions and attitudes: A meta-analytic review and integration. *Psychological Bulletin*, *129*(6), 914–945. https://doi.org/10.1037/0033-2909.129.6.914

Treuren, G. J. M. (2019). Employee embeddedness as a moderator of the relationship between work and family conflict and leaving intention. *The International Journal of Human Resource Management*, *30*(17), 2504–2524. https://doi.org/10.1080/09585192.2017.1326394

Trowler, V. (2010). Student engagement literature review. *The Higher Education Academy.* 1-70.

Uchino, B. N., Berg, C. A., Smith, T. W., Pearce, G., & Skinner, M. (2006). Age-related differences in ambulatory blood pressure during daily stress: Evidence for greater blood

pressure reactivity with age. *Psychology and Aging*, *21*(2), 231–239. https://doi.org/10.1037/0882-7974.21.2.231

Usher, E., Golding, J. M., Han, J., Griffiths, C. S., McGavran, M. B., Brown, C. S., & Sheehan, E. A. (2020). Psychology students' motivation and learning in response to the shift to remote instruction during COVID-19 [Preprint]. PsyArXiv. https://doi.org/10.31234/osf.io/xwhpm

Vaterlaus, J. M., Shaffer, T., & Pulsipher, L. (2021). College student interpersonal and institutional relationships during the COVID-19 pandemic: A qualitative exploratory study. *The Social Science Journal*, 1–14. https://doi.org/10.1080/03623319.2021.1949553

Vaziri, H., Casper, W. J., Wayne, J. H., & Matthews, R. A. (2020). Changes to the work–family interface during the COVID-19 pandemic: Examining predictors and implications using latent transition analysis. *Journal of Applied Psychology*, *105*(10), 1073–1087. https://doi.org/10.1037/apl0000819

Walburg, V. (2014). Burnout among high school students: A literature review. *Children and Youth Services Review*, *42*, 28–33. https://doi.org/10.1016/j.childyouth.2014.03.020

Walumbwa, F. O., Muchiri, M. K., Misati, E., Wu, C., & Meiliani, M. (2018). Inspired to perform: A multilevel investigation of antecedents and consequences of thriving at work. *Journal of Organizational Behavior*, *39*(3), 249–261. https://doi.org/10.1002/job.2216

Warnath, C. F., & Shelton, J. L. (1976). The ultimate disappointment: The burned-out counselor. *Personnel and Guidance Journal*, 172–175.

Warr, P., & Inceoglu, I. (2012). Job engagement, job satisfaction, and contrasting associations with person–job fit. *Journal of Occupational Health Psychology*, *17*(2), 129–138. https://doi.org/10.1037/a0026859

Weick, K. E., & Roberts, K. H. (1993). Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly*, *38*(3), 357. https://doi.org/10.2307/2393372

Wheeler, A. R., Harris, K. J., & Sablynski, C. J. (2012). How do employees invest abundant resources? The mediating role of work effort in the job-embeddedness/job-performance relationship. *Journal of Applied Social Psychology*, *42*, E244–E266. https://doi.org/10.1111/j.1559-1816.2012.01023.x

World Health Organization. (2020). *WHO Director-General's opening remarks at the media briefing on COVID-19—11 March 2020*. 4.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior*, *74*(3), 235–244. https://doi.org/10.1016/j.jvb.2008.11.003

Xanthopoulou, D., Demerouti, E., & Schaufeli, W. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, *14*. https://doi.org/10.1037/1072-5245.14.2.121

Yang, Y., & Li, X. (2021). The impact of challenge and hindrance stressors on thriving at work double mediation based on affect and motivation. *Frontiers in Psychology*, *12*, 613871. https://doi.org/10.3389/fpsyg.2021.613871

Yaratan, H., & Uludag, O. (2012). The impact of verbal aggression on burnout: An empirical study on university students. *Procedia - Social and Behavioral Sciences*, *46*, 41–46. https://doi.org/10.1016/j.sbspro.2012.05.064

