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## The Moderating Role of Emotional Intelligence on Remote Work-Related Stresses During the COVID-19 Pandemic

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# Walden University

College of Psychology and Community Services

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Devon M. Scherer

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Walden University  
2022

Abstract

The Moderating Role of Emotional Intelligence on Remote Work-Related Stresses  
During the COVID-19 Pandemic

by

Devon M. Scherer

MA, Xavier University, 2005

BS, University of Cincinnati, 1999

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

Walden University

May 2022

## Abstract

At the start of the COVID-19 pandemic, many employees were laid off, furloughed, and forced to work remotely with no time to prepare for the drastic shift in routine. Those working from home have sometimes found it challenging to maintain boundaries between work and family, often leading to decreased overall psychological well-being. Research suggests that individuals with high levels of emotional intelligence (EI) may be better equipped to regulate their emotions during stressful times. Informed by EI theory, the purpose of this quantitative study was to investigate the potential for ability EI to influence work stresses associated with stay-at-home orders during the COVID crisis. One hundred and thirty full-time U.S. English-speaking adults, ages 18 to 65+, who worked on-site prior to COVID-19 and then shifted to remote work completed a survey on Momentive, a cloud-based platform. Although no moderating effect was found for the relationship between remote work and job-related stresses, findings revealed that remote work was a significant predictor of work-life balance. Additionally, ability EI was a significant predictor of work engagement, highlighting the value of increased worker satisfaction and productivity. As the pandemic persists and remote work increases, organizational leaders may want to add EI training to the onboarding process for new hires. Increasing employees' EI may effect positive social change by improving individual well-being and quality of life.

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## Dedication

This work is dedicated to my mom, Bonnie Bowie. I will be forever grateful for all you have done for me and everything you have sacrificed for me. Thank you for the endless encouragement and emotional support you have provided throughout this journey and always. Thank you for always making me a priority; your selflessness has never gone unnoticed. You are the strongest woman I know, and I could not have done this without you.

To my daughter, Adalyn, and my son, Emmett, who sacrificed too much time away from me over the last 4 years so that I could pursue my educational dream. Although the last 4 years have been challenging for everyone, I hope this will teach you both that with dedication, determination, hard work and perseverance anything is possible. Always know that if it does not challenge you, it does not change you. To my husband, Matt Scherer, who has been by my side every step of the way.

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## Chapter 1: Introduction to the Study

In March 2020, many states in the United States issued orders instructing organizations to shift employees to remote work in an attempt to slow the transmission of COVID-19 (Zhang et al., 2021). By May 2020, it was estimated that 65% of the workforce were working remotely (Gallup, 2020), and by October, 71% were estimated to be working remotely (Parker et al., 2021). In addition, many were furloughed or laid off, leaving little time for organizations or employees to make plans for a successful transition (Kiniffin et al., 2021). Although remote work had been studied for decades, COVID-19 abruptly changed work routines. Previous research on remote work had been shown at times to be beneficial for employees who require little interaction with others (Allen et al., 2014); however, individuals forced to work from home due to the pandemic have found it challenging to maintain boundaries between work and non-work (Palumbo, 2020).

In one survey conducted early in the pandemic, a significant percentage of respondents reported worsening mental health symptoms while working from home compared to those who worked away from home (Izdebski & Mazur, 2021). Another study found increasing reports of psychological distress and poorer overall well-being as a consequence of working from home (De Sio et al., 2021). There was an urgent need to better understand the implications of enforced remote work on employees so that organizations could plan accordingly both now and in the future. If, as predicted, ability emotional intelligence (EI) has the potential to mitigate job stresses associated with remote work, then organizations can offer EI training to increase individuals' ability to

regulate their emotions. Doing so may potentially decrease job-related stress and anxiety, increase engagement, and encourage a healthy work-life balance for positive social change.

This chapter will review the background of the study and explain the problem and the purpose of the study. The research questions (RQs) and hypotheses will be presented along with the theoretical framework and nature of the study; both will be discussed in more detail in Chapter 2. This chapter will also provide the definitions of key terms used in the study and discuss the assumptions, scope and delimitations, limitations, and significance of the research.

### **Background**

Research has shown that in 2019, COVID-19 changed the nature of the work environment, forcing many workers to shift from the office to the home (Zhang et al., 2021). By October 2020, approximately 71% of U.S. workers were working remotely in some capacity (Parker et al., 2021). Although remote work was not a new concept, COVID-19 had accelerated the number of people working remotely (Bondarenko et al., 2021). Before COVID-19, positive aspects of remote work had allowed employees more options for childcare and schedule flexibility; however, the pandemic sparked significant changes for employees and organizations (Jacks, 2021), including an increase in digital inequities, severe unemployment (Rai, 2020), a disproportionate number of women and minorities losing their jobs, and a shift back to a more male-dominated work environment (Jacks, 2021). Remote work had also brought on struggles with managing work-life balance, work engagement, and work-related stress (Palumbo, 2020).

The pandemic has had negative effects on employees' mental health. Recent studies reported increases in short-and long-term mental health issues (Petterson et al., 2020) and increases in avoidable deaths from alcohol, drug use, and suicide (Kannampallil et al., 2020). The prevalence of stress, depression, work exhaustion, burnout, and worsened well-being was found 4 to 5 weeks after work-from-home orders were implemented in a group of employees working remotely (Evanoff et al., 2020). Working from home may have some benefits, such as increased flexibility and control; however, these benefits may have been quickly offset by a non-friendly work environment when employees were forced to work from home (Burdorf et al., 2021). Not all employees had a quiet home environment; with many school-age children home during this period, it was difficult for employees to focus on work tasks while also supervising their children's homeschooling (Kaushik et al., 2020). Additionally, many employees were not technologically equipped to handle work interactions as not everyone had high-speed connectivity, video cameras, headsets, and the skills to manage them. As the pandemic continued into 2021 and beyond, there was still much to be learned about the impact of remote work on job-related stresses. Estimates suggest that remote work continued to grow rapidly after employers instituted work-from-home orders, with more than 25 million remote workers in 2021 (Golden, 2021). There was an urgent need to expand the breadth and depth of research on remote work and its impact on employees and organizations and to identify remedies to mitigate the negative impact (van Zoonen et al., 2021).

To that end, studies have shown that EI has the potential to help individuals regulate emotions associated with stressful events (Marroquin et al., 2017; Salovey et al., 1999; Sanchez-Alvarez et al., 2016). A defining feature of EI is the ability to regulate emotions beneficial to managing work and family challenges, health, and psychological well-being (Restubog et al., 2020). Individuals with higher EI scores tend to live life more easily, have deeper relationships, and more social support (Sanchez-Alvarez et al., 2016); EI has been found to increase work engagement and work performance, leading to an overall increase in general life satisfaction (Ciarrochi et al., 2001; Devonish, 2016). EI has also been found to play a role in maintaining a good work life balance and to positively affect well-being (Nanda & Randhawa, 2020). Individuals with higher levels of EI can better regulate their negative emotions leading to greater emotional control and the skills necessary to better reconcile both family and work. The study addressed the gap in the literature by examining the relationship between remote work, job stresses, and the moderating role of *ability* EI. As the pandemic continues and organizations continue to increase remote work options, the study was needed to understand how to best support employees in an effort to decrease the mental health challenges they were experiencing.

### **Problem Statement**

Organizations attribute their success to the work engagement, job satisfaction, and overall psychological well-being of their employees, all of which have been negatively impacted by a once in a century pandemic's disruption to people's lives. To decrease the spread of COVID-19, millions of individuals were forced to shelter at home and, as a result, forced to work remotely (Prasad et al., 2020). Confined to their homes,



quarantined employees reported worsening physical and mental health conditions related to social isolation, disengagement from work, and loss of revenue (Banerjee & Rai, 2020; Torales et al., 2020; Zhang et al., 2020). As COVID-19 resulted in entire companies moving to remote work, employees were challenged with finding ways to maintain business as usual. With little time to prepare, individuals found themselves sharing a workspace at home with other family members, shifting roles and responsibilities, and dealing with increased anxiety and stress (Waizenegger et al., 2020).

The pandemic has broadly affected the mental health of the general population and continues to cause psychological distress to many individuals (Galea et al., 2020). Even before the pandemic, individuals suffering from mental health challenges (i.e., anxiety, stress, and depression) struggled to keep jobs, which may become an even bigger issue in the future (Schuring et al., 2017). There is still much to be learned about employees who were required to change their regular work practices (Burdorf et al., 2021). Emerging data have supported the effects on workers' behaviors, such as increases in sedentary behavior, less physical activity, reduced sleep quality, and significant reductions in mental health (Barone-Gibbs et al., 2021). COVID-19 has substantially increased rates of anxiety, depression, substance abuse, loneliness, and domestic violence (Galea et al., 2020). With the introduction of the delta variant and resurgent case numbers and deaths (Keehner et al., 2021), employment security, family management, and psychological well being remain top of mind; managing both work and family when everyone is confined to the home has been and continues to be highly stressful (Restubog et al., 2020).

Studies have shown that the ability to regulate emotions can have myriad benefits to managing work and family challenges and, ultimately, health and psychological well-being (Restubog et al., 2020). The ability model of EI allows for the perception, evaluation, and management of emotion in oneself and others (Drigas & Papoutsis, 2018). Individuals with a high ability EI can manage a situation to their advantage by understanding their emotional processes and gauging others' emotional experiences.

Furthermore, studies find that emotional regulation reduces negative emotions, enhances career adaptability, and facilitates work-family balance (Restubog et al., 2020). Previous research has focused on the role of EI in the workplace; however, this study filled a gap in the literature by exploring whether ability EI could influence work stresses associated with remote work. To that end, EI may offer a solution to the uncertainty of not knowing when or if normal working conditions will resume.

### **Purpose of the Study**

The purpose of this quantitative study was to determine the extent to which ability EI (IV) moderates the relationship between working remotely during COVID-19 (IV), job-related stress and anxiety (DV), work engagement (DV), and work-life balance (DV). Findings from this research can increase understanding of remote work and associated job stresses while working remotely due to the pandemic. Although many companies are now offering hybrid work environments, there is still much to be learned within the context of flexible working arrangements and their effects on employees job-related stresses, work engagement, and work-life balance (Wiatr, 2021). If ability EI is shown to

mitigate the deleterious effects of remote work, organizations may find it useful to offer EI training to their employees.

### **Research Questions and Hypotheses**

RQ1: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to job stress, as measured by the Work-Related Stress Scale (WRSS), among employed adults working remotely due to COVID-19?

*H<sub>01</sub>*: Working remotely during COVID-19 is not a significant predictor of job-related stress.

*H<sub>1</sub>*: Working remotely during COVID-19 is a significant predictor of job-related stress.

RQ2: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to job-related anxiety, as measured by the Workplace Anxiety Scale (WAS), among employed adults working remotely due to COVID-19?

*H<sub>02</sub>*: Working remotely due to COVID-19 is not a significant predictor of job-related anxiety.

*H<sub>2</sub>*: Working remotely due to COVID-19 is a significant predictor of job-related anxiety.

RQ3: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to work engagement, as measured by the

Utrecht Work Engagement Scale (UWES-9), among employed adults working remotely due to COVID-19?

*H<sub>03</sub>*: Working remotely due to COVID-19 is not a significant predictor of work engagement.

*H<sub>3</sub>*: Working remotely due to COVID-19 is a significant predictor of work engagement.

RQ4: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to work-life balance, as measured by the Work Life Balance Scale (WLBS), among employed adults working remotely due to COVID-19?

*H<sub>04</sub>*: Working remotely due to COVID-19 is not a significant predictor of work-life balance.

*H<sub>4</sub>*: Working remotely due to COVID-19 is a significant predictor of work-life balance.

RQ5: To what extent does ability EI, as measured by the Wong and Law Intelligence Scale (WLEIS), moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and job-related stress, as measured by the WRSS, among employed adults working remotely due to COVID-19?

*H<sub>05</sub>*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and job-related stress.

*H<sub>5</sub>*: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and job-related stress.

RQ6: To what extent does ability EI, as measured by the WLEIS, moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and job-related anxiety, as measured by the WAS, among employed adults working remotely due to COVID-19?

*H<sub>0</sub>6*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and job-related anxiety.

*H<sub>6</sub>*: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and job-related anxiety.

RQ7: To what extent does ability EI, as measured by the WLEIS, moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and work engagement, as measured by the UWES-9, among employed adults working remotely due to COVID-19?

*H<sub>0</sub>7*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and work engagement.

*H<sub>7</sub>*: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and work engagement.

RQ8: To what extent does ability EI, as measured by the WLEIS, moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and work-life balance, as measured by the WLBS, among employed adults working remotely due to COVID-19?

*H<sub>0</sub>8*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and work-life balance.

*H8: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and work-life balance.*

### **Theoretical Framework**

The study was informed by the theory of EI. Salovey and Mayer (1990) introduced the concept of EI as defined by the ability to monitor one's own and others' emotions and use that information to guide one's own thinking and the actions that follow subsequently. Mayer and Salovey also suggested that EI is a cognitive ability associated with but separate from general intelligence. Later, Goleman (1998) extended the concept of EI to include general social competence, suggesting that EI plays a critical role in one's success in life. Accurately perceiving emotions is a fundamental aspect of EI, and emotions are crucial determinants of how well individuals function in everyday life (Kadic-Maglajlic et al., 2016; Pena-Sarrionandia et al., 2015). Emotions allow the individual to facilitate various cognitive activities such as critical thinking and problem-solving (Kadic-Maglajlic et al., 2016). Because COVID-19 has brought life-altering changes, how we interpret situations can influence how we think, feel, and react (Hasson & Aryub, 2019). EI was, therefore, important to study given the impact that COVID-19 has had on many peoples' lives.

There are two conceptually different EI models. Trait EI is described as affect-related personality traits, whereas ability EI is a cognitive ability based on emotion information processing (Fiori & Vesely-Maillefer, 2018). In other words, trait EI belongs within the realm of personality, whereas ability EI belongs within the realm of cognition (Petrides, 2011). Trait and ability EI are distinct constructs and are recognized as such in

the literature. Studies have found that emotion regulation, the defining feature of ability EI, has the potential to improve individuals' physical and mental health, making it appropriate for use in this study. Emotion regulation involves several different techniques or strategies that can be used to regulate emotions at different points in time across the emotional experience (Allen et al., 2014). The theory of emotional intelligence, specifically *ability* EI, was selected for the study due to the focus on emotional regulation and cognitive ability. Chapter 2 will provide a comprehensive review of ability EI and justify its use in the study.

### **Nature of the Study**

The study was a quantitative nonexperimental correlational design featuring survey methodology to determine the extent to which ability EI (IV) moderates the relationship between working remotely during COVID-19 (IV), job-related stress and anxiety (DV), work engagement (DV), and work-life balance (DV). Quantitative research was appropriate for examining relationships among the study variables.

The target population for the study was full-time U.S., English-speaking adults, ages 18 to 65+. As of July 2021, the civilian labor force in the United States was estimated to be around 161 million people (Widelska, 2021). Before the pandemic, only 6% of employees worked primarily from home (Kosteas et al., 2020). In May 2020, over one third of employees worked from home. The study used an internet-based survey using Momentive (previously known as SurveyMonkey). A self-selected convenience sample was used where participants who meet the inclusion/exclusion criteria were invited to participate electronically. Data were analyzed using the Statal Package for

Social Sciences (SPSS) Version 27.0. Standard multiple regression analyses was used to determine the strength of the relationship between the outcome variables (e.g., job-related stress and anxiety, work engagement, and work-life balance) and predictor variables (e.g., remote work and ability EI). A moderation analysis assessed the extent to which the moderator (i.e., ability EI) altered the strength of relationships between independent and dependent variables. Moderation occurs when the relationship between two variables (e.g., remote work and job stresses) strengthens or weakens depending on a third variable (e.g., ability EI).

### **Ability Emotional Intelligence**

Ability EI is an individual's ability to regulate emotion and make more effective decisions utilizing the cognitive system (MacCann et al., 2020) to address and solve problems related to social functioning (Guil et al., 2018). Three key components of ability EI are perception and expression of emotions, understanding and knowledge of emotions, and emotional regulation (Hughes & Evans, 2016).

### **Remote Work**

Remote work has been described interchangeably with telework, homeworking, work from home, or work from anywhere (Popovici & Popovici, 2020). Remote work describes the ability of individuals to work outside the confines of an office. Advances in technology have made remote work available to many employees.

### **Job-Related Stress**

Job stress, also known as occupational stress or workplace stress, refers to an individual's response to the work environment perceived as threatening and is caused by



an individual's perception of their ability to perform required job tasks and the ability to cope with the demands (Jung et al., 2020). One of the most important factors associated with workplace health is the ability to successfully regulate emotion (Joseph & Newman, 2010). Emotion regulation is a core feature of ability EI. Emotion regulation can potentially improve job attitudes, changing the way employees perceive stressful work events, handle negative emotions, and potentially decrease job-related stress (Miao et al., 2017).

### **Job Related Anxiety**

Job-related anxiety, also known as work-related anxiety, refers to a mental state where employees feel increased arousal, fear, and concern about their job (Yunas & Mostafa, 2021). Job-related anxiety can be caused by the work environment, employment status, and job insecurity and can lead to decreased productivity and participation at work, increased turnover, and decreased well-being at work (Jiang & Probst, 2019; Sora et al., 2019; Yunas & Mostafa, 2021). Recent evidence suggests that emotional regulation, a key construct in ability EI, may serve as a buffer for employees' mental health (Extremera et al., 2020). Evidence suggests that helping individuals to cultivate emotional abilities may reduce the likelihood of psychological maladjustments and may increase employees' health, job attitudes, and performance (Miao et al., 2017; Mikolajczak & Van Belleghem, 2017).

### **Work Engagement**

Work engagement is defined as having a positive, fulfilling, work-related state of mind (Extremera et al., 2020) and is characterized by vigor, dedication, and absorption

(Schaufeli et al., 2002). Work disengagement is employees' physical, cognitive, and affective withdrawal from work (Azeem et al., 2020); it is likely to occur when employees feel they are not valued and expectations between employee and employer are mismatched (Kahn, 1990, Rastogi & Chaudry, 2018). One theme in the disengagement literature is the distancing of oneself emotionally, cognitively, and physically from work (Afrahi et al., 2022). When employees become disengaged from work, they are more likely to leave, not see their work as meaningful, and not invest themselves in work (Hu & Hirsh, 2017; Leunissen et al., 2018). Research suggests that individuals experiencing negative emotions and a negative view of themselves can decrease work engagement (Afrahi et al., 2022). Emotional regulation has been found to influence job attitudes and promote feelings associated with job dissatisfaction (Miao et al., 2017).

### **Work-Life Balance**

Work-life balance encompasses the existing relationship between work and personal life, emphasizing health, absence of stress, well-being, quality of life, organizational performance, and human and social development with others (Sanchez-Hernandez et al., 2019). Work-life balance reflects the balance between work, personal life, and family commitments (Hammig et al., 2009). The COVID-19 pandemic caused large numbers of individuals to work from home, resulting in physical and psychological separation and leaving workers struggling to cope with a clash of work and home life (Afrahi et al., 2022). Work-life balance was an issue for many.

### **Assumptions**

The first assumption was that all participants would provide honest responses to the survey questions and would understand all the questions asked. The data collection process would foster anonymity and confidentiality in an effort to maximize the truthfulness of responses. It was also assumed that lingering stresses related to the 2020 U.S. COVID-19 lockdown (e.g., job loss, loss of income, social isolation) would inform participants' current state of mind, such that their survey responses would reflect the mental health toll, if any, exacted by the home quarantine mandate. Furthermore, it was assumed that the theoretical reasoning for selecting the predictor variables was logically sound—specifically, that remote work and ability EI are factors that influence job-related stresses.

### **Scope and Delimitations**

The study was designed to examine the extent to which ability EI moderates the relationship between remote work and job stresses (e.g., job-related stress and anxiety, work engagement, and work-life balance) among individuals forced to work from home during the mandated COVID-19 lockdown. Recent literature suggests that the rapid shift to remote work has caused significant mental health issues (De Sio et al., 2021), including increased stress and anxiety and concerns about work/life balance (Rudolph et al., 2021). The target population for the study was full-time U.S., English-speaking adults, ages 18 to 65+, who worked on-site in their place of business prior to the work-from-home directive to slow the spread of COVID-19 and then shifted to remote work. Although telecommuting began in the 1970s, the 2019 pandemic brought exponential

change, forcing workers to move to remote work without preparation (Rudolph et al., 2021). The study intended to understand the relationship between remote work and job-related stresses and the potential moderating effect of ability EI. Because cultural differences in the workplace were beyond the study's scope, the sample was limited to U.S. employees.

