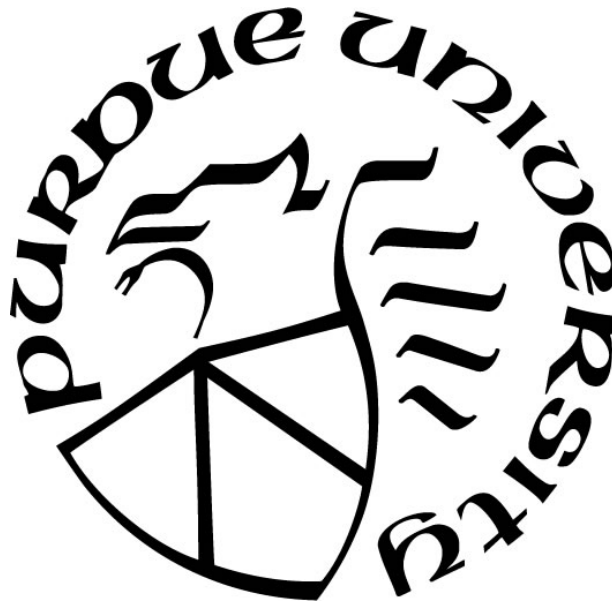# UNDERSTANDING THE MENTAL HEALTH NEEDS OF RESTAURANT EMPLOYEES

by

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ABSTRACT

The restaurant industry is one of the largest in the United States, and employees within this industry deal with poor working conditions on a daily basis. Despite this, there has been a surprising dearth of research to understand the mental health needs of these workers. The aims of this study were to establish a prevalence of burnout and depression, and understand the relationships between these two outcomes with the constructs of bullying, perfectionism, and social support. To do so, restaurant workers (N=453) were recruited to complete an on-line survey. Results revealed a high prevalence of depressive symptoms and an overextended profile of burnout. Both bullying and perfectionism displayed significant positive relationships with depression and burnout, while social support demonstrated significant negative relationships with burnout and depression. When analyzed in a three-way interaction, social support failed to significantly moderate the effects of bullying and perfectionism on depression and burnout. Results indicate that depression and burnout are serious concerns among restaurant workers. Additionally, bullying and perfectionism are promising targets to consider in future research as mechanisms leading to depression and burnout among restaurant workers.

CHAPTER 1. INTRODUCTION

Restaurants have long been recognized as stressful places to work. Employees in the restaurant industry earn low wages (Jayaraman, 2016), work long hours (Murray-Gibbons & Gibbons, 2007), face high expectations (Giousmpasoglou, Marinakou, & Cooper, 2018), and frequently experience workplace bullying (Ram, 2018). In the face of such stressors, it is unsurprising that these employees experience high levels of stress (Chuang & Lei, 2011; Kotera, Adhikari, & Gordon, 2018). In addition, the industry is associated with high levels of substance use (Bush & Lipari, 2015), turnover (Park, Song, & Lee, 2017), and there is initial evidence that these employees have high levels of depression (SAMHSA, 2007 as cited in Woo & Postolache, 2008) and burnout (Yaciocioglu & Kizanlikli, 2018).

Despite the size of the restaurant industry, there has been a surprising dearth of research to understand the mental health of these workers. In the broader context of organizational psychology, the Job Demands-Resource Model (JDR) has been used to explain how burnout occurs as a result of the interaction between various job demands and job resources (Demerouti & Bakker, 2011). Through the perspective of JDR, the purpose of this study is to examine how demands, such as bullying and perfectionism, interact with each other, as well as with the resources of the workplace (i.e., social support), to predict burnout and depression. In order to provide the context for this study, the following literature review will describe in more detail the various stressors employees in the restaurant industry face, the JDR model, and how the variables of bullying and perfectionism fit into this model to understand burnout and depression in the restaurant industry.

1.1 The Restaurant Industry

In general, restaurant employees can be classified as those that work in the front of house (FOH) and those that work in the back of house (BOH). FOH employees typically include staff such as servers, hostesses, bussers, bartenders, and managers. BOH employees typically include staff such as chefs, sous chefs, line cooks, prep cooks, and dishwashers. Despite being the second largest occupation in the country, food preparation workers (those in the BOH) make the lowest mean wage, while waiters and waitresses earn the third lowest (Bureau of Labor Statistics, 2018).

Somewhat ironically, those in the restaurant industry have been likely to need food stamps (Jayaraman, 2016). In addition to low wages, the vast majority of restaurant workers in America don't receive paid sick days, which means many restaurant workers feel pressure to work even while sick (Jayaraman, 2016). Moreover, many employees work long hours, over 40 per week, with some even reporting working up to 21 hours each week without pay (Murray-Gibbons & Gibbons, 2007). Unfortunately, putting in extra hours of work off the clock is no guarantee of success, with up to two thirds of restaurant employees reporting never having received a promotion, raise, or the training required to advance (Jayaraman, 2016).

The work environment can also be stressful. Many employees experience sexual harassment (Jayaraman, 2016) in addition to bullying (Ram, 2018). Bullying is often used in an effort to maintain high standards (Giousmpasoglou et al., 2018; Giousmpasoglou, Marinakou, & Cooper, 2016). Within the restaurant industry, bullying has been recognized as a widespread issue (Alexander, MacLaren, O'Gorman, & Taheri, 2012; Bloisi & Hoel, 2008; Giousmpasoglou & Marinakou, 2017; Kitterlin, Tanke, & Stevens, 2016) and, among a sample of restaurant employees, male chefs and line cooks have been found to be highly aggressive when compared with the general population (Meloury & Signal, 2014). Experiencing bullying has been linked to turnover intentions (Bohle, Knox, Noone, McNamara, Rafalski, & Quinlan, 2017; Xu et al., 2015) as well as intentions to leave the industry altogether (Patah, Abdullah, Naba, Zahari, & Radzi, 2010). Given the prevalence of bullying in this industry and its relationship with negative outcomes, there has been recognition of the need to identify personality traits that predispose people to bullying within the restaurant industry (Ariza-Montes, Arjona-Fuentest, Law, & Han, 2017). Because of the importance of high standards in the restaurant industry, one promising trait to consider is perfectionism, as it has been directly linked to higher levels of aggression (Chester, Merwin, & DeWall, 2015; Stoeber, Noland, Mawenu, Henderson, & Kent, 2017; Besharat & Shahidi, 2010), and indirectly linked to bullying (Matthiesen & Einarsen, 2007).

1.2 Mental Health of Restaurant Workers

Perhaps as a result of the poor conditions restaurant workers often find themselves in, many struggle with mental health concerns. Indeed, one of the most prominent figures within the

industry, Anthony Bourdain, died by suicide, which sparked awareness of mental health needs among restaurant workers. Previously, much of the psychological research within the restaurant industry has focused on substance use. Compared to other occupations, those in the restaurant industry have demonstrated the highest rates of past month illicit drug use as well as past year substance use disorder (Bush & Lipari, 2015). Yet, relatively little research has examined other important concerns such as depression and burnout. Census data has shown that the restaurant industry has the second highest levels of depression (SAMHSA, 2007 as cited in Woo & Postolache, 2008). In the UK, a sample of hospitality workers that included restaurant employees reported mean depression scores in the severe range and mean stress scores in the moderately severe range (Kotera et al., 2018). Given the potential for high prevalence of depression, but few actual studies in the restaurant industry, there is a need for more studies that measure depression as a primary outcome.

Similar to depression, burnout is another outcome of concern for restaurant workers. Burnout can be defined as a state characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, 1998). Burnout has been studied more within the restaurant industry when compared to depression. Four studies were identified that examined burnout as a primary outcome (Yazicioglu & Kizanlikli, 2018; Jung, Yoon, & Kim, 2012; Kang, Twigg, & Hertzman, 2010; Kim, Shin, & Swanger, 2009). Only one study reported the prevalence rate of burnout among its sample, with 62% showing moderate levels of burnout and 19% showing high levels of burnout (Yazicioglu & Kizanlikli, 2018). The other three studies examined predictors such as personality traits, where neuroticism was associated with greater burnout (Kim et al., 2009), and organizational support was associated with reduced burnout (Kang et al., 2010).

1.3 The Relationship Between Burnout and Depression

Because there have been initial indications that depression and burnout are causes for concern in the restaurant industry, these will be the primary outcomes of this study. There has been debate over whether burnout and depression are in fact disparate constructs (Bianchi, Schonfeld, & Laurent, 2015). Burnout is characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach, 1998). Depression, on the

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other hand, is characterized by depressed mood, anhedonia, fatigue, weight fluctuations, irritability, sleep difficulties, feelings of worthlessness, and thoughts of death (DSM-5; American Psychiatric Association, 2013). On the surface, some aspects are similar. For example, emotional exhaustion may reflect fatigue, depressed mood, or anhedonia; reduced personal accomplishment may be a more specific form of worthlessness, and depersonalization could be represented as irritability. Indeed, it has been argued that the defining criteria of burnout are essentially the same as for depression, especially because many studies that measure burnout and depression find the two to be highly correlated (Koutsimani, Montgomery, & Georganta, 2019; Bianchi et al., 2015; Schonfeld & Bianchi, 2015). It has also been shown that a person's symptoms of depression and burnout change over time in line with one another (Bianchi et al., 2015).

Despite this evidence linking burnout with depression, others argue that burnout is a distinct construct. There is empirical evidence that the two are related in such a way that burnout leads to depression, which then leads back to increased burnout in a spiraling manner (Toker & Biron, 2012). Additionally, advocates for burnout as a distinct construct point out that burnout is contingent upon work-related factors, while depression is not bound by context and its symptoms are more pervasive (Iacovides, Fountoulakis, Kaprinis, & Kaprinis, 2003). In the most recent meta-analysis on the construct overlap, which examined 69 studies from the past decade that measured burnout and depression, a significant moderate (r=.52) effect size was found. The authors concluded that this effect size was small enough to confirm that burnout and depression are distinct constructs (Koutsimani et al., 2019). Additionally, it was noted that among studies using the Maslach Burnout Inventory (MBI) to measure burnout, the effect size was even smaller. Because there is sufficient evidence that burnout and depression are distinct, both will be measured in the current study.

1.4 Job Demands-Resource (JDR) Model

Cristina Maslach's initial conceptualization of burnout described above was specific to employees in the human service industry, and while it was an important step in describing burnout, it did little to explain how burnout happens, much less explain how it is applicable to the work force at large (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). To address this

need, the two domains of stress and motivation research were combined to create the JDR model (Demerouti & Bakker, 2011). This model identifies two broad antecedents to burnout: job demands and job resources (See Figure 1). Job demands are "physical, psychological, social, or organizational aspects of the job…associated with certain physiological and/or psychological costs." (Demerouti et al., 2001, p. 501). Job resources are "physical, psychological, social, or organizational aspects that…reduce job demands…or stimulate personal growth." (Demerouti et al., 2001, p. 501). The interaction between job demands and job resources predicts burnout such that positive job resources can have a buffering effect on the negative influences of job demands (Van den Broeck, Ruysseveldt, Vanbelle, & De Witte, 2013). It is important to note that there are no specific demands or resources highlighted as part of the model so that this model can be applied across contexts (Demerouti & Bakker, 2011). The JDR model has been supported across numerous occupational contexts (Llorens, Bakker, Schaufeli, & Salanova, 2006), though it has yet to be applied specifically to the restaurant industry.

One growing area of study within JDR seeks to understand how personal resources play a role alongside job demands and job resources (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Personal resources include traits that are associated with resiliency as well as the ability to control one's environment (Schaufeli & Taris, 2014). Some commonly studied personal resources are self-efficacy, optimism, and self-esteem (Xanthopoulou et al., 2007), and research has attempted to determine how such personal resources fit into the JDR model. For example, personal resources have been studied as antecedents (Prieto, Soría, Martínez, & Schaufeli, 2008), moderators (Van den Broeck, Ruysseveldt, Smulders, & De Witte, 2010), and mediators (Wang, Huang, & You, 2016). Despite this body of research, no consistent role has been identified for personal resources within the JDR framework; rather it seems that personal resources can take on a variety of roles and even play multiple roles concurrently (Schaufeli & Taris, 2014). The following sections will describe potential resources and demands that may be particularly relevant for the restaurant industry.

1.5 Perfectionism

Due to its multidimensional nature, perfectionism is a promising variable that can likely play multiple roles within the JDR model. Perfectionism is "characterized by striving for

flawlessness and setting exceedingly high standards of performance accompanied by overly critical evaluations of one's behavior." (Stoeber, 2018). Perfectionism is also contextual, for example one might hold high standards in a life domain such as work but not in another domain such as housekeeping. In a study measuring perfectionism across 22 domains, the two most common perfectionistic domains were work and school (Stoeber & Stoeber, 2009). Within the context of the restaurant work environment, perfectionism has yet to be empirically studied, but indirect evidence suggests it could be important. For example, two studies examining the nature of bullying in restaurants have noted that high standards are prevalent in restaurants, and bullying can be used to maintain these high standards (Cooper, Giousmpasoglou, & Marinakou, 2017, Alexander et al., 2012). Outside of empirical research, there have been popular books, such as the late Anthony Bourdain's *Kitchen Confidential* (2000)*,* that detail the perfectionism that drives many chefs and is demanded of restaurant employees. Additionally, articles from prominent publications such as The Guardian and The Boston Globe also discuss perfectionism and the role it plays in restaurants (Baskin, 2016; Roberts, 2015).