Zepke, N., & Leach, L. (2010). Improving student engagement: Ten proposals for action. *Active Learning in Higher Education*, *11*(3), 167–177. https://doi.org/10.1177/1469787410379680

Zhou, J., & Zhang, Q. (2021). A survey study on U.S. college students' learning experience in COVID-19. *Education Sciences*, *11*(5), 248. https://doi.org/10.3390/educsci11050248

APPENDIX A

INFORMED CONSENT FORM

Project Title: The Role of Embeddedness and Thriving on Student Well-Being and Performance

Purpose of the Study:

The purpose of this study is to identify the needs and challenges of ODU students during COVID-19 pandemic and offer ODU recommendations for high-quality programs and services. We are reaching out to you because we believe that your perspective is very important for future improvements. You must be at least 18 years old to participate in this study.

Researchers:

Principal Investigator: Dr. Konstantin Cigularov, PhD, Associate Professor, College of Sciences, Department of Psychology

Co-Investigator: Kate Warnock, BS, Doctoral Student, College of Sciences, Department of Psychology

What will be done:

We would like to invite you to participate in this anonymous, internet-based survey, which will require about 15-20 minutes of your time. This survey includes questions about your school and work experiences, challenges, and needs during this time. Several demographic questions are also included so that the characteristics of the final sample can be accurately described. Approximately 1,000 college students will be participating in this study.

At the beginning of the survey, you will be asked to generate a unique code that will be used to

link your responses to future surveys and still preserve your anonymity. Upon completion of the survey, you will be redirected to a separate website where you can enter your email address if you are willing to assist with a second survey in fall 2021 semester. This information will not be linked to your survey responses, thus guaranteeing your anonymity.

Benefits of this Study:

There are no direct benefits for you; however, you will be contributing to a unique base of knowledge regarding college students' experiences during a pandemic and helping researchers and administrators to identify areas for improvement.

What are the risks to me?

The risks of this study are minimal and limited to the potential inconvenience of taking the survey. If you feel uncomfortable with a question in the survey, you can skip it. You can also withdraw from the study at any time.

What about my privacy?

Your responses will be anonymous. No names will be collected at any time during this study. In other words, no one (not even me, the researcher) will be able to link your responses back to you. I would like to make sure that you feel safe to respond freely and honestly to the questions.

Voluntary participation:

It is your choice to participate in this research and you may withdraw from this study at any time. If you decide to quit before you have finished the survey, however, your answers will NOT

be recorded. Because we can only make use of fully completed surveys, we greatly appreciate your full participation.

How will the data be used?

When we write about the study to share it with other researchers and/ community organizations, we will write about the combined information gathered. We may present or publish the results of this study; however, you will not be identified in any written materials.

Contact information:

If you have questions about the survey and research project, please contact Dr. Konstantin Cigularov at kcigular@odu.edu. If at any time you feel pressured to participate, or if you have any questions about your rights or this form, then you should call Dr. Tancy Vandecar-Burdin, the current IRB chair, at 757-683-3802, or the Old Dominion University Office of Research, at 757-683-3460.

By clicking on the arrow below, you are telling the researchers YES, that you agree to participate in this study.

Thank you greatly for your participation and support for this project!

Sincerely,

Konstantin Cigularov, Ph.D., Principal Investigator

Kate Warnock, B.S., Co-Investigator

Old Dominion University

APPENDIX B

MEASURES

THRIVNG AT WORK SCALE

Using the scale below, please answer the following questions in relation to your current experience at WORK. If you are not currently working, think about these questions with reference to your most recent job.

