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Office Clutter and Its Influence:
Assessing Engagement, Satisfaction, Tension, Stress, and Emotional Exhaustion

A Thesis
Presented in
Partial Fulfillment of the
Requirements for the Degree of
Master of Science

By
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June, 2019

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Biography

The author was born in Beloit, Wisconsin on February 16, 1996. She graduated from Boylan Catholic High School and received her Bachelor of Arts degree in Psychology from DePaul University in 2018. She has undergraduate and graduate research experience in social, community, and industrial/organizational psychology, is an author of an article in the Journal of Addiction Research, and has presented her studies at over 30 conferences nationwide.

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Abstract

Psychological home is a relatively new topic within the field of psychology, defined as a person's need to self-identify with a physical environment. *Clutter*, defined as the over-accumulation of material items, is even less studied. Previous research has shown that clutter in the home may negatively influence a person's well-being, but this tendency has not been investigated in workplace settings (Crum & Ferrari, 2019a; Crum & Ferrari, 2019b; Roster, Ferrari & Jurkat, 2016). Within workplace research, there is a construct called *work-related well-being* (Narainsamy & Van Der Westhuizen, 2013; Rothman, 2008), consisting of job satisfaction, employee engagement, burnout, and occupational stress. Previous research has shown that job-related tension may negatively impact job satisfaction (Bateman & Strasser, 1983). The present study will address whether clutter in the office negatively impacts work-place well-being, using a crowd-sourced sample of adults ($n = 290$) who work full-time within the United States in office and home settings. It was hypothesized that office clutter would negatively impact job satisfaction and employee engagement, positively impact emotional exhaustion and occupational stress, and job-related tension was expected to moderate the relationship between office clutter and job satisfaction. Multiple linear regressions and a moderated regression were used to analyze the data and test the hypotheses. This present study benefited both scientists and practitioners by helping them understand the possible benefits of companies initiating "clean desk policies" and how personal materials and spending habits may reflect workplace behaviors or impact work outcomes.

Chapter I: Introduction

Clutter in Psychology

Clutter is a topic that has recently taken over the world by storm, with popular television shows and books inspiring millions of people to declutter and tidy up their personal spaces (*The Life-Changing Magic of Tidying Up* by Marie Kondo). This trend has extended into the corporate world as well, with organizations initiating “clean desk policies” and digitalizing data that used to be in paper format (Parviainen, Tihinen, Kääriäinen, & Teppola, 2017). Clutter may seem innocuous, but it may have more of an impact upon employee performance than previously thought.

According to the National Association of Professional Organizers (NAPO) (2009), about 27% of consumers stated that they feel disorganized while at work and believed that they would save over an hour a day in productivity if their workspaces were more organized (as cited in Roster & Ferrari, 2019). A separate study by the Kelton Research for Office Max found that over half of participants (53%) believed that their motivation was negatively affected by their own workspace disorganization (as cited in Roster & Ferrari, 2019). A fifth of the participants also stated that clutter has impacted their relationships with peers and coworkers and 53% admitted that they have negative impressions of their coworkers with messy workspaces (as cited in Roster & Ferrari, 2019). Despite these concerning statistics and the potential consequences of office clutter, few (if any) published psychological studies have focused on supporting or challenging the information deduced from these survey results.

Office clutter research may inform scientists and practitioners of any links between personal spending habits and organizational spending, since someone who is prone to overspending in their life outside of work may also use materials more wastefully or budget work-related finances more frivolously. This research may be especially useful to organizations, since keeping costs low is typically an integral component to keeping the business running at a profit. Office clutter is an imperative topic to study, since digital clutter in the workplace is a pressing issue with technology being so common and advanced. On the surface, clutter may seem like a personal problem, but it is pervasive and might impact the organization's environment as a whole. More research on the antecedents to clutter in the workplace would be useful, since clutter may also pose a health risk. An abundance of papers and items may be a fire hazard and increase the number of work injuries due to slips and falls. The impact of clutter may vary depending on the individual and the situation, but it may influence interpersonal relationships if it shapes the way that people perceive their coworkers or employees. This present study seeks to understand how office clutter may impact some of the most crucial workplace outcomes related to performance and quality personnel. In order to best anticipate the effect of clutter in the workplace, a solid foundational knowledge of clutter in the home is necessary.

Clutter in a person's living space is part of a larger topic known as "*psychological home*," conceptualized by Roster, Ferrari, and Jurkat (2016) as an individual's desire to self-identify with their home and physical environment. As an emerging topic that has remained relatively untouched, there are a variety of

aspects to explore, including clutter in the home. Clutter is defined as the over-accumulation of material items that creates a chaotic and disorderly space (Roster, Ferrari, & Jurkat, 2016). It is deeply personal so the threshold for when items become clutter or when clutter becomes harmful is dependent on the person. Clutter in any space is not limited to just one person's belongings, it may include a roommate or family member's items as well; it may include possessions that are either commonly used or unused.

However, clutter is not to be confused with hoarding, which is a psychological disorder recognized by the DSM-5 and ICD-10. Hoarding is a type of obsessive-compulsive disorder that involves the over-accumulation of the same types of items, often of little or no worth to the average person, and leading to unsanitary or dangerous living spaces (American Psychological Association, 2013). Clutter is not as severe as hoarding and often involves a wide breadth of items; although it may lead to a disorderly space, it does not have a direct connection to hygiene. Clutter may also appear outside of the home, particularly in office spaces. It may even act as a physical stressor in work environments (Roster & Ferrari, 2019). Despite the prevalence of clutter in the home and office, not much psychological research has been done on the topic, with few articles on home clutter (Crum & Ferrari, 2019a; Crum & Ferrari, 2019b; Roster, Ferrari, & Jurkat, 2016) and only one published article related to office clutter (Roster & Ferrari, 2019).

Clutter's Negative Side

The research into “psychological home” and clutter began when Joseph Ferrari and colleagues decided to transition from researching decisional procrastination to learning more about possible physical manifestations of delayed decision making. Roster, Ferrari, and Jurkat (2016) believed that clutter was a result of decisional procrastination, meaning that a person developed clutter because they procrastinated on deciding which items to keep or remove. Roster and colleagues (2016) hypothesized that an over-accumulation of items may actually impede an individual’s well-being and their connection with their home environment because of the stress and negative stigma associated with clutter.

In order to test this, Roster, Ferrari, and Jurkat (2016) polled members of the *Institute for Challenging Disorganization* (ICD). ICD consists of professional organizers who assist people with mild to severe disorganization. The ICD “coaches” work directly in client’s homes to remove the clutter and address underlying factors that may have caused the disorganization. With the data from ICD, Roster et al. (2016) found that self-extension tendencies regarding possessions (a person’s need to self-identify with their material possessions), and place attachment (how emotionally dependent a person is on their physical location) had a positive relationship with psychological home (a person’s desire to self-identify with their home and physical environment), while clutter had a negative influence on psychological home and sense of well-being (Roster et al., 2016). These findings are the first to connect physical clutter with a person’s health and well-being. It provides support for the hypothesis that material items may have a profound impact on a person and their reactions to other stressors.

Since Roster and colleagues (2016) found that clutter may reduce well-being, Crum and Ferrari (2019a) expanded on this research by analyzing whether clutter may impact a person's overall life satisfaction. Crum and Ferrari (2019a) explored whether personal demographics, such as race, could play a role in how strongly clutter affects an individual. To understand the effects of clutter in ethnically diverse populations, Crum and Ferrari (2019a) surveyed a sample of adult women of color ($n = 99$; M age = 50.33 years) who responded to measures of psychological home, clutter, place attachment, and life satisfaction.

Results showed that psychological home was a significant predictor of life satisfaction. Although place attachment and clutter did not moderate the relationship between psychological home and life satisfaction, clutter did mediate the relationship (Crum & Ferrari, 2019a). In a separate study, Crum and Ferrari (2019b) analyzed the effects of clutter in the home again. This time, they tested the effects of clutter and person versus thing orientation on psychological home in a sample of young adults (242 women, 82 men; M age = 19 years old). Person versus thing orientation (whether a person tends to value the people or the possessions in their life more), also was a significant predictor of psychological home. Specifically, people are more influential to one's self-identity and conceptualization of home than possessions. Results also found that the perception of clutter was a significant predictor of psychological home; people who were less affected by clutter reported a higher sense of psychological home.

Despite the small body of literature on clutter in the home, Roster and Ferrari (2019) believed that the negative effects of clutter would also occur in

work settings. In the first study to look at office clutter, Roster and Ferrari (2019) crowd-sourced 290 employed adults (109 females; 177 males; *M* age range = 25 - 35) and revealed that having a heavy workload at a quick pace was positively related to emotional exhaustion. The emotional exhaustion would then deplete energy and make decisional delays more likely. This decisional procrastination then predicted the negative impact of office clutter. Roster and Ferrari (2019) also claimed that the relationship between workload and office clutter is partially mediated by the effects of emotional exhaustion and its consequential impact on decisional delay, as related to clutter.

This study by Roster and Ferrari (2019) was the first and only published article to directly analyze clutter in the office, suggesting that there is still an incredible amount of unexplored territory on these concepts. If clutter in the home may have an influence on a person's general well-being, then it may be possible that office clutter affects work outcomes. People spend a large amount of time at work and in their organization, so their well-being is not just dependent on their home environments, but their work life as well. Organizations suffer when their employees are unhealthy, unmotivated, or performing at a lower level. Identifying a relationship between office clutter and decreased well-being can potentially inform practitioners of how to approach the issue of clutter and reduce their impact on workplace outcomes that may affect profit, employee motivation, the buildup of slack/extraneous resources, interpersonal conflict, attitudes about work, and employee behavior. An individual's work-related well-being not only impacts their success as an employee, but it may influence their home life and

health as well. Higher levels of stress or emotional exhaustion may directly harm a person's health and make them more susceptible to illnesses, which will also impact absenteeism and turnover (House, Wells, Landerman, McMichael, & Kaplan, 1979; Tsutsumi, Kabaya, Kario, & Ishikawa, 2009).

Work-Related Well-Being

With workplace outcomes garnering a significant amount of attention in news and media, companies are constantly searching for ways to improve morale, boost productivity, and reduce unwanted behaviors such as absenteeism, turnover, and deviant actions. In an attempt to better understand what motivates employees to work and what influences certain work-related outcomes, Hackman and Oldham (1976) theorized that there are five core job characteristics: skill variety, task identity, task significance, autonomy, and feedback. These characteristics may influence whether the work is meaningful, whether the individual has knowledge of the outcomes, and whether they feel responsible for the outcomes (Hackman & Oldham, 1976). Together, these variables may determine work outcomes, such as job satisfaction, absenteeism, or motivation (Hackman & Oldham, 1976). Many more recent work-related models have since included new variables or constructs that may also influence occupational outcomes.