Perfectionism was first recognized in the 1950s, though it became more established in the 1990s when Paul Hewitt and Randy Frost each released different articles describing multidimensional perfectionism. Frost et al. (1990) conceptualized perfectionism as containing six dimensions: personal standards, concern over mistakes, doubts about actions, parental expectations, parental criticism, and organization. Conversely, Hewitt and Flett (1991) conceptualized perfectionism as containing three dimensions: self-oriented perfectionism, socially prescribed perfectionism, and other-oriented perfectionism. In the following years, research has shown that both conceptualizations overlap and as a result they have been combined under the two dimensions of perfectionistic strivings and perfectionistic concerns (Stoeber, 2018; Stairs, Smith, Zapolski, Combs, & Settles, 2012). Those with perfectionistic strivings have high personal standards but aren't self-critical; their drive for perfectionism comes from within. As such, perfectionistic strivings are a positive form of perfectionism. On the other hand, those with perfectionistic concerns tend to feel pressure from others to be perfect, are self-critical, doubt their actions, and worry about mistakes (Smith, Saklofske, Stoeber, & Sherry, 2016). As such, perfectionistic concerns can be thought of as a negative form of perfectionism.

While there has been a wealth of research into the two dimensions of perfectionistic strivings and perfectionistic concerns, one area of perfectionism that has been ignored until more

recently is other-oriented perfectionism (Stoeber, 2014; Stoeber, 2018). Other-oriented perfectionism is the tendency to expect perfection from others. It has demonstrated unique positive relationships with the traits of narcissism, machiavellianism, psychopathy, dominance, leadership and unique negative relationships with nurturance, intimacy, development, emotionality, conscientiousness, and altruism (Stoeber, 2014). Given other-oriented perfectionism's relationships with troubling traits such as narcissism, it has been considered as a vital component of a new dimension: narcissistic perfectionism (Nealis, Sherry, Lee-Baggley, Stewart, & Macneil, 2016).

These three dimensions of perfectionism -- perfectionistic strivings, perfectionistic concerns, and narcissistic perfectionism -- have demonstrated different relationships with various outcomes. Perfectionism in general has been linked with depression since the very first models of perfectionism were introduced (Hewitt & Flett, 1991; Hewitt & Flett, 1993). As the two domains of perfectionistic strivings and perfectionistic concerns emerged, it was discovered that perfectionistic concerns account for the variance between overall perfectionism and depression (Enns & Cox, 1999; Cox & Enns, 2003; Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Mandel, Dunkley, & Moroz, 2015). This means that when both perfectionistic strivings and perfectionistic concerns are present, the negative effects of perfectionistic concerns linked with depression override any positive effects perfectionistic strivings might have. Longitudinally, this relationship between perfectionistic concerns and depression still holds true, though there is also evidence that the relationship between perfectionistic concerns and depression can be reciprocal (Asseraf & Vaillancourt, 2015; Mandel et al., 2015; Békés et al., 2015). Further research has shown that social connection and perceived social support have protective effects and moderate the relationship between perfectionistic concerns and depression (Zhou, Zhu, Zhang, & Cai, 2013; Rice, Leever, Christopher, & Porter, 2006; Dunkley, et al., 2000).

In the context of work environments, perfectionism in general has shown small to medium correlations with burnout (Harari, Swider, Steed, & Breidenthal, 2018). When this relationship has been examined more closely, perfectionistic concerns account for the majority of the variance, with perfectionistic strivings and narcissistic perfectionism showing only small correlations with burnout (Childs & Stoeber, 2010; Hill & Curran, 2016). On the other hand, perfectionistic strivings have been correlated with positive outcomes at work, such as motivation and engagement (Harari et al., 2018; Childs & Stoeber, 2010). As with depression,

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perfectionistic strivings and perfectionistic concerns interact in such a way that the negative effects of perfectionistic concerns override the positive effects of perfectionistic strivings when both are present to predict burnout (Stoeber & Damian, 2016).

As a newer domain, not as much is known about narcissistic perfectionism when compared to perfectionistic strivings and concerns. Initial evidence shows that narcissistic perfectionism has small positive correlations with anxiety and depression (Casale, Fioravti, Rugai, Flett, & Hewitt, 2019). Narcissistic perfectionism has also been correlated with several other factors that could be relevant to workplace bullying, for example, the experience of greater interpersonal conflict and derogation others (Nealis, Sherry, Sherry, Stewart, & Macneil 2015). Narcissistic perfectionism has also shown strong correlations with anger (Nealis et al., 2016).

In sum, it is clear that each of these three perfectionism domains can play different roles conceptually within the JDR model. Because perfectionistic strivings are related to positive traits, such as elevated levels of engagement, it is likely that perfectionistic strivings will act as a personal resource and be related to decreased burnout and depression. Conversely, perfectionistic concerns consists of a perceived external pressure for perfection. Employees in restaurants are often held to high standards. As such, perfectionistic concerns are likely to act as a job demand, associated with negative outcomes such as burnout and depression. Due to narcissistic perfectionism's relationships with conflict and derogation (Nealis et al., 2015), it will likely correlate with the perpetration bullying and act as a demand to others in the work environment.

1.6 Bullying

It has been well established empirically that bullying is prevalent, and even the norm, in the restaurant industry (Giousmpasoglou et al., 2018; Kitterlin et al., 2016; Alexander et al., 2012; Bloisi & Hoel, 2008). Because bullying is so pervasive throughout the restaurant industry and is related to the psychological costs of burnout and depression, this study considers bullying to be a job demand.
Bullying has been defined as purposeful negative and aggressive behaviors (either psychological or physical) repeated frequently over time for at least six months (Einarsen, Hoel, Zapf, & Cooper, 2003).

At the organizational level, bullying is thought to derive from power disparities, which can result from hierarchical structures (Samnami & Singh, 2016). Power disparities have been well established within the restaurant industry as restaurants traditionally have been structured in a hierarchical manner inspired by the military (Cooper et al., 2017, Bloisi & Hoel, 2008). At the individual level, aggression has been identified as a trait related to the perpetration of bullying (Hershcovis et al., 2007). Among restaurant employees, elevated levels of aggression have been found, especially among male line cooks (Meloury & Signal, 2014). As previously noted, there have also been calls for further research to identify antecedents of bullying at the individual trait level (Ariza-Montes et al., 2017). The research of bullying can be separated into projects studying perpetrators of bullying (the bullies), and those that have experienced the bullying (the victims). A current gap in the literature regarding workplace bullying is that the bulk of this research has focused on victims' perspectives and outcomes while very few studies have measured perpetrators' perspectives and outcomes (Matthiesen & Einarsen, 2007).

Research has shown that the hospitality industry (including restaurant employees as well as hotel and tourism employees) has a higher prevalence of workplace bullying compared to other industries (Ariza-Montes et al., 2017). Among the hospitality domains, bullying has been found to be most prevalent among restaurant employees (Kitterlin et al., 2016). Despite the recognized prevalence, there are only three published studies on bullying specifically in restaurants that extend beyond identifying the issue. One qualitative study interviewed chefs in the UK seeking to understand how new employees are integrated into the kitchen, finding that bullying plays a key role in this socialization (Giousmpasoglou et al., 2018). In another small sample of chefs from the UK (n=40), experiencing bullying had the strongest positive correlation with stress among a number of work related factors (Murray-Gibbons & Gibbons, 2007). In a larger sample of chefs from Scotland (n=164), bullying did not have an impact on job satisfaction or job commitment; the authors attributed this to bullying being an accepted part of working in kitchens (Alexander et al., 2012). Conversely, two studies among hospitality employees (hotel and restaurant employees) found that experiencing bullying was positively correlated with turnover intentions (Bohle et al., 2017) as well as intentions to leave the industry all together (Patah et al., 2010).

It should be noted that the studies examining bullying within the restaurant industry tends to focus primarily on BOH employees (Bloisi & Hoel, 2008; Alexander et al., 2012; Cooper et

al., 2017; Giousmpasoglou et al., 2018; Murray-Gibbons & Gibbons, 2007). Bullying research within the restaurant industry has yet to include FOH employees to determine whether they have similar experiences. However, several studies have examined incivility, a less direct and intense form of bullying, among FOH employees (Cho, Bonn, Han, & Lee, 2016; Torres, Niekerk, & Orlowski, 2017). In this context incivility, has been linked with increased emotional exhaustion (Cho et al., 2016), as well as overall burnout (Wen, 2018).

In the larger organizational literature, experiencing bullying has been linked to a variety of negative health and occupational outcomes such as burnout and depression (Schilpzand, De Pater, & Erez, 2016; Nielsen & Einarsen, 2012). Thus there is a clear indication that bullying may be an important job demand. At the same time, social support from co-workers and supervisors has been found to act as a job resource and moderate the relationship between experiencing bullying and negative outcomes such as burnout and intentions to leave (van Emmerik, Euwema, & Bakker, 2007; Djurkovic, McCormack, & Casimir, 2008). To our knowledge, there has been no research seeking to understand how being a perpetrator of bullying is related to negative health outcomes. Moreover, the relationships between bullying social support and depression or burnout have yet to be examined within the restaurant industry.

1.7 Social Support

Social support has long been recognized as a protective factor to negative health outcomes in general and is related to low rates of morbidity and mortality (Uchino, 2006). Particularly relevant for this study, social support is a protective factor for both depression (Gariépy, Honkaniemi, & Quesnel-Vallée, 2016; Weigl, Stab, Herms, Angerer, Hacker, & Glaser, 2016; Schermuly & Meyer, 2016) and for burnout (Saijo et al., 2015; Kay-Eccles, 2012; Chiaburu & Harrison, 2008) across a range of contexts. With regards to depression, social support has been found to act as a protective factor across age groups (Rueger, Malecki, Pyun, Aycock, & Coyle, 2016; George, Blazer, Hughes, & Fowler, 1989) and ethnicities (Plant & Sachs-Ericsson, 2004). Interestingly, social support has already been established as a moderator between perfectionism and depression (Zhou et al., 2013; Rice et al., 2006; Dunkley et al., 2000).

Within the context of the workplace, social support acts a resource in the JDR model (Jayarathna, 2017). Studies have shown that social support, specifically supervisor support, acts

as a protective factor against depression (Schermuly & Meyer, 2016; Weigl et al., 2016). Social support may also moderate the relationship between workplace bullying and depression. In a longitudinal study, Sprigg and colleagues (2018) found that coworker support significantly moderated the relationship between witnessing bullying and depression. Yet, no studies have examined social support as a protective factor for depression in the restaurant industry. Similarly, although social support has also been established as a protective factor for burnout across a number of contexts (Halbesleben, 2006; Chiaburu & Harrison, 2009), only one published study has examined support as a protective factor for burnout in the restaurant industry (Cho et al., 2016).

1.8 Current Study

The purpose of this study is to better understand the mental health needs of restaurant employees by examining the relationships between workplace bullying, perfectionism, and social support in predicting burnout and depression, through the perspective of the JDR model. This will be accomplished through four aims.

The first aim of this study is to understand the prevalence of depression and burnout among employees in the restaurant industry. Both burnout (Yazicioglu & Kizanlikli, 2018) and depression (Kotera et al., 2018) have been identified as potential concerns for employees in the restaurant industry. Despite this, only one study has addressed the prevalence of either of these issues, and that was focused on depression (SAMHSA, 2007 as cited in Woo & Postolache, 2008). As a result, the question still remains as to whether burnout and depression are major areas of concern for restaurant workers in the US. By measuring both depression and burnout across a large sample, this study is uniquely poised to address this question. Additionally, we will explore whether the prevalence of depression and burnout varies across job positions (e.g. FOH or BOH) or types of restaurants (e.g. fast casual or fine dining). As this aim is exploratory in nature there are no a priori hypotheses.

The second aim of this study is to understand how experiencing bullying is related to depression and burnout among restaurant employees. In the broader organizational literature, experiencing bullying has been correlated with negative outcomes such as depression and burnout (Schilpzand et al., 2016; Nielsen & Einarsen, 2012). Additionally, workplace bullying

has been identified as a serious issue that employees within the restaurant industry face (Kitterlin et al., 2016). As a result, from the perspective of the JDR model, workplace bullying acts as a demand. This leads to the hypothesis that:

1. Experiencing workplace bullying will be positively correlated with burnout and with depression.

The third aim of this study is to determine how perfectionism is related to bullying, depression, and burnout among restaurant employees. Because of the high standards demanded of employees within the restaurant industry (Bourdain, 2000; Alexander et al., 2012), perfectionism is a promising construct to consider. The three domains of perfectionism have been correlated with various outcomes, both positive and negative, and as a result can function as demands and resources in the context of the JDR model. Perfectionistic strivings have been correlated with positive outcomes such as motivation and engagement (Harari et al., 2018) and as such can function as a personal resource. Perfectionistic concerns on the other hand have been correlated with negative outcomes such as burnout (Childs & Stoeber, 2010) and depression (Mandel, et al., 2015) and are likely to act as a demand. The third dimension of perfectionism, narcissistic perfectionism has been correlated with outcomes such as interpersonal conflict and the derogation of others (Nealis et al., 2015), and can be thought of as a demand for others in the workplace. Yet, in the broader organizational literature, narcissistic perfectionism has not been studied in relation to similar constructs such as bullying. This study will attempt to fill that gap. This leads to the following hypotheses:

2a: Narcissistic perfectionism will be positively correlated with the perpetration of bullying.