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

At work…

1. As an employee, I feel alive and vital.	1 2 3 4 5 6 7
2. As an employee, I am really thriving.	1 2 3 4 5 6 7
3. As an employee, I have energy and spirit.	1 2 3 4 5 6 7
4. As an employee, I am looking forward to each new day.	1 2 3 4 5 6 7
5. As an employee, I continue to learn more and more as time goes by.	1 2 3 4 5 6 7
6. As an employee, I do not feel very energetic.	1 2 3 4 5 6 7
7. As an employee, I am not learning.	1 2 3 4 5 6 7
8. As an employee, I have developed a lot as a person.	1 2 3 4 5 6 7
9. As an employee, I feel alert and awake.	1 2 3 4 5 6 7
10. As an employee, I find myself learning often.	1 2 3 4 5 6 7
11. As an employee, I see myself continually improving.	1 2 3 4 5 6 7

THRIVING AT SCHOOL SCALE

Using the scale below, please answer the following questions in relation to your current experience at SCHOOL. If you are not currently taking classes, think about these questions with reference to your most recent school experience.

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

At school

1. As an ODU student, I feel alive and vital.	1 2 3 4 5 6 7
2. As an ODU student, I am really thriving.	1 2 3 4 5 6 7
3. As an ODU student, I have energy and spirit.	1 2 3 4 5 6 7
4. As an ODU student, I am looking forward to each new day.	1 2 3 4 5 6 7
5. As an ODU student, I continue to learn more and more as time goes by.	1 2 3 4 5 6 7
6. As an ODU student, I do not feel very energetic.	1 2 3 4 5 6 7
7. As an ODU student, I am not learning.	1 2 3 4 5 6 7
8. As an ODU student, I have developed a lot as a person.	1 2 3 4 5 6 7
9. As an ODU student, I feel alert and awake.	1 2 3 4 5 6 7
10. As an ODU student, I find myself learning often.	1 2 3 4 5 6 7
11. As an ODU student, I see myself continually improving.	1 2 3 4 5 6 7

JOB BURNOUT SCALE—EMOTIONAL EXHAUSTION SUB-SCALE

1. I feel frustrated by my job.

2. I feel emotionally drained from my work.

3. I feel burned out from my work.

SCHOOL BURNOUT SCALE—EMOTIONAL EXHAUSTION SUB-SCALE

1. I feel frustrated by my schoolwork.

2. I feel emotionally drained from my schoolwork.

3. I feel burned out from my schoolwork.

NEGATIVE APPRAISALS AT WORK SCALES

Threat Appraisal

Due to the COVID-19 pandemic, to what extent do you feel that each of the following at work is threatened (there is a possibility that it will get worse in the future)?

1. Pay and benefits
2. General work conditions
3. Job security
4. Personal job opportunities
5. Job resources

Harm Appraisal

Due to the COVID-19 pandemic, to what extent do you feel that each of the following aspects of your work life were harmed (got worse than they were)?

1. Relationships with your supervisor
2. Ability to perform your job
3. Relationships with coworkers
4. Desirability of your job
5. Motivation to perform your job

NEGATIVE APPRAISALS AT SCHOOL SCALES

Threat Appraisal

Due to the COVID-19 pandemic, to what extent do you feel that each of the following at school is threatened (there is a possibility that it will get worse in the future)?

1. Financial aid and scholarships
2. Your GPA
3. Your graduation
4. Campus safety
5. Personal academic opportunities
6. Personal financial security
7. Access to school services and resources
8. Career opportunities

Harm Appraisal

Due to the COVID-19 pandemic, to what extent do you feel that each of the following aspects of your school life were harmed (got worse than they were)?

1. Relationships with your advisor
2. Ability to perform well academically
3. Relationships with classmates
4. Desirability of your major
5. Relationships with professors/instructors
6. Motivation to perform well academically

JOB EMBEDDEDNESS SCALE

Fit

1. My job utilizes my skills and talents well.
2. I feel like I am a good match for this organization.
3. I feel personally valued at work.
4. I like my work schedule (e.g., flextime, shift).
5. I fit with this organization's culture.
6. I like the authority and responsibility I have at this company.