Employees' well-being, for instance, is particularly important to address in corporate settings. In 2002, Warr created a model for the construct of work-related well-being. The model consisted of a pleasure-displeasure dimension, anxiety-comfort dimension, and enthusiasm-depression dimension. Warr (2002) also explained that there might be a fourth dimension that encompasses fatigue-

vigor. Warr's (2002) model is the first validated model on work-related well-being and identified several underlying factors that made up the construct. Prior to the work by Warr (2002), work-related well-being was not actually used in research since scientists did not hypothesize that personal well-being and work-related well-being would be separate constructs.

Rothmann (2008) expanded upon Warr's conceptualization and developed a four-part model of work-related well-being, which includes job satisfaction, engagement, stress, and burnout. Even though some of these constructs overlap, Rothmann (2008) decided that they are separate enough from each other that they may accurately represent Warr's different dimensions. In Rothmann's model, job satisfaction represents the pleasure-displeasure dimension, stress represents the anxiety-comfort dimension, burnout represents fatigue-vigor, and engagement represents the enthusiasm-depression dimension (Rothmann, 2008). Rothmann (2008) tested his model on a sample of police officers in South Africa ($n = 677$). Results supported his model of work-related well-being; stress and burnout negatively affected well-being in the workplace while engagement and job satisfaction were found to positively impact it. These results showed that job satisfaction, employee engagement, occupational stress, and burnout combine as first order factors to create the construct of work-related well-being.

Other researchers have further tested Rothmann's four-factor model of work-related well-being in a medical setting with a sample of medical laboratory staff in order to see if the model is externally valid (Narainsamy & Van Der Westhuizen, 2013). Structural equation modeling was used to test the model,

which once again found support for the four elements of the construct that Rothmann (2008) had conceptualized as separate, but related units. Narainsamy and Van Der Westhuizen (2013) discovered that out of the four variables that define work-related well-being, job satisfaction, had the most impact on a person's sense of work well-being while engagement had the least influence.

With the model having been validated several times, Jackson, Rothmann, and van de Vijver (2006) contributed to the understanding of work-related well-being by analyzing other possible variables that may relate to the four that define the construct – job satisfaction, employee engagement, stress, and burnout. Work-related well-being was measured in a sample of educators in South Africa ($n = 1177$). Jackson et al. (2006) found that burnout actually mediates the relationship between job demands and ill-health. Employee engagement was also found to mediate the relationship between job resources and organizational commitment (Jackson, Rothmann, & van de Vijver, 2006). This study emphasized the importance of studying work-related well-being because the factors that make up the construct may have a significant impact on an employee's ability to work and their positive behavior within their organization.

In an effort to actually utilize this construct and improve work-related well-being and job performance in mid-level managers working an office job ($n = 152$), Shonin, Gordon, Dunn, Singh, and Griffiths (2014) tested the impact of a meditation intervention. Meditation Awareness Training (MAT), which includes eight 90-minute workshops and a CD of guided daily meditations, was given to employees for eight weeks, after which they were tested against a control group;

results showed that the meditation training increased work-related well-being as well as performance. According to Shonin et al. (2014), these results indicate that meditation may be used as an effective, low-cost intervention in order to increase employee well-being, organizational commitment, and productivity. In fact, it may even be more effective than other methods such as goal-based working styles (Shonin et al., 2014). This article provided evidence that work-related well-being may be improved and that meditation or intervention programs to help employee well-being are a worthy investment for an organization.

Engagement. Employee engagement is one of the four factors within the construct of work-related well-being; it is a broad construct that encompasses a variety of attitudes and behaviors regarding interest and attention at work (Kompaso & Sridevi, 2010). Oftentimes, if employees are not engaged at work, then that is a response to some sort of mismanagement. Engagement was founded from concepts such as employee commitment, organizational citizenship behavior, and job satisfaction; however, it is much broader in scope (Kompaso & Sridevi, 2010). According to Kompaso and Sridevi (2010), job engagement is a strong predictor of good work performance within an organization. Engaged employees are assets to an organization; they are emotionally attached to their employer, are highly committed and involved at work, are enthusiastic about the success of the company, are more likely to meet customer needs, and go beyond what is contractually mandated of them (Kompaso & Sridevi, 2010; Roberts & Davenport, 2002).

Attridge (2009) attempted to break down employee engagement further by defining it as a three-dimensional concept; the three factors include a physical component, emotional component, and a cognitive one. The article reviewed literature from business and academic sources to find that employee engagement may be improved through organizational behavioral health programs that improve communication, resource availability, working conditions, job design, leadership, and overall culture, such as creating a more supportive environment that encourages collaboration rather than competition. Data about engagement may also be used to identify issues and create intervention programs in order to retain employees and increase financial success. One study from Towers Perrin (2005) from over 85,000 employees worldwide, found about 24% were disengaged, 62% were moderately engaged, and only 14% of all workers were considered highly engaged. This statistic emphasizes the dire state of employee engagement; with only 14% of employees feeling highly engaged, there is much room for improvement and change upon the organization's part.

In order to better understand what type of environment fosters job engagement and how to increase it, the Great Place to Work Institute (2017) conducted a study in which they found that employees enjoy working in environments where they are prideful of their work, like the people that they work with, and trust the people that they take orders from. These environments generally have good communication and are transparent in nature. Internal communication has been shown to improve trust between managers and employees. In a qualitative study where several high level executives were

interviewed, Mishra and colleagues (2014) found that all of the executives claimed there was more job engagement in their organizations because internal communication was effective. An engaging workplace would fully utilize the employees' abilities, challenge them, and instill them with a sense of accomplishment (Roberts & Davenport, 2002).

However, the environment is not the only factor that may affect a person's sense of engagement; it is impacted by other workplace factors as well. Shuck, Reio Jr., and Rocco's (2010) correlational study found that affective commitment, job fit, and psychological climate were all significantly correlated with job engagement. Job engagement was also positively correlated with discretionary effort at work and negatively correlated with intention to turnover. Engaged employees have about 27% less absenteeism, which saves organizations millions a year in lost productivity. Employees who are engaged with their job also tend to stay with their company longer than others who are not engaged, which reduces turnover and saves companies exponentially in recruitment and retraining costs. Not only does the performance of engaged employees affect the organization, but it also positively affects customers and coworkers. Shuck, Reio Jr, and Rocco (2010) also found evidence for a direct link between job engagement and organizational profit; having a high number of engaged employees has been shown to have a positive correlation with higher profit earnings for the company.

Taken together, these studies showed the effect that job engagement may have on other variables such as job satisfaction and intention to turnover, other researchers want to understand what motivates employees to be engaged. Fairlie

(2011) stated that meaningful work is severely underrepresented in measures of work characteristics and current theories and models and believed that it might have a strong link to work outcomes such as employee engagement; in order to remedy this, Fairlie sought to demonstrate the value of meaningful work in organizational development practices by finding correlates and predictors between meaningful work and characteristics such as burnout, turnover, job engagement, job satisfaction, and organizational commitment. He found that the highest mean correlation was between meaningful work and total engagement. Meaningful work was also the strongest predictor for job engagement, accounting for 16 percent of the total variance in engagement scores. This study is necessary in understanding what motivates employees to do more than what they are asked of; engagement is something that must be gained.

Although Fairlie (2011) analyzed the influence of meaningful work on variables such as engagement and burnout, his study did not focus on the relationship that they have with each other. Instead, Schaufeli and Bakker (2004) filled this gap in the literature by testing a model in which burnout and engagement have different predictors and consequences. Their study showed that burnout and engagement had a negative relationship, with burnout being predicted by job demands as well as lack of job resources while engagement is mostly predicted by the latter. Although engagement was found to be related to turnover intention, the consequences of burnout were more serious; Schaufeli and Bakker (2004)'s results showed that burnout was not only linked to turnover intention, but employee health problems also.

Despite all the research related to employee engagement and the many related variables, employee engagement has never been examined in conjunction with office clutter. Researching this connection is a critical next step, considering the powerful impact that employee engagement may have on organizational commitment, turnover intention, job satisfaction, and organizational profit. If office clutter is found to be related to employee engagement, then addressing the impact of clutter might be a physical solution for practitioners to improve complicated work outcomes.

Burnout and Emotional Exhaustion. The link between engagement and burnout found by Schaufeli and Bakker (2004) is not surprising, considering that they are both variables under the construct of work-related well-being (Rothmann, 2008). Burnout, which is a state that encompasses emotional exhaustion as well as cynicism (Maslach & Jackson, Leiter, Schaufeli, & Schwab, 1986), was originally thought to only exist in the service industry; however, it later became clear that burnout may occur within employees of various industries (Schaufeli & Bakker, 2004). The main element to burnout syndrome is emotional exhaustion – emotional resources are depleted until the employee is unable to give anymore of themselves (Maslach & Jackson, 1981).

Burnout (and emotional exhaustion in particular) are necessary components of work-related well-being because they may directly impact an employee's health (Schaufeli & Bakker, 2004). Emotional exhaustion may even lead to colds, headaches, problems with sleep, depression, and gastro-intestinal issues (Belcastro, 1982; Wright & Cropanzano, 1998). Not only is emotional

exhaustion a factor within work-related well-being, it is also heavily related to other workplace outcomes. A study done in the late 1990's found that although there was no direct relationship between emotional exhaustion and job satisfaction, emotional exhaustion did predict voluntary turnover and job performance, including with positive and negative affect controlled for (Wright & Cropanzano, 1998). This study extends Schaufeli and Bakker's (2004) findings, indicating that a person's emotional state may have a profound impact on their overall performance within an organization. As evidenced by this study, emotional exhaustion has grave implications for both the quality of work and for the success of an organization (Cordes & Dougherty, 1993; Halbesleben & Bowler, 2007; Jackson & Maslach, 1982; Kahill, 1988; Wright & Copanzano, 1998). However, a separate study suggests that motivation may actually mediate the relationship between emotional exhaustion and job performance (Halbesleben & Bowler, 2007).

Emotional exhaustion may also impact a person's perception of justice (Cole, Bernerth, Walter, & Holt, 2010). A study analyzing the relationship between organizational justice, emotional exhaustion, and employee withdrawal found that an individual's perceptions of distributive and interpersonal justice are negatively related to emotional exhaustion, meaning that the more emotionally drained a person is, the less likely they are to feel as though they are being treated fairly in regards to allocation of resources and through personal interactions (Cole et al., 2010).