2b: Perfectionistic strivings will be negatively correlated with depression and burnout.

2c: Perfectionistic concerns will be positively correlated with depression and burnout.

2d: Perfectionistic concerns will interact with experienced bullying such that when both are present, depression and burnout will be worse than with either predictor alone.

The fourth aim of this study is to understand how social support at work will act as a moderator and protect against burnout and depression. Social support has been demonstrated to act as a protective factor for depression (Weigl et al., 2016) and burnout (Saijo et al. 2015). Additionally, social support moderates the relationship between perfectionism and depression (Zhou et al., 2013) as well as between bullying and depression (Sprigg et al., 2018). Within the

workplace, social support comes from both supervisors and coworkers (Karasek & Theorell, 1990). This leads to the following hypotheses:

3a: Social support will moderate the relationship between workplace bullying and outcomes of depression and burnout, such that in the presence of social support, the relationship between bullying and outcomes will be weaker.

3b: Social support will moderate the relationship between perfectionistic concerns and outcomes of depression and burnout, such that in the presence of social support, the relationship between perfectionistic concerns and outcomes will be weaker.

3c. Finally, a three-way interaction will be run to test social support's protective role. As previously hypothesized, it's predicted that perfectionistic concerns and experiencing bullying will interact to predict higher scores on measures of burnout and depression. With the additional interaction of social support though, it's predicted that at high levels of social support scores of burnout and depression will be lower than at low levels of social support.

CHAPTER 2. METHODS

2.1 Study Design

This was a cross-sectional, correlational study of restaurant workers who completed an online survey.

2.2 Participants and Recruitment

The sample for this survey consisted of 452 restaurant employees of at least 18 years of age across the United States. All types of restaurant employees (FOH and BOH) and restaurant types (e.g. fast food, fine dining) were included to enable comparisons across subgroups. Participants were primarily recruited with the help of the Restaurant Workers Community Foundation (RWCF) and the Giving Kitchen. RWCF is a new non-profit organization focused on addressing issues related to wage fairness, gender equality, racial justice, and mental health within the restaurant industry. RWCF distributed the study invitation with a link to the survey to their email subscribers and social media followers, a total of 400 people. The Giving Kitchen is a non-profit organization that provides financial assistance to restaurant employees in Georgia and hosts several Facebook groups specifically for restaurant employees. The Giving Kitchen posted the survey link across these Facebook groups, which combined have a total of 20,000 members. The survey was also distributed via social media to a Reddit group of restaurant workers with over 200,000 members.

The survey was hosted on Qualtrics and took no more than 30 minutes. Prior to the survey, each respondent completed an informed consent page, which reminded participants that all responses would remain anonymous, that respondents would not be forced to answer questions, and that results would be confidential. Upon completion of the survey, participants were invited to add their name to a drawing for the chance to win one of five $25 dollar Amazon gift cards.

2.3 Measures

2.3.1 Demographics questionnaire

The beginning of the survey consisted of items collecting demographic information such as race, sex, age, education level, role within the restaurant (i.e. chef, line cook, server, bartender, etc.), type of restaurant (i.e. quick service, fast casual, fine dining, etc.), and years of experience. Those who indicated they did not work in a restaurant were excluded from the study.

2.3.2 Perfectionism

The Big Three Perfectionism Scale (BTPS; Smith et al., 2016) was used to assess the three domains of perfectionistic standards, perfectionistic concerns, and narcissistic perfectionism. The BTPS contains 45 items consisting of the 10 subscales that form three domains of perfectionistic standards (e.g., "I strive to be as perfect as possible."), perfectionistic concerns (e.g., "When I notice that I have made a mistake, I feel ashamed."), and narcissistic perfectionism (e.g., "It is important to me that other people do things perfectly."). Each item is a statement that participants rate on a Likert scale of 1 (disagree strongly) to 5 (agree strongly). The BTPS has shown acceptable reliability with coefficient alphas ranging from .83 to .90 among the 10 subscales and ranging from .92 to .93 among the three domains. In addition, the BTPS has demonstrated convergent and discriminant validity and has already been adapted and validated in other languages (Di Fabio, Saklofske, & Smith, 2018; Besharat & Atari, 2017). In our sample among the 10 subscales, coefficient alphas ranged from .66 to .90. Among the three domains alpha coefficients ranged from .85 to .91

2.3.3 Bullying

The experience of bullying was measured by the short negative acts questionnaire (S-NAQ), the short form of the most widely used measure to asses experiences of bullying (Notelaers, Van der Heijden, Hoel, & Einarsen, 2019). The S-NAQ was developed to address concerns that the original NAQ lacks discriminant validity and measures constructs in addition to bullying (De Cuyper, Baillien, & De Witte, 2009). The S-NAQ was also developed with a focus

on identifying bullying within the workplace. The S-NAQ consists of 9 items measuring person-oriented bullying ("gossiping"), work-related bullying ("being withheld information"), and social exclusion ("being excluded from group activities by colleagues"). Subjects rate items based on how often they have experienced each of the items in the last six months (1=never; 5=daily). The S-NAQ can be used as a continuous measure as well as dichotomously (i.e., having been bullied or not). To meet criteria for having experienced bullying, a respondent must endorse having experienced a minimum of two items on at least a weekly basis. This criterion was used to report the prevalence of bullying among this sample. A score of 16 or greater is predictive of depression (Conway et al., 2017. For all predictive analyses, bullying was included as a continuous measure with its raw scores. The S-NAQ has shown adequate reliability and validity (Cronbach's α = .81) (De Cuyper et al., 2009) Among our sample the S-NAQ demonstrated adequate reliability (Cronbach's α = .86).

The perpetration of bullying was measured with the same items on the S-NAQ that have been adjusted to demonstrate perpetrating ("excluding colleagues from group activities") rather than experiencing ("being excluded from group activities by colleagues") bullying. The measurement of the perpetration of bullying is not as developed because most studies examining bullying rarely attempt to identify perpetrators. However, the S-NAQ has been used to measure perpetration of bullying by rewording items, although with somewhat lower levels of reliability (Cronbach's α = .64) (De Cuyper et al., 2009). In our sample, the S-NAQ showed adequate reliability (Cronbach's α = .82).

2.3.4 Depression

The Patient Health Questionnaire-9 (PHQ-9; Kroenke, Spitzer, & Williams, 2001) was used to assess depressive symptoms. The PHQ-9 has been widely used as a screening tool for depression across a variety of settings (Moriarty, Gilbody, McMilan, & Manea, 2015). The PHQ-9 consists of nine items aligned with the DSM-IV criteria for depression. Participants select a response from a Likert scale to indicate how frequently they have experienced symptoms over the past two weeks (0=not at all, 3 nearly every day). The PHQ-9 has shown good validity and reliability (Cronbach's α = .89) (Kroenke et al., 2001). Reliability was also good among our sample (Cronbach's α = .87).

2.3.5 Burnout

The Maslach Burnout Inventory-General Survey (MBI-GS) was used to measure burnout. Many regard the MBI-GS as the gold standard for assessing burnout (Schutte, Toppinen, Kalimo, & Schaufeli, 2000). The MBI-GS consists of 16 items that measure the three facets of burnout posited by Maslach, emotional exhaustion ("I feel used up at the end of the workday"), cynicism ("I have become less enthusiastic about my work"), and reduced professional efficacy ("In my opinion, I am good at my job"). Items are endorsed based on frequency by participants on a Likert scale ranging from 0 (never) to 6 (daily). As scores on these three facets are not combined into an overall burnout score, emotional exhaustion will be used as the primary measure of burnout for aims 2, 3, and 4. This is consistent with prior research (Doulougeri, Geroganta, & Montgomery, 2016; Maslach, Leiter, & Schaufeli, 2005). The MBI-GS has demonstrated good validity (Schaufeli, Bakker, Hoogduin, Schaap, & Kladler, 2001). Additionally, the three subscales of the MBI-GS have demonstrated adequate reliability, with Emotional Exhaustion achieving a coefficient of .89, Cynicism achieving a coefficient of .78, and Professional Efficacy achieving a coefficient of .76 (Richardsen & Martinussen, 2005). Among our sample, Emotional Exhaustion achieved a coefficient of .90, Cynicism achieved a coefficient of .86, and Professional Efficacy achieved a coefficient of .77.

2.3.6 Social Support

Following other research on workplace support (Kuvaas & Dysvik, 2010; Eisenberger, Huntington, Hutchinson, & Sowa, 1986), supervisor support was measured using four items adapted from Eisenberger's Perceived Organizational Support measure by replacing the word organization with supervisor. The four items are: 'My supervisor strongly considers my goals and values', 'My supervisor cares about my opinions', 'My supervisor shows very little concern for me', and 'My supervisor really cares about my well-being.' This adapted measure has shown good reliability (Cronbach's α = .88) (Skerlavaj, Cerne, & Dysvik, 2014). This measure showed good reliability among our sample as well (Cronbach's α = .89). The items are rated on a 5 choice Likert scale ranging from 1 (Strongly Agree) to 5 (Strongly Disagree).

Coworker support was measured in the same manner as supervisor support by adapting the same four items from the Perceived Organizational Support measure, and replacing the word

organization with coworker. Items for coworker support will read 'My coworkers strongly consider my goals and values', My coworkers care about my opinions', 'My coworkers show very little concern for me', and 'My coworkers really care about my well-being.' Adapting this measure of organizational support to measure coworker support has shown good levels of reliability across studies with coefficients ranging from to .93 to .94 (Halbesleben & Wheeler, 2015; Ladd & Henry, 2000). Among our sample reliability was lower but still adequate (Cronbach's α = .84). Consistent with prior research that has measured workplace social support as a moderator to experienced workplace bullying, scores of supervisor and coworker support will be combined to create one overall score of social support (Quine, 1999; Carroll & Lauzier, 2014).

2.4 Analyses

Multiple steps were taken to ensure a comprehensive analysis. Descriptive statistics were used to examine rates of depression and burnout to address the first aim of understanding the prevalence. Next, prevalence rates were examined based on demographic groups (e.g. job position); independent samples t-tests were conducted to discover any differences between groups (e.g., BOH versus FOH) and ANOVAs were examined for multiple categories (e.g., chef, dishwasher, server, hostess). For aims two and three, simple correlation analyses were conducted to establish relationships among the primary variables. As age and gender are associated with burnout (Radostina, Purvanova, & Muros, 2010; LaFaver et al., 2018) and depression (Kessler et al., 2010; Salk, Hyde, & Abramson, 2017), stepwise regression analyses were then examined controlling for age and gender. As previously described, emotional exhaustion was used as the primary measure of burnout.

For aim 4, moderation analyses were run using Andrew Hayes's regression based approach (Hayes, 2013), to test social support's role as a buffer for burnout and depression. The macro PROCESS 3.0 was used to run each moderation model testing whether the relationship between the predictors of perfectionistic concerns and bullying and the outcomes of depression and burnout were moderated by social support. Upon entering these variables into the PROCESS tool, the predictor variables were mean centered and interaction terms between the predictor X (either perfectionistic concerns or bullying) and the moderator W (social support)

were created. Additionally, new terms were created representing one standard deviation below the mean of W and one standard deviation above the mean of W. Next, the PROCESS tool ran the following regressions to test each model: 1) the outcome variable Y (either depression or burnout) was regressed onto the predictor variable X (either perfectionistic concerns or bullying); 2) the outcome variable Y was separately regressed onto the moderating variable W (social support); 3) the outcome variable Y was regressed onto the interaction variable XW to determine the effect of the moderator W, and 4) the terms representing one standard deviation below and above the mean of W were regressed along with the interaction variable XW to determine the effect of the moderator W at different levels.

Finally, two moderated moderation analyses (one for burnout and one for depression) were run using a regression based approach to test the overall three-way interaction model, with social support acting as a protective factor for depression and burnout against the predictors of bullying, perfectionistic concerns, and perfectionistic strivings. These analyses were also conducted in PROCESS. As with the simple moderation analyses, the predictor variables were mean centered and interaction terms between the predictor X (perfectionistic concerns), the first moderator W (experiencing bullying), and the second moderator Z (social support) were created. Next, the PROCESS tool ran the following regressions to test each model: 1) the outcome variable Y (either depression or burnout) was regressed onto the predictor variable X (either perfectionistic concerns); 2) the outcome variable Y was separately regressed onto the first moderating variable W (experiencing bullying); 3) the outcome variable Y was regressed onto the interaction variable XW to determine the effect of the moderator W, 4)the outcome variable Y was separately regressed onto the second moderator Z, 5) the outcome variable Y was regressed onto the XZ interaction, 6) the outcome variable Y was regressed onto the WZ interaction, 7) the outcome variable Y was regressed onto the XWZ interaction, and 8) the terms representing one standard deviation below and above the mean of X, W, and Z were regressed along with the interaction variable XWZ to determine the effect of the three-way interaction at different levels.

2.5 Sample Size Determination Power Analysis

Sample sizes were calculated using the G*Power 3.1 tool (Faul, Erdfelder, Buchner, & Lang, 2009). The analyses required to analyze the hypotheses for aims two and three are correlations. Although these analyses are new in the context of the restaurant industry, there are meta-analyses that have reported effect sizes for some of these relationships in other contexts (Nielsen & Einarsen, 2012; Hill & Curran, 2016). To calculate the most conservative sample size needed for the correlations in this study, the smallest overall effect size from these meta-analyses was used. The smallest effect size (r=-.14) between perfectionistic strivings and burnout) was reported in Nielsen & Curran's (2016) meta-analysis. Using this effect size of .14, in order to detect significant correlations with .8 power for this study, we determined that a minimum of 314 participants were required. As there were many incomplete responses, the sample size of available responses varied from a low of 252 to a high of 383 depending on the correlation. As such, we were slightly underpowered, to find small effects for some correlations while overpowered to find small effects for other correlations.