The theory of emotional intelligence, specifically ability EI, was selected for the study given its focus on emotional regulation and cognitive ability. The ability EI approach views emotions as useful sources of information that help individuals make sense of and navigate their social environment (Salovey et al., 2015). Other forms of EI are mixed model, which emphasizes self-awareness, social awareness, and social skill, and trait EI, which concerns individual differences in how emotional information is recognized, processed, and regulated. Ability EI, specifically, has been shown to predict health-related outcomes (i.e., higher life satisfaction, lower depression, and fewer health issues; Fernández-Berrocal & Extremera, 2016) and has been positively implicated in workplace performance and leadership (Fiori & Vesley-Maillefer, 2018). Last, researchers have found that individuals with high levels of ability EI enjoy better interpersonal functioning in the family (Martin et al., 2021), are happier at work (Miao et al., 2017), and more successful in social relationships (Wei et al., 2019). These findings supported further investigation of ability EI.

### **Limitations**

A limitation of the study was the easing of COVID-19 lockdown restrictions. In March 2020, the U.S. government enforced a national lockdown, forcing all nonessential

employees to work from home (Wang & Pagan, 2021). Because I measured job-related stress and anxiety, work engagement, and work-life balance as experienced currently, participants who had returned to the workplace and/or opted to continue working remotely may not have experienced work-related stresses at the time of the study as they did when remote work was mandatory. Given that job performance was not measured, determining the influence of job stresses on work performance was not possible. The use of nonprobability internet-based surveys may have affected the generalizability of the study, given that random sampling is needed to guarantee the representativeness of a sample (Lehdonvirta et al., 2020). Also, individuals who self-select may be different from those who do not volunteer to participate in survey research. The existence of professional survey-takers may not reflect the majority since inclusion criteria determined who could, and could, participate in the research (Jager et al., 2017; Mason & Suri, 2011).

Using self-report surveys increases the potential for social desirability bias; participants tend to respond in ways that cast themselves in the most favorable light (Latkin et al., 2017). One way to mitigate this bias was to use anonymous data collection, which may encourage participants to respond honestly. There were no personal or researcher biases specific to this study; however, I acknowledge that I, too, was impacted by the pandemic and was required to work remotely. That said, the participants answered the surveys anonymously, and I had no interaction with them. As noted in the Scope and Delimitations section, the scope of this study was to examine the extent to which ability EI moderates the relationship between remote work and job stresses. Other variables have

the potential to influence job stress (e.g., personal relationships, finances, etc.) but were beyond of the scope of this study.

### **Significance**

The COVID-19 pandemic has brought on unforeseen challenges to the way we work, and the changes have had a significant impact on occupational activity and the mental health of individuals (Izdebski & Mazur, 2021). The impact of remote work on employees working remotely during COVID-19 continues to negatively impact workers' mental and physical health and reduces productivity (Dongarwar et al., 2020). As organizations continue to increase work-from-home options, there was a critical need to understand how to best support employees in an effort to reduce the mental health challenges they experience. The results of the study have several implications for positive social change. First, if it is found that *ability* EI reduces job stresses associated with remote work, then organizations could develop EI training for employees. Individuals reporting high levels of EI have been shown to experience more positive life outcomes, which can lead to increases in overall life satisfaction and happiness (Blasco-Belled et al., 2020). Second, the study intended to increase awareness of the mental health challenges employees are facing while working remotely during the pandemic. Relationships between remote work, stress, quality of life, wellbeing, and depression have been well-documented (Oakman et al., 2020). Last, organizations may use this information as a starting point to offer additional resources for their employees (e.g., work from home resources, increased access to mental health services, and ongoing EI training).

## Summary

As the pandemic continues, remote work has become the new normal for many employees and organizations across the United States. There are still significant gaps in the literature on the effect of remote work on workers' professional activity and mental health, and what was previously known about remote work is being challenged. The pandemic has provided an opportunity to learn more about remote work and how it affects workers both in how they do their jobs and how it impacts their health and life outside of work. Employees continue to encounter challenges related to job stress, job-related anxiety, work engagement and work-life balance. Experts contend that even when the pandemic subsides, millions of workers will continue working from home because organizations are realizing the tremendous cost savings of having employees work remotely (i.e., less need for office space, fewer full-time employees, more remote connection through technology).

Organizations and employees did not have time to prepare for the shift from office work to remote work during the COVID-19 pandemic. As discussed in Chapter 2, understanding the relationship between remote work and job stresses and the moderating effect of ability EI may assist organizations in developing training and policies that will support employees working from home in the future. Chapter 2 will include an introduction; an overview of the literature search strategy; a more detailed discussion of the theoretical framework; and an exhaustive review of the current literature about remote work, job-related stress, and anxiety, and work engagement.

## Chapter 2: Literature Review

### **Introduction**

Successful organizations attribute their success, in part, to work engagement, job satisfaction, and the overall psychological well-being of their employees, all of which have been impacted when COVID-19 recently disrupted individuals' lives, including their work. To decrease the spread of COVID-19, millions of individuals were forced to shelter at home and, as a result, had to work remotely (Prasad et al., 2020). Confined in their homes, quarantined employees reported worsening of physical and mental health conditions related to social isolation, disengagement from work, and revenue loss (Banerjee & Rai, 2020; Torales et al., 2020; Zhang et al., 2020). As the pandemic continues, employment security, family management, and psychological well-being remain top of mind for many workers; managing both work and family with everyone confined to the home has been and continues to be extremely stressful (Restubog et al., 2020).

A growing body of literature highlights the adverse effects of the pandemic, including the abrupt changes in daily life and the impact of closures on businesses and work-life, on mental and physical health, including stress levels (Drigas & Papoutsis, 2020). Researchers reported that between February and May 2020, over one third of U.S. employees working outside of the home moved to remote work resulting in about half of American employees now working from home (Brynjolfsson et al., 2020). As the pandemic continues, individuals continue to worry about wage cuts, mass layoffs, and how their lives have changed and will continue to change (Drigas & Papoutsis, 2020).



Because pandemics trigger emotional reactions, negative emotions can arise causing individuals to struggle managing their emotional reactions leading to increases in stress and long-term health consequences (Drigas & Papoutsi, 2020). Therefore, individuals who can understand their feelings and are proficient in emotion-regulation may likely be more able to adjust to job stressors and better adjust to the remote environment of work.

As COVID-19 forced entire companies to move to remote work, it is critical to explore how employees navigate the challenges of changing work environments and find ways to maintain business as usual. With little time to prepare mentally, many individuals found themselves quickly trying to share workspace at home with other family members, shift roles and responsibilities, and deal with increased anxiety and stress (Waizenegger et al., 2020). Organizations are interested in retaining top talent and investing in their employees to ensure that they are committed to staying with the company (Brunetto et al., 2020); committed employees lead to less turnover and more loyalty to the organization (Brunetto et al., 2020). Additional research is needed to learn more about the effects of remote work on job-related stress and anxiety, work engagement, and work-life balance. In particular, if individuals with high ability EI fare better during a pandemic because they can regulate their emotions, then employers may want to consider offering EI training to their workforce in the interest of reducing employee turnover.

Since COVID-19 has resulted in more employees being forced to work from home, the consequent disengagement from work and job-related stress have increased while also complicating employees' pre-COVID work-life balance (Sanderson et al., 2020). EI can help mitigate these adverse effects for remote workers (Navas &

Vijayakumar, 2018). The results of the present investigation may help organizations identify individuals with lower EI who are less satisfied, less engaged, and struggling to balance work and family life due to the abrupt changes brought on by COVID-19 and the uncertainty of not knowing when or if normal working conditions will resume. Once identified, organizations could then teach skills or provide training to increase an individual's EI and ultimately increase work engagement, decrease job-related stress and anxiety, and encourage healthy work-life balance (Gilar-Corbi et al., 2019).

The purpose of the study was to examine the relationship between ability EI and problems associated with working remotely due to the pandemic (e.g., job-related stress and anxiety, work engagement, and work-life balance). To that end, the study used a quantitative approach to determine the extent to which ability EI (IV) moderates the relationship between working remotely during COVID-19 (IV), job-related stress and anxiety (DV), work engagement (DV), and work-life balance (DV). Working remotely was defined as the average number of hours worked remotely per week.

Chapter 2 will provide an overview of the search strategy used to find current literature addressing the research problem. This overview is followed by a discussion of emotional intelligence theory and its application. The chapter will also include an exhaustive review of the existing literature related to the key variables (e.g., remote work, job-related stress and anxiety, work engagement, and work-life balance) and conclude with a summary.

## **Literature Search Strategy**

The Walden University Library was the primary source used to locate empirical articles reviewed for this study. Databases searched included APA PsycInfo, APA PsycTests, SAGE Journals, ScienceDirect, SocINDEX, ProQuest, and ABI/INFORM Collection. Google Scholar was used to identify additional articles that were not accessible through the Walden University Library. Key terms used in the literature search included combinations of the following: *COVID-19*, *emotional intelligence*, *ability EI*, *job-related stress and anxiety*, *work engagement*, *remote work*, *telework*, *telecommuters*, *life disruption*, *emotional regulation*, *job satisfaction*, and *work-life balance*. Most articles included in the literature review reflect peer-reviewed research conducted from 2017 to 2022. Seminal sources were used to reference the theoretical foundation of emotional intelligence.

## **Theoretical Foundation**

### **The Theory of Emotional Intelligence**

Over the past 3 decades, EI theory has continued to evolve (O'Connor et al., 2019). Because the theory of EI is relatively new, several iterations are presented in the literature. Humans are complex and can express emotion, reason deeply, and judge things with mathematical precision (Gayathri & Meenakshi, 2013). Theologians study the control of emotions in humans, psychologists and sociologists discuss emotions and the significance to the individual and society, and natural scientists are interested in the origin, evolution, and function of emotion. Although the definition of emotion is easily explained in any online search as a feeling involving thoughts, physiological changes,

and expressions of behavior, feelings, or thoughts, the application of emotions to humans is more complicated. In the 1990s, it was thought that EI was analogous to general intelligence and was an ability-based construct; however, other forms of EI, such as trait, mixed model, and ability EI, have emerged (O'Conner et al., 2019). Following is a brief overview of EI's evolution, followed by a more thorough explanation of the conceptualization and application of ability EI to the study.

The idea that an individual has only one intelligence is increasingly disputed. Researchers have developed a new understanding of EI that includes other inherent abilities that should be considered before deciding an individual's general intelligence level (Gayathri & Meenakshi, 2013). Attention needs to be paid to other "non-intellective elements" like a person's capacities and traits, which are aspects of personality rather than general intelligence. This idea is traced back to Thorndike in the early 1920s. Thorndike introduced the term *social intelligence* as an ability to understand others and act wisely in social situations as he believed there was more to an individual's intelligence than just memory and problem solving (Thorndike, 1920).

Following the idea that an individual has other abilities besides what can be discerned from an IQ test, there must be affective and conative abilities in addition to the nonintellective elements that make up an individual's intelligence. Conative functions like drive and persistence, will, and temperament, in addition to the cognitive and nonintellective elements, would provide a better understanding of an individual's IQ rather than just a simple cognitive test (Wechsler, 1950). The importance of looking at an

individual from multiple aspects rather than only one became a driving force in the evolution of EI. Gardner presented the idea of multiple intelligences in 1983.

Gardner (2012), who was a critic of IQ tests, asserted that it was impossible to ascertain a person's intellect or non-intellect by a single test because humans are complex, and each person has different levels of latent abilities. Additionally, Gardner stated that all humans have different levels of intelligence, that no two individuals can have the same combination, which led to his introduction of the multiple intelligence theory. Although there have been critics of multiple intelligence theory due to lack of validity, current neuroscientific evidence supports the theory as one of the first formulations of (Shearer, 2020).

As social intelligence and multiple intelligence concepts have continued to evolve, more attention has been paid to the idea that other qualities should be considered essential in an intelligent person (Sternberg et al., 1981). Experts recognized qualities like making judgments, being sensitive to others' needs, understanding the world from a larger perspective than oneself, and making and recognizing mistakes as additional components of what makes an intelligent person (Sternberg et al., 1981). As research developed, the term *emotional intelligence* was coined and presented as a subset of social intelligence (Salovey & Mayer, 1990). Later, Goleman (2006) extended the concept of EI to include general social competence, suggesting that EI plays a critical role in one's success in life. According to Cherniss and Goleman (2001), EI is a cluster of skills and competencies based on self-awareness, relationship management, and social awareness.

Goleman (1998) is well known as the first to apply the concept of EI to business and the workplace.

Extending EI theory even further, Mayer et al. (1999) described EI as individual differences in the abilities and traits involved in perceiving, using, understanding, and managing emotions. Salovey and Mayer (1990) asserted that individuals could analyze emotions intellectually, leading to the development of *ability* EI, whereby emotion and cognition is a dynamic system that functions reciprocally to facilitate social adaptation (Vanuk et al., 2019). Distinct from trait EI, which belongs within the realm of personality, ability EI focuses on an individual's cognitive ability to (a) perceive and express emotion; (b) assimilate emotion into thought; (c) understand, analyze, and appropriately label the emotion; and (d) regulate emotion (Mayer et al., 1999). Studies have found that emotion regulation, in particular, plays a significant role in individuals' physical and mental health and is also a defining component of EI (John & Gross, 2007).

Emotion regulation is described as a group of psychological processes and behaviors that individuals use to manage their own responses (Zysberg & Raz, 2019); it refers to the effort people undertake to influence the experience and expression of their emotions (Gross, 1999). In other words, emotion regulation enables people to control which emotions they have and when they have them (Gross, 1999). Studies suggest that emotionally intelligent people experience fewer negative emotions and that some emotion regulation processes are more effective than others in controlling negative emotion; however, it is unclear whether individual differences in EI relate to differences in the emotion regulation process people use and that to be effective one must plan, monitor,

and evaluate the processes one is using and then adjust based on which is most or least effective (Bucich & MacCann, 2019).

The current knowledge on EI suggests that emotion regulation begins with the appraisal of emotions before the emotions can be processed more thoroughly (Pekkar et al., 2018). Hence, the appraisal of emotions seems to be a prerequisite for more complex emotion-related processes like emotion regulation. The ability to regulate emotions at different points in time across the emotional experience is the highest, most complex level of emotion regulation and is the ultimate step through which external conditions are affected (Allen et al., 2014). Individuals who are skillful in emotion regulation have been shown to possess a more positive affect, increased social functioning, and increased well-being, which is thought to be due to specific regulation strategies (Megias-Robles et al., 2019). Two commonly studied strategies in emotion regulation are cognitive reappraisal and expressive suppression.

The first strategy, cognitive reappraisal, is a form of cognitive change involving the interpretation of an emotional situation as a way to modify the impact of the emotion once the situation occurs, which allows for psychological distance from an aversive situation (Gross, 1999). The second strategy, expressive suppression, is a form of response modulation that involves suppression of emotional behavior after the individual is already aroused or in an emotional state (Gross, 1998). Each strategy regulates emotion differently and has differential consequences. Generally, reappraisal reduces the likelihood of negative emotional experience and expression and physiological activation and increases the likelihood of positive experience. Conversely, suppression is associated

with increases in physiological response and decreases in behavioral expression (Gross & John, 2011). Megias-Robles et al. (2019) found that higher EI abilities are associated with greater cognitive reappraisal use and less expressive suppression for regulating emotions.

Prior research has shown that EI is positively associated with performance and employee well-being in caring professions such that healthcare professionals with high EI have better relationships with patients, better clinical performance, less job stress, less compassion fatigue, and more engagement in their work (Zheng et al., 2015). Based on preliminary findings that emotions must first be appraised before they can be processed more thoroughly, Pekaar et al. (2018) tested a process model of EI to determine how individuals manage their own and others' emotions during work from week to week. Pekaar et al. hypothesized that different emotion management strategies are used depending on if the individual is appraising their emotions or others' emotions, which entails the continuous assessment of one's own and others' emotions. Pekaar et al. used a weekly diary design to record how individuals use EI to process their own and others' emotions at work and to examine how they respond to their own and others' emotions. The results showed that EI starts with the appraisal of emotions before emotion regulation can occur; emotion regulation is the highest, most complex level of emotion processing. Therefore, the emotions that a caring professional perceives or experiences during work activate EI use, which in turn may benefit patient care and employee wellbeing.

To test the belief that individuals with high levels of ability EI can better manipulate and regulate their emotions across a wide range of settings (Laborde et al.,



2014), Zysberg and Raz (2019) examined the relationship between an individual's ability to self-induce an emotional state (positive or negative) on request and then return to baseline effectively in 127 young adults. The participants took tests of trait EI, ability EI, and trait anxiety. Their heart rates were monitored as an indicator of emotional responsiveness, and blood pressure was taken to indicate long-term emotion regulation. The results suggested that people with higher ability EI regulated their emotional responses more effectively, supporting the link between ability EI and emotion regulation. These findings have implications for the current study, given that individuals with high ability EI may adapt more effectively to stressful work situations than those with a lower EI (Schutte et al., 2002).

Further research supports the positive role of *ability* EI in the workplace. In a cross-sectional study, Sanchez-Gomez et al. (2021) analyzed the influence of *ability* EI on salary, hypothesizing that *ability* EI will help employees develop their professional careers and lead to higher financial compensation. A multi-occupational sample of men and women ( $N=758$ ) completed an *ability* EI questionnaire while salary information was collected with other sociodemographic variables. After controlling for the age, gender, social class, education level, and work experience variables, the results of the correlation and regression analysis showed that participants with higher *ability* EI generally have higher salaries. The study results provide preliminary evidence that *ability* EI is a relevant variable in achieving career success.

Extremera et al. (2020) examined the relationship between *ability* EI, cognitive emotion regulation strategies, and wellbeing indicators (e.g., psychological well-being

and satisfaction with life) while controlling for sociodemographic variables and personality traits. The authors expected *ability* EI to be significantly and positively correlated with adaptive cognitive regulation strategies and wellbeing outcomes and negatively correlated with maladaptive cognitive emotion regulation strategies. They also anticipated that adaptive cognitive strategies would mediate the relationship between *ability* EI and wellbeing. Three hundred seventy-eight college students completed questionnaires during class time. The results revealed that *ability* EI is associated with wellbeing indicators and specific cognitive emotion regulation, supporting the claim that people with higher *ability* EI levels experience greater subjective wellbeing and life satisfaction than those with lower *ability* EI. Additionally, results revealed that higher *ability* EI was associated with greater use of different adaptive emotion regulation strategies, including lower catastrophizing and higher rumination, focus on planning, positive reappraisal, and putting things into perspective. Higher scores in positive refocusing, focused planning, positive reappraisal, and putting things into perspective were positively and significantly associated with wellbeing, whereas self-blame, catastrophizing, and blaming others were negatively and significantly associated with wellbeing.

Dirican and Erdil (2020) examined the relationship between *ability* EI and workplace behaviors. The workplace behaviors studied were organizational citizenship behavior (i.e., promotes the effective functioning of the organization) and counterproductive work behavior (i.e., voluntary behavior that violates organizational norms, threatening the organization's wellbeing or its members). Dirican and Erdil (2020)

hypothesized that employees' *ability* EI would positively affect both interpersonal and organizational citizenship behavior (OCB) and negatively affect both interpersonal and organizational counterproductive work behavior (CWB). Academic staff from public universities in Turkey completed an online survey ( $N=645$ ). Results showed that *ability* EI increased OCB and reduced CWB in the workplace. *Ability* EI may encourage employees to perform OCB because emotionally intelligent employees can better understand their own and others' needs and are willing to offer empathetic responses to those in need. Also, individuals with higher *ability* EI tend to exhibit positive moods and use their emotions to increase performance. Conversely, when a negative experience at work triggers emotions like anger, rage, and resentment, employees low in *ability* EI are more likely to engage in CWB to satisfy their desire for retribution. Because COVID-19 has brought life-altering changes, how we interpret situations can influence how we think, what we feel, and how we react (Hasson, 2019).

### **Relationship of the Research Questions to the Theory of Emotional Intelligence**

The goal of the present research was to understand how emotional intelligence, specifically, *ability* EI, may moderate the relationship between working remotely due to COVID-19 and job-related stress and anxiety, work engagement, and work-life balance. The theory of emotional intelligence explains how individuals can monitor their own and others' emotions to guide thinking and behavior (Salovey & Mayer, 1990). Learning more about the relationship between remote work due to COVID-19 and job-related stress and anxiety, work engagement, and work-life balance will allow for a better understanding of ways to mitigate the negative effects of these work-related stresses.