In addition to organizational justice, emotional exhaustion was also negatively related to organizational commitment, prompting the employees to emotionally withdraw from their employer (Cole et al., 2010; McManus, Winder, & Gordon, 2002). Perceived lack of support and emotional exhaustion has also been found to be predictive of absences at work, particularly those that last more than four days (Bekker, Croon, & Bressers, 2005; Firth & Britton, 1989). These issues become much more serious when the emotionally exhausted employees are in positions of power over other individuals. Two separate studies exploring police officers and nursing home staff found that emotional exhaustion strongly influenced aggressive behavior and the use of violence while at work (Evers, Tomic, & Brouwers, 2002; Kop, Euwema, & Schaufeli, 1999). These employees are in positions of authority over other individuals, allowing them to lash out without immediate consequences, often as a way to release their own frustrations (Evers, Tomic, & Brouwers, 2002; Kop, Euwema, & Schaufeli, 1999).

While these studies explain the negative consequences that may arise from employees feeling emotionally exhausted, knowing what predicts high levels of exhaustion may be the key to reducing it. Boles, Johnston, and Hair, Jr. (1997) were intrigued by the possible impact of a person's home life on work outcomes, specifically emotional exhaustion. With family compositions changing in the United States, there has been a departure from the traditional family and there are more single parents and working mothers (Keilman, 1988; Nomaguchi, 2009). Boles and colleagues (1997) found that role conflict and work-family conflict, which arises from a lack of balance between a person's work and home life, are

positively related to emotional exhaustion. In a sample of over 1,000 workers within the human service industry, Maslach and Jackson (1981) found that emotional exhaustion varied by sex and marital status. Specifically, females scored higher than males and single and divorced individuals were also more susceptible than individuals who were married. Different levels of emotional exhaustion were also due to a mix of interpersonal relationship conflicts, the work itself, and personal characteristics such as promotion opportunity, motivating potential of the task, and rule inflexibility (Gaines & Jermier, 1983). The strongest predictor of emotional exhaustion frequency was promotion opportunity; it was also the only significant predictor of emotional exhaustion intensity (Gaines & Jermier, 1983). A 2002 longitudinal study found reciprocal causal links between occupational stress and emotional exhaustion, meaning that high levels of stress caused emotional exhaustion and high levels of emotional exhaustion also cause stress (McManus, Winder, & Gordon, 2002).

Taken together, emotional exhaustion and burnout are important to address in employees. Healthy employees are better performers and more satisfied with their work, often experiencing less stress and feeling more committed to their organizations. As an antecedent to job performance and physical health, it is beneficial to reduce emotional exhaustion as much as possible for employees. Therefore, finding links between office clutter and emotional exhaustion would be a beneficial step forward for organizations to learn how to improve exhaustion levels within their workers.

Occupational Stress. With research support for links between occupational stress and emotional exhaustion (McManus, Winder, & Gordon, 2002), it is no surprise that stress is linked with negative health outcomes. Although job stress may be positive because it might motivate employees and encourage them to overcome challenges, it may be considered a modern “epidemic”, of sorts. According to P. Rosch (1991), the president of the American Institute of Stress, stress may lead to a decline in health and ultimately, a decline in work ability, as evidenced by indicators such as workers compensation claims, absenteeism, and loss of jobs. Spielberger, Vagg, and Wasala (2003) suggest that the two main causes of work stress are job pressures and lack of support within the organization.

There are two well-known models regarding stress, the effort-reward model and demand-control model (Cho, Kim, Change, Fiedler, Koh, Crabtree, Kang, Kim, & Choi, 2008). The effort-reward model, which is one of the newer stress models, is drawn from March and Simon’s (1958) theory of organizational equilibrium and incorporates the idea of cost and gain. March and Simon’s (1958) theory suggests that as long as an organization provides the employee with as much incentive to stay as the amount of effort that they input into the organization, then they will remain at the organization. Cho and colleague’s (2008) effort-reward model states that when there is an imbalance such as high effort and low reward, the employee may be more affected by work stress. This imbalance may lead to the employee feeling as though they are treated unjustly or that they are extending too much effort, which ultimately exacerbates the feelings

and consequences of stress (Cho et al., 2008). One of the most common occupational stress models is the job demand-control model – it suggests that employees who face increased psychological demands at work will experience more strain, feel less in control of their work, and are at more risk of becoming ill (Tsutsumi, Kabaya, Kario, & Ishikawa, 2009). Most studies that support this model have used coronary heart disease as the possible health outcome. One specific study found that occupational stress may actually increase health issues such as ulcers, self-reported angina, hypertension, and heart disease risk factors, as well as exacerbate the dangerous effects of noxious chemicals that factory workers may be exposed to (House, Wells, Landerman, McMichael, & Kaplan, 1979). Stress may affect other aspects of health as well, such as risk of stroke. A study found that occupational stress may increase the number of strokes two-fold in men, if their stress levels are high; surprisingly, the risk of stroke was not affected by stress in women (Tsutsumi, Kabaya, Kario, & Ishikawa, 2009). These results suggest that the consequences of stress and strain may vary by gender or possibly other demographics.

The effects of stress extend beyond the physical ailments, however. Recent studies have taken an interest in trying to understand the mental and emotional impact of occupational stress. High levels of stress are associated with mental disorders such as depression and anxiety, even in young and previously healthy individuals (Jamal, 1990; Melchior, Caspi, Milne, Danese, Poulton, & Moffitt, 2007; Park, Lee, Park, Min, & Lee, 2008). A study that investigated how stress and coping mechanisms would impact the mental health of nurses in

England found that job demands, extrinsic effort, and over-commitment were related to higher levels of anxiety and depression (Mark & Smith, 2012).

However, having coping mechanisms in place, a stable support system, skill discretion, and work rewards may help negate the detrimental effects of stress (Mark & Smith, 2012). A social support system and feeling comfortable in the organizational climate are especially powerful in combating depression as a consequence of stress, even more so than feeling as if they have a just workplace or feeling in control of job demands (Cho et al., 2008).

How stressful a job may be varies by job, industry, and experience level. For instance, a career involving extensive emotional labor will have different stressors than a job that is physically intensive. A previous longitudinal analysis showed that high-demand jobs are most associated with new diagnoses of clinical depression and generalized anxiety in workers (Melchior, Caspi, Milne, Danese, Poulton, & Moffitt, 2007). Members of the United States military stated in a survey that the majority of them experience significant work stress and that the stress led to emotional issues; close to half of the participants believed that it is a main contributor in their mental illness (Pflanz, 2001).

Individuals working in the healthcare field are also subject to high levels of occupational stress. Physicians and nurses typically work long hours, needing to endure physical fatigue, emotional labor, and high-stakes situations. In separate self-reports, nurses and physicians stated that they are exposed to a variety of occupational stresses and have a high rate of depression and anxiety (Mosadeghrad, 2013; Tomioka, Morita, Saeki, Okamoto, & Kurumatani, 2011).

However, having a high degree of emotional intelligence may help individuals in the human services profession manage and process their stress in a way that is healthier (Oginska-Bulik, 2005).

An employee's physical and mental health is not only pertinent to the well-being of the individual, but the well-being of the organizational that they work for as well (Cooper & Cartwright, 1994; Ongori & Agolla, 2008). A worker's level of stress may directly impact their ability to work by decreasing their health, but it may also affect important work outcomes. The International Labor Organization (ILO) has reported that occupational stress can cost the organization up to 10% of a country's gross national product (Ongori & Agolla, 2008). Unsurprisingly, high levels of stress are related to lower job performance (Motowidlo, Packard, & Manning, 1986; Ongori & Agolla, 2008). Specifically, stress related to job context has been found to be detrimental to perceived performance as well as increasing absenteeism (Arsenault, & Dolan, 1983).

In addition to increasing employee absences, stress may also impact turnover intention; in a study involving nurses and their levels of occupational stress, over 35% of participants stated that they had intentions of quitting their jobs if they could find another opportunity (Jamal, 1990; Mosadeghrad, 2013; Ongori & Agolla, 2008). A study also found that job stress may negatively impact organizational commitment, although Type-A behavior was found to be a moderator within stress-outcome relationships (Jamal, 1990). With stress affecting a person's physical and mental health, as well as various workplace outcomes such as turnover intention and organizational commitment, previous

research has also suggested that stress may play a role in how satisfied an employee is with their job. As stress increased for an individual, their job satisfaction decreased (Chandraiah, Agrawal, Marimuthu, & Manoharan, 2003; Jamal, 1990). Chandraiah and colleagues (2003) explained that as a person becomes more stressed by their job, they may feel as though their intrinsic and extrinsic needs are not being met.

Considering the strong links between occupational stress, emotional exhaustion, and physical health, occupational stress may be an essential factor affecting an employee's ability to work. Finding a potential relationship between occupational stress and office clutter would be especially useful and may lead to clutter interventions that not only tidy up work spaces, but also positively impact physical and emotion health. A direct relationship between office clutter and occupational stress supports Roster and Ferrari's (2019) claim that clutter acts as a physical stressor in work settings.

Job Satisfaction. As previous research indicated, stress may negatively relate to job satisfaction (see Chandraiah, Agrawal, Marimuthu, & Manoharan, 2003; Jamal, 1990). However, a study by Klassen and Chiu (2010) found that self-efficacy mediates this relationship, suggesting that occupational stress is not the only determinant of job satisfaction. Job satisfaction may depend on variables such as personal demographics, work characteristics, and affect. When comparing the job satisfaction of identical twins that were raised in different environments, for instance, Arvey, Bouchard, Segal, Abraham (1999) found that approximately 30% of the variance in job satisfaction scores was because of genetic factors.

Arvey and colleagues (1999) supported the results by Staw and Ross (1985), stating that a person's job satisfaction scores may be stable over time, even with job and organizational changes. Although previous research has been unable to explain whether affective dispositions are genetic or social, it has been suggested that affective dispositions may impact job attitudes over time (Staw, Bell & Clausen, 1986). Along with extraversion and conscientiousness, core self-evaluation is another personality trait that is a key element to job satisfaction (Judge & Bono, 2001; Judge, Heller, & Mount, 2002).

Within the service industry, skill variety and role ambiguity were the best predictors of job satisfaction. Nevertheless, the organization's age and leadership skills were the best predictors of organizational commitment (Glisson & Durick, 1988). When looking at specific areas of job satisfaction (i.e., satisfaction with the work itself), variables such as level of challenge, autonomy, reach, and variety, also were predictors of overall job satisfaction (Saari & Judge, 2004). Thus, the nature of the job is yet another more prominent aspect of this construct. Gender differences also explain differences in job satisfaction as well (Clark, 1997). Women, for instance, typically report feeling higher levels of satisfaction than men, despite working in the same industries. Clark (1997) explains that this difference might be related to well-being and personal expectations. However, when surveying women that are in male-dominated fields, higher-educated, younger, and working in professional workplaces, the gender difference was eliminated, suggesting that when males and females have similar job expectations, their feelings of job satisfaction are also more similar (Clark, 1997).