Because we proposed several regression analyses, the model with the largest number of predictors was used for sample size determination. Although there have been no previous studies analyzing all of the same constructs in the same manner to provide a point of reference for what effect size to expect, there is a recent study that analyzed social support as a moderator between bullying and depression, along with several other variables in a sample of over 1,000 students (Palomares-Ruiz, Oteiza-Nascimento, Toldos, Serrano-Marugán, & Martín-Babarro, 2019). They found a significant effect size of .22 with social support moderating the relationship between bullying and depression. Using the square of the effect to estimate likely percent of variance accounted for by social support as a moderator, .05 was inserted in G*Power as the effect size. With four tested predictors and a total number of 8 predictors, 254 participants would be needed to find significant effects with .80 power. We were sufficiently powered for these moderated moderation analyses as out of the 453 responses, 261 completed enough items to be included.

Although we initially had 453 respondents, incomplete responses were a concern. As this study is one of the first of its kind and some aims were exploratory in nature, respondents fully completing at least one measure were included to maximize the available data. The majority of respondents with incomplete responses left entire measures incomplete rather than beginning a measure and leaving certain questions unanswered. However, for the few cases where a

respondent had missing data within a measure, responses with at least 75% of the measure completed were included in analyses and mean imputation was used to replace missing scores. Depending on the construct, completed measures ranged from achieving 252 responses to 383 responses; sample sizes are shown with each analysis in the corresponding table.

CHAPTER 3. RESULTS

3.1 Demographics

Demographics and background characteristics of the study sample are presented in Table 1. The majority of respondents identified as male (63.2%) and Caucasian (92.9%), and the mean age was 28.7 (SD=7.90). Most worked in the "back of house" (74.5%) in roles such as dishwasher, prep cook, line cook, and chef. The mean years of experience in the restaurant industry was 7.25 (SD=5.75). The majority (54.7%) of respondents worked over 40 hours each week. There were slightly more respondents working in high-end restaurant settings (52%) compared to low-end restaurant settings (48%).

3.2 Aim 1

The first aim of this study was to gain a better understanding of the prevalence of depression and burnout among restaurant employees, as well as to understand potential factors in the type of work that might contribute. As shown in Table 2, descriptive statistics suggested that depression may be very common; the average score on the screening measure was in the moderate range (M=13.54, SD = 6.56), and 68.6% scored in the moderate range or above. An independent samples t-test indicated that there was a significant difference based on roles, with less severe depression symptoms among employees working in the front of house (M=11.46, SD=5.76) compared to back of house (M=14.43, SD=6.6, $p<.01$, $d=.048$). One-way ANOVAs (Table 3) indicated that there were significant differences in depressive symptoms between employees based on the number of hours worked per week as well as income. Post-hoc comparisons between groups showed significant differences between those that work the least (0-20 hours) (M=9.23, SD=6.80) and those that work the most (over 60 hours) each week (M=15.54, SD=5.89), with no other between-group differences. Similarly, significant differences in depression symptoms were also found between employees based on income. Post-hoc comparisons between groups showed that those earning the least (less than $10,000; M=14.95, SD=5.31) reported more severe symptoms than those earning the most (over $70,000 annually; M=1.25, SD=1.50). There were no other between-group differences.

Means and standard deviations for the three burnout scales are presented in Table 4. Among this sample, the mean emotional exhaustion score was 20.43 (SD=7.15) out of a maximum of 30, mean cynicism was 17.08 (SD=8.46) out of a maximum 30, and the mean level of professional efficacy was 28.36 (SD=6.11) out of 36. A one-way ANOVA (Table 5) indicated significant differences in emotional exhaustion based on the number of hours a week working. Post-hoc comparisons showed a significant difference between employees that work the least (0-20 hours) (M=15.62, SD=6.87) and those that work the most (over 60 hours) each week (M=23.23, SD=5.83). None of the other variables were significant (role, type of restaurant or income level). For cynicism (Table 6), an independent samples t-test indicated a significant difference in restaurant type, with greater cynicism among employees working in low-end restaurants (M=18.53, SD=8.64) compared to those working in high-end restaurants (M=15.84, SD=8.10). None of the other variables were significant (role, hours worked, or income level). Similarly for professional efficacy (Table 7), an independent samples t-test indicated a significant difference in type of restaurant, with employees in low-end restaurants reporting less efficacy (M=27.48, SD=6.80 versus M=29.08, SD=5.39). Again, none of the other variables were significant (role, hours worked, or income level).

3.3 Aim 2

The second aim of this study was to understand how bullying (both experiencing bullying and perpetrating bullying) is related to depression and burnout, focusing on emotional exhaustion. Nearly half (42.7%) of respondents met criteria for experiencing bullying, endorsing experiencing at least two forms of abuse on at least a weekly basis. 74% of the sample experienced bullying at a level associated with depression in prior research (i.e., at a score of 16 or above). As hypothesized, experiencing bullying was significantly positively correlated with both depressive symptoms (r=.39, p<.01) and emotional exhaustion (r=.47, p<.01) [See Table 8 for correlations between all of the primary study variables]. Perpetrating bullying was also significantly positively correlated with both depressive symptoms and emotional exhaustion, but to a lesser degree (r=.19, p<.01 for depression and r=.25, p<.01 for emotional exhaustion). Additionally, perpetrating bullying was also positively correlated with experiencing bullying (r=.40, p<.01).

As perpetrating and experiencing bullying were correlated with each other as well as both outcome variables, regression analyses were conducted to determine their effects when controlling for the other, in addition to age and gender. Standardized beta weights from these analyses revealed that experiencing bullying remained a significant predictor of emotional exhaustion (B=.40, p<.01) and depression (B=.31, p<.01) while controlling for the effects perpetrating bullying, age, and gender. Perpetrating bullying no longer remained a significant predictor of emotional exhaustion (B=.11, p=.13) or depressive symptoms (B=.09, p=.20) when controlling for experiencing bullying, age, and gender (see Table 10).

We also explored other correlates of bullying. Experiencing bullying was also positively correlated with hours worked each week (r=.20, p<.01). No other demographic or background characteristics (e.g. age, gender, restaurant position, restaurant type, income) were significantly correlated to perpetrating or experiencing bullying.

3.4 Aim 3

The third aim of this study was to determine how the three domains of perfectionism relate to bullying, depression, and emotional exhaustion. The first hypothesis of this aim was that narcissistic perfectionism would be positively correlated with the perpetration of bullying, and that hypothesis was supported (r=.41, p<.01).

The next hypotheses for this aim were that perfectionistic strivings and perfectionistic concerns would have negative and positive correlations respectively with depression and emotional exhaustion (see Table 11). As expected, perfectionistic concerns were positively correlated with depressive symptoms (r=.50, p<.01) and emotional exhaustion (r=.43, p<.01). Contrary to expectations, perfectionistic strivings were also *positively* correlated with both depressive symptoms (r=.25, p<.01) and emotional exhaustion (r=.16, p<.01), although to a lesser degree. As perfectionistic concerns showed a strong positive correlation with perfectionistic strivings (r=.58, p<.01) regression analyses were conducted to determine the effect of each while controlling for the other. Standardized beta weights showed that when controlling for age, gender, and perfectionistic concerns, perfectionistic strivings no longer significantly predicted either depressive symptoms (B=.03, p=.70) or emotional exhaustion (B=-.12, p=.14). In the same analyses, standardized beta weights showed that perfectionistic concerns

maintained its significant relationships with depressive symptoms ($B=.45$, $p<.01$) and emotional exhaustion ($B=.52$, $p<.01$) when controlling for age, gender, and perfectionistic strivings.

Building on the prior analyses, we tested the hypothesis that perfectionistic concerns would interact with experiencing bullying such that when both are present, depressive symptoms and emotional exhaustion will be worse than with either predictor alone. This hypothesis was partially supported. As shown in Table 12, the interaction between perfectionistic concerns and experiencing bullying did not significantly predict depression ($B=-.0002$, $p=.96$), but the interaction did significantly predict emotional exhaustion ($B=-.01$, $p=.04$). Probing the interaction indicated that burnout is higher when both perfectionistic concerns and experiencing bullying are high (1 standard deviation above the mean) (see Figure 3). Because prior research suggests controlling for perfectionistic strivings (Dunkley, Blankstein, Masheb, & Grilo, 2006), we re-analyzed the data adding perfectionistic strivings as a covariate. However, the results did not change – the interaction was still significant for emotional exhaustion, but not depressive symptoms.

Other correlates of perfectionism were also explored. Elements of perfectionism demonstrated relationships with background characteristics of respondents. Narcissistic perfectionism demonstrated a weak positive correlation with income ($r=.17$, $p<.01$). Perfectionistic concerns demonstrated a weak positive correlation with hours worked each week ($r=.15$, $p<.05$) and a moderate negative correlation with income ($r=-.20$, $p<.01$). Perfectionistic strivings demonstrated a moderate positive correlation with hours worked each week ($r=.25$, $p<.01$) and a weak positive correlation with restaurant type, such that higher perfectionistic strivings was associated with working in a high-end restaurant setting ($r=.15$, $p<.051$).

3.5 Aim 4

The fourth aim of this study was to understand how social support at work might function to moderate the relationships between the independent variables of experiencing bullying and perfectionistic concerns, and the dependent variables of depression and emotional exhaustion.

We hypothesized that social support would moderate the relationship between experiencing bullying and the outcomes of depression and emotional exhaustion, such that in the presence of social support, the relationship between bullying and these outcomes would be

weaker. As shown in Tables 13 and 14, these hypotheses were not supported. For depression, none of the interactions between experiencing bullying and support were significant, whether we looked at total support (B=.00, p=.63), coworker support (B=.01, p=.45), or supervisor support (B=.00, p=.81). Similarly, these same interactions did not significantly predict emotional exhaustion, though the interaction between experiencing bullying and total support approached significance (B=.01, p=.07)

Next, similar analyses were conducted with perfectionistic concerns taking the place of experiencing bullying in the interactions. Again, contrary to hypotheses, none of the interactions between perfectionistic concerns and support predicted depressive symptoms or emotional exhaustion (See Tables 15 and 16). However, similar to experiencing bullying, the interaction between perfectionistic concerns and supervisor support approached significance for emotional exhaustion (B=.01, p=.07).

The last goal of this aim was to conduct a moderated moderation analysis testing the relationships depicted in Figure 2. A three-way interaction was examined between perfectionistic concerns (X), experiencing bullying (M), supervisor support (Z), and depression or emotional exhaustion (Y). As presented in Table 17, this interaction significantly predicted depression (R^2=.002, $F(1,254)$=8.24, p<.01). Probing the interaction (as seen in Figures 4-6) showed that at low levels (1 standard deviation below the mean) of experienced bullying and low levels (1 standard deviation below the mean) of perfectionism, supervisor support had a small protective effect, such that as the level of supervisor support increased from 1 standard deviation below the mean to 1 standard deviation above the mean, depression symptom severity decreased from 8.90 to 8.53. This three-way interaction did not significantly predict emotional exhaustion (R^2=.002, $F(1,253)$=.77, p=.38), as shown in Table 18.

CHAPTER 4. DISCUSSION

There has been a dearth of research seeking to understand the mental health needs of restaurant workers. The aims of this study were to examine the prevalence of depression and burnout and to understand predictors of these outcomes – namely bullying and perfectionism – and how social support might moderate these relationships. The results indicate that, at least in our sample, depression is likely to be highly prevalent among restaurant workers as over two thirds scored in the moderate range (or above) for depression symptoms on a frequently used screening tool. Experiencing bullying was also highly prevalent, and along with perfectionistic concerns, was related to both depression and burnout. Social support demonstrated a minimal protective impact. Below we discuss the findings for each aim in more detail.

The first aim of this study was to understand the prevalence of depression and burnout among restaurant employees, and identify any groups among restaurant employees that might be at particular risk. To our knowledge no research has sought to identify the prevalence of depression among restaurant workers as a primary aim, and yet our findings suggest that depression may be a common occurrence. Based on PHQ-9 scores among this sample, 68.6% met the screening criteria – scoring in the moderate range or higher – for depression. Yet, a screener such as a PHQ-9 is not a replacement or equivalent to a diagnosis from a clinical interview. Recently, a meta-analysis of the PHQ-9 found the potential for 51% of positive screens to be false positives (Levis, Benedetti, & Thombs, 2019). If the PHQ-9 identifies false positives at a rate of 51%, that would conservatively indicate a prevalence of approximately 33.6% among this sample, substantially higher than the estimated prevalence of depression among adults in the US of 7.1% (NIMH, 2017). Given the high rates of depression (based on PHQ-9 scores) in our sample – even when taking into account the potential for a large number of false positives – it suggests that depression may be a significant cause for concern among this population.