Recent research demonstrates that individuals who exhibit higher levels of EI often have higher job satisfaction, higher organizational commitment, and experience less turnover (Miao et al., 2017).

If it is found that emotional intelligence moderates the relationship between working remotely due to COVID-19 and job-related stresses, then organizations can offer EI training to reduce job-related stresses due to remote work. A separate study found that employees are typically more productive and more satisfied when organizations incorporate EI into employee recruitment, training, and development (Miao et al., 2017). Additionally, the research found that when companies offer stress management and EI training, productivity increased by 93% (Paul & Dissanayake, 2020).

The study was informed by the *ability* approach to emotional intelligence and emotion management; linked to emotion regulation, *ability* EI offers several different techniques or strategies that can be used to regulate emotions at different points in time across the emotional experience (Allen et al., 2014). Adaptive cognitive strategies may positively affect the ability to understand and regulate emotion, helping individuals better understand and control their emotional responses to situations both in the workplace and in daily life (Thomas et al., 2020).

### **Literature Review Related to Key Variables**

#### **Remote Work**

Remote work, also referred to as telecommuting, telework, flexible work, or working from home, is a work arrangement where an employee works outside of the traditional office or workspace (Golden, 2021). Working from home emerged in the early

2000s when telecommuting and technologies started to develop allowing workers to avoid commuting, increasing flexibility in schedules, and supporting a better quality of life (Tavares, 2017). Over the last ten years, research in economics and other social sciences has focused on the advantages and disadvantages of remote work (Angelucci et al., 2020). Recent literature highlights the widespread use of telecommuting during the coronavirus 2019 pandemic for employees' physical health and safety and to decrease the spread of the virus, with estimates suggesting that more than 25 million employees in the United States now work remotely, a growth rate of 11-30% (Golden, 2021). A survey of 229 human resource departments reported more than 80% of their employees working from home during the early stages of the Covid-19 pandemic (Gartner, 2020). Moreover, a 2020 survey found that 71% of chief financial officers said they would allow their staff to opt for long-term remote work following the pandemic, and 60% of America's chief financial officers do not expect a return to normal until at least 2021 (Klebnikov, 2020).

Considering the large number of employees being forced to work remotely due to COVID-19, it is important to learn more about the effects of remote work on job-related stresses. There are advantages and disadvantages of remote work. Advantages of remote work show telecommuting can increase job performance, work satisfaction, and retention (Choudhury et al., 2019). Ipsen et al. (2021) investigated people's experiences of working from home during the pandemic to identify the main advantages and disadvantages of working from home. Ipsen et al. (2021) gathered data from employees ( $N=5748$ ) during the early stages of the lockdown. Self-report survey data were collected online, including questions that addressed participants' remote work experience. The main advantages of

working from home were work-life balance (i.e., instead of going to work and wasting time commuting, employees can enjoy the atmosphere at home, a change in routines, and having more free time), improved work efficacy (i.e., instead of spending time in meetings and wasting time on meaningless tasks at work, employees can focus on tasks without interruptions), and greater work control (i.e., taking breaks and experiencing more control over the day). The main disadvantages found were home office constraints (i.e., limited contact with people, getting out of the house less, being fixed in front of the computer, and disturbances by other family members who are home), work uncertainties (i.e., being unclear about the work situation, tasks that are not interesting, financial problems, and inability to focus on work), and inadequate tools (i.e., not having access to the tools needed to complete required work tasks). The results highlight the importance of how COVID-19 changed the world of work and how organizations operate. The study highlights the importance of recognizing both the advantages and disadvantages of remote work and how working from home can impact many facets of employees' daily life.

Other potential disadvantages of remote work include isolation, misunderstandings, and decreased interpersonal contact (Hertel et al., 2005; Stich, 2020). Some employees who engage in remote work struggle to keep their home life separate from work, increasing stress due to the blurred boundaries between home and work (Nakrosiene et al., 2019). Evidence is still lacking about the effects of remote work on employees forced to work from home during the COVID-19 pandemic. Moretti et al. (2020) examined the impact of Italian employees working from home on perceived job

productivity and satisfaction, work-related stress, and musculoskeletal issues. Data were gathered from employees ( $N=51$ ) working from home, where job satisfaction was assessed using the Utrecht Work Engagement Scale, Brief Pain Inventory, and Fear Avoidance Beliefs Questionnaire. Results showed half of the participants reported no variation in job satisfaction between remote and office work, but decreased productivity was reported. Results indicated a decline in productivity in 39% and an increase in 29% of workers. Mental health results indicated an increase in psychological and physical health issues, perhaps due to social isolation and reduced physical activity.

Working remotely prior to the Covid 19 pandemic was optional for some employees and may have seemed attractive at first; however, the work-from-home mandate caused by the pandemic has created many problems, especially on employees' mental health. The resulting occupational stress was the focus of Bulut and Maimaiti (2021) study. Thirty-nine participants working from home for at least three weeks were interviewed in mid-February 2020. The interview findings indicated that remote work caused challenges relating to work-family conflict, workload and over-working, and loneliness. Pre-pandemic, employees completed their work in their place of business and would then come home to relax and spend time with family. Work-from-home mandates blurred these lines, making workload and over-working issues due to poor time management, ambiguous start and stop times, and feeling obliged to work more than their previous work hours. Increased loneliness due to social isolation was underscored as office socializing was no longer available. The above challenges were found increase

occupational stress, leading to decreased work effectiveness and increased depression and anxiety.

Remote work may also present psychological barriers where employees find themselves forced to choose between attending to work or home (Delanoetje et al., 2019), rendering them unable to unplug and disconnect mentally from one's job; this may increase stress and may reduce productivity, motivation, and mental health (Toniolo-Barrios & Pitt, 2021). Palumbo (2020) investigated the direct effects of telecommuting on work-life balance. The sample consisted of people ( $N=9,877$ ) employed in the public sector. Participants completed a self-assessment on work-life balance and the Utrecht Work Engagement Scale. Results showed that home-based telecommuting negatively affected work-life balance, and employees who worked from home suffered from an increase in work-to-life and life-to-work conflicts as predicted. Home-based telecommuting was associated with increased work-related fatigue, which worsened the perceived work-life balance. These findings indicated that home-based telecommuting interferes with employee's ability to handle the interplay between work-related commitments and daily life activities. This is due to the overlapping of work and private life and may limit an employee's ability to balance work and life while working remotely.

To further understand how working from home during COVID-19 is implicated in workers' physical and mental wellbeing, Xiao et al. (2021) had participants ( $N=988$ ) who, prior to COVID-19, spent most of their work time in an office and had transitioned to working from home complete an online questionnaire. The questionnaire included



questions about lifestyle and home environment, occupational environmental factors, home office environmental factors, work performance, and physical and mental wellbeing. Authors found decreased overall physical and psychological wellbeing after working from home were associated with a decrease in physical exercise, increased food intake, reduced communication with coworkers, struggles balancing children at home, increased distractions while working, adjusted work hours, challenges setting up a workstation, and difficulty with indoor workspace environments due to distractions (e.g., children and other family members).

Sato et al. (2021) examined the relationship between pandemic-related lifestyle changes (i.e., number of weekday steps taken, suspension of work or loss of employment, increased working hours, shift to working from home, and increased time on childcare) and risk of depression. Participants' work and life patterns were assessed before and after the pandemic, and depressive symptoms were evaluated using a 2-question screening tool. An online survey was administered to 2,846 participants. Results revealed that about 70% of participants decreased weekday steps, men were more likely to shift to working from home, and more women than men experienced a suspension or loss of employment and suffered an increase in depressive symptoms. Participants reported a decrease of more than 900-weekday steps, a reduction in physical activity that increases the risk of developing depressive symptoms. An association between depressive symptoms and change in work and life patterns was found with more females experiencing decreased steps and increased working hours. Conversely, shifting to working from home (as mandated during the pandemic) was associated with decreased depressive symptoms.

This may be due to a reduced fear of infection, as noted in prior studies that determined how working from home is related to employees' psychological distress during COVID-19 (Sasaki et al., 2020).

In addition to the risk of depression, working from home can make it more difficult for employees to participate in social interaction despite the increasing number and availability of digital tools that promote virtual social interactions (e.g., Zoom and Microsoft Teams) (Hacker et al., 2020). Published studies show that lack of human interaction is the main disadvantage of telework (Mann, 2003). Social deprivation and solitude have well-established negative health consequences: worse sleep quality, increased anxiety and depression, and increased risk of suicide (Beutel et al., 2017); however, more needs to be known about the specific impact of telework on mental health. Afonso et al. (2021) evaluated anxiety, depression, and sleep quality in full-time teleworkers (telework imposed by COVID-19 lockdown for a minimum of at least three months). A cross-sectional study was conducted on 143 full-time teleworkers, assessed for anxiety, depression, and sleep quality. Data were collected through a general self-report questionnaire, work and quality of life questionnaire, Hospital Anxiety and Depression Scale, and Pittsburgh Sleep Quality Index. Poor sleep quality was reported in 74% of the participants. High levels of anxiety and depression were also reported suggesting a marked impairment of sleep quality and significant prevalence of depression and anxiety. Participants reporting better sleep quality also reported longer sleep duration and better job satisfaction. Participants who reported higher levels of anxiety and depression also reported worse sleep quality and quality of life. Higher levels of anxiety

and depression have also been linked to lower quality of life in previous studies, underscoring the deleterious impact of telework on mental health during COVID-19 (An et al., 2020; Becker et al., 2018).

Even before the pandemic, workplace loneliness had been shown to impact employees' commitment, affiliative behaviors, and performance (Zhou, 2018). Although virtual communication platforms have increased, these platforms still lack the richness of human interaction and can potentially contribute to loneliness and increased social isolation (Tavares, 2017). Loneliness has been considered one of the biggest struggles of working remotely and can be a significant contributor to depression (Moss, 2018). Isolation changes the way individuals work and interact with others and can aggravate loneliness and decrease psychological wellbeing (Wang et al., 2020).

To further explore the topic of remote work and isolation, Wang et al. (2020) conducted an online survey of 446 working professionals who telecommute one or more days a week. Telecommuting has been associated with both psychological (i.e., feeling disconnected from others, lacking desired social interactions, and a lack of overall emotional support) and physical isolation (telecommuters' physical separation from their colleagues), potentially leading to job dissatisfaction, increased turnover, poor health, feelings of frustration, and increased loneliness. Three dimensions of organizational commitment were measured: *affective commitment* (i.e., emotional commitment to the organization), *normative commitment* (i.e., the felt obligation to stay), and *continuance commitment* (i.e., the need to stay due to perceived benefits, high cost of switching, or lack of alternatives) to determine how psychological and physical isolation impacted

commitment to their organization. The findings suggest that remote workers who experience psychological isolation also feel less emotionally attached to their organizations (affective commitment). The results did not find a relationship between physical isolation and affective commitment, suggesting that employees can feel isolated even while working side by side with their colleagues. The study also found that psychological and physical isolation were associated with continuance commitment, as telecommuters, lacking visibility, have less opportunity to bond with peers and managers. Lastly, there was no evidence that increases in psychological or physical isolation among remote workers would reduce normative commitment, logically because these employees were already tenured and were able to retain their sense of responsibility to the organization. The study results suggest that telecommuters who experience isolation feel less emotionally connected to their organizations, tending to stay out of a desire to conserve resources or due to a lack of employment opportunities rather than a sense of connection to the organization. As remote work continues to increase, organizations must work to decrease feelings of isolation in an effort to increase employee commitment.

Research indicates that working from home will become more common even after the pandemic recedes; therefore, understanding the potential implications is necessary for employees to stay engaged, reduce work stress and anxiety, and maintain a healthy work-life balance while working from home (Bartik et al., 2020).

### **Job-Related Stress and Anxiety**

Job-related stress and anxiety also referred to as work or job stress, is a major modern health problem and can present significant short-term and long-term health and

safety challenges for employees (Basu et al., 2017). Globally, workplace stress and anxiety can cost organizations anywhere from \$221.13 million to \$187 billion annually (Hassard et al., 2018). Job stress and anxiety can lead to increased absence (Keus van de Poll et al., 2020), high employee turnover (Lee & Jang, 2020; Park et al., 2020; Tetteh et al., 2020), and employee burnout (Bercasio et al., 2020; Kabakleh et al., 2020; Yang et al., 2020). Occupational stress and anxiety, defined as insufficient resources to cope with the demands of the workplace, have been linked to sleep disturbances, fatigue, and gastrointestinal upset that can significantly impact occupational outcomes (Lennefer et al., 2020; Thomas et al., 2020). Chronic exposure to occupational stress and anxiety can lead to cardiovascular disease, hypertension, insulin resistance, musculoskeletal illness, and depression (Basu et al., 2017).

In 2020, Zhang et al. compared the prevalence and severity of occupational stress and mental health symptoms (i.e., anxiety, depression, and insomnia) between frontline and non-front line medical staff ( $N=524$ ) during the COVID-19 pandemic who endured stressful work conditions (i.e., work intensity, working time, working difficulty, and working risk). A scale was used to assess occupational stress, mental-health symptoms were self-reported, and an insomnia index was completed. Findings indicated that both frontline and non-front line medical staff endured stressful work conditions leading to poorer mental health during COVID-19. Similarly, a comparison between non-frontline and frontline medical staff found that frontline medical staff suffered higher levels of anxiety, depression, and insomnia, specifically work hours, work difficulty, and occupational risks. Further, results indicated that occupational stress was a significant

risk factor for increased mental health symptoms and increased work hours. Work intensity was related to greater stress-related symptoms (e.g., headache and gastrointestinal upset) among frontline and non-frontline medical staff. The results of this study are significant because the more occupational stress that employees experience, the more likely they are also to experience a decrease in wellbeing.

Wang et al. (2017) explored the relationship between job stress, burnout, and wellbeing among workers. Job stress is an important risk factor for mental health. High levels of job stress can lead to job burnout (i.e., a feeling of overwhelming exhaustion, detachment from work, lack of accomplishment, or ineffectiveness) and depression. Job burnout is associated with turnover intentions, decreased productivity, decreased commitment, and impacts psychological health. Wang et al. (2017) hypothesized a positive association between job stress and job burnout (i.e., increased levels of job stress would lead to more symptoms of job burnout) and a negative association between job stress and wellbeing (i.e., increased job stress will lead to decreased wellbeing). A cross-sectional study was conducted in 26 factories, with 1500 workers randomly selected by cluster sampling. Measures used were an occupational stress scale, Psychological Capital Questionnaire, Rosenberg self-esteem scale, Maslach Burnout Inventory, and a psychological wellbeing scale. Results revealed positive associations between job stress and job burnout (i.e., the higher the levels of job stress, the higher the level of job burnout) among manufacturing workers and that employees experiencing increased job stress also reported decreased psychological wellbeing. These findings support the importance of occupational health and employee performance such that organizations that

enhance employees' psychological health will likely improve organizational performance in the long run.

Stress is unavoidable and can decrease motivation, job satisfaction, performance, and productivity. Nisar and Rasheed (2019) investigated career satisfaction in the relationship between occupational stress and job performance (those actions associated with workers' regular and formal job duties), hypothesizing that occupational stress decreases career satisfaction subsequently decreases job performance. In addition to the suggested relation between occupational stress and employee job performance, the study also explains the underlying mechanism of career satisfaction as a mediator between occupational stress and performance. Police officers ( $N=271$ ) completed self-report measures of occupational stress, career satisfaction, and job performance. Results revealed that occupational stress was related to job performance mediated by job satisfaction such that occupational stress reduced job satisfaction which, in turn, reduced job performance. Hence, career satisfaction is an important psychological mechanism to understanding why and how stress affects job performance.

### **Work Engagement**

Work engagement is defined as having a positive, fulfilling, work-related state of mind (Extremera et al., 2020) and is characterized by vigor, dedication, and absorption (Schaufeli et al., 2002). Vigor refers to the energy and mental resilience that one has to invest in the job and persistence to work despite perceived difficulties (Bakker et al., 2008). Dedication refers to the strength of involvement and feelings of enthusiasm that result in a sense of pride and inspiration. Absorption refers to a pleasant state of

immersion in one's work which can be characterized by time passing quickly and the inability to detach from the job. In essence, work engagement captures how workers experience their work and is among the most studied topics, often coupled with organizational commitment, which has been found to impact employee wellbeing (Kim et al., 2017).

Previous studies have consistently shown that job and personal resources facilitate work engagement (Bakker & Demerouti, 2008; Bakker et al., 2011). Work engagement is positively correlated with increased individual and organizational outcomes, and it has recently been suggested that engaged employees can help organizations maximize profits and provide a competitive advantage (Barreiro & Treglown, 2020). Importantly, work engagement has been linked to positive health outcomes, including low levels of anxiety and depression, perceived physical health, low levels of burnout, and positive emotions (Kim et al., 2017).

Employee happiness/wellbeing is an emerging topic in the literature, notably because employees who are highly engaged in their work and satisfied with their careers are generally happy in their lives. Joo and Lee (2017) investigated the effects of perceived organizational support (POS) and psychological capital (PsyCap) on work engagement, career satisfaction, and subjective wellbeing. POS is described as an employee's general belief about how much the organization cares about their wellbeing, and PsyCap is defined as an individual's positive psychological state of development. Joo and Lee (2017) hypothesized that employees would be more engaged in their work, more satisfied with their careers, and would feel a greater sense of wellbeing in their lives



when they had higher POS and PsyCap. Data were collected from 550 employees who completed measures of organizational support, a PsyCap questionnaire, the Utrecht Work Engagement Scale, a career satisfaction scale, and the Subjective Happiness Scale. Results showed that employees were highly engaged in their work, satisfied with their careers, and felt a greater sense of wellbeing when they had higher POS and PsyCap, supporting the idea that when organizations enhance employees' growth opportunities and PsyCap, employees' will feel more engaged in their work, perform better, and experience greater career satisfaction.

One popular approach to work engagement is described in the literature as job crafting. Job crafting is an employee-initiated approach defined as the physical and cognitive changes employees make to customize their jobs in an effort to shape, mold, and redefine their jobs (Wrzesniewski & Dutton, 2001). Job crafting is one way to increase employee engagement. Employees who engage in job crafting proactively try to align their work to their own strengths and interests. Kuijpers et al. (2020) evaluated the relationship between job crafting and work engagement, hypothesizing that participating in a job crafting intervention would increase work engagement, and employees with a high workload would benefit more from job crafting when compared with employees with a low workload. Employees from a Dutch healthcare organization ( $N=99$ ) filled out questionnaires about job crafting, completed the Utrecht Work Engagement Scale and a workload assessment scale. Results support that job crafting could help enhance work engagement for employees with a high workload. Consistent with these findings, recent job crafting interventions have shown that employees who can learn to craft their jobs

typically experience higher levels of work engagement and performance (Gordon et al., 2018; Van Wingerden et al., 2017). When employees experience higher engagement, happiness and satisfaction increase, business outcomes improve, and retention rates increase.

Work engagement has received considerable attention; however, far less attention has been paid to work disengagement (Afrahi et al., 2022). Disengagement in the literature is defined as distancing oneself emotionally, cognitively, or physically from work (Afrahi et al., 2022). According to the Gallup (2019) employee report, 51% of American employees are disengaged in their work, 16% were actively disengaged, and only 33% are engaged. Gallup (2019) estimates that actively disengaged employees cost the United States \$483 billion to \$605 billion each year in lost productivity. Various estimates suggest 70% of the workforce is either passively or actively disengaged (Rastogi et al., 2018). Work disengagement is currently one of the most alarming global economic problems and can lead to declines in work performance, loss of revenue for organizations, high turnover rates, and profound financial implications for both employees and employers (Motyka, 2018).

Another common theme among employees disengaged from work is psychological contract violation (PCV). PCV is defined as an affective state experienced when employees develop strong emotional responses to broken organizational promises (i.e., organizational betrayal). Azeem et al. (2020) looked at the role of PCV as a specific source of frustration and, if so, a potential antecedent of employee turnover intention. The authors hypothesized that PCV triggers negative behavior in employees, leading to job

dissatisfaction and work disengagement, which in turn develops into turnover intentions. The data ( $N=200$ ) were collected via surveys administered to middle and lower management by the authors during visits to different banking organizations. Results confirmed the hypothesis that employees experiencing PCV raise their turnover intentions because of a feeling of organizational betrayal, which makes them dissatisfied and detached from their work. When employees feel betrayed, they often experience increased work dissatisfaction, disengagement, and increased turnover intention, suggesting that broken organization promises leave employees dissatisfied, disengaged, and more likely to leave.