Job satisfaction may not be just an outcome variable; instead, it may also predict other important workplace variables. In a meta-analysis of over 300 studies, there was a correlation of 0.30 between job satisfaction and job performance (Judge, Thoresen, Bono, & Patton, 2001). Judge and colleagues (2001) found that the relationship between job satisfaction and job performance was especially strong for professional jobs, with the predictability increasing as complexity of the job increased. Not only does job satisfaction seem to affect performance, but it has been linked to turnover, absenteeism, and withdrawal behaviors (Saari & Judge, 2004).

Because most people spend a major part of their life at work, job satisfaction may impact life satisfaction. Judge and Watanabe (1994) discussed three ways in which a person's work may influence their life outside of the organization – spillover, segmentation, and compensation. Spillover is when work spills over into a person's general life or vice versa. Segmentation is when their work life and home life are completely separate from each other, while compensation is when a person uses their work or home life to fulfill dissatisfying parts of the other (Judge & Watanabe, 1994). Most individuals fit into the spillover model, which is supported by the relationship between job satisfaction and health. Job satisfaction was found to be highly correlated with general health measures, but also had strong negative correlations with specific health outcomes such as burnout, depression, anxiety, and low self-esteem (Faragher, Cass, & Cooper, 2005).

Taken together, job satisfaction may greatly impact a person's work life, considering that it might impact turnover, absenteeism, negative behaviors, and most importantly, job performance. Scientists have spent a considerable amount of time and effort on finding as many factors that may influence as possible, in an attempt to better understand the construct and potentially manipulate it. This present study, which seeks to understand how office clutter can influence job satisfaction, can add to this literature and result in real, organizational changes by improving employees' levels of job satisfaction.

Job-Related Tension. In recent years, the topic of job-related tension has become more widely recognized by organizations and researchers as a systematic problem, particularly because of its relationship to job satisfaction. Bateman and Strasser (1983) analyzed the causal relationship between job-related tension and job satisfaction; they not only found a causal relationship between job tension and satisfaction, but they found reverse causal sequences as well. The study confirmed their hypothesis that job-related tension led to lower job satisfaction, however they also found that having less job satisfaction led to more job tension as well.

The negative relationship between job-related tension and job satisfaction has been supported by other researchers as well. Jackson (1983) analyzed how increased decision-making could affect variables such as role conflict and ambiguity, which are major components of job-related tension. Participation in decision-making for 6 months was shown to have a significant, negative correlation with role conflict and role ambiguity and a positive correlation with perceived influence. Perceived influence is highly correlated with job satisfaction

and role conflict and ambiguity were positively related to job-related tension. Job tension was positively related to absenteeism and turnover intention. This has been supported by other research as well. When examining workers in a hospital environment, even though the nature of a certain position is satisfying, environmental factors may contribute to role ambiguity and work-related tension, which then decreases the satisfaction derived from the work (Blalack & Davis, 1975).

In order to fully understand the nature of job-related tension and not just its relationship with other variables, it is important to understand job stress and whether the importance of or number of goals would influence it (Emsley, 2003). While multiple goals seemed to increase the managers' level of job-related tension and decrease their overall performance, the relative importance of the goals does not significantly affect them (Emsley, 2003).

Job-related tension may not only negatively affect the employee's mental and physical health, but it can affect other aspects of their lives such as work-life balance and employees' personal relationships. Role conflict is especially straining on home life, since it was found to be a major determinant of work interference with family (WIF) conflict (Fu & Shaffer, 2001). Role conflict was also shown to have both direct and indirect effects on burnout and job satisfaction, through work-life balance conflicts (Bacharach, Bamberger, & Conley, 1991). These findings are especially important to note because it emphasizes how far-reaching the implications are for job-related tension. Not only does it influence

their health and their personal lives, but it is related to other work characteristics, such as job satisfaction, absenteeism, and turnover intention, as well.

While job tension has been shown to be related to a number of negative work characteristics, Abush and Burkhead (1984) wanted to conduct a study to see whether certain personality types were more prone to job-related tension than others in women. The study found that there was significant relationship between job-related tension and Type A personalities. Job-related tension was also related to characteristics of the job such as feedback, variety, autonomy, and challenge. This not only allowed job-related stress to be understood from a different perspective – one more unique to working personalities – but also emphasized the importance of person-environment fit.

These studies emphasized the importance of job-related tension because an employee that feels that their role is ambiguous is less likely to be a quality worker; their job satisfaction decreases as well as their health, and they are more likely to miss work or want to quit their jobs. It is clear that the organizational cost of job-related tension is high. Understanding this construct as thoroughly as possible is the best way to combat its negative consequences. By testing to see whether office clutter has any relationship with job-related tension, we can examine whether shifts in the physical environment (clutter) may help more complex and important work outcomes, like the ones that job-related tension directly influences.

Rationale. Although past research has established that clutter may have a negative influence on personal well-being (Roster, Ferrari, & Jurkat, 2016), there

has been no previous research connecting office clutter to workplace well-being. Office clutter has not been measured as a variable before, nor has its implications ever been studied (Roster & Ferrari, 2019). The components of workplace wellbeing, such as burnout, job satisfaction, occupational stress, and engagement, may all significantly impact the productivity and morale of employees (Rothmann, 2008). By measuring how office clutter may influence those variables, we not only have a clearer understanding of them as a whole, but it may lead to some implications and practical solutions as well. However, previous research has also shown a relationship between job-related tension and job satisfaction (Bateman & Strasser, 1983).

Therefore, the present study will analyze the perception of office clutter on job satisfaction, in which their relationship is moderated by job-related tension, since job-related tension may either strengthen or weaken this relationship. This present study will also assess the relationships between office clutter and emotional exhaustion, stress, and job engagement. The present study also has the potential to make an impact on organizational practices and policies involving office clutter and workspace neatness, considering the strong relationships that the factors in work-related well-being have with other important work outcomes, such as absenteeism, organizational commitment, turnover intention, physical health, and job performance. If office clutter is found to have a connection with work-related well-being, then scientists and practitioners can explore the many options that may come from these results, such as interventions or clean-up programs that can positively influence employee behavior, health, and performance.

Statement of Hypotheses

Hypothesis 1: *There is a positive relationship between the impact of office clutter and emotional exhaustion.*

Hypothesis 2: *There is a positive relationship between the impact of office clutter and stress.*

Hypothesis 3: *There is a negative relationship between the impact of office clutter and job engagement.*

Hypothesis 4: *The perception of office clutter negatively predicts job satisfaction.*

Hypothesis 5: *Job-related tension moderates the relationship between the impact of office clutter and job satisfaction. Specifically, the more job-related tension there is, the stronger the relationship.*

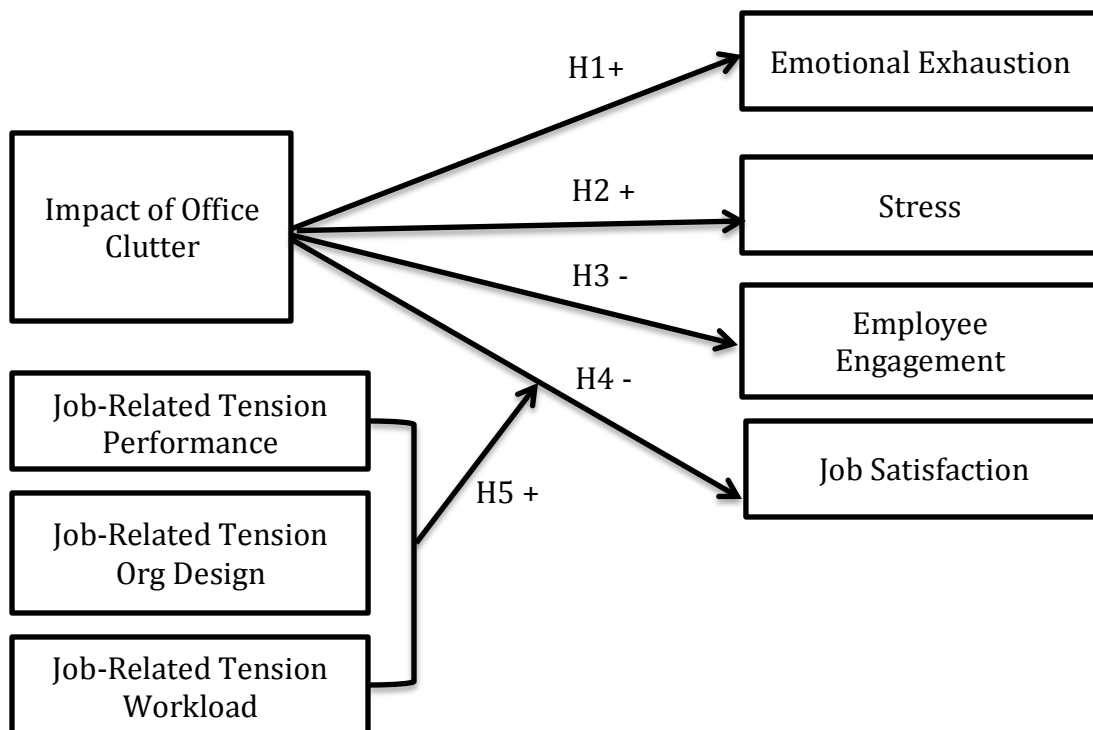


Figure 1. Proposed model.

Chapter II: Methods

Participants

Data were previously collected by Roster through the University of New Mexico in February 2018 and used in one previous study (Roster & Ferrari, 2019). However, in the present study, none of the previous published analyses were repeated. The present study focused on different variables than Roster and Ferrari (2019). Participants are adults living in the United States, found through a website called *Prolific Academic* (<https://prolific.ac>), an online service designed to connect researchers with a quality group of participants based on certain selection criterion. The final number of participants was 290 (96.7% of the original number of 300 participants), after excluding individuals who did not pass a qualifier and did not pass the attention trap question. Participants were asked to answer “yes” or “no” to a qualifier, namely:

Do you spend at least 20 hours per week working in an “office” workspace, meaning a space allocated specifically for you to conduct either self-employed or employer-related (either profit or non-profit) business activities? While ‘office’ workspaces can take many forms these days, we are referring to a traditional office space that includes at least a desk and a chair designated for your use to conduct work-related activities, whether it be located in your home or in an office building.

The attention trap question asked to “please select ‘agree’ to answer this question.” About 51.4% ($n = 149$) of participants were aged 25 to 35. Most participants ($n = 226$; 77.9%) were Caucasian and male ($n = 177$; 61.0%).

Participants ($n = 116$; 40%) frequently self-identified their highest degree earned as a bachelor's degree.