While the overall prevalence of positive screens for depression was high among this sample, there were also significant differences between subgroups of the sample. Those that worked the most hours reported higher depression scores than those that worked the least hours. In addition, differences in income were also significant as those earning the least demonstrated

more severe symptoms than those earning the most. Among this sample, BOH employees earned less and worked longer hours than FOH employees. These work characteristics suggest that BOH employees are more vulnerable to more severe symptoms of depression than FOH employees. Indeed, BOH employees demonstrated significantly more severe symptoms than FOH employees, though the average PHQ-9 score for FOH employees still met the screening criteria for depression. As this was a cross sectional study, causality among these relationships could not be determined. However, these results indicate that BOH employees may be especially vulnerable to depression, possibly due to the characteristics of working in the BOH (earning less while working longer hours). Although we found no prior studies of depression comparing types of roles, studies of substance use have found differences in use between FOH and BOH employees, with FOH employees engaging in greater substance use than BOH employees (Zhu et al., 2011). Future studies are needed to understand how roles in a restaurant might confer different risk

Determining the prevalence of burnout can be difficult as burnout is viewed as a continuous variable and is not a clinical diagnosis. As such there are no clinically meaningful cutoff points for the scale we used in this study (MBI-GS; Maslach, Jackson, & Leiter, 2016). However, burnout has been conceptualized as consisting of five profiles, which might help provide more context: burnout (when exhaustion and cynicism are high and efficacy is low), disengaged (only cynicism is high), overextended (only exhaustion is high), ineffective (when efficacy is low), and engagement (when exhaustion and cynicism are low and efficacy is high) (Leiter & Maslach, 2016). In our sample, as emotional exhaustion was the most highly elevated subscale, restaurant workers may fall under the category of overextended. People with an overextended profile typically have a primary concern with workload (Leiter & Maslach, 2016).

The classification of our sample as overextended is consistent with the analysis of background characteristics in relation to the three dimensions of burnout. Over half of respondents endorsed working more than 40 hours each week and those that worked the most hours were significantly more emotionally exhausted than those that worked the least hours. The only significant differences between subgroups for cynicism and professional efficacy were found in the comparison of low-end versus high-end restaurant employees. Those that work in low-end restaurant settings endorsed significantly higher levels of cynicism and lower levels of professional efficacy than those that worked in high-end restaurant settings. While there may be important differences in the environments of these restaurants, this finding could also be due to

individual differences in people who work in high-end restaurants versus low-end restaurants. Among our sample, working in high-end restaurants was associated with a higher level of perfectionistic strivings, that is, having an internal motivation to perform well (Stoeber & Stoeber, 2009). The broader organizational literature has shown internal motivations to have positive relationships with job satisfaction and professional efficacy, and negative relationships with outcomes such as emotional exhaustion and turnover intentions (Rubino, Luksyte, Perry, & Volpone, 2009; Vansteenkiste, Neyrinck, Niemiec, Soenens, De Witte, & Van den Broeck, 2007). Therefore, it is possible that differences in perfectionistic strivings between those that work in high-end restaurant settings and low-end restaurant settings explain the differences in cynicism and professional efficacy between these two groups.

The second aim of this study was to understand how bullying, both experiencing and perpetrating, is related to depression and burnout, focusing on emotional exhaustion. Consistent with prior research in the broader organizational literature (Schilpzand et al., 2016; Nielsen & Einarsen, 2012), experiencing and perpetrating bullying were predictive of both burnout and depressive symptoms among this sample of restaurant employees. Experiencing bullying demonstrated a moderate relationship with depressive symptoms and a strong relationship with burnout, while perpetrating bullying demonstrated a weak relationship with depressive symptoms and a moderate relationship with burnout. However, perpetrating bullying was no longer related to depressive symptoms and burnout, when controlling for the effects of experiencing bullying. Previous research has revealed a subgroup of the bullying population, known as provocative victims, that experience and perpetrate bullying (Matthiesen & Einarsen, 2007; Hauge, Skogstad, & Einarsen, 2009). As such, it is possible that this group of provocative victims accounts for perpetrating bullying's positive relationships with burnout and depressive symptoms.

The rate of experiencing bullying found in this study is significantly higher than the estimated average across all industries in the United States. Overall, 42.7% of our sample met criteria for having experienced bullying (at least two negative acts on at least a weekly basis). In contrast, it's estimated that 13% of all workers in the United States experience bullying (Namie & Namie, 2009). Given the restaurant industry's status as one of the largest employers (Bureau of Labor Statistics, 2018), these rates are particularly concerning. At the same time, this finding is unsurprising as bullying is often considered a normal and accepted part of many restaurant

environments (Kitterlin et al., 2016; Cooper et al., 2017). Most prior research studying bullying within restaurants has suggested that experiencing bullying is more common in high-end restaurants (Giousmpasoglou et al., 2018), yet no significant differences in experiencing or perpetrating bullying were found between high-end and low-end restaurant employees in this sample. This could be due to sampling bias as the majority of research studying bullying in restaurants has done so in high-end restaurants (Ariza-Montes et al., 2017).

The third aim of this study was to determine how the three components of perfectionism: perfectionistic strivings, perfectionistic concerns, and narcissistic perfectionism are related to the other variables of bullying, burnout, and depression. The first hypothesis under this aim was that narcissistic perfectionism would significantly predict the perpetration of bullying. This hypothesis was supported as perpetrating bullying showed a weak relationship with perfectionistic concerns and a strong relationship with narcissistic perfectionism. This is meaningful as there have been calls to identify personality traits that lead to bullying (Ariza-Montes et al., 2017), and this finding may contribute to better interventions. Identifying further personality traits related to the perpetration of bullying could serve to inform future interventions to prevent bullying by targeting perpetrators.

The other hypotheses under the third aim were that perfectionistic strivings would have a negative relationship with the outcomes (burnout and depression) while perfectionistic concerns would have a positive relationship with the outcomes. The first hypothesis was rejected as perfectionistic strivings initially showed positive correlations with both burnout and depressive symptoms. When controlling for the effect of perfectionistic concerns, though, perfectionistic strivings showed no significant relationships with either burnout or depressive symptoms. Thus it may not independently predict symptoms of depression or burnout. The second hypothesis was supported as perfectionistic concerns showed positive relationships with the outcomes, and maintained these relationships when controlling for the effects of perfectionistic strivings, age, and gender. This is consistent with prior research showing that, while both perfectionistic concerns and perfectionistic strivings may be related to negative outcomes, perfectionistic concerns explain the majority of the variance (Childs & Stoeber, 2010; Hill & Curran, 2015; Limburg, Watson, Hagger, & Egan, 2016). This is likely due to the differences between perfectionistic strivings and perfectionistic concerns. Those with high levels of perfectionistic concerns tend to feel pressure from others to be perfect, are self-critical, and often doubt their

actions. Conversely, those with high levels of perfectionistic strivings are primarily motivated by an internal drive for perfection and are not as self-critical (Smith et al., 2016).

As both perfectionistic concerns and experiencing bullying are predictive of burnout and depressive symptoms, we expected that they would interact to more strongly predict burnout and depressive symptoms than they did alone. However, this interaction was only significant when predicting burnout, and with a small effect. The interaction did not significantly predict depressive symptoms. A potential explanation of these results can be found in the Perfectionism Social Disconnection Model (PSDM), which posits that perfectionism's (primarily perfectionistic concerns) relationship with negative outcomes, such as depression and suicide, are mediated by social disconnection (Roxborough et al., 2012). This model stems from the observation that perfectionism has been related to negative interpersonal behaviors and disconnection (Slaney, Pincus, Uliaszek, & Wang, 2006). These interpersonal difficulties lead to rejection by others (bullying), which in turn lead to feelings of isolation and negative outcomes such as increased depression and suicide risk (Hewitt et al., 2017). It is possible that we only found a small interaction effect on one outcome, and no interaction effect on the other, because bullying may mediate the effects of perfectionism on the outcomes instead of moderating the effects in an interaction. Further research using longitudinal samples would be important to examine this supposition.

The final aim of this study was to explore the function of social support in acting as a potential protective factor for both burnout and depression. In the broader health literature, social support has been recognized as a protective factor for a variety of negative health outcomes (Uchino, 2006). Within the organizational literature, supervisor support has been found to act as a protective factor for depression (Schermuly & Meyer, 2016). Additionally, coworker support has moderated the relationship between bullying and depression (Sprigg et al., 2018) and one study within the restaurant industry established support as a protective factor for burnout (Cho et al., 2016). In our own study, however, social support did not appear to be a strong buffer overall. Although social support (supervisor, coworker, and total support) had significant negative correlations with both burnout and symptoms of depression, no form of social support significantly moderated the relationship between predictors (perfectionistic concerns and experiencing bullying) and outcomes (burnout and depression).

While single interactions including social support were not significant, there was one three-way interaction including supervisor support that significantly predicted depressive symptoms. Even so, the protective effect of supervisor support was not strong as it was only related to a decrease in depression at low levels of experiencing bullying and perfectionistic concerns. This weakness of social support as a protective factor may be due to the strength of experiencing bullying and perfectionistic concerns predicting burnout and depression, or the complicated nature of the work environments. For example, it is possible that social relationships at work were entangled such that workers experienced bullying, demands to be perfect, and support from coworkers, supervisors, or a combination of both simultaneously. If a worker experienced support from a coworker or supervisor but was bullied by other coworkers and supervisors, any mitigating effect of support might not be enough to protect against multiple sources of bullying. We were not able to identify sources of bullying to parse apart these potential relationships. Another potential reason for the lack of a buffering effect for social support in our study may be due to measurement factors. For example, prior research has shown that elements of perfectionism do not show significant relationships with supportive behaviors (e.g., agreeing with opinions, assistance with completing work, expressing concern about well-being) but do show significant relationships with perceptions of support (Sherry et al., 2008). The measures of social support we used primarily focused on supportive behaviors rather than perceived feelings of being supported. If we had used a measure that more clearly emphasized perceptions of support, we may have seen a larger protective effect of social support.

There is an ongoing debate over whether burnout and depression are separate constructs (Bianchi et al., 2015). Although not a specific aim of the current study, our findings may shed some light on this debate. As was expected, there was a strong positive correlation between the two measures. The observed correlation (r=.52) is identical to the effect size found in a meta-analysis reviewing the similarities of burnout and depression (Koutsimani et al., 2019). The authors of that meta-analysis concluded that such an effect size, while large, is small enough to justify the distinction of burnout and depression as unique constructs. Additionally in our study, each showed similar correlations, in both strength and direction, with all other primary study variables. The largest differences between burnout and depression were found in relation to background characteristics. While both showed similar correlations to hours worked each week, only depression was significantly correlated with job position and annual income.

4.1 Implications

There are several important implications that can be taken from our findings. The first is that depression and bullying are major causes for concern among restaurant employees. Among our sample, depression (indicated by positive screens on the PHQ-9) was 5 to 10 times as common as it is in the general population, affecting at least 33.6% of respondents and potentially as many as 68.6%. Additionally, our sample exhibited an overextended profile of burnout, endorsing high levels of emotional exhaustion in relation to cynicism and professional efficacy. In recent years, there have been new programs created to address mental health in the restaurant industry. One program, "I Got Your Back" (Alburger, 2020) designates one employee as a peer counselor. At the beginning of each shift, employees anonymously indicate their mood by placing a card into a box. The cards are then removed and any negative moods are explored in a group discussion facilitated by the peer counselor. This is likely to facilitate a more supportive working environment, which could help protect against burnout and depression. Another, "Fair Kitchens," provides guidelines for a fair and safe work environment in addition to trainings and webinars that provide education on how to create such environments (Alburger, 2020). Given that work characteristics such as hours worked and annual income were correlated with burnout and depression, the Fair Kitchens program might help address burnout and depression through targeting the systemic issues of high workloads and low wages.

Bullying is one of two variables predictive of burnout and depression that could also be targeted for intervention. By promoting a fair and safe workspace, Fair Kitchens could potentially have a positive on bullying, which in turn would likely decrease symptoms of depression. However, it is unclear to what extent this program addresses bullying, and so more targeted intervention may be needed. Unfortunately, even in the broader organizational literature, there is limited research on workplace bullying interventions. As reviewed by Hodgins, two studies in a related area (incivility) have shown the CREW (Civility, Respect, and Engagement in the Workplace) intervention to be effective in reducing incivility (Hodgins, MacCurtain, & Mannix-McNamara, 2014). While incivility is similar to bullying, incivility is considered an ambiguous and indirect form of bullying (Cho et al., 2016), and so it is unclear whether CREW could be effective for targeting bullying in restaurants. Further research assessing bullying interventions is needed.

The second variable predictive of depression was perfectionism, which might serve as another target for intervention. In the broader psychological literature, both Cognitive Behavioral Therapy (CBT) and mindfulness-based therapies have proven effective in treating both perfectionism and depression (Burns, Lee, & Brown, 2011; López-López et al., 2019; Suh, Sohn, Kim, & Lee, 2019). Mindfulness-based cognitive therapy (MBCT) has also emerged as a promising treatment for depression and perfectionism (Manicavasgar, Parker, & Perich, 2011; James & Rimes, 2018; Goldberg et al., 2018). As self-compassion moderates the relationship between perfectionism and depression (Ferrari, Yap, Scott, Einstein, & Ciarrochi, 2018), an MBCT that focuses on ways to enhance self-compassion through its mindfulness component could potentially be an effective option to target perfectionism and depression among restaurant employees.