When employees are more engaged, happiness and satisfaction increase, business outcomes improve, and retention rates increase. Engaged workers embrace values that align with the organization, believe in themselves, feel tired but satisfied, and are also engaged outside of work. Enhanced by job autonomy, social support, coaching, performance feedback, opportunities to learn and develop, variety in assigned tasks, and leadership (Albrecht et al., 2015), engaged workers draw upon various resources such as emotional stability, extraversion, optimism, self-esteem, self-efficacy, flexibility, and adaptability to maintain work engagement (Saks & Gruman, 2018). Engaged workers perform better because they are proactive, set higher goals, are intrinsically motivated, experience positive emotions because they process information better, and are present in their work (Kooij et al., 2017); they are more likely to stay in organizations, reducing costs related to hiring and retention in markets (Kuijers et al., 2020). Future research is

needed to determine environmental influences that may impact employee work engagement.

### **Work-Life Balance**

Although work-life balance is not a new concept, work-life balance has no commonly accepted definition in the literature and is referred to alternately as work-family balance, work-family interface, or work-family satisfaction (Chandran & Abukhalifeh, 2021). As technology continues to blur the balance between work and life, employees may find it increasingly difficult to balance work responsibilities and leisure time. For this study, work-life balance refers to an employee's cognitive perception of their ability to successfully combine or unite work and family domains, functions, and demands (Murphy, 2006). Work-life balance involves juggling increasing demands of work requirements and conflicting demands of family life, time with friends, recreational pursuits, or even sleep. As the boundaries of work are shifting, various communication platforms and personal mobile devices keep employees attached to work even if they are not there, leading to challenges balancing work and life (Chandran & Abukhalifeh, 2021).

Work-life balance is considered one of the core issues in human resource management as successful work-life balance has been associated with increased employee commitment, job satisfaction, and employee performance. Abdirahman et al. (2020) investigated the relationship between work-life balance, job satisfaction, and organizational commitment on employee performance, hypothesizing positive relationships between each and on employee performance. Therefore, when employees

experience a healthy work-life balance, increased job satisfaction, and a high organizational commitment, employee performance should also increase. The study collected data from administrative staff ( $N=357$ ) working in universities. Results supported the authors' hypotheses, such that an increase in work-life balance, job satisfaction, and organizational commitment can increase employee job performance.

Human capital remains a critical success factor for businesses, and retaining top talent requires organizations to develop and implement strategies to attract and retain talented employees (Rodriguez-Sanchez et al., 2020). Work-life balance is a critical aspect of retaining top talent, and organizations have become increasingly aware of the importance of creating an environment that respects work-life balance. Rodriguez-Sanchez et al. (2020) analyzed a case study carried out in a multinational company in the technology and tourism industry, gathering information through interviews with employees and human resource managers who participated in implementing work-life balance strategies. Results highlight the need for implementation of work-life balance policies in an effort to attract and retain top talent.

Akpa et al. (2019) examined the influence of work-life balance, role conflict (when two incompatible roles are given to an employee), flexible work arrangements (preferred geographical location and hours of work), and job autonomy (the level at which employees enjoy freedom, autonomy in decisions, and execution on job-related activities) on employee performance. Employees ( $N=249$ ) working for insurance companies completed questionnaires assessing work-life balance, flexible work arrangements, and job autonomy. Results indicated positive associations between work-

life balance and employee performance such that employee performance increases with an increase in work-life balance. Conversely, when workplace demands interfere with family employee work performance suffers. The positive relationship between work-life balance and job performance may have been disrupted by COVID-19 having forced many to work from home.

In addition to the effects of work-life balance on job performance, a body of literature also examined the relationship between work-life balance and work engagement (Wood et al., 2020). Given that work and family each requires significant time, energy, and emotional effort, studies have found that an individual's personal life dramatically influences an employee's engagement level and vice versa (Timms et al., 2015). Research has shown contrasting effects of work engagement on the family, suggesting that work engagement can be both beneficial and detrimental to work-life balance. To further investigate this point, Ilies et al. (2017) focused on the positive side of whether work engagement (a positive, fulfilling, work-related state of mind) would translate to higher-quality family life. A sample of bank employees ( $N=125$ ) completed daily surveys for two weeks, measuring work engagement, work-family balance, family satisfaction, and positive/negative affect. The authors hypothesized that work engagement would be related to higher-quality family life because being highly engaged at work will likely make people feel more accomplished in life, leading to greater satisfaction with family. The findings revealed that employees' positive work experiences, when shared with their spouses, positively related to work-family balance and overall family life. Moreover, when employees felt they gave their best at work, they could devote more attention to

family life when at home. Employers continue to focus on creating a work environment where employees can experience work-life balance, as it has been found to increase productivity and contribute to successful organizational outcomes (Gragnano et al., 2020).

Conversely, work-life imbalance defined as time (e.g., amount of time spent at work relative to time spent in-non work activities) and energy (e.g., not having enough energy to pursue non-work activities after a full day of work) (Aziz & Cunningham, 2008) can increase stress-related outcomes like psychological distress, emotional exhaustion, anxiety, and depression (Clouston, 2019). Therefore, organizations are motivated to improve work-life balance and ensure that employees' psychological wellbeing is protected by promoting and eliminating factors that may affect it. Saraswati and Lie (2020) investigated work-life balance and work pressure (the intensity of work demands, both physical and psychological) on employees' psychological wellbeing. Employees who experience a positive work environment demonstrate better work performance which will lead to increased organizational performance. Therefore, it is thought that employees with higher wellbeing should perform well at their workplace, feel happier, more supported, and be more productive when compared to others who show lower levels of wellbeing. Data were collected from employees ( $N=250$ ) working in various business sectors. Participants completed Ryff's Scales of Psychological Wellbeing, the Work-Life Balance Checklist, and the Tilburg Work Pressure Questionnaire. The results showed that work pressure affects work-life balance such that the better employees can balance work demands, the more likely they can enjoy their

personal life outside of work. Employees overwhelmed with work demands (i.e., deadlines, workloads, and no support) increases work pressure, causing stress in their personal lives. The study concludes that psychological wellbeing is affected by work-life balance and that when employees balance the demands of work and life, they also experienced increased wellbeing.

### **Summary and Conclusions**

The impact of COVID-19 has substantially affected many employees, employers, and organizations across the world. Orders to work from home made it difficult to organize one's own working time and confused the boundaries between work and private life. The pandemic has significantly changed work practices at the individual level (e.g., working from home) almost overnight, creating an urgent need to understand how to best support individuals whose resulting mental and physical health challenges have been widely documented. Studies have shown that the ability to regulate emotions can have myriad benefits to managing work and family challenges and, ultimately, health and psychological wellbeing. Although, the literature documents many positive benefits of EI (increased psychological wellbeing, satisfaction with life, and health), there is still little research dealing with *ability* EI-based models (Extremera et al., 2020).

The purpose of this study was to examine the relationship between *ability* EI, and problems associated with COVID-19 mandated work from home (e.g., job-related stress and anxiety, work engagement, and work-life balance). The study used a quantitative approach to determine the extent to which *ability* EI moderates the relationship between remote work and job-related stresses. The findings of this research may encourage



organizations to offer employees EI training given its potential to benefit both the organization and its employees. The study will add to the knowledge about remote work and job-related stresses. The ongoing COVID-19 pandemic has forever changed the way we work, and the number of employees working remotely continues to rise (Kniffin et al., 2021). The long-term effects of COVID-19 on organizations and employees is still unknown. Organizations are working to support their employees cope with and adjust to the new work environment (Carnevale & Hatak, 2020). These findings will add to what is already known about the potential for *ability* EI to mitigate the deleterious impact of stress on individuals' general wellbeing. There are, however, still many unknowns and the results of this study will extend what is known about the ameliorative potential for *ability* EI to influence workers' experience of stress related to remote work, specifically.

Chapter 3 will describe the research design and approach used to answer the research questions, including sampling, recruitment, and data collection/analysis procedures.

## Chapter 3: Research Method

### **Introduction**

The purpose of this quantitative study was to determine the extent to which ability EI moderates the relationship between working remotely due to the pandemic and job-related stresses (i.e., job-related stress and anxiety, work engagement, and work-life balance). Chapter 3 will present the research design and rationale, methodology, and data analysis plan. The discussion of methodology includes information on the target population; sampling and sampling procedures; procedures for recruitment, participation, and data collection; and instrumentation and operationalization of constructs. Threats to validity and ethical procedures are also addressed.

### **Research Design and Rationale**

The present study used a quantitative nonexperimental correlational design to determine the extent to which ability EI (IV) moderates the relationship between working remotely during COVID-19 (IV), job-related stress and anxiety (DV), work engagement (DV), and work-life balance (DV). Quantitative research is appropriate for examining statistical relationships among variables. A nonexperimental design was used, and the independent variables were not manipulated. Surveys are often used in nonexperimental research for convenience; they also allow large populations to be assessed relatively quickly resulting in greater statistical power.

## **Methodology**

### **Population**

The study's target population was full-time U.S., English-speaking adults, ages 18 to 65+. As of July 2021, the civilian U.S. labor force was estimated to be around 161 million people (Bhandari et al., 2021). Before the pandemic, only 6% of employees worked primarily from home (National Council on Compensation Insurance, 2020). In May 2020, over one third of employees were working from home. According to current research, 41.8% of the U.S. workforce continues to work remotely, and it is projected that by 2025, 22% of the workforce will be working remotely, which is an increase of 87% prior to the pandemic (Ozimek, 2020).

### **Sampling and Sampling Procedures**

A nonprobability, self-selected, convenience sample was used to identify participants. The sampling technique was selected due to its time- and cost-effectiveness. Nonprobability sampling techniques cannot guarantee a representative sample and may limit the generalizability of the study's findings. The sample was obtained utilizing Momentive, formally known as SurveyMonkey, which changed its name on June 9<sup>th</sup>, 2021. Momentive is a cloud-based survey platform that helps users conduct online survey research. Momentive allows users to email, text, share on social media, or send surveys to participants through a weblink. Momentive helped to find survey participants who met all inclusion criteria. Momentive allows the researcher to set inclusion criteria for participation, which included full-time U.S. employees ages 18-65+. Momentive works

with trusted companies that provide participants vetted for quality and to ensure willing participation.

A power analysis to calculate sample size was performed using G\*Power 3.1.7 software (Faul et al., 2009). In a recent meta-analysis, including 484 unique primary studies based on 102,579 participants, the literature supports an average effect size for ability EI of .160 ( $p < 0.001$ ; Gong & Jiao, 2019). To calculate the sample size, an effect size of 0.160 (medium effect size), alpha level of .05, power level of .95, and the three independent variables (remote work, ability EI, and the interaction). The results recommended a sample size of 112.

### **Procedures for Recruitment, Participation, and Data Collection**

After Walden University's Institutional Review Board approved the study (approval no. 01-04-22-0987513), participants were recruited using Momentive. Momentive is commonly used by students conducting research for dissertations making Momentive an ideal platform for survey research. Additional benefits to utilizing Momentive compared to traditional survey modes include that it is less expensive, requires less time, and provides greater access to unique populations. Momentive provided prospective participants with a link directing them to the online survey if they met inclusion criteria for participation; ineligible individuals were immediately removed from the survey. A brief explanation of the study was provided, along with the opportunity to decline participation or exit the study at any given point with no penalty.

Informed consent was provided on the first page of the survey, and Momentive time-stamped the consent form. Also, the submission of the survey indicated agreement

to participate. Informed consent included the purpose of the study and the intended use of the results. A demographic questionnaire (e.g., age, gender, race, education level, remote work status, and if at home, were they given the option to work remotely) was completed, followed by the respective study survey. Participants were instructed to respond based on how they feel currently, and all data were collected anonymously with no identifying information. Participants were reminded of why the survey was sent and how the data will be used. Participants were disqualified if they disagreed with the privacy notices or practices. At the end of the survey, my name and email was made available should participants have further questions, comments, or concerns. Anyone who experienced discomfort while completing the survey was referred to Mental Health America (<http://www.mentalhealthamerica.net/search/node>). The approximate time to complete all survey items was less than 30 minutes.

## **Instrumentation and Operationalization of Constructs**

### ***Demographic Questionnaire***

The demographics questionnaire took less than 1 minute to complete and asked participants about their age, gender, race, education level, and remote work status (e.g., numbers of hours worked per week and if employees were given the option to return to the office or continue to work remotely).

### ***The Wong and Law Emotional Intelligence Scale***

The WLEIS is a 16-item self-report measure that is based on the ability model of EI; it can be completed in approximately 10 minutes (Wong & Law, 2002). Wong and Law (2002) designed the scale for the work context. WLEIS consists of four subscales:

self-emotional appraisal (ability to understand one's own emotions, e.g., "has a good sense of why he/she has certain feelings most of the time"), others' emotional appraisal (ability to recognize and understand other people's emotions, e.g., "always knows his/her friends' emotions from their behavior"), use of emotion (tendency to motivate oneself to enhance performance, e.g., "always sets goals for oneself and then tries one's best to achieve them"), and regulation of emotion (ability to regulate emotion, e.g., "is able to control his/her temper"; Fukuda et al., 2011). Items are rated on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The total ability EI score across the four subscales. Many EI tests are available; however, many of the other tests are lengthy and difficult to administer (Sulaiman & Noor, 2015). WLEIS is in the public domain and may be reproduced and used for noncommercial research and educational purposes without written permission (Law et al., 2004; Wong & Law, 2002).

**Reliability and Validity.** Wong and Law (2002) found the internal consistency reliability (Cronbach's alpha) for the four factors of the scale (i.e., self-emotion appraisal, others' emotion appraisal, regulation of emotion, and use of emotion) to range from .83 to .90. The correlations among the four EI factors were all mildly correlated (ranging from  $r = .13$  to  $.42$ ) indicating they were related but not identical dimensions. In a separate sample, reliability estimates (coefficient alphas) for the four dimensions of self-appraisal, use of emotion, regulation of emotion, and others' emotion appraisal were .92, .91, .84, and .93, respectively (Wong & Law, 2002). Sulaiman and Noor (2015) surveyed newly appointed administrative officers ( $N = 150$ ) utilizing WLEIS and two other scales to evaluate organizational commitment and satisfaction with life. Both Cronbach's alpha

and split-half reliability were used to evaluate reliability with satisfactory results; Cronbach's alpha ranged from .83 to .92 for all dimensions (i.e., self-emotional appraisal, others' emotional appraisal, use of emotion, and regulation of emotion), and split-half reliability coefficients ranged from .81 to .95. Park and Yu (2021) evaluated the reliability of the WLEIS with nurses ( $N = 210$ ) recruited from two hospitals. For the four subscales, (i.e., self-emotional appraisal, others' emotional appraisal, use of emotion, and regulation of emotion), Cronbach's alpha was .89, .92, .90, and .88, respectively. Shi and Wang (2007) conducted a study to evaluate the reliability of the WLEIS involving students in two universities ( $N = 1,458$ ). Internal consistency was assessed using Cronbach's alpha with results indicating self-emotional appraisal ( $\alpha = 0.81$ ), others' emotional appraisal ( $\alpha = 0.83$ ), use of emotion ( $\alpha = 0.87$ ), and regulation of emotion ( $\alpha = 0.72$ ), and for total WELIS score ( $\alpha = 0.86$ ).

Wong and Law (2002) conducted confirmatory factor analysis using the computer program LISREL. The model  $\chi^2$  of the confirmatory analysis was 132.41 ( $df = 98$ ). The standardized root mean square of the model was .08, the comparative fit index was .95, and the Tucker-Lewis Index was .93 supporting that the measure can be generalized to other samples. Sulaiman and Noor (2015) evaluated criterion and construct validity. To examine the construct validity of WLEIS, authors used principal component analysis with varimax rotation and examination of scree plot to replicate the four-factor structure (contributing a total of 75.1% variance and yielded loadings between 0.60 and 0.88; (Wong & Law, 2002). Kaiser-Meyer-Olkin yielded a value of .87, indicating the sample was adequate. These results were further strengthened by the Bartlett Sphericity test

yielding a significant result ( $p < 0.01$ ). The WELIS showed good criterion validity for emotional intelligence and organizational commitment ( $r = 0.29, p < 0.01$ ) and satisfaction with life ( $r = 0.25, p < 0.01$ ). Another study found the WELIS to have a content validity index of .90, to have adequate construct validity (the standardized regression weights ranged from .598 to .969), and to be statistically significant for each of the four-factor ( $p < .001$ ; Park & Yu, 2021). Pearson's correlations for the four subscales were computed to examine the convergent validity of the scale (self-emotional appraisal = .59–.67, others' emotional appraisal = .64–.68, use of emotion = .65–.68, and regulation of emotion = .57–.67; Sulaiman & Noor, 2015).

### ***The Work-Related Stress Scale***

The WRSS is a four-item measure utilizing a 7-point frequency scale designed to assess stress related to work (McCutcheon & Morrison, 2016). The WRSS asks participants to respond on a 6-point Likert-type scale ranging from 0 (*never*) to 6 (*always*). The scores are summed to create a total scale ranging from 0 to 24, with higher scores reflecting more frequent work-related stress. The items include “the demands of my job make it difficult to be relaxed at home,” “I feel overwhelmed by my workload,” “I feel guilty when I’m not working,” and “I have unrealistic time pressures in my job.” The scale is brief and easy to administer and can be completed in less than 5 minutes. The scale can be used without permission for noncommercial research and education purposes with no associated fee.

**Reliability and Validity.** The WRSS exhibited strong internal consistency (Cronbach's  $\alpha = .88$ ; 95% CI = [.85, .91]) in a sample of 337 university faculty members



(McCutcheon & Morrison, 2016). McCutcheon and Morrison (2016) conducted principal axis factoring using oblique rotation (direct oblimin with a delta set at 0). An examination of the resulting eigenvalues (how much variation there is in the data in that direction), and a scree plot revealed that the scale was unidimensional. The lone factor accounted for 73.92% (eigenvalue = 2.96) of the variance. Construct validity scores on the WRSS were found to correlate strongly ( $p < .001$ ) with work-family conflict (McCutcheon & Morrison, 2016). The content validity of the scale was found to be .94 by using the Content Validity Index in a study of 293 rescue workers and construct validity was determined by confirmatory factor analysis using a sample of 305 rescue workers to detect a moderate effect ( $\rho = 0.23$ ; Chen et al., 2021).

### ***The Workplace Anxiety Scale***

Workplace anxiety is conceptualized as having feelings of nervousness and apprehension about performing well and accomplishing tasks related to job requirements (McCarthy et al., 2016). McCarthy et al. (2016) developed the WAS, an eight-item scale with Likert-type ratings, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), to measure workplace anxiety (). Participants rate questions like “I am overwhelmed by thoughts of doing poorly at work” and “I worry that my work performance will be lower than that of others at work.” The scale can be completed in less than 5 minutes, is available for use without written permission, and is free of cost for research and educational purposes.

**Reliability and Validity.** McCarthy et al. (2016) found the WAS to have good internal consistency (Cronbach's  $\alpha = .94$ ) in a study of police officers ( $n = 680$ ). Validity data were not available.

### ***The Utrecht Work Engagement Scale-9***

The UWES-9, which was developed by Schaufeli et al. (2006), has three subscales with each subscale containing three items. The self-report scale measures the three core constructs of work engagement, vigor, dedication, and absorption, which characterize a positive work-related state of fulfillment. Participants rate how often they feel different aspects of engagement on a 7-point Likert-type scale ranging from 1 (*never*) to 7 (*always/every day*). A sample item is "I am proud of the work that I do". The nine-item scale was developed as a shorter version of the UWES-17 and can be completed in less than 5 minutes. The total score of the UWES-9 will be used. The instrument is in the public domain and may be used with no associated costs.

**Reliability and Validity.** The UWES is used across the globe and is a favored measurement of work engagement (Kulikowski, 2017). Schaufeli et al. (2006) found the internal consistency of the UWES-9 to be high (Cronbach's  $\alpha = .93$ ). Villotti et al. (2013) found internal consistency overall was high (Cronbach's  $\alpha = .94$ ) and for each subscale, i.e., vigor (.86), dedication (.90), and absorption (.85) subscales when used in the general population and with the mentally ill. de Bruin et al. (2013) reported overall Cronbach's  $\alpha$  scores across 10 different countries varying between .85 and .92, with a median of .92 which is considered satisfactory. The reported scores for the subscales in the 10 countries were also satisfactory (vigor  $\alpha = .77$ , absorption  $\alpha = .78$ , and dedication  $\alpha = .85$ ).