Sacrifice

1. I have a lot of freedom on this job to decide how to pursue my goals.
2. The perks of this job are outstanding.
3. I feel that people at work respect me a great deal.
4. I would incur very few costs if I left this organization (R)
5. I would sacrifice a lot if I left this job.
6. My promotional opportunities are excellent here.
7. I am well compensated for my level of performance.
8. The benefits are good on this job.
9. I believe the prospects for continuing employment with this company are excellent.

Links

1. How long have you been in your present position? (years)
2. How long have you worked for this organization?
3. How long have you worked in this industry? (years)
4. How many coworkers do you interact with regularly?

5. How many coworkers are highly dependent on you?
6. How many work teams are you on?
7. How many work committees are you on?

MAJOR EMBEDDEDNESS SCALE

Please indicate your level of agreement with the following statements:

Fit

1. My major is my passion.
2. The way I think fits well with my major.
3. I have the right skills and abilities for my major.
4. I am well suited for my major.
5. I thrive on the challenge my major offers.

Links

1. I feel well understood by other students in my major.
2. My professors make me feel more connected to my field.
3. I enjoy being around other students in my major.
4. I like that people in my major think the same way I do.
5. I try to bring other people into the community of the field of my major.

Sacrifice

1. Because of my major, I am likely to have a good career.
2. I take a great deal of pride in being a student of my major.
3. I've invested a great deal in my major.
4. I stand out from others because of my major.

VITA

Kate Noel Warnock

Education

- Ph.D. in Industrial/Organizational Psychology at Old Dominion University, Department of Psychology. MGB 250, Norfolk, VA, 23529-0267. Expected graduation May 2025
- Honors Bachelor of Sciences in Psychology, University of Utah, Graduated May 2019

Experience

- Researcher: L.E.A.D. Lab, Old Dominion University, Aug. 2020 – Present
  - Lead research projects
  - Collect data for research projects
  - Mentor undergraduate students
  - Write manuscripts and prepare presentations of research findings
- Project coordinator, Early Experiences Lab, University of Utah, June 2019 – Aug. 2020
  - Supervised and trained research assistants
  - Oversaw data collection and management
  - Managed IRB applications
  - Recruited and scheduled participants for lab visits
- Data manager, Early Experiences Lab, University of Utah, Jan. 2018 – Aug. 2020
  - Collected data for research projects
  - Designed and managed data entry process
  - Supervised research assistants
  - Prepared data sets for analyses and conducted analyses

Research

- Jimenez, W. P., Cigularov, K. P., Warnock, K. N., Katz, I. M., & Bonvie, J. (2022, March 7–11). Leading helm and hull: A review of Navy leadership [Poster presentation]. International Military Testing Association Conference, Raleigh, NC, United States.
- Warnock, K. N., Jimenez, W. P., Cigularov, K. P., Katz, I. M., & Bonvie, J. (2022, March 7–11). Taking a deep dive into US Navy EOD leadership [Poster presentation]. International Military Testing Association Conference, Raleigh, NC, United States.
- Katz, I. M., Rauvola, S. R., Lavigne, K.L., Palmer, S. N., & Warnock, K. N. (April, 2021). *Organizational identification: A meta-analysis and meta-regression.* [Poster presentation]. Society for Industrial and Organizational Psychology, New Orleans, Louisiana.
- Frazier, J. F., Warnock, K. N., & Cigularov, K. P. (March, 2021). *The effect of employment status on university students' perceived threat and harm during the COVID-19 pandemic.* Presentation to be given at the Examining the Past, Embracing the Present, Innovating the Future: WMSURE Undergraduate Research Conference, Williamsburg, VA.
- Terry, J. D., Cigularov, K. P., Dillulio, P., Maverick, M., & Warnock, K. N. (2020, October). *Your email didn't find me well: Employee perceptions of work and feeling safe during COVID-19*. Presentation delivered at the 2020 River Cities I-O (RCIO) Psychology Conference, Chattanooga, TN.
- Warnock, K. N. (2019). *The effect of stereotype threat on stereotype activation*. Poster presented at the University of Utah Undergraduate Research Symposium, Salt Lake City, Utah.