Based on our findings, it is unclear the extent to which interventions promoting social support would have a positive impact. Social support was shown to have a small protective effect in some contexts in this study but not in others. Even when social support did show a protective effect, this effect was nullified at higher levels of perfectionism and experiencing bullying. Despite this, all forms of social support were negatively correlated with burnout and depression. In addition, other research, especially related to the perfectionism social disconnection model, indicates that social support is an important element to consider. As such, interventions targeting enhanced support, such as I Got Your Back, might still have a positive effect on burnout and depression.

4.2 Limitations and Future Directions

It should be noted that there were important limitations with this study. The first limitation was that this sample is not a representative sample of the restaurant industry, especially in regards to race. Nearly 92.9% of this sample was Caucasian, while 73.8% of the restaurant industry in the United States consists of employees identifying as Caucasian (U.S. Bureau of Labor Force Statistics, 2019) Similarly, the sample was greatly restricted in ethnicity with only 8% of respondents identifying as Hispanic/Latinx, while 25.6% of restaurant employees in the United States identify as Hispanic/Latinx. Additionally, 52.9% of restaurant employees in the US identify as female while only 34.9% identified as female in our study (U.S.

Bureau of Labor Force Statistics, 2019). As a result of the skewed demographics of this sample, these results are not generalizable to the restaurant industry as a whole. In particular, Hispanic/Latinx workers were vastly underrepresented. It is unclear how our results would have differed for depression, for example, as there has been conflicting research on the prevalence of depression among Hispanic/Latinx populations compared to non-Hispanic Whites. Varying studies have found Hispanic/Latinx populations to endorse a lower prevalence of depression (Alegría et al., 2008), while others show a higher prevalence of depression (Wassertheil-Smoller et al., 2014). As such, future research should focus on obtaining diverse samples that are representative of the industry.

Forms of measurement were also a concern for this study. While our sample initially yielded 453 total participants, 40% had incomplete responses. The measure that had the lowest rate of completion, the Big Three Perfectionism Scale (BTPS), was also the longest, containing 45 items. It is possible that these incompletions were due to study fatigue related to the BTPS. Future research should seek to create and validate an abbreviated form of this measure to alleviate demands on respondents. The measurement of perpetrating bullying could also be improved. Consistent with prior research (De Cuyper et al., 2009), our study relied on adapting a measure of experiencing bullying by changing the wording to capture whether the respondent perpetrated each of the items. Research on workplace bullying would likely benefit from a measure developed specifically with the aim of identifying perpetrators of bullying. While the modified version of the SNAQ showed good reliability in this study, it has showed questionable reliability in others (De Cuyper et al., 2009). Further research is needed to determine if this measure is psychometrically sound. Gaining a better understanding of perpetrators could lead to interventions that target perpetrators in order to prevent bullying. Lastly, the sole measurement for depression was a screening instrument. While this instrument has shown good validity and reliability in predicting depression (Kroenke et al., 2001), it should not be relied on as a diagnostic tool. We measured the frequency of symptoms someone was currently reporting, but could not address depression directly.

As this study was cross-sectional, future research should employ longitudinal methods to develop more accurate predictive models. This is important because an increased understanding of the directionality of relationships in the model could lead to better informed and more effective interventions. In seeking to obtain more accurate models, other relevant variables, such

as substance use and bullying from customers should also be integrated. Additionally, qualitative methods should also be employed to better understand between group differences. For example, qualitative interviews could potentially collect data that might explain why those working in high end restaurants endorse higher perfectionistic strivings, higher professional efficacy, and lower cynicism than those working in low end restaurants. Most of the preexisting literature among this population focuses on substance use and there is significant comorbidity between depression and substance use -- approximately one third of depressed patients also struggle with substance use (Davis, Uezato, Newell, & Frazier, 2008). Thus, future research should seek to understand how substance use might be related to depression and burnout.

4.3 Conclusion

In the wake of Anthony Bourdain's death, issues related to mental health appear to have become an increasing focus within the restaurant industry. As individuals within the restaurant industry begin to develop programs to address these issues, such as support groups and awareness trainings, researchers should seek to work with them to help monitor their outcomes. Doing so can better inform which interventions are effective. This study found perfectionism, bullying, depression, and burnout to be of significant concern and promising targets for future interventions that seek to address mental health concerns within the restaurant industry.

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APPENDIX A: TABLES

Table 1

Demographics and restaurant descriptors of Study Sample

Factor	Frequency	Percent
Gender (n=261)		
Male	165	63.2%
Female	90	34.9%
Non-binary or Gender Fluid	5	1.9%
Race (n = 253)		
American Indian/Alaska Native	7	2.8%
Black or African American	4	1.6%
Asian	6	2.4%
Native Hawaiian or Other Pacific Islander	1	0.4%
White or Caucasian	235	92.9%
Hispanic or Latino (n=261)		
Yes	21	8.0%
No	240	92.0%
Age (n=192)		
18-25	74	38.5%
26-35	87	45.3%
36-45	20	10.4%
46+	11	5.7%
Restaurant Role (n=376)		
Front of house (server, host, etc.)	96	25.5%
Back of house (cook, dishwasher, etc.)	280	74.5%
Restaurant Type (n=383)		
Low End (quick service, fast casual, concessions, etc.)	184	48.0%
High End (business casual, fine dining)	199	52.0%

Table 1 continued

Years of Experience (n=383)		
0-5	159	41.5%
6-10	104	27.2%
11-20	94	24.5%
21-35	26	6.8%
Weekly Hours (n=258)		
0-20	13	5%
21-40	104	40.3%
41-60	115	44.6%
61+	26	10.1%
Annual Income (n=258)		
<$10,000	21	8.1%
$10,000-$19,999	59	22.9%
$20,000-$29,999	90	34.9%
$30,000-$39,999	46	17.8%
$40,000-$54,999	27	10.5%
$55,000-$69,000	11	4.3%
$70,000+	4	1.6%

Table 2

Descriptive Statistics of Depression as assessed by the PHQ-9.

Depression Severity	n	%
Minimal/none (0-4)	26	8.5
Mild (5-9)	70	22.9
Moderate (10-14)	72	23.5
Moderately Severe (15-19)	78	25.5
Severe (20-27)	60	19.6

Note. Overall sample mean (SD) = 13.54 (SD = 6.56), range from 0 to 27

Table 3

Differences in Depression Between Groups

Independent Variable	n	Mean	Standard Deviation	*Test of Significance*	Effect Size (*d*)
Role in Restaurant					
Front of house	79	11.46	5.76	$t = -3.54$**	0.48
Back of house	221	14.43	6.60		
Restaurant Type					
Low End	140	13.46	6.98	$t = -0.25$	0.02
High End	165	13.64	6.20		-
Hours Worked Each Week					
0-20 hours	13	9.23	6.80	$F = 3.10$*	0.04
21-40 hours	104	13.33	5.96		
41-60 hours	115	14.06	6.76		
61+ hours	26	15.54	5.89		
Annual Income					
Less than $10,000	21	14.95	5.31	$F = 3.30$**	0.07
$10,000-$19,999	59	14.05	6.80		
$20,000-$29,999	90	14.28	6.52		
$30,000-$39,999	46	13.41	6.64		
$40,000-$54,999	27	12.26	5.59		
$55,000-$69,999	11	11.64	5.05		
$70,000+	4	1.25	1.50		

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

Table 4

Descriptive Statistics of Burnout as measured by the MBI-GS scales.

	Mean	Standard Deviation	Minimum	Maximum
Emotional Exhaustion (n=305)	20.43	7.15	1	30
Cynicism (n=304)	17.08	8.46	0	30
Professional Efficacy (n=305)	28.36	6.11	8	36

Note. Scores for Emotional Exhaustion and Cynicism can range from 0-30 while scores for Professional Efficacy can range from 0-36. Higher scores on Emotional Exhaustion and Cynicism and lower scores on Professional Efficacy are indicative of burnout.

Table 5

Differences in Emotional Exhaustion Between Groups

Independent Variable	n	Mean	Standard Deviation	*Test of Significance*	Effect Size (*d*)
Role in Restaurant					
Front of house	78	20.91	7.00	$t = 0.57$	0.07
Back of house	221	20.38	7.18		
Restaurant Type					
Low End	140	21.22	7.09	$t = 1.83$	0.21
High End	163	19.71	7.17		
Hours Worked Each Week					
0-20 hours	13	15.62	6.87	$F = 3.87*$	0.04
21-40 hours	104	20.22	7.48		
41-60 hours	115	21.09	6.52		
61+ hours	26	23.23	5.38		
Annual Income					
Less than $10,000	21	19.29	8.34	$F = 0.81$	0.02
$10,000-$19,999	59	21.14	7.06		
$20,000-$29,999	90	20.69	6.88		
$30,000-$39,999	46	20.54	7.46		
$40,000-$54,999	27	20.64	5.60		
$55,000-$69,999	11	23.09	5.91		
$70,000+	4	15.25	4.19		

* $p < .05$, ** $p < .01$.

Note. For the significant difference in means found for Hours Worked Each Week, post-hoc analysis only revealed significant differences between the lowest (0-20 hours) and highest (61+ hours) groups.

Table 6

Differences in Cynicism Between Groups

Independent Variable	n	Mean	Standard Deviation	*Test of Significance*	Effect Size (*d*)
Role in Restaurant					
Front of house	77	17.50	8.66	$t = 0.53$	0.07
Back of house	221	16.91	8.38		
Restaurant Type					
Low End	139	18.53	8.64	$t = 2.79**$	0.32
High End	163	15.84	8.10		
Hours Worked Each Week					
0-20 hours	13	15.69	8.67	$F = 0.23$	0.00
21-40 hours	104	17.31	8.84		
41-60 hours	114	17.66	7.53		
61+ hours	26	17.29	8.08		
Annual Income					
Less than $10,000	21	16.81	7.69	$F = 0.47$	0.01
$10,000-$19,999	59	17.64	8.29		
$20,000-$29,999	90	17.48	8.17		
$30,000-$39,999	46	18.02	8.62		
$40,000-$54,999	26	16.65	8.35		
$55,000-$69,999	11	15.36	7.93		
$70,000+	4	12.25	9.25		

* $p < .05$, ** $p < .01$.

Table 7

Differences in Professional Efficacy Between Groups

Independent Variable	n	Mean	Standard Deviation	*Test of Significance*	Effect Size (*d*)
Role in Restaurant					
Front of house	78	27.89	5.87	*t* = -0.80	0.11
Back of house	221	28.53	6.60		
Restaurant Type					
Low End	140	27.48	6.80	*t* = -2.28*	0.26
High End	163	29.08	5.39		
Hours Worked Each Week					
0-20 hours	13	26.31	9.33	*F* = 2.40	0.02
21-40 hours	104	27.33	6.48		
41-60 hours	115	28.79	5.41		
61+ hours	26	30.12	4.54		
Annual Income					
Less than $10,000	21	26.43	7.72	*F* = 1.22	0.03
$10,000-$19,999	59	27.70	6.96		
$20,000-$29,999	90	28.25	5.30		
$30,000-$39,999	46	28.41	6.06		
$40,000-$54,999	27	29.17	5.87		
$55,000-$69,999	11	29.82	5.00		
$70,000+	4	34.00	1.41		

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

Table 8

Correlations, means, standard deviations, minimum and maximum scores, and alphas for primary study variables.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Depression (PHQ-9)	-											
2. Emotional Exhaustion (MBI)	.52**	-										
3. Cynicism (MBI)	.49**	.65**	-									
4. Professional Efficacy (MBI)	-.25**	-.21**	-.46**	-								
5. Narcissistic Perfectionism	.01	.05	.09	.18**	-							
6. Perfectionistic Concerns	.50**	.43**	-36**	-.24**	.12	-						
7. Perfectionistic Strivings	.25**	.16**	.05	.10	.41**	.58**	-					
8. Coworker Support	-.21**	-.29**	-.41**	.33**	-.12	-.27**	-.05	-				
9. Supervisor Support	-.29**	-.34**	-.47**	.32**	-.03	-.21**	-.11	.33**	-			
10. Total Support	-.30**	-.39**	-.54**	.39**	-.08	-.29**	-.10	.78**	.85**	-		
11. Perpetrating Bullying	.19**	.25**	.29**	-.00	.41**	.15*	.08	-.28**	-.12*	-.23**	-	
12. Experiencing Bullying	.39**	.47**	.41**	-.08	.12	.30**	.14*	-.40**	-.39**	-.48**	.40**	-
Mean	13.5	20.4	17.1	28.4	38.7	60.7	30.9	14.4	14.4	28.7	16.0	19.7
Standard deviation	6.6	7.2	8.5	6.1	10.4	14.4	9.5	3.7	4.4	6.6	6.2	7.7
Minimum	0	1.0	0	8.0	18.0	18.0	10.0	4.0	4.0	8.0	9.0	9.0
Maximum	27.0	30.0	30.0	36.0	68.0	90.0	49.0	20.0	20.0	40.0	41.0	42.0

Table 9

Correlations for background characteristics, depression, burnout, perfectionism, and bullying.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Restaurant Position	-											
2. Restaurant Type	.18**	-										
3. Weekly Hours	.12	.10	-									
4. Annual Income	-.17**	.07	.23**	-								
5. Depression (PHQ)	.20**	.01	.16**	-.19**	-							
6. Emotional Exhaustion (MBI)	-.03	-.10	.19**	.01	.52**	-						
7. Cynicism (MBI)	-.03	-.16**	.03	-.05	.49**	.65**	-					
8. Professional Efficacy (MBI)	.05	.13*	.17*	.15*	-.25**	-.21**	-.46**	-				
9. Narcissistic Perfectionism	-.05	-.03	.09	.17**	.01	.05	.09	.18**	-			
10. Perfectionistic Concerns	.14	.07	.15*	-.20**	.50**	.43**	.36**	-.24**	.12	-		
11. Perfectionistic Strivings	.07	.19**	.25**	.01	.25**	.16*	.05	.10	.41**	.58**	-	
12. Perpetrating Bullying	.04	-.10	.12	.08	.19**	.25**	.29**	-.00	.41**	.15*	.08	-
13. Experiencing Bullying	.06	.05	.20**	.01	.39**	.47**	.41**	-.08	.12	.30**	.14*	.40**

Note. Restaurant positions is dichotomous consisting of FOH and BOH. FOH was coded as 1 and BOH as 2. Restaurant type is also dichotomous and consists of low-end and high-end. Low-end was coded as 1 and high-end as 2.