Kulikowski (2017) conducted a literature review of 21 peer-reviewed studies that addressed the factorial validity of the UWES using the confirmatory factor analysis approach. Villotti et al. (2014) tested the validity of the UWES-9 among mentally ill workers ( $N=310$ ). Goodness-of-Fit Indices for confirmatory factor analysis of the UWES-9 was performed ( $\chi^2 =$  chi-square test 75.71). The standardized factor loadings for the final 3-factor model were all statistically significant ( $p < .001$ ) and ranging from .65 to .93, while the intercorrelations for latent factors were high ( $r_s$  between .78 and .85). The 3-factor structure was found to be superior ( $>.95$ ), concluding that the UWES-9 is a useful instrument for measuring work engagement in the general population and workers with mental disorders. Littman-Ovadia and Balducci (2013) investigated the psychometric properties of UWES-9 using a sample ( $N=252$ ) of white-collar employees. The authors conducted a series of confirmatory factor analyses of the 3-factor model (i.e., vigor, absorption, dedication) of the UWES-9 and found the UWES-9 to be a valid tool ( $p < .01$ ). The standardized factor loadings were all statistically significant ( $p < .001$ , ranging from .72 to .91). Seppala et al. (2008) tested the construct validity of the UWES-9 from five different studies ( $N=9,404$ ), specifically testing the factor structure (i.e., vigor, absorption, and dedication) and its group and time properties (i.e., measures work engagement similarly among different occupations and over time) by means of confirmatory factor analysis. The correlations ranged from .83 to .97, confirming the structure of the UWES-9 remained largely the same across the samples; this indicates that participants with different occupations interpret the scale similarly. The factorial time

invariance (between .01 and .04) showed the UWES-9 measured work engagement similarly over time.

### ***The Work-Life Balance Scale***

The four-item WLBS is rated on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) based on individuals' subjective perceptions of balance between their work and other aspects of their lives (Brough et al., 2014). The WLBS requires participants to reflect on work and non-work activities over the past three months and rate the extent to which they agree or disagree with four statements (e.g., "I currently have a good balance between the time I spend at work and the time I have available for non-work activities"). The WLBS takes less than five minutes to complete and requires the user to contact the publisher and author to gain permission for use. Permission will need to be granted by the primary author to use the WLBS for the present study.

**Reliability and Validity.** To demonstrate acceptable psychometric properties of the four-item work-life balance measure, Brough et al. (2014) used four independent samples ( $N = 9,683$ ) from different countries (i.e., Australia and New Zealand). Confirmatory factor analysis indicated that the measure has an overall good fit exceeding or equal to .97. The four work-life balance items accounted for acceptable amounts of variance (square multiple [ $R^2$ ] with correlations greater than .30). Cronbach's alpha for the work-life balance measure ranged from .84 to .94.

To test the criterion validity of the work-life balance measure, Brough et al. (2014) used *work demands* and four recognized outcome variables (i.e., *job satisfaction*,

*family satisfaction, psychological strain, and turnover intentions*). The study consisted of cross-sectional and longitudinal analyses to compare results with published findings on work-life balance. Two study samples were used Australia ( $N=5094$ ) and New Zealand ( $N=718$ ). Criterion-related validity in the cross-sectional analysis was significant ( $p < .001$ ). The longitudinal analysis of work life balance ( $N=823$ ) demonstrated that the work-life balance measure had significant associations ( $p < 0.001$ ) with work demands (psychological strain  $r = .10$ , turnover intentions  $r = .09$ , and job satisfaction  $r = .11$ ). The measure also demonstrated predictive validity ( $p < .001$ ) over time for three of the four variables: *job satisfaction* ( $r = .08$ ), *turnover intentions* ( $r = .20$ ), and *psychological strain* ( $r = .11$ ).

### **Data Analysis Plan**

Once data was collected from the Momentive platform, results were downloaded into the Statistical Package for Social Sciences (SPSS) version 27.0 for data analysis. Standard multiple regression analyses were used to predict how job-related stresses (e.g., *job stress* and *anxiety*, *work engagement*, and *work-life balance*) change as remote work (measured in the number of hours worked) changes. I used multiple regression to assess the strength of the relationship between outcome variables (e.g., *job stress* and *anxiety*, *work engagement*, and *work-life balance*) and predictor variables (e.g., *remote work* and *ability EI*). Multiple regression analysis was run for each dependent variable separately. Moderation analysis was used to assess the extent to which the moderating variable moderates the strength of relationships between independent and dependent variables. Moderation occurs when the relationship between two variables (e.g., *remote work* and

*job stresses*) strengthens or weakens depending on a third variable (e.g., *ability EI*). An interaction variable was created by multiplying the IV (*remote work*) with the moderator variable (*ability EI*). Then a multiple regression was run with the IV (*remote work*), the moderator (*ability EI*), and the interaction in the model (i.e., *remote work x ability EI*) to test the moderation relationship. The dependent variables (i.e., *job stress*, *job anxiety*, *work engagement*, and *work-life balance*) were regressed on the two independent variables and the interaction variable (i.e., *remote work*, *ability EI*, and *remote work* and *ability EI*). Moderation effects can be challenging to interpret, so a graph was used to help to visualize the effect. All multiple regression assumptions were evaluated in SPSS (i.e., normality, linearity, homoscedasticity, multicollinearity, and independence of residuals). Histograms and Q-Q plots were used to test for normality. Scatterplots were used to test for linearity, and a scatterplot of residuals was used to test for homoscedasticity. Multicollinearity was tested using Variance Inflation Factor values. The Durbin-Watson *d* test was used to examine independence of residuals.

### **Research Questions and Hypotheses**

RQ1: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to job stress, as measured by the WRSS, among employed adults working remotely due to COVID-19?

$H_0$ 1: Working remotely during COVID-19 is not a significant predictor of job-related stress.

$H_1$ : Working remotely during COVID-19 is a significant predictor of job-related stress.

RQ2: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to job-related anxiety, as measured by the WAS, among employed adults working remotely due to COVID-19?

*H<sub>0</sub>2*: Working remotely due to COVID-19 is not a significant predictor of job-related anxiety.

*H<sub>2</sub>*: Working remotely due to COVID-19 is a significant predictor of job-related anxiety.

RQ3: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to work engagement, as measured by the UWES-9, among employed adults working remotely due to COVID-19?

*H<sub>0</sub>3*: Working remotely due to COVID-19 is not a significant predictor of work engagement.

*H<sub>3</sub>*: Working remotely due to COVID-19 is a significant predictor of work engagement.

RQ4: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to work-life balance, as measured by the WLBS, among employed adults working remotely due to COVID-19?

*H<sub>0</sub>4*: Working remotely due to COVID-19 is not a significant predictor of work-life balance.

*H<sub>4</sub>*: Working remotely due to COVID-19 is a significant predictor of work-life balance.

RQ5: To what extent does ability EI, as measured by the WLEIS, moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and job-related stress, as measured by the WRSS, among employed adults working remotely due to COVID-19?

*H<sub>05</sub>*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and job-related stress.

*H<sub>5</sub>*: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and job-related stress.

RQ6: To what extent does ability EI, as measured by the WLEIS, moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and job-related anxiety, as measured by the WAS, among employed adults working remotely due to COVID-19?

*H<sub>06</sub>*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and job-related anxiety.

*H<sub>6</sub>*: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and job-related anxiety.

RQ7: To what extent does ability EI, as measured by the WLEIS, moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and work engagement, as measured by the UWES-9, among employed adults working remotely due to COVID-19?

*H<sub>07</sub>*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and work engagement.



*H7*: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and work engagement.

RQ8: To what extent does ability EI, as measured by the WLEIS, moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and work-life balance, as measured by the WLBS, among employed adults working remotely due to COVID19?

*H<sub>0</sub>8*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and work-life balance.

*H8*: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and work-life balance.

### **Threats to Validity**

The first threat to validity for this study was self-selection bias. The study used a convenience sample rather than a random sample. Because participants are not randomly selected, the sample may not be representative, limiting the generalizability of the results (Etikan et al., 2016). Participant self-selection further limits sample representativeness as those who choose to participate may differ demographically from those who do not (Copas et al., 2020). Individuals interested in participating in research may do so for different reasons. Participants may self-select based on how salient they find the ad or media content, and this may lead to bias (Lehdonvirta et al., 2020). It is likely that individuals experience difference levels of stress working remotely, where individuals who have a more positive experience working remotely will likely be more willing to participate. Also, if individuals are given the choice to work remotely and choose to do

so, then their responses will likely be more positive than individuals forced to work remotely when they would otherwise prefer to be in the office. Momentive was set up so that participants were not able to skip questions and could not progress until all questions were answered. Second, social desirability bias may manifest when participants present themselves more favorably in an effort to be viewed by others as appropriate. Social desirability bias is more prevalent when using interviews as survey participants may provide answers consistent with social norms, especially when asking about controversial topics (Larson, 2019). Maintaining anonymity and adding confidentiality assurances may help mitigate social desirability bias. There were no personal or researcher biases specific to this study; however, I acknowledge that I, too, was impacted by the pandemic and was required to work remotely. That said, the participants answered the surveys anonymously, and I had no interaction with them.

### **Ethical Procedures**

Once the Walden University Institutional Review Board approved the study, participant recruitment and data collection began. Before participants began the survey, they read the informed consent form, and if they agreed to participate, they clicked the agree button and were moved to the start of the survey. Participants could stop or withdraw at any time. Having been forced to work from home, participants could have experienced some discomfort due to concerns about lost income and camaraderie; anyone who experienced discomfort while completing the survey was referred to Mental Health America (<http://www.mentalhealthamerica.net/search/node>). The data collected did not include identifying information and will be kept secure on a password-protected

computer accessible only by me. Moreover, the data will be backed up on OneDrive and will be deleted after five years.

### **Summary**

The current study used a quantitative approach to examine the moderating effect of *ability* EI on the relationships between the independent variables (remote work, *ability* EI, and the interaction variable) and dependent variables (job-related stress and anxiety, work engagement, and work-life balance). Chapter 3 presented the research design and methodology. Participants were 18–65+-year-olds, English speaking, full-time employed adults working in the United States who, prior to COVID-19, worked in an office and then shifted remote. The instruments used were described, and their reliability and validity results were reported. A moderation analysis addressed the research questions. Threats to validity and ethical considerations were presented. Chapter 4 will provide a detailed discussion of the analysis and results

## Chapter 4: Results

### Introduction

The purpose of this quantitative survey study was to determine the extent to which ability EI moderates the relationship between working remotely during COVID-19 and job-related stresses (i.e., stress, anxiety, work engagement, and work-life balance). This study tested eight RQs using standard multiple regression analysis. In this chapter, the RQs and hypotheses are restated, followed by a description of the data collection and screening procedures. Descriptive statistics and evaluation of the statistical assumptions are also provided. The chapter concludes with a summary of the results.

### Research Questions and Hypotheses

RQ1: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to job stress, as measured by the WRSS, among employed adults working remotely due to COVID-19?

*H<sub>0</sub>1*: Working remotely during COVID-19 is not a significant predictor of job-related stress.

*H<sub>1</sub>*: Working remotely during COVID-19 is a significant predictor of job-related stress.

RQ2: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to job-related anxiety, as measured by the WAS, among employed adults working remotely due to COVID-19?

*H<sub>0</sub>2*: Working remotely due to COVID-19 is not a significant predictor of job-related anxiety.

*H2*: Working remotely due to COVID-19 is a significant predictor of job-related anxiety.

RQ3: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to work engagement, as measured by the UWES-9, among employed adults working remotely due to COVID-19?

*H03*: Working remotely due to COVID-19 is not a significant predictor of work engagement.

*H3*: Working remotely due to COVID-19 is a significant predictor of work engagement.

RQ4: To what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to work-life balance, as measured by the WLBS, among employed adults working remotely due to COVID-19?

*H04*: Working remotely due to COVID-19 is not a significant predictor of work-life balance.

*H4*: Working remotely due to COVID-19 is a significant predictor of work-life balance.

RQ5: To what extent does ability EI, as measured by the WLEIS, moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and job-related stress, as measured by the WRSS, among employed adults working remotely due to COVID-19?

*H05*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and job-related stress.

*H5*: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and job-related stress.

RQ6: To what extent does ability EI, as measured by the WLEIS, moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and job-related anxiety, as measured by the WAS, among employed adults working remotely due to COVID-19?

*H06*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and job-related anxiety.

*H6*: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and job-related anxiety.

RQ7: To what extent does ability EI, as measured by the WLEIS, moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and work engagement, as measured by the UWES-9, among employed adults working remotely due to COVID-19?

*H07*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and work engagement.

*H7*: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and work engagement.

RQ8: To what extent does ability EI, as measured by the WLEIS, moderate the relationship between working remotely due to COVID-19, as measured by the average number of hours per week, and work-life balance, as measured by the WLBS among employed adults working remotely due to COVID19?

*H<sub>08</sub>*: Ability EI does not significantly moderate the relationship between working remotely due to COVID-19 and work-life balance.

*H<sub>8</sub>*: Ability EI significantly moderates the relationship between working remotely due to COVID-19 and work-life balance.

### **Data Collection**

Data were collected 1 day in January 2022. Study participants were recruited through SurveyMonkey based on the study's inclusion criteria requiring participants to be full-time U.S., English-speaking adults, ages 18 to 65+, who, prior to the COVID-19 pandemic, worked on-site and then shifted to remote work after the pandemic began. Part-time employees, participants under the age of 18, and participants who worked remotely prior to the COVID-19 pandemic were excluded from the study. The survey took place online and began with an introduction to the study and informed consent that explained the purpose of the study, description of procedures, the voluntary nature of the study, risks and benefits, privacy, and contact information. The survey was anonymous; no identifying information was collected to protect the participants' privacy. Respondents who did not provide consent were directed to the end of the survey and disqualified; those who did provide consent were directed to three screening questions designed with a skip logic feature to disqualify participants who did not meet the inclusion criteria.

Respondents who met all inclusion criteria were then directed to the survey portion of the study. All survey questions were equipped with a forced validation feature, requiring participants to answer all questions to prevent missing data. Participants were offered the option to withdraw their data during the survey at any point for any reason if

they decided they no longer wanted to participate. To reach 112 completed responses, SurveyMonkey sent the survey to 329 participants based on an estimated incidence rate (e.g., the percentage of people estimated to qualify for the study) of 35-49%. The actual incidence rate was 62%, resulting in more participants who qualified for the survey ( $n = 130$ ). The abandon rate (i.e., participants who did not finish the survey) was 13% ( $n = 19$ ), and the disqualification rate (i.e., participants who did not qualify for the study based on the screening questions) was 38% ( $n = 82$ ). There was a total of 132 completed surveys. The total sample size needed for the study was 112, providing adequate power with an effect size of .160, an alpha of .05, and a power level of .95. Three predictor variables (i.e., remote work, ability EI, and the interaction term) and four outcome variables (i.e., job-related stress, job-related anxiety, work engagement, and work-life balance) were used to examine the RQs and hypotheses. Prior to analysis data were diagnosed for potential outliers using the boxplot approach. Two outliers were detected (Cases 19 and 40); these outliers were removed from the final data set resulting in a sample size of 130.

### **Demographics**

The participant demographics (i.e., gender, age, race, education level, and remote work status) are displayed in Tables 1 and 2. There were slightly more female ( $n = 68$ , 52.3%) than male participants ( $n = 62$ , 47.7%); 32 were 50-59 (24.6%), 31 were 21-29 (23.8%), 27 were 40-49 (20.8%), 23 were 30-39 (17.7%), 15 were 60 or older (11.5%), and two were 18-20 (1.5%) years old. The majority of the participants were White ( $n = 84$ , 64.6%), followed by Asian or Asian American ( $n = 15$ , 11.5%), Black or African



American ( $n = 14$ , 10.8%), Hispanic or Latino ( $n = 14$ , 10.8%), and American Indian or Alaskan Native ( $n = 1$ , .8%). Forty percent had a bachelor's degree ( $n = 52$ , 40.0%), followed by a graduate degree ( $n = 32$ , 24.6%), some college but no degree ( $n = 24$ , 18.5%), associate degree ( $n = 19$ , 14.6%), and high school or general equivalency diploma (GED;  $n = 3$ , 2.3%).

**Table 1**  
*Frequencies and Percentages for Gender, Age, Race, and Education Level*

Variable	<i>N</i>	%
Gender		
Male	62	47.7
Female	68	52.3
Age		
18-20	2	1.5
21-29	31	23.8
30-39	23	17.7
40-49	27	20.8
50-59	32	24.6
60 or older	15	11.5
Race		
American Indian or Alaska Native	1	.8
Asian or Asian American	15	11.5
Black or African American	14	10.8
Hispanic or Latino	14	14
Native Hawaiian or other Pacific Islander	2	1.5
White	84	64.6
Education level		
Associates degree	19	14.6
Bachelor's degree	52	40.0
Graduate degree	32	24.6
High school degree or equivalent (e.g., GED)	3	2.3
Some college but no degree	24	18.5

*Note.* GED = general equivalency diploma.

Participants were asked about their current work environment and if they were given the option to return to the office. Most of the participants reported working in a hybrid environment ( $n = 64, 49.2\%$ ), spending some time in the workplace, and some time remote. The remaining participants worked fully remote ( $n = 43, 33.1\%$ ) or only in the workplace ( $n = 23, 17.7\%$ ). The participants were also asked if they had been given the option to continue working remotely or go back to the office. Most were given the opportunity to return to the office ( $n = 97, 74.6\%$ ); however, 33 (25.4%) were not allowed to return to the office.

**Table 2**

*Current Work Environment and the Option to Go Back to Work*

Variable	<i>N</i>	%
Current work environment		
Fully remote	43	33.1
Hybrid	64	49.2
Workplace only	23	17.7
Option to return to the office		
Yes	97	74.6
No	33	25.4

As a nonprobability self-selected convenience sampling technique was used to identify participants, representativeness of the sample cannot be guaranteed, potentially limiting the generalizability of the study's findings. Although convenience sampling has time and money advantages, probability sampling would have increased the sample representativeness and generalizability of the results; therefore, external validity is limited.

## Results

### Descriptive Statistics

The total sample included 130 out of 214 participants who completed the study. Thirty-eight percent ( $n = 82$ ) of the participants were disqualified based on two screener questions (i.e., “do you currently work full-time in the US and speak English?” and “prior to the COVID-19 pandemic, did you work onsite and then shift to remote work?”) and 13% ( $n = 19$ ) abandoned the survey. Two of the observations were removed due to outliers. Participants' mean number of hours worked remotely was 27.97 ( $n = 130$ ). The following means and standard deviations were calculated for the three predictor variables: remote work ( $M = 27.95$ ,  $SD = 14.98$ ), *ability* EI ( $M = 5.59$ ,  $SD = .76$ ), and the interaction (remote work x *ability* EI) ( $M = 155.44$ ,  $SD = 84.99$ ). Means and standard deviations were also calculated for the following outcome variables: job-related stress ( $M = 9.85$ ,  $SD = 4.45$ ), job-related anxiety ( $M = 23.79$ ,  $SD = 7.44$ ), work engagement ( $M = 32.14$ ,  $SD = 10.97$ ), and work-life balance ( $M = 13.24$ ,  $SD = 3.41$ ). Table 3 displays the means and the standard deviations for the predictor and outcome variables.

**Table 3***Descriptive Statistics for Predictor and Outcome Variables*

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
Remote Work	130	27.97	14.98	0	60.00
Ability EI	130	5.59	.76	3.75	7.00
Interaction (remote work x ability EI)	130	155.44	84.99	0	344.38
Job-related stress	130	9.85	4.45	1.00	20.00
Job-related anxiety	130	23.79	7.44	8.00	40.00
Work Engagement	130	32.14	10.97	10.00	53.00
Work-life balance	130	13.24	3.41	4.00	20.00

In addition to deriving a total average score for *ability* EI, the WLEIS also provides separate average scores for self-emotional appraisal (SEA), others' emotion appraisal (OAE), use of emotions (UOE), and regulation of emotion (ROE), with higher numbers indicating higher levels of *ability* EI. Questions 1-4 assessed participants use of self-emotional appraisal ( $M = 23.26$ ,  $SD = 3.58$ ), questions 5-8 assessed participants emotional appraisal of others ( $M = 22.02$ ,  $SD = 3.72$ ), questions 9-12 assessed participants use of emotion ( $M = 22.95$ ,  $SD = 3.65$ ), and questions 13-16 assessed participants regulation of emotion ( $M = 21.45$ ,  $SD = 4.55$ ).