Only individuals who spend at least 20 hours per week in an office workspace were included in the present study. About a third of participants (33.8%) classify their current job as part of the “professional” sector. The most commonly reported income was \$50,000 to \$74,999 ($n = 76$; 26.2%), followed by \$35,000 to \$49,999 ($n = 62$; 21.4%), and \$20,000 to \$34,999 ($n = 50$; 17.2%). In terms of number of years employed, 98 (27.2%) participants claimed employment for 5 to 10 years, 26.9% for 3 to 4 years, and 24.8% for 1 to 2 years. Many participants ($n = 80$; 27.6%) indicated that they held a staff/administrative position within their organization or worked as an individual contributor ($n = 76$; 26.2%). In total, 202 (69.7%) participants spend most of their time in an office building workspace while the rest use a home office. Tables displaying these statistics in greater detail are available in Appendix A.

Demographic and Work Characteristic Items

All participants completed a set of demographic questions, namely: *age*, *state of residence*, *race*, *income level*, *level of education*, *length of employment*, and *gender*. Participants also indicated *whether they did most of their work from a home office or office building workspace*, *the size of their workspace*, *how cluttered their workspace is*, and *what types of clutter they have in their workspace*. In addition, respondents completed general questions about their work, including their *position within the organization*, *how many hours they work in a typical week*, and their *job classification*.

Measures

Office Clutter Impact Scale. The 11-item, unidimensional *Office Clutter Impact* scale (shown in Appendix B), adapted from the *Clutter Quality of Life Scale* (Roster, Ferrari, & Jurkat, 2016), examined the negative impact of workplace clutter on the individual's workability of space, emotional well-being, and social aspect of work. Initial reliability studies conducted by Roster, Ferrari, and Jurkat (2016) on the original scale showed a Cronbach's alpha of 0.88 ($M = 31.55$, $SD = 15.40$) and was validated with the original sample of adults ($n = 1,349$) using both exploratory and confirmatory factor analyses. Reliability analysis conducted for the present study showed an Omega Hierarchical score of 0.88 and an Omega Total of 0.96. Example items from this scale include, "*I have to move things in order to accomplish tasks in my office,*" and "*I feel overwhelmed by the clutter in my office.*" Participants responded by selecting a number on a 7-point Likert scale, from 1 (*strongly disagree*) to 7 (*strongly agree*).

Engagement in Work Scale. Also, participants completed the 4-item, unidimensional *Engagement in Work Scale* (Britt & Bliese, 2003, adapted from Britt, 1999; shown in Appendix C), which assessed how invested the individual was within their work. Initial reliability studies conducted by Britt and Bliese (2003) showed a Cronbach's alpha of 0.56 ($M = 16.94$, $SD = 2.44$). Reliability analysis conducted for the present study showed an Omega Hierarchical score of 0.74 and an Omega Total of 0.87. Prior research has shown that the modified version of the scale has convergent validity; the measure correlates with elements of work that encourage engagement, such as clarity or control (Britt, 1999).

Example items from this scale include “*I feel responsible for my job performance,*” and “*I am committed to my job.*” Participants responded by selecting a number on a 5-point Likert scale, from 1 (*strongly disagree*) to 5 (*strongly agree*).

Job-Related Tension Index. In addition participants responded to the revised *Job-Related Tension Index* (Wooten, Fakunmoju, Kim, & LeFevre, 2010, adapted from Kahn et al., 1964; shown in Appendix D), a 12-item, multidimensional scale examining job tension as related to role ambiguity. Exploratory and confirmatory factor analyses determined that there are three factors – performance, workload, and organizational design (Wooten et al., 2010). Initial reliability studies conducted by Wooten and colleagues (2010) showed a Cronbach’s alpha of 0.87 ($M = 25.06$, $SD = 9.03$) for the full scale. Reliability analysis conducted for the present study showed an Omega Hierarchical score of 0.77 and an Omega Total of 0.93. Participants responded by selecting a number on a 5-point Likert scale, from 1 (*never*) to 5 (*nearly all the time*).

The performance subscale discusses role ambiguity as it is related to the individual’s performance at work. Example items include, “Not knowing what your supervisor [senior coach] thinks of you, how he evaluates your performance,” and “The fact that you can’t get information needed to carry out your job.” Reliability tests conducted for this present study showed a Cronbach’s alpha of 0.86 for this subscale.

The workload subscale asks about how the individual’s workload impacts their levels of role ambiguity. Example items include, “Thinking that you will not

be able to satisfy the conflicting demands of various people over you,” and “Feeling that you have too heavy a workload, one that you can’t possibly finish during an ordinary work day.” Reliability tests conducted for this present study showed a Cronbach’s alpha of 0.83 for this subscale.

The organizational design subscale items are related to the individual’s work responsibilities and job structure. Example items include, “Feeling that you have too little authority to carry out the responsibilities assigned to you,” and “Not knowing what opportunities for advancement or promotion exist for you.” Reliability tests conducted for this present study showed a Cronbach’s alpha of 0.73 for this subscale.

Emotional Exhaustion – Maslach Burnout Inventory. Plus, participants responded to the 8-item, unidimensional *Emotional Exhaustion* subscale (shown in Appendix E) from the Maslach Burnout Inventory (Maslach & Jackson, 1981), which measures how tired, frustrated, and close to burnout the individual is. Initial reliability studies conducted by Maslach and Jackson (1981) showed a Cronbach’s alpha of 0.86 ($M = 29.70$, $SD = 11.93$) and internal consistency of the subscale was supported when tested across occupational groups (Schutte, Toppinen, Kalimo, & Schaufeli, 2000). Reliability analysis conducted for the present study showed an Omega Hierarchical score of 0.88 and an Omega Total of 0.95. Example items include “*I feel fatigued when I get up in the morning and have to face another day on the job,*” and “*I feel used up at the end of the workday.*” Participants responded by selecting a number from a 7-point Likert scale from 1 (strongly disagree) to 7 (*strongly agree*).

Job Satisfaction Scale. Ferguson and Weisman's (1986) unidimensional *Job Satisfaction* scale (shown in Appendix F) contains 5 items and examines how much the individual likes their job and is satisfied by it. Initial reliability studies conducted by Ferguson and Weisman (1986) showed a Cronbach's alpha of 0.85 ($M = 17.29$, $SD = 4.46$). Reliability analysis conducted for the present study showed an Omega Hierarchical score of 0.74 and an Omega Total of 0.91. Example items include "*I am satisfied with my daily job routine,*" and "*In general I like my job.*" Participants responded by selecting a number from a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (*strongly agree*).

Perceived Stress Scale. The 10-item Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983) measures the individual's self-perception of stress within their life (shown in Appendix G). Initial reliability studies conducted by Cohen, Kamarck, and Mermelstein (1983) showed a Cronbach's alpha of 0.84 ($M = 30.11$, $SD = 4.62$). Reliability analysis conducted for the present study showed an Omega Hierarchical score of 0.51 and an Omega Total of 0.80. Validity of the scale is evidenced by the association of PSS scores with increased colds, less control over blood sugar levels in diabetics, more depressive symptoms elicited by stressful life events, and failure to quit smoking cigarettes (Cohen et al., 1983). Example items include "*In the last month, how often have you felt that you were unable to control the important things in your life?*" and "*In the last month, how often have you found that you could not cope with all the things that you had to do?*" Participants responded by selecting a number from a 5-point frequency scale (1 = Never and 5 = Very Often).

Procedure

The self-report survey was created on *Qualtrics* with each scale placed in counterbalance order, and posted on *Prolific Academic* for one day (target sample size = 300 participants). Participants were notified ahead of time that they would be compensated for completing the survey. Participants earned \$2.60 for filling out the entire survey, and must have been at least 21 years old and a United States resident. The survey began with the *qualifier question* (if the individuals spend at least 20 hours working in an office), followed by office space questions, the scales, and lastly, demographic items.

The 130-item survey contained a total of 14 scales but only six key scales were included in the present study. It took participants approximately 20 minutes to complete the full survey. Once data were collected, it was examined and cleaned. Individuals with mostly missing data or failed attention trap questions were deleted.

Chapter III: Results

Preliminary Analyses

The data was analyzed using SPSS and R (version 3.5.2). Participants who failed the attention trap question or had significantly missing data ($n = 10$) were deleted and summated scores of the measures were be used for the analyses. Prior to running the analyses, tests were done to assure that all assumptions were met. With the exception of the Engagement in Work Scale used in Hypothesis 3, all assumptions were met successfully (supplemental information and graphs are in Appendix H). For the Engagement in Work Scale, the normality of residuals assumption of ordinary least-squares (OLS) regression was violated. This violation means that any conclusions made from the data on this scale should be taken with caution. Power analyses were used to determine the minimum sample size needed to reach a large effect size of $f^2 > 0.35$. The present study's sample size ($n = 290$) was sufficient.

Primary Analysis

Hypothesis 1: *There is a positive relationship between the impact of office clutter and emotional exhaustion.*

In order to test Hypotheses 1, a hierarchical linear regression was done to assess whether office clutter predicted emotional exhaustion, while controlling for gender, age, and length of employment. As seen in Table 1, results showed that gender, age, and length of employment did not significantly influence levels of emotional exhaustion but office clutter impact did significantly predict emotional exhaustion scores, $b = 0.39$, $t(283) = 7.16$, $p < 0.001$. This means that for every

one-unit change in office clutter impact, there was a 0.39 unit increase in emotional exhaustion. Office clutter impact also explained a significant proportion of variance in emotional exhaustion scores, $R^2 = 0.16$, $F(1, 283) = 13.05$, $p < 0.001$. Thus, Hypothesis 1 was supported.

Table 1

Hypotheses 1 Results

Emotional Exhaustion	<i>t</i>	<i>p</i>	<i>B</i>	<i>b</i>	<i>SE</i>	<i>df</i>	<i>F</i>	R^2
Model 1						3, 284	0.25	0.003
Gender	-0.44	0.66	-0.62	-0.03	1.41	-	-	-
Age	-0.65	0.52	-0.54	-0.05	0.82	-	-	-
Employment Length	0.48	0.63	0.34	0.03	0.72	-	-	-
Model 2						1, 283	13.05	0.16
Gender	-0.22	0.82	-0.29	-0.01	1.30	-	-	-
Age	-0.90	0.37	-0.68	-0.06	0.76	-	-	-
Employment Length	0.38	0.70	0.25	0.03	0.66	-	-	-
Office Clutter	7.16	0.001	0.30	0.39	0.04	-	-	-

Note. $\Delta R^2 = 0.15$, F Change = 51.31, $p < 0.001$

Hypothesis 2: *There is a positive relationship between the impact of office clutter and stress.*

To test Hypotheses 2, a hierarchical linear regression was done to assess whether office clutter predicted perceived stress, while controlling for gender, age, and length of employment. Results, which are shown in Table 2, showed that stress levels were not significantly impacted by gender, age, or employment length. However, office clutter impact significantly predicted stress scores, $b = 0.41$, $t(283) = 7.55$, $p < 0.001$. This means that for every one-unit change in office clutter impact, there was a 0.41 unit increase in stress. Office clutter impact also explained a significant proportion of variance in stress scores, $R^2 = 0.17$, $F(1, 283) = 14.38$, $p < 0.001$. Thus, Hypothesis 2 was supported.