Table 10

Regression of experiencing bullying, perpetrating bullying, gender, and age to predict depression (n=265) and burnout (n=264).

Antecedents	Depression						
	Standardized Beta	*SE*	*t*	*p*	R^2	*F*	*p*
Step 1							
Age	-.27	.06	-3.92	.00	.09	(2,184)=9.44	.00
Gender	.10	.96	-1.42	.16			
Constant	-	2.05	10.63	.00			
Step 2							
Age	-.25	.06	-3.66	.00	.22	(4,182)=12.55	.00
Gender	-.10	.91	-1.49	.14			
Experiencing Bullying	.31	.06	4.32	.00			
Perpetrating Bullying	.09	.08	1.28	.20			
Constant	-	2.40	6.06	.00			
	Burnout (Emotional Exhaustion)						
Step 1							
Age	-.08	.07	-1.13	.26	.00	(2,184)=1.10	.33
Gender	.08	1.11	1.08	.28			
Constant	-	2.39	8.65	.00			
Step 2							
Age	-.04	.06	-.61	.54	.19	(4,182)=12.53	.00
Gender	.08	1.01	1.19	.24			
Experiencing Bullying	.40	.07	5.64	.00			
Perpetrating Bullying	.11	.09	1.51	.13			
Constant	-	2.68	3.84	.00			

Table 11

Regression of perfectionistic strivings, perfectionistic concerns, gender, and age to predict depression (n=265) and burnout (n=264).

Antecedents	Depression						
	Standardized Beta	*SE*	*t*	*p*	R^2	*F*	*p*
Step 1							
Age	-.27	.06	-3.77	.00	.09	(2,182)=8.70	.00
Gender	-.10	.97	-1.37	.17			
Constant	-	2.08	10.35	.00			
Step 2							
Age	-.10	.06	-1.44	.15	.28	(4,180)=17.39	.00
Gender	-.12	.87	-1.86	.06			
Perfectionistic Concerns	.45	.04	5.59	.00			
Perfectionistic Strivings	.03	.05	.39	.70			
Constant	-	3.10	1.52	.13			

	Burnout (Emotional Exhaustion)						
Step 1							
Age	-.08	.07	-1.03	.30	.01	(2,182)=1.02	.36
Gender	.08	1.12	1.09	.28			
Constant	-	2.41	8.47	.00			
Step 2							
Age	-.09	.07	1.29	.20	.20	(4,180)=11.07	.00
Gender	.05	1.02	.68	.50			
Perfectionistic Concerns	.52	.04	6.09	.00			
Perfectionistic Strivings	-.12	.06	-1.47	.14			
Constant	-	3.63	.96	.38			

Table 12

Interaction of perfectionistic concerns and experiencing bullying to predict depression (n=263) and burnout (n=262).

Antecedents	Depression						
	Coefficient	*SE*	*t*	*p*	*R²*	*F*	*p*
Perfectionistic Concerns	.19	.06	3.19	.00	.31	(3,259)=38.30	.00
Experiencing Bullying	.23	.20	1.20	.23			
Concerns X Bullying	-.0002	.003	-.05	.96	.00	(1,259)=.003	.96
Constant	-2.37	3.66	-.65	.52			
	Burnout (Emotional Exhaustion)						
Perfectionistic Concerns	.27	.06	4.27	.00	.31	(3,258)=37.96	.00
Experiencing Bullying	.73	.21	3.50	.00			
Concerns X Bullying	-.01	.003	-2.02	.04	.01	(1,257)=4.10	.004
Constant	-2.18	3.94	-.56	.58			

Table 13

The interaction of experiencing bullying and different forms of social support to predict depression (n=278).

Antecedents	Depression						
	Coefficient	*SE*	*t*	*p*	*R²*	*F*	*p*
Experiencing Bullying	.19	.19	.98	.33	.17	(3,274)=18.91	.00
Total Support	-.20	.15	-1.36	.17			
Interaction	.00	.01	.49	.63	.00	(1,274)=.24	.63
Constant	14.07	4.61	3.05	.00			
Experiencing Bullying	.19	.18	1.02	.31	.16	(3,274)=17.34	.00
Coworker Support	-.28	.28	-.98	.33			
Interaction	.01	.01	.75	.45	.00	(1,274)=.57	.45
Constant	11.35	4.31	2.64	.01			
Experiencing Bullying	.25	.15	1.65	.10	.18	(3,274)=19.51	.00
Supervisor Support	-.28	.23	-1.22	.22			
Interaction	.00	.01	.25	.81	.00	(1,274)=.06	.81
Constant	12.17	3.62	3.36	.00			

Table 14

The interaction of experiencing bullying and different forms of social support to predict burnout (n=275).

Antecedents	Burnout (Emotional Exhaustion)						
	Coefficient	*SE*	*t*	*p*	R^2	*F*	*p*
Experiencing Bullying	-.01	.19	-.03	.98	.25	(3,271)=30.29	.00
Total Support	-.45	.15	-2.95	.00			
Interaction	.01	.01	1.84	.07	.01	(1,271)=3.40	.07
Constant	26.75	4.65	5.75	.00			
Experiencing Bullying	.10	.19	.55	.58	.23	(3,271)=27.11	.00
Coworker Support	-.60	.29	-2.08	.04			
Interaction	.02	.01	1.54	.12	.01	(1,271)=2.39	.12
Constant	21.71	4.40	4.93	.00			
Experiencing Bullying	.10	.19	.55	.58	.23	(3,271)=27.11	.00
Coworker Support	-.60	.29	-2.08	.04			
Interaction	.02	.01	1.54	.12	.01	(1,271)=2.3s9	.12
Constant	21.71	4.40	4.93	.00			

Table 15

The interaction of perfectionistic concerns and different forms of social support to predict burnout (n=262).

Antecedents	Burnout (Emotional Exhaustion)						
	Coefficient	*SE*	*t*	*p*	*R*^{2}	*F*	*p*
Perfectionistic Concerns	.20	.13	1.55	.12	.21	(3,258)=22.55	.00
Coworker Support	-.25	.53	-.46	.65			
Interaction	.00	.01	-.11	.91	.00	(1,258)=.01	.91
Constant	12.80	8.46	1.51	.13			
Perfectionistic Concerns	.02	.09	.22	.83	.25	(3,258)=29.18	.00
Supervisor Support	-1.09	.38	-2.83	.01			
Interaction	.01	.01	1.84	.07	.01	(1,258)=3.40	.07
Constant	25.64	6.07	4.22	.00			
Perfectionistic Concerns	.13	-.13	-.13	.90	.25	(3,258)=29.30	.00
Total Support	-.67	.27	-2.49	.01			
Interaction	.00	.00	1.51	.13	.01	(1,258)=2.27	.13
Constant	30.34	8.50	3.57	.00			

Table 16

The interaction of perfectionistic concerns and different forms of social support to predict depression (ns=262-265).

Antecedents	Depression						
	Coefficient	*SE*	*t*	*p*	R^2	*F*	*p*
Perfectionistic Concerns	.19	.12	1.61	.11	.28	(3,261)=33.17	.00
Total Support	-.20	.25	-.81	.42			
Interaction	.00	.00	.11	.91	.00	(1,261)=.01	.91
Constant	7.18	7.82	.92	.36			
Perfectionistic Concerns	.30	.12	2.55	.01	.25	(3,261)=29.61	.00
Coworker Support	.21	.48	.43	.67			
Interaction	-.01	.01	-.72	.47	.00	(1,261)=.52	.47
Constant	-2.84	7.67	-.37	.71			
Perfectionistic Concerns	.17	.08	2.02	.04	.28	(3,261)=34.47	.00
Supervisor Support	-.44	.35	-1.26	.21			
Interaction	.00	.00	.46	.65	.00	(1,261)=.21	.65
Constant	7.53	5.56	1.35	.18			

Table 17

Three-way interaction of perfectionistic concerns, experiencing bullying, and supervisor support to predict depression (n=262).

Antecedents	Depression						
	Coefficient	SE	t	p	R^2	F	p
Perfectionistic Concerns	.62	.21	2.93	.00	.34	(7,254)=18.93	.00
Victim Bullying	1.83	.65	2.84	.00			
Concerns X Bullying	-.03	.01	-2.65	.01			
Supervisor Support	1.84	.87	2.10	.04			
Concerns X Support	-.03	.01	-2.36	.02			
Bullying X Support	-.12	.04	-2.77	.01			
Concerns X Bullying X Support	.002	.0007	2.87	.00	.02	(1,254)=8.24	.00
Constant	-26.68	13.85	-1.93	.06			

Table 18

Three-way interaction of perfectionistic concerns, experiencing bullying, and supervisor support to predict burnout (n=261).