**Evaluation of Statistical Assumptions**

Assumptions for multiple regression were tested prior to each regression analysis (i.e., normality, linearity, homoscedasticity, multicollinearity, and independence of residuals). Normality was tested using the Shapiro-Wilk test and Q-Q plots. Table 4 provides the results of the Shapiro-Wilk test and indicates that the variables are not

normally distributed, with the exception of job-related anxiety ( $p = .110$ ); therefore, the assumption of normality in the raw data was only partially met, however the Q-Q plots did indicate that the other variables did follow the normal distribution. Q-Q plots for all variables are provided in Appendix A.

**Table 4**

*Shapiro-Wilk Normality Testing for Study Variables*

Variable	Statistic	<i>df</i>	<i>p</i>	Skewness	Kurtosis
Remote Work	.915	130	.000	-.501	-.597
<i>Ability</i> EI	.978	130	.033	-.310	-.477
Interaction (remote work x <i>Ability</i> EL)	.951	130	.000	-.350	-.536
Job-related stress	.969	130	.004	.347	-.501
Job-related anxiety	.983	130	.110	-.175	-.525
Work engagement	.959	130	.001	-.130	-.788
Work-life balance	.978	130	.033	-.582	.057

Linearity between the predictor and outcome variables was examined using scatterplots. Scatterplots demonstrating linear relationships between predictor and outcome variables are provided in Appendix B. The scatter plots do not show that the predictor and outcome variables are linear resulting in low *r*-square values, therefore, linearity was not met for the data.

Multicollinearity was assessed by examining the variance inflation factor (VIF). Table 5 displays the VIF for the predictor variables. The multicollinearity assumption has been partially met. Other than the interaction term there is no multicollinearity in the regression models. The interaction term produced multicollinearity as it includes the main effect.

**Table 5***Collinearity Diagnostics for Predictor Variables*

Variable	Tolerance	<i>VIF</i>
(Constant)		
Remote Work	.019	52.599
Ability EI	.198	5.058
Interaction Term	.019	53.806

The Durbin-Watson  $d$  was conducted to examine the independence of residuals.

Table 6 provides the Durbin-Watson test results for each of the four regressions. The Durbin-Watson scores are close to 2.0, indicating the assumption of the independence of residuals was met.

**Table 6***Model Summary: Durbin-Watson  $d$  Test*

Model	Outcome Variable	<i>Durbin-Watson</i>
M1	Job-Related Stress	1.957
M2	Job-Related Anxiety	1.990
M3	Work Engagement	1.624
M4	Work-Life Balance	2.115

Homoscedasticity was examined using the scatterplots of the standardized residual and standardized predicted values for the four regressions (Appendix C). Examination of the scatterplots indicates the variance of residuals is constant for all regressions. The assumption of homoscedasticity was met.

P-P plots for all four regressions were used to examine the distribution of the residuals (Appendix D). The residuals were normally distributed for all four regressions. Therefore, the assumption of normally distributed residuals was met.

In addition to testing for the assumptions for the multiple regression, Cronbach's alpha was computed to test the reliability of the instruments used for the current sample. Table 7 provides the Cronbach's alpha coefficients ( $\alpha$ ) for each instrument; each had an acceptable internal consistency, ranging from .76 to .92.

**Table 7**

*Cronbach's Alpha Coefficients for Study Instruments*

Instrument	$\alpha$
WLEIS	.913
WRSS	.766
WAS	.928
UWES-9	.911
WLBS	.804

**Multiple Regression Analysis**

Four separate standard multiple regressions were conducted to determine the strength of the predictor variable: Remote work (measured in the number of hours of remote work per week), on the outcome variables (i.e., job-related stress, job-related anxiety, work engagement, and work-life balance). In standard multiple regression, all the independent variables are entered into the equation simultaneously and evaluated in terms of predictive power. The regression results also showed the moderating effect of *ability* EI based on the  $p$ -value of the interaction term.



### Job-Related Stress (RQ1)

The first multiple regression model included the predictor variable (i.e., remote work) and the outcome variable job-related stress. Based on the *correlations* appearing in Tables 8-9, the model was statistically significant ( $F(3,126) = 4.009, p = .009$ ). The multiple correlation ( $R = .295$ ) was small and indicates a weak correlation between the variables ( $F(3,126) = 4.008, p .009$ ). The  $R^2 = .087$  means that a total of 8.7% of the variability in job-related stress can be explained by remote work.

**Table 8**

*ANOVA Results for Model 1: Job-Related Stress*

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>R</i>	$R^2$	<i>p</i>
Regression	222.531	3	74.177	4.008	.295	.087	.009
Residual	2331.692	126	18.505				
Total	2554.223	129					

*Note.* Dependent Variable: Job-related Stress (WRSS); Predictors: (Constant), Remote work (number of hours worked per week, *ability* EI, interaction term

Table 9 indicates that remote work did not have a significant impact on job-related stress. The results in Table 9 indicate that remote work is not a significant predictor of job-related stress ( $b=0.061, p=.618$ ). Based on the results it can be inferred that the remote work is not a significant determinant of job-related stress. Therefore, the null hypothesis was not rejected for the proposed relationship.

**Table 9**

*Coefficients: Prediction of Job-Related Stress*

Model		<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
1	(Constant)	16.374	6.280		3.018	<.003
	Remote Work	.061	.183	.204	-.500	.618
	Ability EI	-.936	1.107	-.162	-.640	.523
	Int Variable	-.019	.033	-.366	.251	.803

*Note.* Dependent Variable: Job-related Stress (WRSS); Predictors: (Constant), Remote work (number of hours work per week), ability EI, interaction term.

### **Job-Related Anxiety (RQ2)**

The second multiple regression model included the predictor variable (i.e., remote work) and the outcome variable job-related anxiety. The results appearing in Table 10, indicate that the model is not statistically significant ( $F(3,125) = 1.315, p = .273$ ). The results appearing in Tables 10-11 indicate that remote work ( $R=.175, p .273, R^2 = .031$ ) is not a significant predictor of job-related anxiety ( $b=-0.163, p=.608$ )

**Table 10**

*ANOVA Results for Model 1: Job-Related Anxiety*

	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>R</i>	$R^2$	<i>p</i>
Regression	218.816	3	72.939	1.315	.175	.031	.273
Residual	6934.533	125	55.476				
Total	7153.349	128					

*Note.* Dependent Variable: Job-Related Anxiety Scale (WAS); Predictors: (Constant), Remote work (number of hours work per week), ability EI, interaction term.

Table 11 indicates that remote work did not have a significant impact on job-related anxiety. The standardized and unstandardized coefficients of remote work do not significantly impact job-related anxiety ( $b=-.159, p=.618, \beta =-.319$ ). Based on the results

it can be inferred that remote work is not a significant determinant of job-related anxiety.

Thus, the null hypothesis was not rejected for the proposed relationship.

**Table 11**

*Coefficients: Predication of Job-Related Anxiety*

Model		<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
2	(Constant)	32.937	10.915		3.018	<.003
	Remote Work	-.159	.319	-.319	-.500	.618
	Ability EI	-1.233	1.925	-.127	-.640	.523
	Int Variable	.014	.057	.162	.251	.803

*Note.* Dependent Variable: Job-Related Anxiety Scale (WAS); Predictors: (Constant), Remote work (number of hours work per week), ability EI, interaction term.

### **Work Engagement (RQ3)**

The third multiple regression model included the predictor variable (i.e., remote work) and the outcome variable work engagement. The results in Table 12 indicate that the model was statistically significant ( $F(3,126) = 7.064, p = .000$ ). Based on the standardized and unstandardized coefficients appearing in Tables 12-13, remote work ( $R=.379, p= .726, R^2 = .124$ ) is not significantly related to work engagement ( $b=0.154, p=.726$ ).

**Table 12***ANOVA Results for Work Engagement*

Model		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>R</i>	<i>R</i> <sup>2</sup>	<i>p</i>
3	Regression	2238.480	3	746.160	7.064	.379	.124	
	Residual	13309.028	126	105.627				<.000
	Total	15547.508	129					

*Note.* Dependent Variable: Uretch Work Engagement Scale (UWES); Predictors: (Constant), Remote work (number of hours work per week), ability EI, interaction term

Table 13 indicates that remote work did not have a significant impact on work engagement. The standardized and unstandardized coefficients of remote work have an insignificant positive impact on work engagement ( $B=.154$ ,  $p=.726$ ,  $\beta = .210$ ). Based on the results it can be inferred that remote work is not a significant predictor of work engagement. Thus, the null hypothesis was not rejected for the proposed relationship.

**Table 13***Coefficients: Work Engagement*

Model		<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>
3	(Constant)	-2.648	15.003		-.176	.860
	Remote Work	.154	.438	.210	.351	.726
	Ability EI	5.925	2.645	.415	2.240	.027
	Int Variable	-.017	.078	-.134	-.221	.825

*Note.* Dependent Variable: Work Engagement (UWES); Predictors: (Constant), Remote work (number of hours work per week), ability EI, interaction term.

### Work-Life Balance (RQ4)

The fourth multiple regression model included the predictor variable (i.e., remote work) and the outcome variable work life-balance. The results in Table 14 indicate that the model was statistically significant ( $F(3,126) = 6.194, p = .001$ ). Based on the correlations appearing in Tables 14-15, remote work ( $R = .358, p = .036, R^2 = .129$ ) is significantly related to work-life-balance. The multiple correlation ( $R = .358$ ) was small and indicates a moderate correlation between the variables ( $F(3,126) = 6.194, p = .001$ ). The  $R^2 = .129$  means that a total of 12.9% of the variability in work-life balance can be explained by the model.

**Table 14**

*ANOVA Results for Work-Life Balance*

Model		SS	df	MS	F	R	R <sup>2</sup>	p
4	Regression	193.245	3	64.415	6.194	.358	.129	.001
	Residual	1310.363	126	10.400				
	Total	1503.608	129					

*Note.* Dependent Variable: Work-life balance scale (WLBS); Predictors: (Constant), Remote work (number of hours work per week), *ability* EI, interaction term

The results in Table 15 indicate that remote work had a significant impact on work-life balance ( $b = .126, p = .036$ ). This finding suggested that as the number of remote hours increased, so did work-life balance. Based on the results it can be inferred that remote work is a significant determinant of work-life balance. Therefore, the null hypothesis for the proposed relationship has been rejected..

**Table 15**

*Coefficients: Predication of Work-Life Balance*

Model		<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>P</i>
4	(Constant)	3.083	4.708		.655	.514
	Remote Work	.126	.137	.552	.916	.036
	Ability EI	1.507	.830	.340	1.815	.072
	Interaction	-.012	.025	-.288		.637

*Note.* Dependent Variable: Work-life balance scale (WLBS); Predictors: (Constant), Remote work (number of hours work per week).

### **Moderation Analyses**

To answer research questions 5-8 four moderation analyses were conducted to determine if, *ability* EI, affects the relationship between the predictors (i.e., remote work, *ability* EI, and the moderator effect) and the outcome variables (i.e., job-related stress, job-related anxiety, work engagement, and work-life-balance).

### **Moderation Models**

The first moderation model included remote work, *ability* EI, the interaction term between remote work and *ability* EI, and the outcome variable job-related stress. The second moderation model included remote work, *ability* EI, the interaction term between remote work and *ability* EI, and the outcome variable job-related anxiety. The third moderation model included remote work, *ability* EI, the interaction term between remote work and *ability* EI, and the outcome variable work engagement. The fourth moderation model included remote work, *ability* EI, the interaction term between remote work and *ability* EI, and the outcome variable work-life balance.

### **Moderation Model Variability**

The results of the moderations are displayed in Table 16 and show the  $R^2$  values for Models 1 to 4 (e.g., 1- job-related stress, 2- job-related anxiety, 3- work engagement and 4- work-life balance). The  $R^2$  reflects the variation explained in the response variables by the combination of predictors, including the predictor, moderator, and the interaction of both. Model 1 tests if *ability* EI moderates the effect of remote work on job-related stress. The  $R^2$  for Model 1 is 0.087, indicating the predictors in the model explained 8.7% of the variance in job-related stress. Model 2 tests if *ability* EI moderates the effect of remote work on job-related anxiety. The  $R^2$  for the model is 0.031, suggesting that the predictors in the model explained 3.1% of the variance in job-related anxiety. Model 3 tests if *ability* EI moderates the effect of remote work on work engagement. The  $R^2$  for the model is 0.144, suggesting that the predictors in the model explained 14.4% of the variance in work engagement. Model 4 tests if *ability* EI moderates the effect of remote work on work-life balance. The  $R^2$  for the model is 0.129, suggesting that the predictors in the model explained 12.9% of the variance in work-life balance.

**Table 166***Model Summary: Influence of Moderator on Outcome Variables*

Model	<i>R</i>	<i>R</i> <sup>2</sup>	Adjusted <i>R</i> <sup>2</sup>	Std. Error of the Estimate
1 - RW, EI, interaction term, JRS	.295	.087	.065	4.302
2 - RW, EI, interaction term, JRA	.175	.031	.007	7.419
3 - RW, EI, interaction term, WE	.379	.144	.124	10.278
4 - RW, EI, interaction term, WLB	.358	.129	.108	3.225

*Note.* RW= #hrs/Remote Work, EI= *ability* EI, Interaction Term=Remote Work x *Ability* EI, JRS=Job-Related Stress, JRA=Job-Related Anxiety, WE=Work Engagement, WLB=Work-Life Balance.

#### **Moderation Models 1-4: Remote Work and Ability EI**

Table 19 displays the overall model significance for Models 1 to 4. The significance level adjacent to the *F* statistic tests whether the model is a significant fit or not; the *F* significance is also the significance test for goodness of fit. Model 1 tests *ability* EI as a moderator between the effect of remote work on job-related stress; this model is statistically significant ( $F(3,126) = 4.009, p = .009$ ). Model 2 tests *ability* EI as a moderator between the effect of remote work on job-related anxiety; this model is not statistically significant ( $F(3,126) = 1.323, p = .270$ ). Model 3 tests *ability* EI as a moderator between the effect of remote work on work engagement. This model is statistically significant ( $F(3,126) = 7.064, p = .001$ ). Model 4 tests *ability* EI as a moderator between the effect of remote work on work-life balance; this model is statistically significant ( $F(3,126) = 6.194, p = .001$ ).



**Table 17***ANOVA Results for Moderation Models 1-4*

Model		<i>SS</i>	<i>Df</i>	<i>MS</i>	<i>F</i>	<i>R</i> <sup>2</sup>	<i>p</i>
1	Regression	222.538	3	74.179	4.009	.087	.009
	Residual	2331.685	126	18.505			
	Total	2444.223	129				
2	Regression	218.404	3	72.801	1.323	.031	.270
	Residual	6934.988	126	55.040			
	Total	7153.392	129				
3	Regression	2238.487	3	746.162	7.064	.144	.001
	Residual	13309.020	126	105.627			
	Total	15547.508	129				
4	Regression	193.241	3	64.414	6.194	.129	.001
	Residual	1310.367	126	10.400			
	Total	1503.608	129				

*Note.* RW= #hrs/Remote Work, EI= *ability* EI, Interaction Term=Remote Work x *Ability* EI, JRS=Job-Related Stress, JRA=Job-Related Anxiety, WE=Work Engagement, WLB=Work-Life Balance.

**Moderation Model 1: Remote Work and Ability EI on Job-Related Stress (RQ5)**

Hypothesis five suggests that *ability* EI significantly moderates the relationship between working remotely due to COVID-19 and job-related stress. After controlling for remote work and *ability* EI, the interactive effect of remote work and *ability* EI on job-related stress is also insignificant. The interaction effect does not significantly explain the variability in job-related stress ( $b=-0.019$ ,  $p=.558$ ,  $sr^2=0.002$ ). These findings fail to support the alternative hypothesis that *ability* EI significantly moderates the relationship between working remotely due to COVID-19 and job-related stress; therefore, the null hypothesis was not rejected.

**Moderation Model 2: Remote Work and Ability EI on Job-Related Anxiety (RQ6)**

Hypothesis six suggests that *ability* EI significantly moderates the relationship between working remotely due to COVID-19 and job-related anxiety. After controlling for remote work and *ability* EI, the interactive effect of remote work and *ability* EI on job-related anxiety is also insignificant. The interaction effect does not significantly explain the variability in job-related anxiety ( $b=0.015$ ,  $p=.792$ ,  $sr^2=0.001$ ). These findings fail to support the alternative hypothesis that *ability* EI significantly moderates the relationship between working remotely due to COVID-19 and job-related anxiety; therefore, the null hypothesis was not rejected.

**Moderation Model 3: Remote Work and Ability EI on Work Engagement (RQ7)**

Hypothesis seven suggests that *ability* EI significantly moderates the relationship between working remotely due to COVID-19 and work engagement. After controlling for remote work and *ability* EI, the interactive effect of remote work and *ability* EI on work engagement is insignificant. The interaction effect does not significantly explain the variability in work engagement ( $b=-0.017$ ,  $p=.825$ ,  $sr^2=0.000$ ). These findings fail to support the alternative hypothesis that *ability* EI significantly moderates the relationship between working remotely due to COVID-19 and work engagement; therefore, the null hypothesis was not rejected. However, it was found that *ability* EI was a significant predictor of work engagement ( $b=5.926$ ,  $p=.027$ ,  $sr^2=0.034$ ).

**Moderation Model 4: Remote Work and Ability EI on Work-Life Balance**

Hypothesis eight suggests that *ability* EI significantly moderates the relationship between working remotely due to COVID-19 and work-life balance. After controlling for

remote work and *ability* EI, the interactive effect of remote work and *ability* EI on work-life balance is insignificant. The interaction effect does not significantly explain the variability in work-life balance ( $b=-0.012$ ,  $p=.638$ ,  $sr^2=0.002$ ). These findings fail to support the alternative hypothesis that *ability* EI significantly moderates the relationship between working remotely due to COVID-19 and work-life balance; therefore, the null hypothesis was not rejected.

**Table 18***Coefficients: Moderation Models 1-4 Remote Work X Ability EI*

Model		<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	<i>p</i>	<i>sr</i> <sup>2</sup>
1	(Constant JRS)	16.37	6.280		2.607	.010	
		3					
	R_Work	0.061	0.183	0.205	0.332	.741	0.001
	Ability	-	1.107	-0.162	-0.845	.400	0.005
		0.936					
	Interaction	-	0.033	-0.366	-0.587	.558	0.002
		0.019					
2	(Constant JRA)	33.00	10.830		3.048	.003	
		9					
	R_Work	-	0.316	-0.327	-0.514	.608	0.002
	ABILITY	-	1.910	-0.129	-0.653	.515	0.003
		1.248					
	Interaction	0.015	0.056	0.170	0.264	.792	0.001
3	(Constant WE)	-	15.003		-0.177	.860	
		2.650					
	R_Work	0.154	0.438	0.210	0.352	.726	0.001
	ABILITY	5.926	2.645	0.415	2.240	.027	0.034
		0.017					
	Interaction	-	0.078	-0.134	-0.221	.825	0.000
		0.017					
4	(Constant WLB)	3.084	4.708		0.655	.514	
	R_Work	0.126	0.137	0.552	0.915	.362	0.006
	ABILITY	1.507	0.830	0.339	1.815	.072	0.023
		0.012					
	Interaction	-	0.025	-0.288	-0.472	.638	0.002
		0.012					

*Note.* R\_Work= #hrs/Remote Work, Ability= *ability* EI, Interaction Term=Remote Work x Ability EI, JRS=Job-Related Stress, JRA=Job-Related Anxiety, WE=Work Engagement, WLB=Work-Life Balance.

### Summary

A series of standard multiple regressions and moderation analyses were performed to determine if *ability* EI moderates the relationship between remote work during COVID-19 and job-related stresses (e.g., job-related stress, job-related anxiety,

work engagement, and work-life balance). The results of the multiple regression analysis revealed that remote work is a significant predictor for work-life balance. The moderation analysis revealed that the interaction term was not significant and *ability* EI does not moderate the strength of the relationship between working remotely during COVID-19 and job-related stress, job-related anxiety, work engagement, and work-life balance. It was found that *ability* EI significantly predicts work engagement. Chapter 5 includes interpretations of the findings, limitations of the study, implications for social change, and recommendations for future research.

## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

This study aimed to determine the extent to which ability EI moderated the relationship between working remotely during COVID-19 and job-related stress, job-related anxiety, work engagement, and work-life balance. The study was conducted in an effort to increase understanding of job stresses associated with working remotely due to the pandemic. Although remote work has been studied for decades, the COVID-19 pandemic prompted significant changes to the way Americans work (Zhang et al., 2021). In March 2020, authorities in many states in the United States issued orders instructing organizations to shift employees to remote work in an attempt to slow the transmission of the virus. With little or no time to prepare for the shift from the office to the home, employees struggled to maintain boundaries between work and non-work (Palumbo, 2020), causing significant increases in psychological distress and poorer overall well-being (De Sio et al., 2021). Studies have shown that the ability to regulate emotions can have many positive benefits to managing work and family challenges and, ultimately, health and psychological wellbeing (Restubog et al., 2020). Individuals with high levels of ability EI can manage situations to their advantage by understanding their emotional processes and gauging others' emotional experiences. To that end, the present study investigated the potential for ability EI to influence work stresses associated with stay-at-home orders during the COVID-19 crisis.