Table 2

Hypotheses 2 Results

Stress	<i>t</i>	<i>p</i>	<i>B</i>	<i>b</i>	<i>SE</i>	<i>df</i>	<i>F</i>	<i>R</i> ²
Model 1						3, 284	0.13	0.001
Gender	0.32	0.75	0.17	0.02	0.55	-	-	-
Age	-0.34	0.73	-0.11	-0.02	0.32	-	-	-
Employment Length	-0.19	0.85	-0.05	-0.01	0.28	-	-	-
Model 2						1, 283	14.38	0.17
Gender	0.62	0.54	0.31	0.03	0.50	-	-	-
Age	-0.58	0.56	-0.17	-0.04	0.29	-	-	-
Employment Length	-0.35	0.73	-0.90	-0.02	0.25	-	-	-
Office Clutter	7.55	0.001	0.12	0.41	0.02	-	-	-

Note. $\Delta R^2 = 0.17$, F Change = 57.05, $p < 0.001$

Hypothesis 3: *There is a negative relationship between the impact of office clutter and job engagement.*

For Hypotheses 3, a hierarchical linear regression was done to assess whether office clutter predicted job engagement, while controlling to gender, age, and employment length. Results showed that office clutter impact did not significantly predict job engagement, $b = -0.02$, $t(283) = -0.34$, $p = 0.74$ (see Table 3). This means that for every one-unit change in office clutter impact, there was a 0.02 unit decrease in work engagement. Therefore, Hypothesis 3 was rejected.

Table 3

Hypotheses 3 Results

Engagement	<i>t</i>	<i>p</i>	<i>B</i>	<i>b</i>	<i>SE</i>	<i>df</i>	<i>F</i>	<i>R</i> ²
Model 1						3, 284	0.52	0.005
Gender	1.13	0.26	0.32	0.07	0.29	-	-	-
Age	0.11	0.91	0.01	0.01	0.17	-	-	-
Employment Length	-0.35	0.73	-0.02	-0.02	0.15	-	-	-
Model 2						1, 283	0.42	0.006
Gender	1.11	0.27	0.32	0.07	0.29	-	-	-
Age	0.12	0.90	0.02	0.01	0.17	-	-	-
Employment Length	-0.34	0.73	-0.05	-0.02	0.15	-	-	-
Office Clutter	-0.34	0.74	-0.003	-0.02	0.01	-	-	-
<i>Note.</i> $\Delta R^2 = 0.001$, F Change = 0.11, $p = 0.80$								

Hypothesis 4: *The perception of office clutter negatively predicts job satisfaction.*

Hypothesis 5: *Job-related tension moderates the relationship between the impact of office clutter and job satisfaction. Specifically, the more job-related tension there is, the stronger the relationship.*

In order to test both hypotheses 4 and 5, a moderated hierarchical regression was used to assess whether office clutter predicted job satisfaction, and whether job-related tension moderated that relationship, while controlling for gender, age, and length of employment. Results showed that office clutter impact did not significantly predict job satisfaction scores, $b = 0.04$, $t(280) = 0.66$, $p = 0.51$. These results are shown in Table 4. This means that for every one-unit change in office clutter impact, there was a 0.04 unit decrease in job satisfaction. Thus, Hypothesis 4 was rejected. Lastly, with Hypothesis 5, multiple models were compared (see Table 4). Results found that there was no significant interaction effect between office clutter and any of the three job-related tension subscales. Thus, Hypothesis 5 was not supported. However, the organizational design subscale did significantly predict job satisfaction scores, $b = -0.30$, $t(280) = -3.89$, $p < 0.001$. This means that for every one-unit change in the organizational design subscale, there is a 0.30 unit decrease in job satisfaction.

Table 4

Hypotheses 4 & 5 Results

Job Satisfaction	<i>t</i>	<i>p</i>	<i>B</i>	<i>b</i>	<i>SE</i>	<i>df</i>	<i>F</i>	<i>R</i> ²
Model 1						3, 284	1.37	0.01
Gender	1.83	0.07	0.96	0.11	0.52	-	-	-
Age	-0.91	0.36	-0.28	-0.06	0.31	-	-	-
Employment Length	1.08	0.28	0.29	0.08	0.27	-	-	-
Model 2						4, 280	10.58	0.21
Gender	1.31	0.19	0.62	0.07	0.47	-	-	-
Age	-1.82	0.07	-0.50	-0.11	0.28	-	-	-
Employment Length	1.51	0.13	0.37	0.10	0.24	-	-	-
Office Clutter	0.66	0.51	0.01	0.04	0.02	-	-	-
JRT Performance	-1.28	0.20	-0.12	-0.11	0.09	-	-	-
JRT Org Design	-3.89	0.001	-0.52	-0.30	0.13	-	-	-
JRT Workload	-1.39	0.17	-0.13	-0.10	0.10	-	-	-
Model 3						3, 277	7.70	0.22
Gender	1.24	0.22	0.59	0.07	0.48	-	-	-
Age	-1.68	0.10	-0.50	-0.12	0.28	-	-	-
Employment Length	1.51	0.13	0.37	0.10	0.25	-	-	-

Table 4 (continued).

Office Clutter	-0.46	0.65	-0.02	-0.07	0.04	-	-	-
JRT Performance	0.66	0.51	0.14	0.13	0.22	-	-	-
JRT Org Design	-2.19	0.03	-0.67	-0.40	0.31	-	-	-
JRT Workload	-2.08	0.04	-0.44	-0.35	0.21	-	-	-
OCLxJRT Performance	-1.32	0.19	-0.01	-0.47	0.01	-	-	-
OCLxJRT Org Design	0.43	0.67	0.004	0.14	0.009	-	-	-
OCIxJRT Workload	1.61	0.11	0.01	0.50	0.01	-	-	-
<i>Note.</i> Model 1 & 2: $\Delta R^2 = 0.20$, F change = 17.25, $p < 0.001$								
Model 2 & 3: $\Delta R^2 = 0.01$, F change = 1.00, $p = 0.39$								

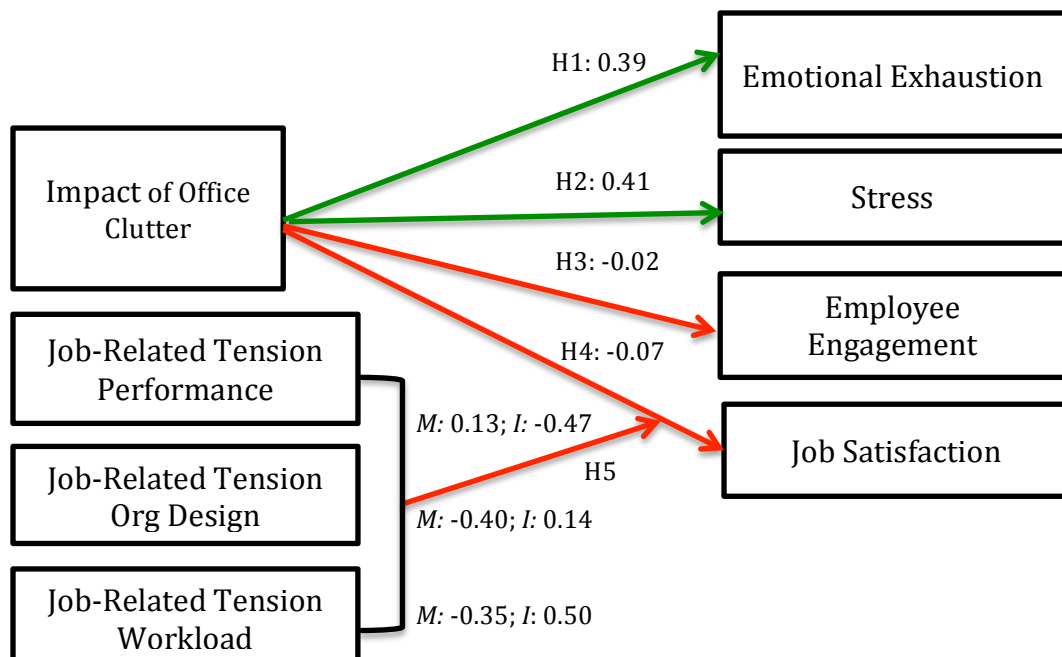


Figure 2. Proposed model with directional results. Coefficients gathered from multiple regression models. “M” indicates a main effect while “I” indicates an interaction effect.

Chapter III: Discussion

The topic of clutter in the home has rarely been studied, but previous research has shown a negative relationship between clutter and a person's well-being. However, this relationship has never been studied in regards to workplace clutter and occupational outcomes (Crum & Ferrari, 2019a; Crum & Ferrari, 2019b; Roster, Ferrari & Jurkat, 2016). There is a construct called *work-related well-being* (Narainsamy & Van Der Westhuizen, 2013; Rothman, 2008), which consists of variables such as job satisfaction, work engagement, burnout, and occupational stress. Previous research has also shown that job-related tension may negatively impact job satisfaction (Bateman & Strasser, 1983). This present study hypothesized that office clutter would negatively impact job satisfaction and employee engagement, positively impact emotional exhaustion and occupational stress, and job-related tension was expected to moderate the relationship between office clutter and job satisfaction.

The analysis used a crowd-sourced sample of adults ($n = 290$) who work full-time within the United States in office and home settings. Multiple linear regressions and a moderated regression were used to analyze the data and test the hypotheses. Analyses showed that office clutter impact did predict emotional exhaustion. As office clutter impact increased by one unit, so did a person's level of emotional exhaustion by 0.39 units. There was also a positive relationship between office clutter impact and perceived stress levels, so as office clutter impact increased by one unit, stress increased by 0.40. Contrary to the hypotheses,

office clutter impact did not predict either work engagement or job satisfaction. However, this study did find that job-related tension scores predicted job satisfaction scores. This supports the findings of previous research regarding the relationship between job-related tension and job satisfaction (Bateman & Strasser, 1983; Jackson, 1983).

Overall, this study found that office clutter only had significant relationships with half of the variables that construct work-related well-being. Since the results do not show significant relationships between office clutter impact and all aspects of work-related well-being, it cannot be concluded that clutter negatively impacts well-being in work settings. However, this study still found important new relationships that may have profound impact on the workplace if its possible implications are expressed to practitioners.