Antecedents	Burnout (Emotional Exhaustion)						
	Coefficient	*SE*	*t*	*p*	R^2	*F*	*p*
Perfectionistic Concerns	.29	.23	1.28	.20	.34	(7,253)=18.36	.00
Victim Bullying	.95	.69	1.38	.17			
Concerns X Bullying	-.01	.01	-1.26	.21			
Supervisor Support	-.15	.93	-.16	.87			
Concerns X Support	-.01	.01	-.34	.73			
Bullying X Support	-.03	.05	-.62	.53			
Concerns X Bullying X Support	.00	.00	.88	.38	.00	(1,253)=.77	.38
Constant	3.93	14.80	.27	.79			
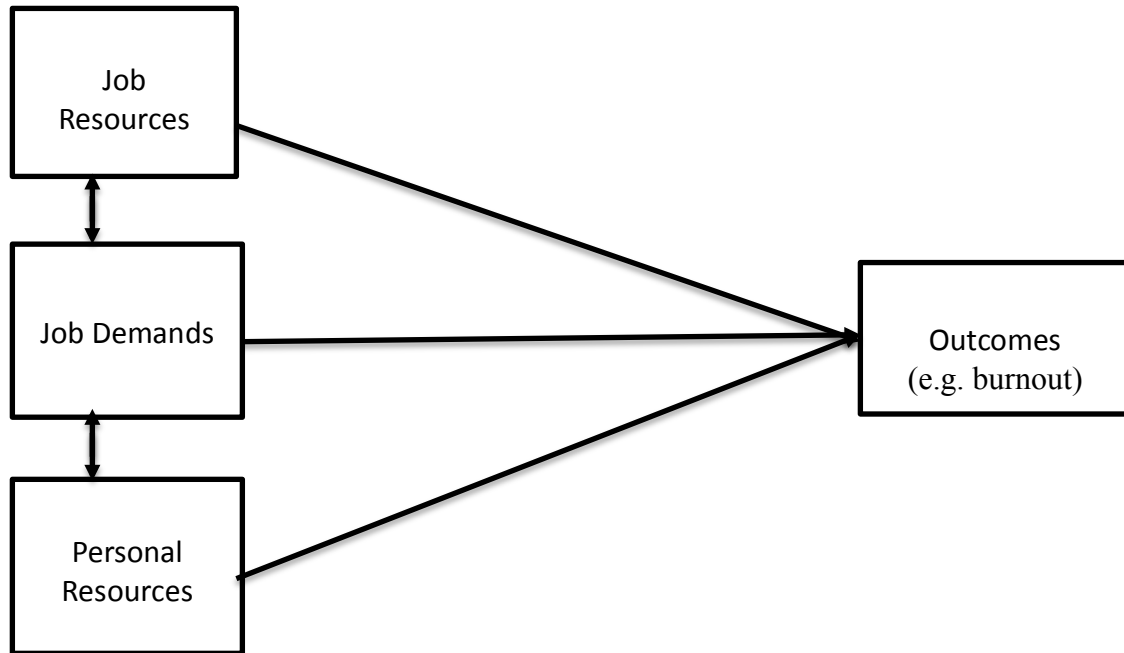
Figure 1. The overall relationships between job demands, job resources, and personal resources.
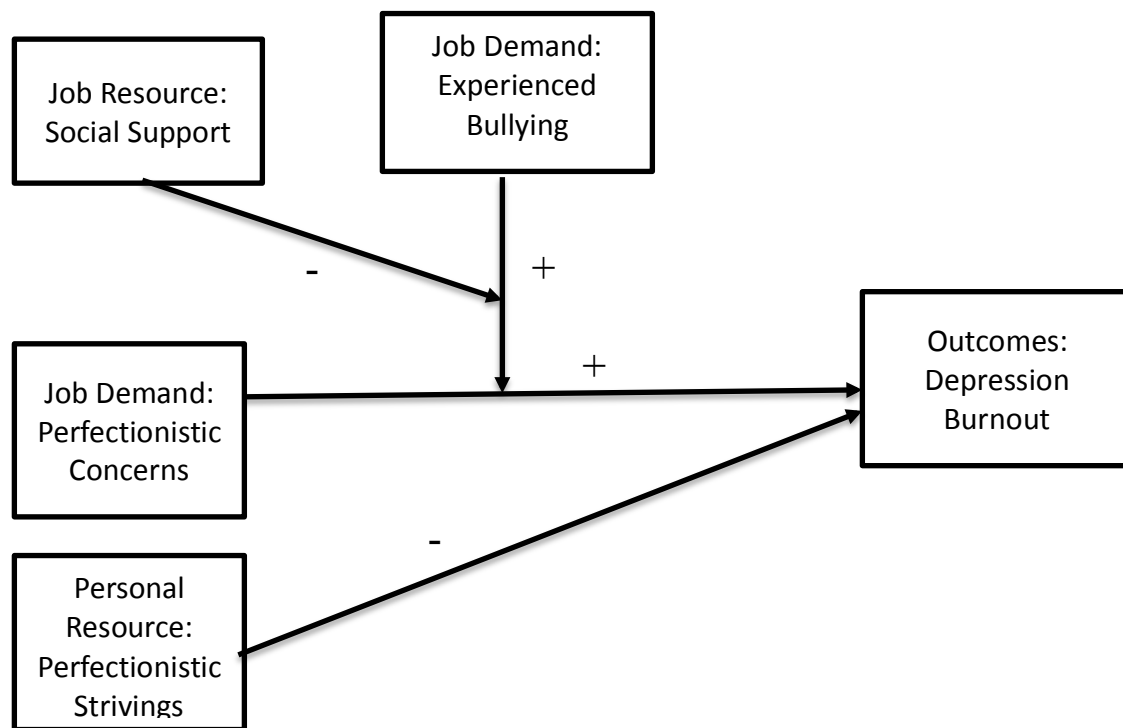
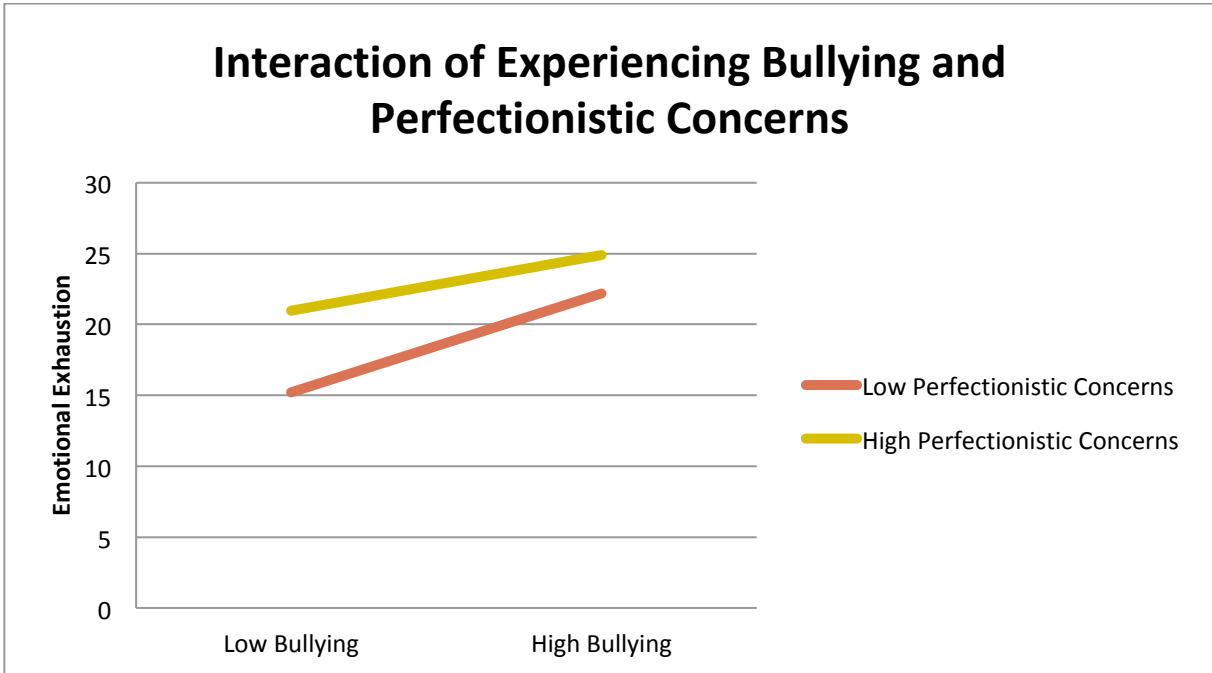*Figure 2.* The overall model of proposed relationships between predictors, moderators, and outcomes

Figure 3. The interaction of experiencing bullying and perfectionistic concerns predicting emotional exhaustion.
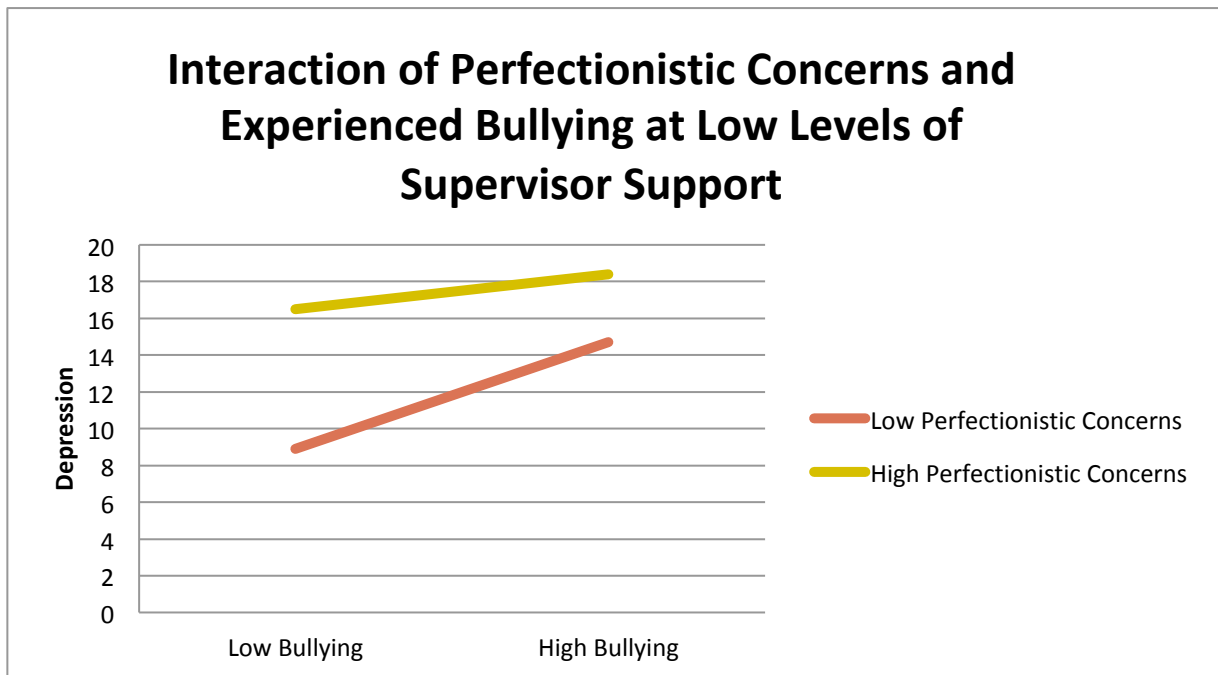

Figure 4. The three-way interaction of supervisor support, perfectionistic concerns, and experiencing bullying to predict depression at low levels of supervisor support.
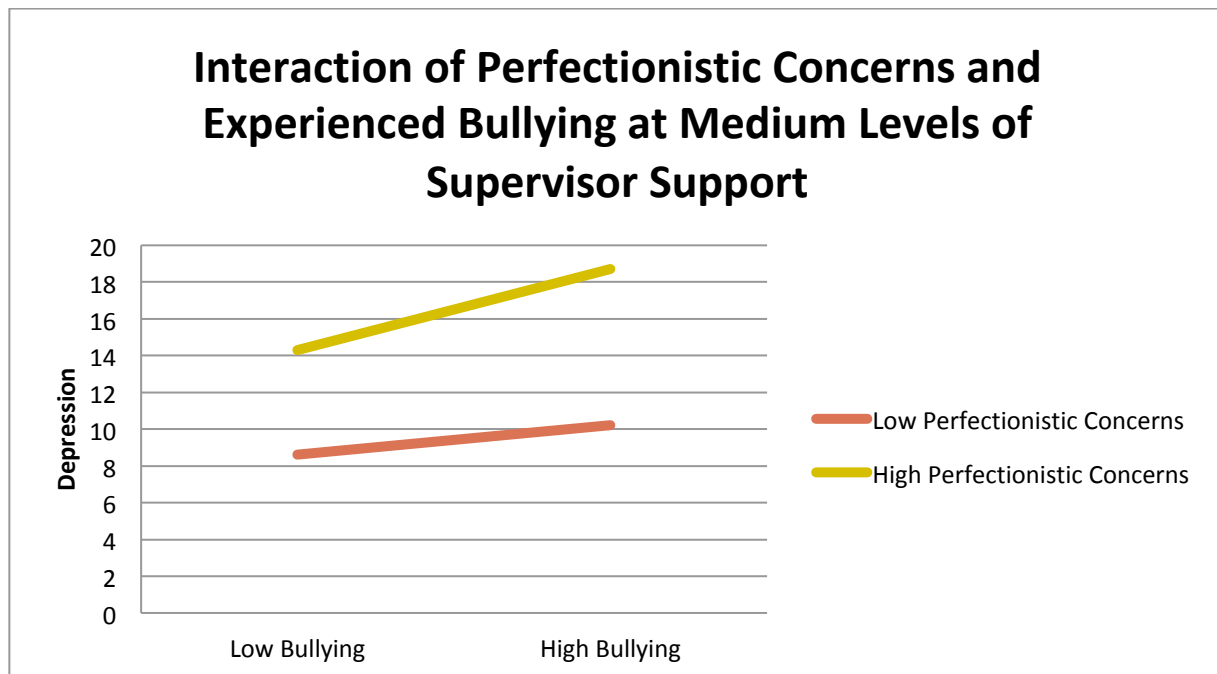
Figure 5. The three-way interaction of supervisor support, perfectionistic concerns, and experiencing bullying to predict depression at medium levels of supervisor support.
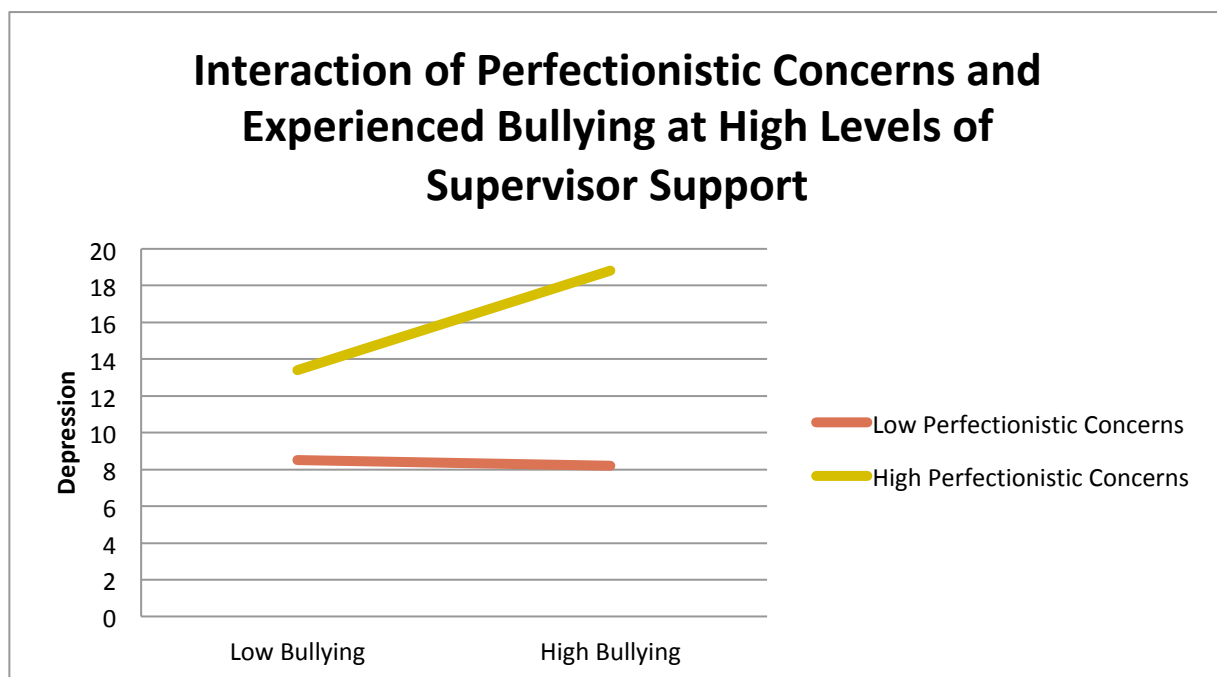

Figure 6. The three-way interaction of supervisor support, perfectionistic concerns, and experiencing bullying to predict depression at high levels of supervisor support.