A quantitative nonexperimental survey design was used to examine the influence of ability EI (IV) on work stresses (DVs: work stress, work anxiety, work engagement,

work-life balance) associated with remote work (IV). The SurveyMonkey platform was used to administer online surveys to employees aged 18-65+ who worked full-time in the United States. Participating employees were required to have worked on-site in their place of business prior to the COVID-19 pandemic and then moved to remote work as required by government mandates in an effort to quash the virus. The predictor variables were (a) remote work (as measured by the number of hours per week worked outside the office), (b) ability EI (i.e., an individual's ability to regulate emotion and make more effective decisions; see MacCann et al., 2020), and (c) the moderator effect (i.e., remote work x ability EI). The four outcome variables were (a) job-related stress (i.e., an individual's perceived inability to cope with work demands; see Jung et al., 2020); (b) job-related anxiety (i.e., a mental state where employees feel increased arousal, fear, and concern about their job; see Yunus & Mostafa, 2021); (c) work engagement, defined as having a positive, fulfilling, work-related state of mind (see Extremera et al., 2020); and (d) work-life balance (i.e., the relationship between work and personal life, emphasizing health, absence of stress, well-being, quality of life, organizational performance, and human and social development with others; see Sanchez-Hernandez et al., 2019).

Standard multiple regression analyses revealed that remote work was a significant predictor of work-life balance. Findings also showed that ability EI significantly predicts work engagement but does not significantly moderate the relationship between remote work and job-related stresses (i.e., job-related stress, job-related anxiety, work engagement, and work-life balance). In this chapter, the interpretations of the research

findings are discussed, followed by the limitations of the study, recommendations for future research, and discussion of the study's implications for positive social change.

### **Interpretation of the Findings**

#### **Remote Work, Ability Emotional Intelligence, and Job-Related Stresses**

RQs1 through 4 asked to what extent is working remotely due to COVID-19, as measured by the average number of hours per week, related to job stress (RQ1), job-anxiety (RQ2), work engagement (RQ3), and work-life balance (RQ4), as measured by the WRSS, the WAS, the UWES-9, and the WLBS, respectively. The null hypotheses were not rejected for relationships between remote work and job-related stress, job-related anxiety, and work engagement. The null hypothesis was rejected for work-life balance, indicating that remote work during COVID-19 was a significant predictor of work-life balance. These findings were generally consistent with previous research on remote work prior to the pandemic.

#### ***Remote Work***

Given that the COVID-19 pandemic brought significant changes to Americans' work, and with little time to prepare for the shift in the work environment, it was assumed that employees may have experienced multiple job stresses related to this unexpected shift. Over the last 10 years, the literature has highlighted both advantages and disadvantages of remote work (Angelucci et al., 2020). Recent literature highlights the widespread use of telecommuting during the COVID-19 pandemic to protect employees' physical health and safety and to limit the spread of the virus, with estimates suggesting that more than 25 million employees in the United States now work remotely, a growth



rate of 11-30% (Golden, 2021). The findings of this study are consistent with those of other studies indicating some remote-work advantages, specifically increased work-life balance; however, no other significant results were found for the influence (either pro or con) of remote work on job-related stresses. The study did not address home office constraints such as limited time with others, getting out of the house, or the impact of having to work with other family members who were also at home, nor were individuals who had been laid off or furloughed included, which, if taken into account, may have produced different results. Future research should consider how employees' mental health may impact job-related stresses while working remotely and how that may influence employees' productivity and work engagement.

Although this study did not provide direct evidence of the impact of remote work on mental health and well-being during the lockdown, other research reported significant decreases in overall physical and physical mental health, reduced communication with coworkers, struggles balancing children at home, and overall increases in distractions while working from home (Xiao et al., 2021). One study reported significant difficulties for women during the pandemic struggling to balance the roles of remote work.

Woodbridge et al. (2021) argued that women struggled to maintain occupational productivity and spent, on average, an additional 2.56 hours more per day on housework than men.

### ***Job-Related Stress and Anxiety***

Prior to the pandemic, the majority of employees working from home chose to do so on their own accord; however, the government-imposed mandates forced many

Americans to shift to remote work, resulting in significant increases in job-related stress, burnout, and decreased well-being during the COVID-19 pandemic (Wang et al., 2017; Zhang et al., 2020). While this study did not find a significant relationship between working remotely during the pandemic and job-related stress and anxiety, other research did find increased stress and anxiety levels related to the pandemic (Sadovyy et al., 2021). This may be largely due to data being collected three years into the start of the pandemic when restrictions had eased, giving organizations time to implement work from home policies and employees time to adjust to remote work.

Although the current study did not control for gender disparities, recent studies suggest that increases in work-related video chat and text messages were associated with greater job-related stress while working remotely, especially for women, particularly those with children (Pennington et al., 2021). Remote workers reported feeling isolated from their colleagues, which impacted their mental health and job performance (Sarkar et al., 2021). The downstream effects of job burnout are now emerging entering the third year of the pandemic. According to a recent survey, 79% of the 1,501 employees surveyed reported significant increases in job-related stress due to remote work (American Psychological Association, 2021). Three in five workers said their job-stress caused them to experience a lack of interest in their work, decreased motivation, and less energy while working (American Psychological Association, 2021). Future research should focus on the long-term impact of remote work on employees' well-being as more jobs shift to remote.

### ***Work Engagement***

Now more than ever, the ability to engage and retain employees is top of mind for many organizations due to labor shortages, resignations, and the recent effect of the pandemic (Parent-Lamarche & Boulet, 2021). From April 2020 to June 2020, 30% of U.S. employees ages 15 to 64 reported spending most of their time working from home, while in 2016, only about 4% of employees reported working remotely (Parent-Lamarche & Boulet, 2021). Work engagement has been linked to employee turnover and job performance. Previous studies have revealed that work engagement can help increase profits and provide organizations with a competitive advantage (Barreiro & Treglown, 2020). Research on remote work and work engagement prior to COVID-19 supports a positive relationship between remote work and work engagement. Employees who choose to work remotely see both the benefits (e.g., flexible work schedule and less time spent commuting) and the limitations (e.g., lack of physical contact with superiors, coworkers, and job insecurity) of remote work because they chose to work remotely and are therefore more engaged in their work than employees who were not given a choice (Wontorczyk & Roznowski, 2022). The pandemic forced millions of Americans to shift from the office to remote work with little or no time to prepare, causing decreases in work engagement for many employees (Pennington et al., 2021).

Although the current study did not find a significant relationship between remote work and work engagement, recent studies have revealed that the more engaged the employee, the more productive they are working remotely unless they are living in the home with children under the age of 18 (Toscano & Zappala, 2021). Employees reported

higher levels of work engagement while working remotely if they received management support and felt a sense of control over their environment. When employees felt supported by their management, and in control of their environment, the benefits of remote work led to increases in employee engagement and job satisfaction (Wontorczyk & Roznowski, 2022). Finally, research emerging on the effects of the pandemic highlights the need to increase employee engagement in an attempt to increase waning employee loyalty as employees shifted from the office to remote work (Ramkumar et al., 2021). Future research may consider other factors that interfere with remote work and work engagement as the number of employees shifting to remote work increases (de Klerk et al., 2021).

### ***Work-Life Balance***

The capacity to balance work and family roles was significantly disrupted during the initial stages of the COVID-19 pandemic (Rathnaweera & Jayathilaka, 2021). Prepandemic research on remote work indicated that individuals often struggled to balance work and home life when their homes became their offices (Molino et al., 2020). During the pandemic, researchers identified similar concerns about working from home and the effects on work-life balance; however, some participants reported greater autonomy and balance (Molino et al., 2020). Prominently featured in the literature was the lack of boundaries between parents' work and home life as they experienced heightened stress trying to work from home while balancing childcare and homeschooling demands during the initial stages of the lockdown (Parker et al., 2021; Yang et al., 2021). Recent studies have found that COVID-19 disruptions have

significantly impacted employees' work and home life (Bellmann & Hubler, 2021).

Consistent with this research, results from the current study indicate that remote work was significantly positively related to work-life balance such that work-life balance increased as the number of remote-work hours increased.

### **Ability Emotional Intelligence as a Moderator**

RQs5 through 8 examined the moderating effect of ability EI on remote work, as measured by the average number of hours per week, and job-related stress (RQ5), job-related anxiety (RQ6), work engagement (RQ7), and work-life balance (RQ8). Ability EI was measured using the WLEIS.

### ***The theory of Emotional Intelligence***

The theory of EI, specifically ability EI, was selected for the study because of its focus on emotional regulation and cognitive ability. EI provides a unified theoretical framework for studying the role of emotional skills needed to successfully manage the COVID-19 crisis. Distinct from the trait EI focus on dispositional characteristics, the ability EI approach focuses on the cognitive ability to process, manage, and use emotions as sources of information useful for navigating one's social environment (Salovey & Grewal, 2005). Ability EI has been shown to predict health-related outcomes (i.e., higher life satisfaction, lower depression, and fewer health issues; Fernández-Berrocal & Extremera, 2016) and has been positively implicated in workplace performance and leadership (Fiori & Vesley-Maillefer, 2018). Given that emotion regulation is its defining feature, ability EI helps individuals better understand and control their emotional responses to situations in daily life and in the workplace (Thomas et al., 2020). Results

for RQs5 through 8 did not support the literature. Findings did not show any significant moderating effects for ability EI on relationships between remote work and job-related stresses. Therefore, the null hypotheses were not rejected.

The easing of COVID-19 lockdown restrictions may explain the failure to find a moderating effect for ability EI on the relationship between remote work and job-related stresses. In March 2020, the U.S. government enforced a national lockdown, forcing all non-essential employees to work from home (Wang & Pagan, 2021). Because the study participants were recruited in January 2022, many of the COVID-19 restrictions had been removed; organizations had worked tirelessly to implement policies and procedures to support their staff, and many employees were given the option to return to the office. Collecting data early in the pandemic when stay-at-home orders were in full effect may have produced different results. Two years had passed, giving participants time to acclimate to working from home and time for organizations to implement procedures and policies to support work from home efforts, possibly reducing the job-related stresses participants likely experienced at the onset of the mandatory lockdown. For example, the average worker spent upwards of 15 hours and more than \$561 on in-home equipment to facilitate working from home, and organizations spent millions of dollars improving IT systems and equipment to support workers (Barrero et al., 2021). In the United States alone, patent applications that advanced work from home efforts more than doubled from January to September 2020, leading to a rise in the quality and efficiency of remote work well after the pandemic ends (Barrero et al., 2021). One might reasonably assume, then, that with the passing of time and efforts by organizations to support employees' remote

work, the work-related stresses experienced initially by employees ordered to work from home would have subsided by the time data were collected.

Although this study did not find a moderating effect of *ability* EI on job-related stresses, recent studies support the moderating role of *ability* EI on work performance during COVID-19 crisis. Sadovvy et al. (2021) found a relationship between COVID-19 stress, work performance, and *ability* EI such that higher levels of *ability* EI better equip people to recognize and understand their emotions, giving them greater ability to regulate their responses to stress. Greater levels of *ability* EI, therefore, assist individuals in minimizing the stress generated by the circumstances engendered by COVID-19 (Sadovvy et al., 2021). Consistent with this literature, findings from this study as it relates to work engagement indicated that *ability* EI was significantly positively related to work engagement as individuals with higher levels of *ability* EI also reported higher levels of work engagement.

### **Limitations of the Study**

This study was limited to U.S. employees working full-time who worked in an office prior to the COVID-19 pandemic and then shifted to working remotely. The participants were aged 18-65+. Therefore, the results from the study cannot be generalized beyond this population. Additionally, non-probability internet-based surveys can affect the generalizability of the results, given that random sampling was not utilized. Excluded from the study were international workers and employees who do not work full-time. Also excluded from the study were individuals who worked part-time, lost their jobs, or were furloughed. Front-line workers and workers who worked remotely prior to

the pandemic were also excluded. Thus, including these subpopulations in the present study may have produced different results.

A second limitation of the study was the timing of data collection well into the pandemic when employees had sufficient time to adjust to remote work. This was discussed at length previously to explain the failure to find a significant moderating effect for *ability* EI on the relationship between remote work and work-related stresses.

Another limitation of the study is participation only by professional survey-takers. Participants were recruited through SurveyMonkey's participant pool, and individuals who self-select may be different from those who do not volunteer to participate in survey research. Additionally, there is no way to confirm the truthfulness of participant responses to self-report questionnaires, nor can their having met the qualification criteria be confirmed. Screening questions were used in an effort to minimize this threat. Self-report surveys also increase the potential for social desirability bias as participants may tend to cast themselves in the most favorable light (Latkin et al., 2017). The survey data were collected anonymously in an effort to decrease this bias.

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There were certain inconsistencies found in the study that call into question the trustworthiness of some of the findings. For example, the time to complete the scales, as reported in Chapter 3, estimated that the surveys collectively should take approximately 10-12 minutes to complete. The actual average response time to complete the study was approximately four minutes suggesting that participants moved quickly through the responses rather than giving the questions serious consideration. Also documented in the literature are concerns about self-report measures of EI. Although the Wong and Law Emotional Intelligence Scale is reliable and valid, it is a self-report scale. Self-report EI measures ask participants to report their agreement with various statements where responses are likely to reflect participants' perceived rather than actual performance levels (Libbrecht et al., 2010). This may lead to participants rating themselves as having higher EI than they actually do (O'Connor et al., 2019).

### **Recommendations**

This study addressed gaps in the literature by investigating the extent to which *ability* EI moderates the relationship between remote work during the COVID-19 pandemic and job-related stresses. The COVID-19 pandemic changed the way Americans work and has resulted in significant increases in mental health issues. These mental health issues persist today, making it impossible to determine the long-term mental health impact of the pandemic. As organizations continue to increase work-from-home options, there was a critical need to understand how to best support employees in an effort to

reduce the mental health challenges they experience. However, much remains to be learned about the impact of the COVID-19 pandemic on employees' mental health and the ways in which organizations can support their workers. It is important to consider in future research how extreme shifts in work requirements can impact the mental health of employees.

As the number of employees working from home continues to increase, future research on the effects of remote work on job-related stresses is warranted. Topics emerging in the literature address new challenges faced by remote workers (i.e., changes in communication patterns, different psycho-emotional perceptions of work, and changing socialization patterns), and it is still uncertain what the “new normal” of remote work will look like in the future (Vyas, 2022). Given the many new workspaces, schedules, and increases in technology use, individuals may struggle to balance personal and family life. There is more to be learned about the challenges to employee productivity for individuals who may find it hard to adapt to the workstyle change. These adaptation issues may lead to mental health struggles; mitigating these challenges will require more information about the impact of remote work on employees' quality of life in 2022 and beyond.

As indicated in the Chapter 2 literature review, some forms of remote work are associated with decreases in job-related stresses and increases in employee mental health. Prior to the COVID-19 pandemic, most employees working from home did so by choice. Working remotely was considered an honor, thereby lowering individual stress levels and increasing mental health (Raveendra et al., 2021). Unfortunately, when remote work

mandates issued to control the COVID-19 virus, individuals working remotely were not given a choice. They had no time to prepare, resulting in elevated job-related stress and anxiety (Raveendra et al., 2021). The literature prior to the pandemic is mixed regarding the benefits and advantages of working remotely. Now that remote work has become the new normal; it is crucial to understand remote workers' experiences and how employees' physical, social, and emotional needs may be changing. One study found that employees working remotely during the pandemic preferred their leadership to reach out to them daily in an effort to maintain social contact and share expectations, which decreased the stress and anxiety of working remotely (Gelea et al., 2020).

The present study contributes to the emerging literature on the nature of remote work in the United States. Individuals working from home find themselves with more time on their hands due to less commuting time and may also find themselves with more time for other activities. However, this may lead to individuals struggling to balance work and home life; therefore, future studies to learn more about the structuring of daily activities related to remote work is warranted.

Although this study did not find that *ability* EI moderates the relationship between remote work and job-related stresses, the benefits of high levels of emotional intelligence are well-documented and are topics of current interest to psychologists. Findings did reveal a significant relationship between *ability* EI and work engagement, highlighting its value to worker satisfaction and productivity. A significant finding between remote work and work-life balance has long-term implications for employee wellbeing and quality of life; organizations must continue to refine remote-work policies needed to support an

increasing number of employees who choose, or are required, to work from home. The pandemic forever changed the way Americans work, and there is still more to learn about the skills needed to successfully adapt to working from home. Based on this study's findings, future research should also consider EI training inside and outside work organizations. The benefits of emotional intelligence can potentially increase overall psychological wellbeing, decrease job-related stress and anxiety, and increase work engagement and work-life balance.

Research on remote work in the era of COVID-19 is changing daily. Future research should examine the positive aspects of remote work that have emerged from the pandemic, including flexible schedules, increased childcare options, gas savings, decreased or nonexistent commuting time, and increases in technologies that support successful work from home environments (Jacks, 2021). Conversely, digital inequities may make the shift to remote work impossible for some, leading to increases in unemployment, with women suffering the brunt of the impact (Jacks, 2021). Remote work is becoming more male-dominated, so future research is needed to address potential gender inequities. Work culture is also changing due to increases in videoconferencing and the lack of social interaction, making the need for more behavioral research to assess the negative aspects of remote work.

### **Implications**

COVID-19 continues to present significant social, economic, and health challenges for many U.S employees, making the need to address these issues urgent (Gruber et al., 2021). The intent of this study was to learn more about the implications of

remote work on employees' job-related stresses and to see if emotional intelligence training could be a tool used in an effort to mitigate some of these stresses. Although findings from this study did not support a moderating influence of *ability* EI on job stresses related to working remotely during the pandemic, the current literature documents sufficient evidence to warrant adding *ability* EI training opportunities for onboarding new hires (Dirican & Erdil, 2020; Extremera et al., 2020; Hasson, 2019; Sanchez-Gomez et al., 2021). To effect positive social change, the need to understand the implications for remote work now and in the future persists.

Theoretical, Methodological, and Empirical Implications Over 30 years of research has utilized the theory of emotional intelligence to explain how individuals can benefit from understanding their emotions and the emotions of others (Mayer et al., 2016). This study extended this body of research further demonstrating that emotional intelligence, specifically *ability* EI, plays a role in employees' levels of work engagement. Notwithstanding the failure to find a moderating effect for *ability* EI, findings did support significant relationships between *ability* EI and work engagement and between remote work and work-life balance, indicating that as remote work hours increased so did the ability to negotiate work-life balance. These results lay the groundwork for future research to examine the degree to which *ability* EI influences all aspects of the work experience given the, as yet, untested flexible work arrangements emerging from the COVID-19 pandemic (Vyas, 2022).

## Conclusion

The purpose of this study was to examine the relationship between remote work and job-related stresses while working during the COVID-19 pandemic and the potential moderating effect of *ability* EI on that relationship. There were no significant results found for the moderating effect of *ability* EI on the relationship between remote work and job-related stress and anxiety, work engagement, and work-life balance. Although some of the results do not support the current literature, this may be due in part to the timing of data collection, taking place after participants had time to adjust to working remotely. *Ability* EI still has been shown to play an important role in the overall wellbeing of individuals and can have positive benefits in many areas of life. Even when the pandemic finally recedes, COVID-19 variants (e.g., stealth omicron) will continue to circulate throughout the United States, influencing how Americans work. The long-term effects of working remotely are yet to be determined; however, some early research suggests increases in role conflicts, decreases in healthy lifestyle habits, poor physical working environment, ineffective management, and little career growth opportunities. People continue to face emotional challenges due to unemployment, isolation, home confinement, illness, and the death of loved ones. The ongoing mental health crisis will last for years, and Americans will still need support. Previous research on trauma shows that its effects (e.g., isolation and loneliness) persist for at least seven to ten years. The potential for *ability* EI to significantly increase overall wellbeing, decrease anxiety and stress, and regulate emotions in the wake of stressful events is well-documented, warranting its addition to training options for employees now and going forward.