Implications for the Workplace

Despite not finding significant relationships with all of the variables of interest, there were still important connections to note. The presence of clutter was found to positively predict a person's level of emotional exhaustion and stress. Previous studies have found that emotional exhaustion has been linked to physical health issues such as colds, headaches, sleep problems, depression, and gastro-intestinal problems; it has also been linked to workplace outcomes such as job satisfaction, turnover intention, perceptions of workplace justice, organizational commitment, and even job performance (Belcastro, 1982; Cole, Bernerth, Walter, & Holt, 2010; Schaufeli & Bakker, 2004; Wright & Cropanzano, 1998).

Previous research has found that occupational stress may actually increase physical health issues such as ulcers, self-reported angina, hypertension, stroke, and heart disease risk factors, as well as exacerbate the dangerous effects of noxious chemicals that factory workers may be exposed to (House, Wells, Landerman, McMichael, & Kaplan, 1979; Tsutsumi, Kabaya, Kara, & Ishikawa, 2009). Stress may increase mental health issues as well, particularly with depression and anxiety (Jamal, 1990; Melchior, Caspi, Milne, Danese, Poulton, & Moffitt, 2007; Park, Lee, Park, Min, & Lee, 2008). Similarly to emotional exhaustion, stress also affects turnover intention, absenteeism, occupational commitment, job satisfaction, and job performance (Arsenault & Dolan, 1983; Jamal, 1990; Mosadeghrad, 2013; Ongori & Agolla, 2008; Chandraiah, Agrawal, Marimuthu, & Manoharan, 2003). These studies emphasize the importance of reducing emotional exhaustion and occupational stress within employees as much as possible. Now that the link between office clutter and these variables have been found, this provides organizations with a more tangible, physical way to reduce emotional exhaustion and stress.

Several options may be done to reduce clutter in the workplace. Organizations can initiate clean desk policies stating that work areas should not look outwardly “messy” and that papers and books should be neatly arranged or stored in folders. Organizations can take extra care to digitalize their work, which saves paper and reduces clutter. Digitalizing data may result in digital clutter, but there has not been any research done on this

topic as of yet. Yearly cleaning interventions can also be done, with one specific day or certain hours of a day dedicated to decluttering, organizing, and cleaning. There are also specialized companies that can be hired to clean and organize office spaces. Organizations may survey their employees to check their levels of emotional exhaustion and stress pre and post decluttering to assess the efficacy of these interventions, or they may simply initiate clutter-reducing interventions to act as a preventative measure. These present results may be used to help justify spending expenditures on creating clutter interventions or hiring help to physically clean out materials or digitalize information. These present results may also be used to inform employees of the connection between office clutter and mental health. If workers are more aware that their office space may contribute to their stress and exhaustion levels, they may be more inclined to keep their work desks neat and clean.

Limitations & Future Directions

This study had several limitations, including the sample size. Although the sample size was shown to be enough using power analyses, the results would be more generalizable with a sample much larger than 290 participants. Another limitation was the measures used in this study. The construct of work-related well-being includes job satisfaction, work engagement, occupational stress, and burnout. However, because this data were pre-collected, the emotional exhaustion subscale was used rather than the whole burnout inventory. The Perceived Stress Scale is also not specific to work stress like occupational stress scales are. The

best possible practice would have been to have used the same scales that Narainsamy and Van Der Westhuizen (2013) and Rothman (2008) used for their studies.

Considering how new this topic of study is, there are still many unexplored avenues of research. Future studies could include analyzing how office clutter can impact other occupational outcomes, such as organizational commitment, perceived control over time, or job performance. Another possibility is looking at certain demographic characteristics, such as income level, gender, or education level, and seeing if these are more or less likely to affect the impact of office clutter on workplace outcomes. It might also be beneficial to analyze which industries or job levels are most susceptible to the effects of office clutter. With technology becoming more advanced and information and processes becoming more digitalized, it would be highly interesting to examine electronic and digital clutter, such as old, unused technology and virtual clutter like apps, emails, and files. Future research may also determine which type of clutter intervention is the most effective in improving employee outcomes.

Conclusion

While the results of this study did not show that office clutter impacts work-related well-being as a whole, it did indicate that office clutter may still have a significant impact on certain occupational outcomes that are pertinent to employees' health and performance. Office clutter may be a real, physical aspect of the workplace that may easily be changed to improve the way employees work and how they feel. It may possibly be the link that allows organizations to

tangibly influence more complex worker characteristics. However, more research needs to be done on the topic in order to fully understand the extent to which clutter in work settings may affect the individual. As more connections are unearthed through research, hopefully it can result in effective interventions that that reduce clutter in work settings and improve the work quality of employees.

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Appendix A

Table 5

Primary Office Workspace Demographics

	N	Percent
Home Office	88	30.3
Office Building Workspace	202	69.7

Table 6

Job Classification Demographics

	N	Percent
Executive/Managerial	41	14.1
Professional	98	33.8
Entrepreneur/Owner	17	5.9
Technical Support	28	9.7
Sales	13	4.5
Clerical/Administration	42	14.5
Customer Support	20	6.9
Other	23	7.9
Prefer Not to Answer	8	2.8

Table 7*Job Level Demographics*

	N	Percent
Top Management	25	8.6
Middle Management	45	15.5
Lower Management	57	19.7
Staff/Administrative	80	27.6
Individual Contributor	76	26.2
Prefer Not to Answer	7	2.4

Table 8*Length of Employment Demographics*

	N	Percent
Less Than 1 Year	31	10.7
1 – 2 Years	72	24.8
3 – 4 Years	78	26.9
5 – 10 Years	79	27.2
11 or More Years	28	9.7
Prefer Not to Answer	2	0.7

Table 9***Gender Demographics***

	N	Percent
Male	177	61.0
Female	109	37.6
Prefer Not to Answer	4	1.4

Table 10***Age Group Demographics***

	N	Percent
18 - 24	34	11.7
25 - 35	149	51.4
36 - 45	57	19.7
46 - 55	35	12.1
56 - 65	14	4.8
Prefer Not to Answer	1	0.3

Table 11***Education Level Demographics***

	N	Percent
Less than High School	2	0.7
Vocational/Trade Degree	24	8.3
Some College	62	21.4
Bachelor's Degree	116	40.0
Master's Degree	59	20.3
Post-Graduate Degree	22	7.6
Prefer Not to Answer	5	1.7

Table 12***Personal Income Level Demographics***

	N	Percent
Less than \$20,000	32	11.0
\$20,000 - \$34,999	50	17.2
\$35,000 - \$49,999	63	21.4
\$50,000 - \$74,999	76	26.2
\$75,000 - \$99,999	31	10.7
\$100,000 or More	32	11.0
Prefer Not to Answer	7	2.4

Table 13***Ethnicity Demographics***

	N	Percent
Black, non-Hispanic	15	5.2
Asian/Pacific Islander	23	7.9
White, non-Hispanic	226	77.9
Hispanic/Latinx	17	5.9
Mixed	5	1.7
Prefer Not to Answer	4	1.4

Appendix B

Office Clutter Impact Scale

To what extent does clutter in your primary workspace affect how you feel or perform in this space? Please read each statement below and indicate your extent of agreement to each statement.

10 items; 7-pt. scale where 1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Neither Agree nor Disagree; 5 = Somewhat Agree; 6 = Agree; 7 = Strongly Agree

Workability of Space:

- I have to move things in order to accomplish tasks in my office.
- I don't get to use spaces in my office the way I would like to because of clutter.
- I can't find things when I need them because of clutter.
- I have neglected taking care of things that need to be done in my job because of the clutter.

Emotional:

- I feel overwhelmed by the clutter in my office.
- I'm worried about the amount of clutter in my office environment.
- I feel frustrated when I think about the clutter in my office.
- I feel stressed by the clutter in my office.

Social:

- I avoid having people come to my office because of the clutter.
- My relationships with my colleagues have suffered as a result of the clutter in my office.
- I don't invite co-workers to come to my office as much as I would like because of the clutter in my office.

Appendix C

Engagement in Work Scale

Please indicate your level of agreement/disagreement with the following statements:

4 items, 5-pt scale where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

- I feel responsible for my job performance.
- I am committed to my job.
- How well I do in my job matters a great deal to me.
- How I do in my job influences how I feel.

Appendix D

Job-Related Tension Index-Revised (Wooten et al., 2010)

Please indicate how often you experience the following in relation to your job:

12 items on a 5-pt. scale where: 1 = never to 5 = nearly all the time

1. Feeling that you have too little authority to carry out the responsibilities assigned to you.
2. Being unclear on just what the scope and responsibilities of your job are.
3. Not knowing what opportunities for advancement or promotion exist for you.
4. Feeling that you have too heavy a workload, one that you can't possibly finish during an ordinary workday.
5. Thinking that you'll not be able to satisfy the conflicting demands of various people over you.
6. Not knowing what your supervisor thinks of you, how s/he evaluates your performance.
7. The fact that you can't get information needed to carry out your job.
8. Feeling that you may not be liked and accepted by the people you work with.
9. Feeling unable to influence your immediate supervisor's decisions and actions that affect you.
10. Not knowing just what the people you work with expect of you.
11. Thinking that the amount of work you have to do may interfere with how well it gets done.
12. Feeling that your job tends to interfere with your family life.

Appendix E

Emotional Exhaustion (Maslach & Jackson, 1981)

8 items, 7-pt. scale where 1 = Strongly Disagree; 2 = Disagree; 3 = Somewhat Disagree; 4 = Neither Agree nor Disagree; 5 = Somewhat Agree; 6 = Agree; 7 = Strongly Agree

1. I feel used up at the end of the workday.
2. I feel fatigued when I get up in the morning and have to face another day on the job.
3. Working all day with people is really a strain for me.
4. I feel frustrated by my job.
5. I feel like I'm at the end of my rope.
6. I feel burned out from my work.
7. I feel emotionally drained from my work.
8. I feel I'm working too hard on my job.

Appendix F

Job satisfaction (Ferguson & Weisman, 1986)

**How satisfied are you with your job? Please indicate your level of agreement/disagreement with the following statements:
5 items, 5-pt scale where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree**

1. Several things I dislike about my job.
2. In general I like my job.
3. I would like to change jobs.
4. I am satisfied with my daily job routine.
5. I am satisfied with the work I do.

Appendix G

Perceived Stress Scale

10 items, 5-pt frequency scale, where 1 = never, 2 = almost never, 3 = sometimes, 4 = fairly often, 5 = very often.

The questions in this section ask you about your feelings and thoughts during the last month. Please indicate how often you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and “stressed”?
4. In the last month, how often have you felt confident about your ability to handle your personal problems?
5. In the last month, how often have you felt that things were going your way?
6. In the last month, how often have you found that you could not cope with all the things that you had to do?
7. In the last month, how often have you been able to control irritations in your life?
8. In the last month, how often have you felt that you were on top of things?
9. In the last month, how often have you been angered because of things that were outside of your control?
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

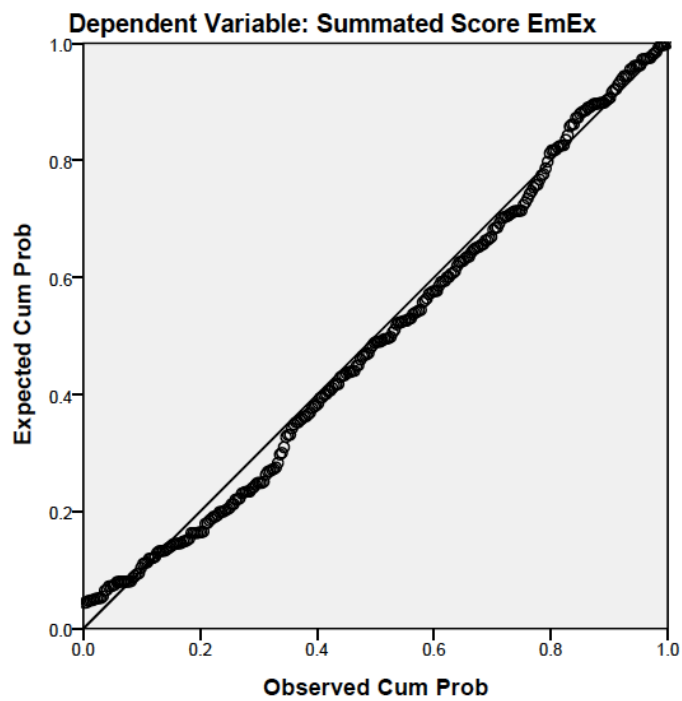
Appendix H

Hypothesis 1 – Emotional Exhaustion

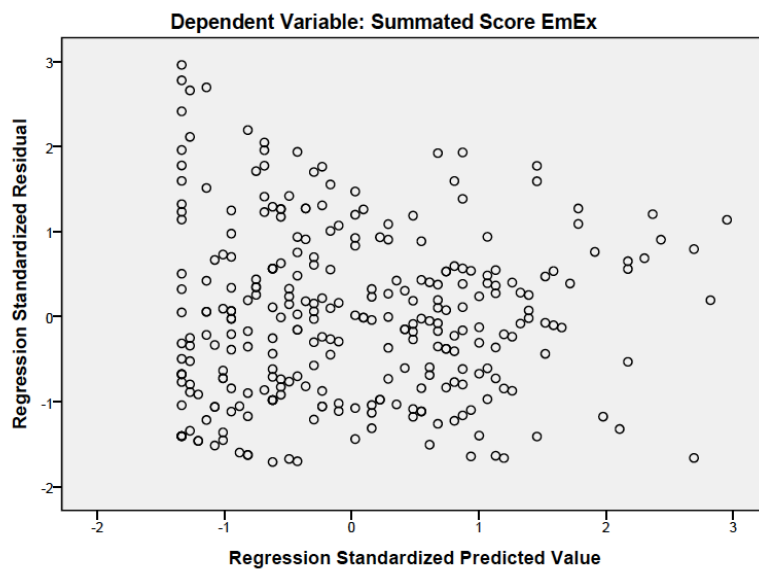
Durbin-Watson: 1.85

VIF: 1.00

Normal P-P Plot of Regression Standardized Residual



Scatterplot

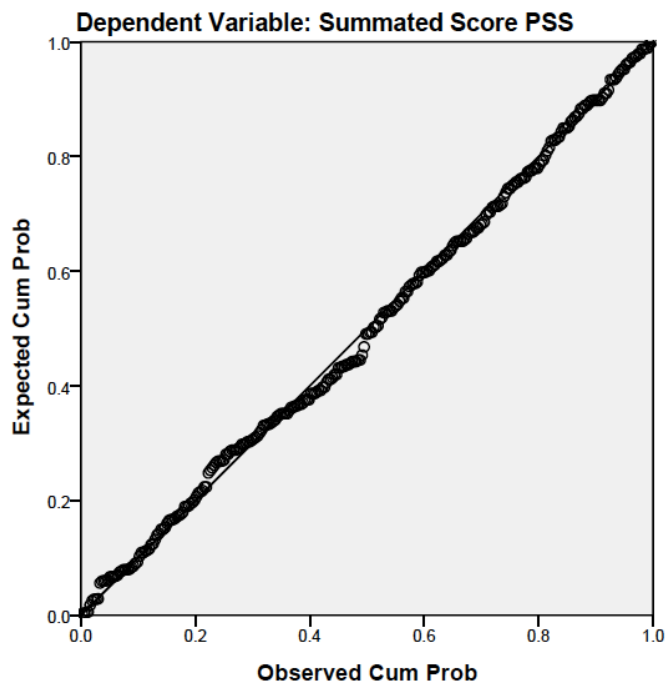


Hypothesis 2 – Stress

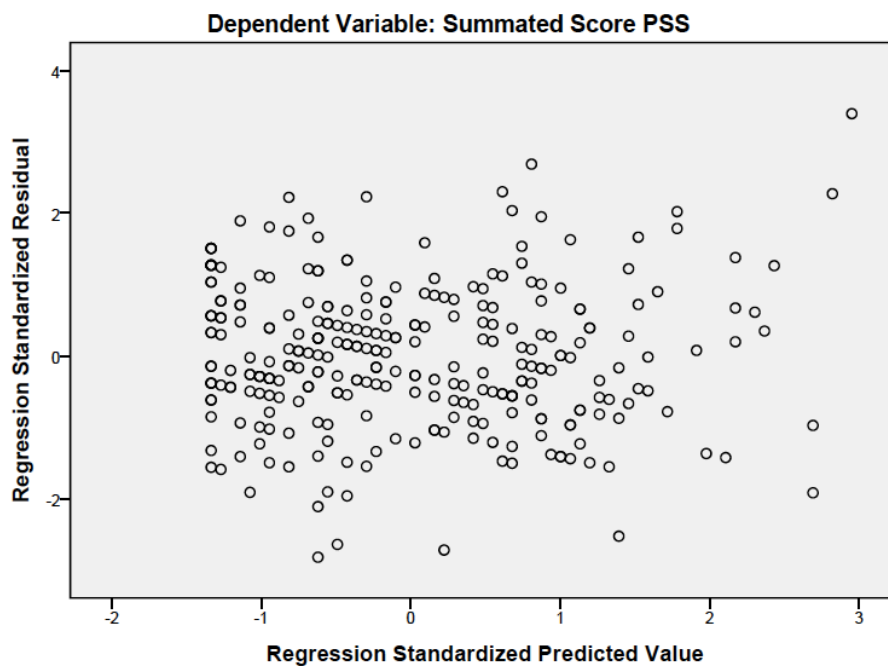
Durbin-Watson: 1.81

VIF: 1.00

Normal P-P Plot of Regression Standardized Residual



Scatterplot

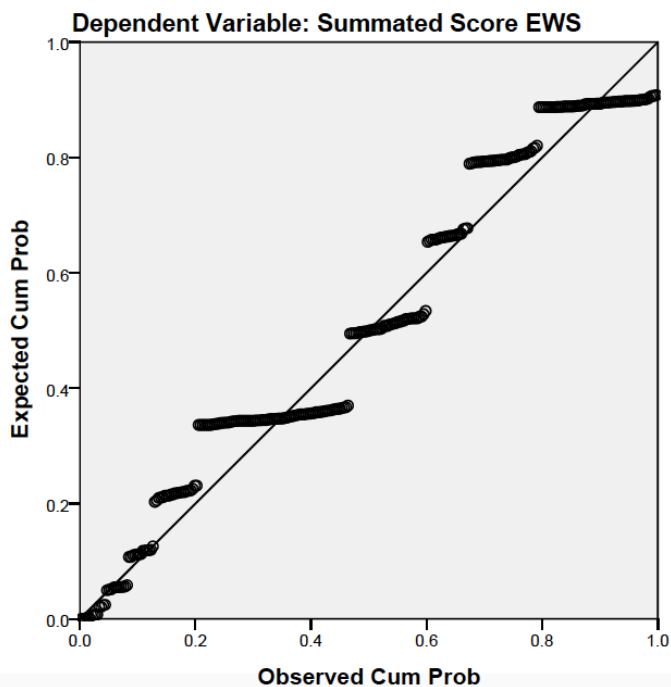


Hypothesis 3 – Work Engagement

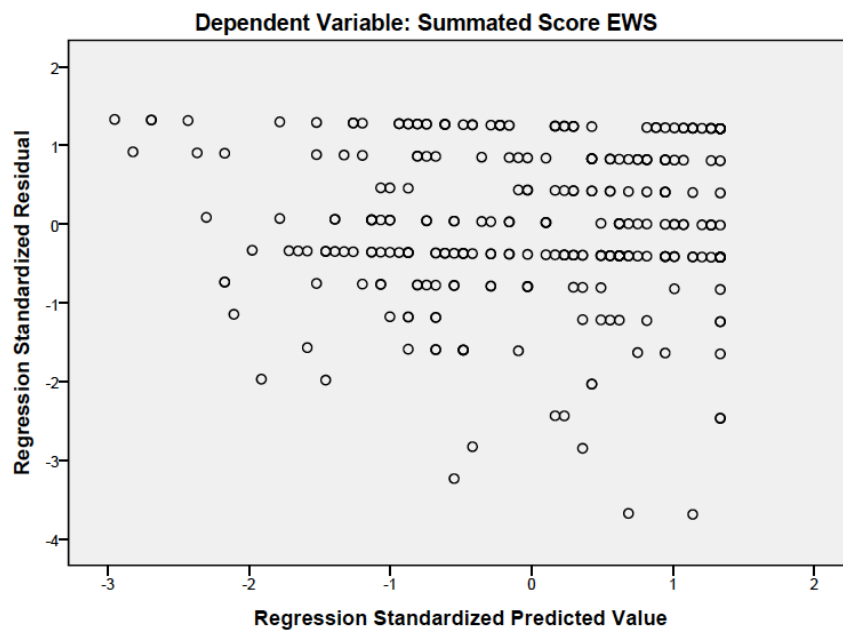
Durbin-Watson: 1.98

VIF: 1.00

Normal P-P Plot of Regression Standardized Residual



Scatterplot



Hypotheses 4 & 5 – Job Satisfaction

Durbin-Watson: 1.86

VIF: 1.23