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## Appendix A: Demographic Questionnaire

1. What is your gender?
  - Male
  - Female
  - Prefer not to answer
  
2. What is your race?
  - White or Caucasian
  - Black or African American
  - Hispanic or Latino
  - Asian or Asian American
  - American Indian or Alaskan Native
  - Native Hawaiian or other Pacific Islander
  - Another Race
  
3. What is your age?
  - 18-20
  - 21-29
  - 30-39
  - 40-49
  - 50-59
  - 60 or older
  
4. What is the highest level of school you have completed or the highest degree you have received?
  - Less than high school
  - High School or equivalent (e.g., GED)
  - Some college but no degree
  - Associate degree
  - Bachelor degree
  - Graduate degree
  
5. How many hours a week do you work remotely?

## Appendix B: Permission to Use the Work-Life Balance Scale

Re: Work-Life Balance Scale- PERMISSION for USE



~~Paula Brough~~ <~~p.brough@griffith.edu.au~~>

To: Devon Scherer

Reply
 Reply All
 Forward
 ...

Wed 9/15/2021 5:36 PM

If there are problems with how this message is displayed, click here to view it in a web browser.

Dear Devon

Thanks for your interest. This measure is freely available for research purposes.  
Best wishes with your research.

Brough, P., Timms, C., O'Driscoll, M., Kalliath, T., Siu, O.L, Sit, C., & Lo, D. (2014). Work-life balance: A longitudinal evaluation of a new measure across Australia and New Zealand workers. *International Journal of Human Resource Management*, 25(19), 2724-2744. doi: 10.1080/09585192.2014.899262

Regards,  
Paula

~~Professor Paula Brough~~  
~~Director, Centre for Work, Organisation & Wellbeing (COWW)~~  
~~Griffith University | Nathan campus | Brisbane QLD 4122 Australia~~  
~~Tel: 07 32725 9979 | Email: ~~p.brough@griffith.edu.au~~~~

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**Recent books:**

*Handbook on management and employment practices*. Springer (Forthcoming in 2022).

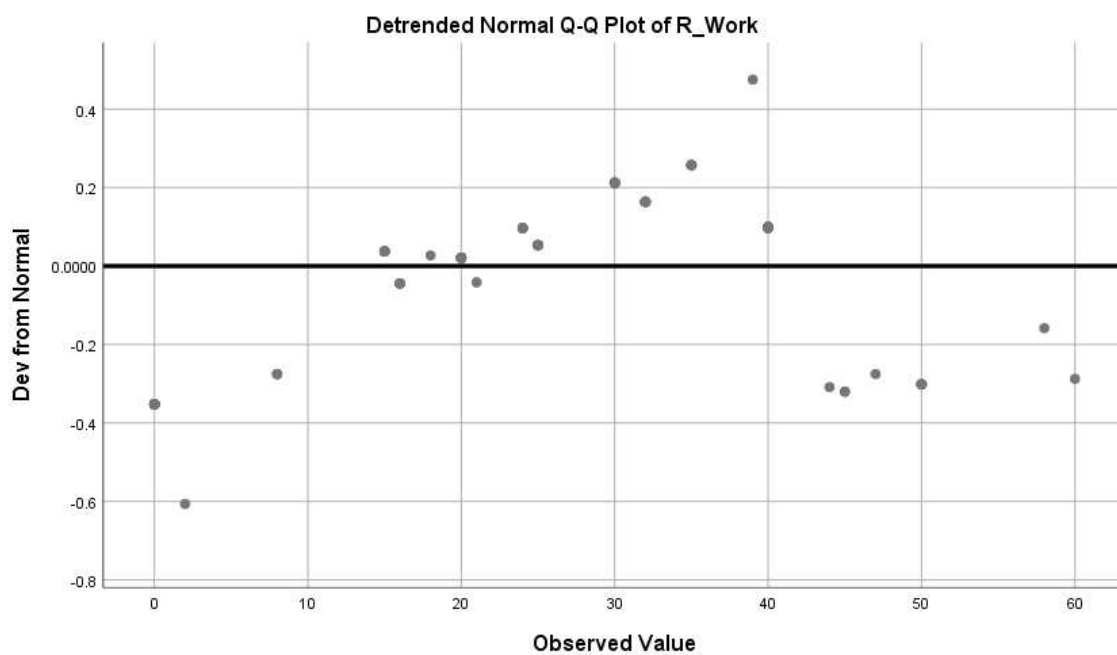
*Destructive leadership in the workplace and its consequences: Translating theory and research into evidence-based practice*. (2021)

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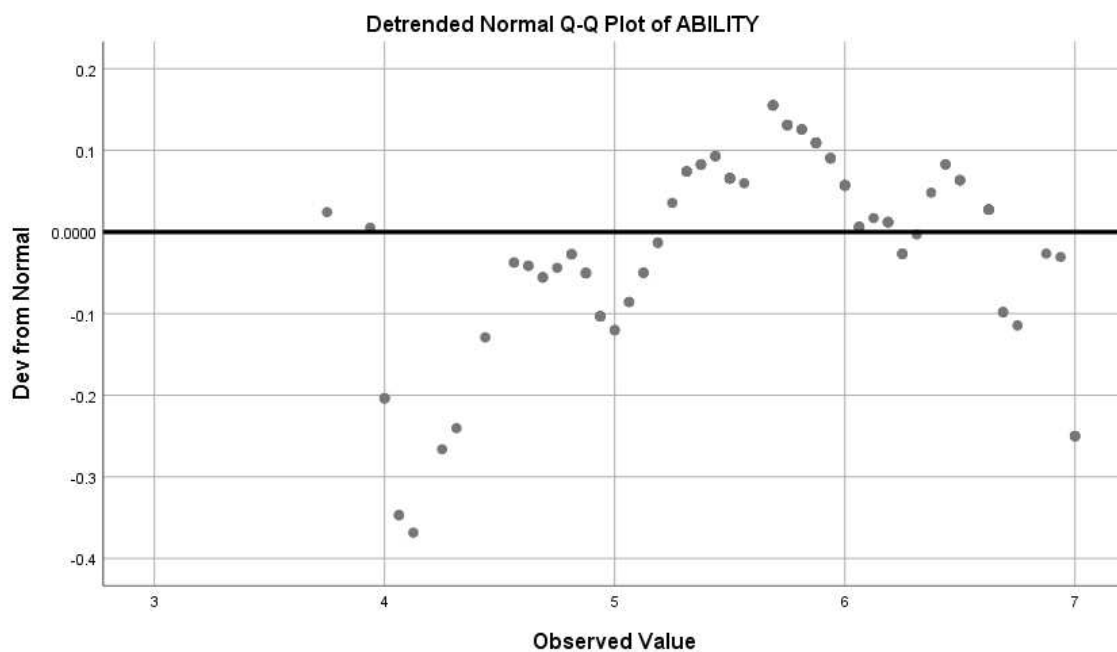
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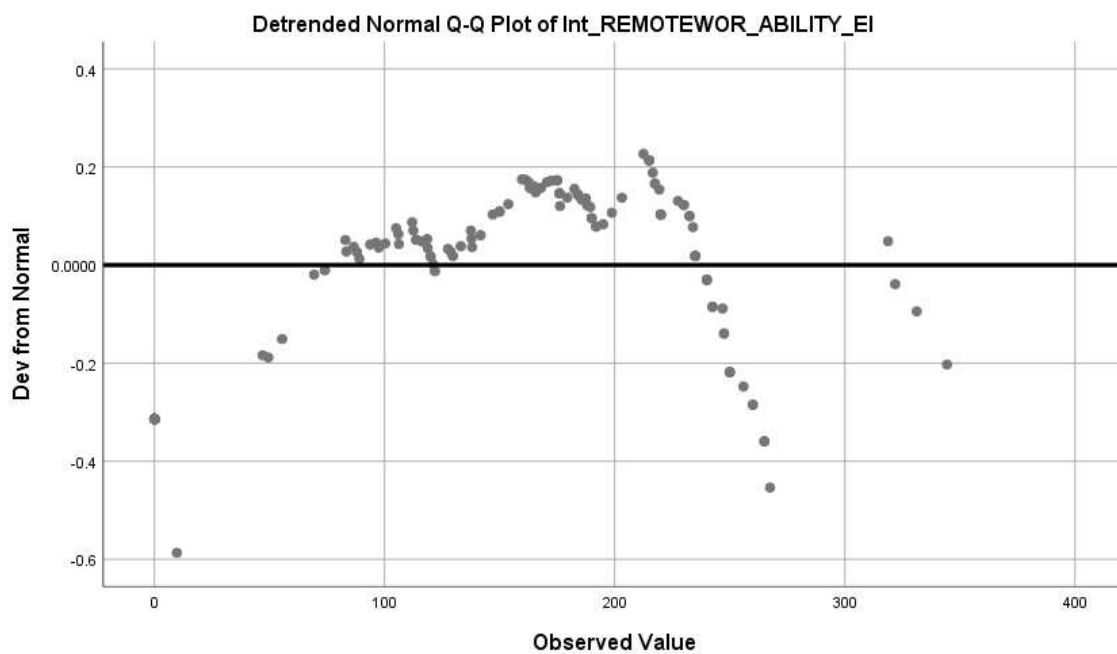
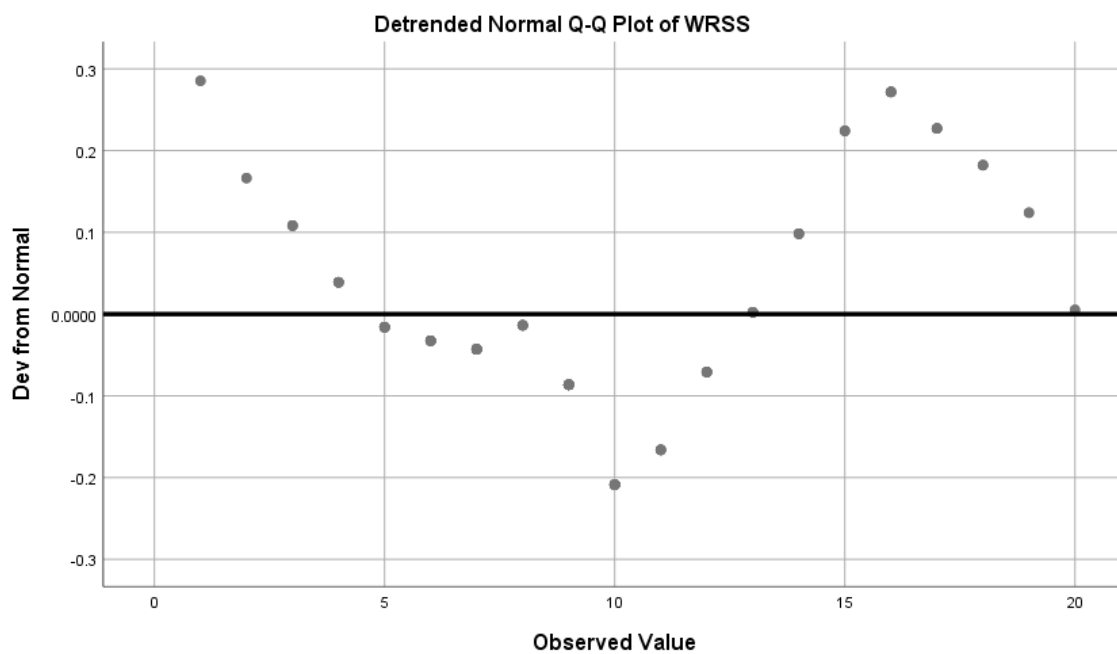
## Appendix C: Q-Q Plots of Variables

## Q-Q plot for #hrs/week remote work

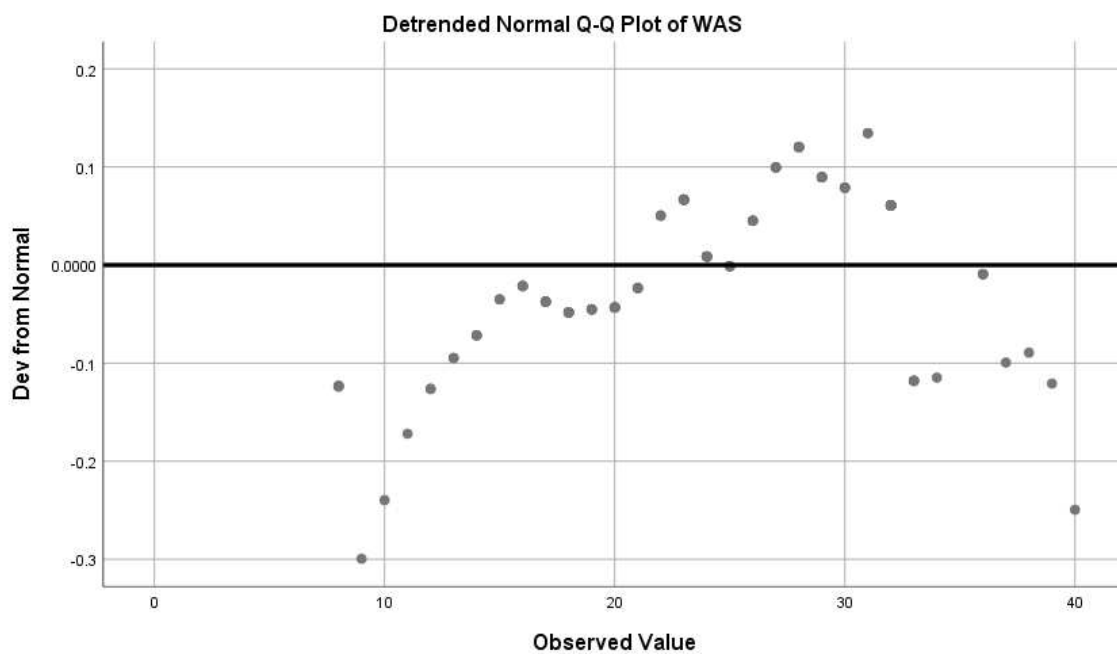
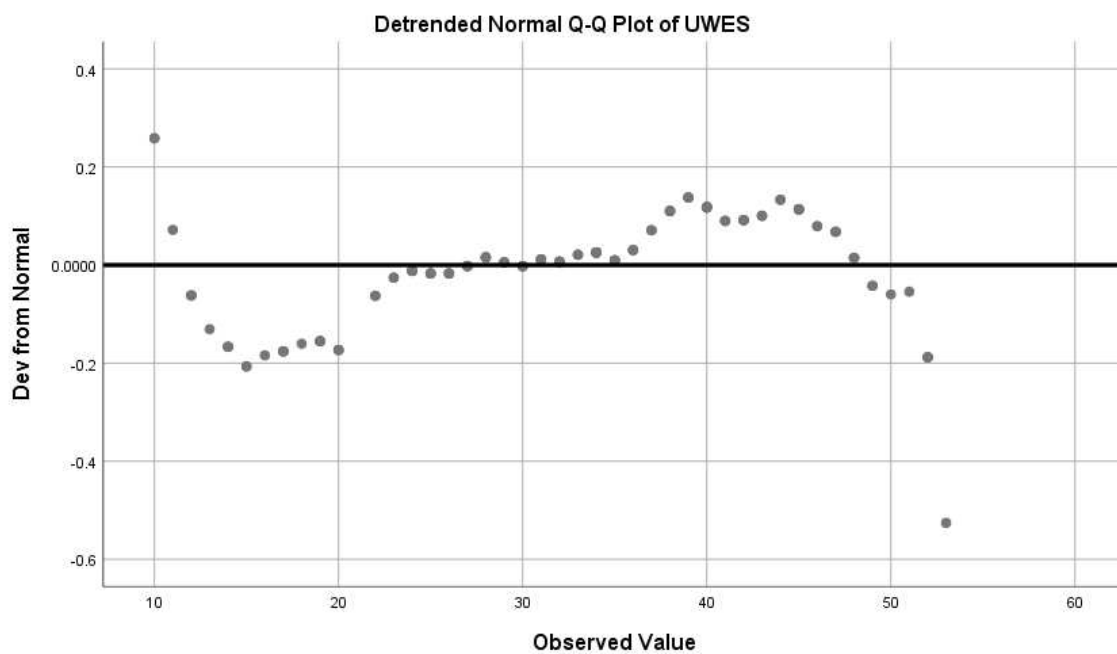


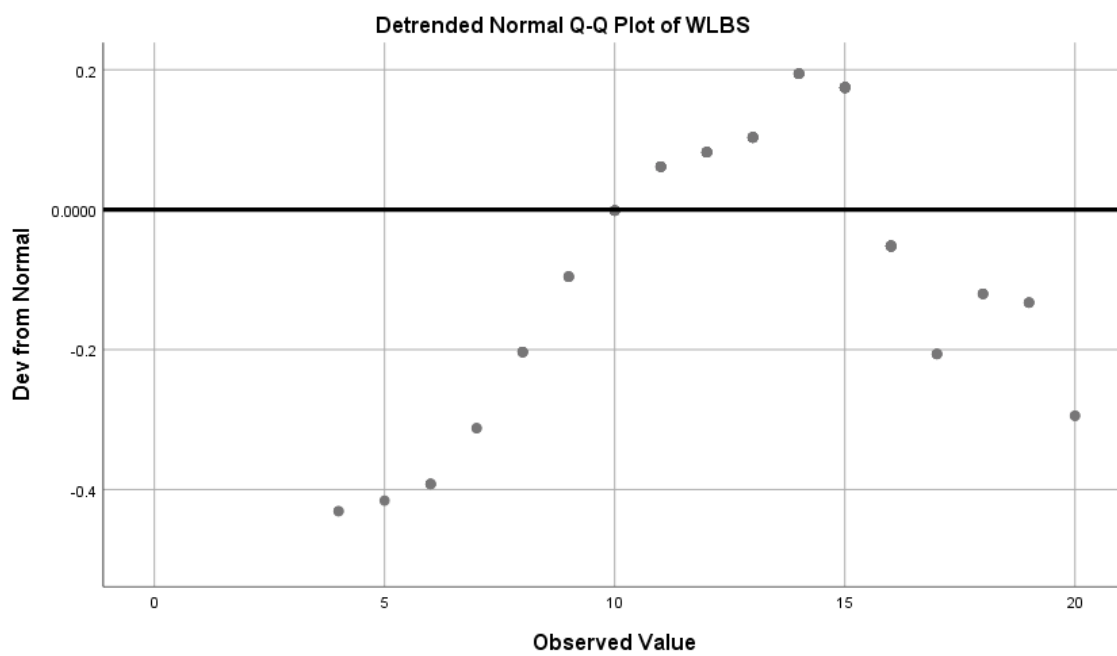
## Q-Q Plot for WLEIS-(AVG-ALL) – Ability EI



**Q-Q Plot Interaction Term (remote\_ei)****Q-Q Plot WRSS (job-related stress)**

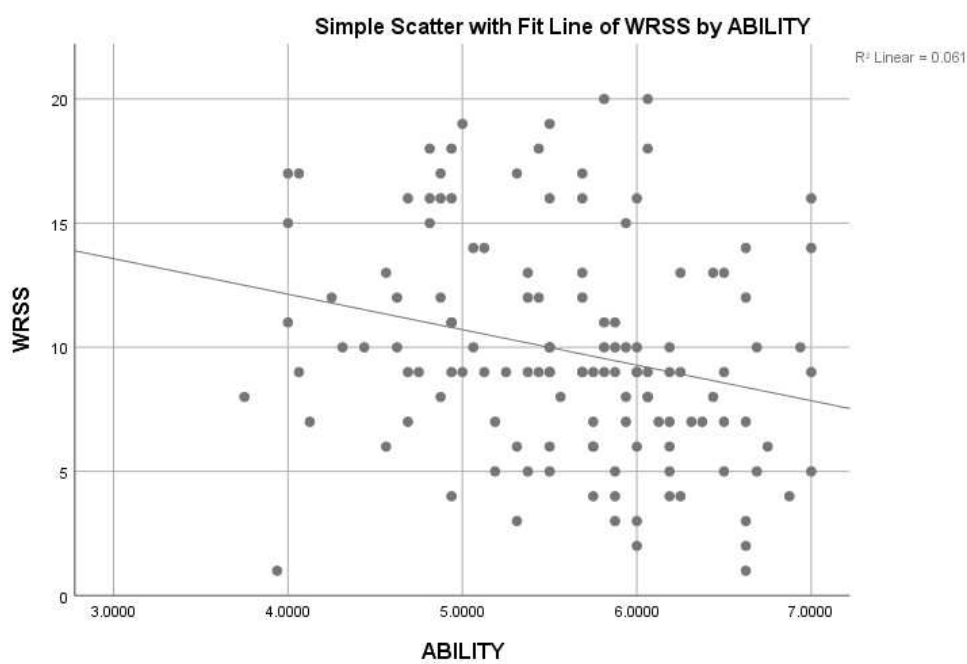
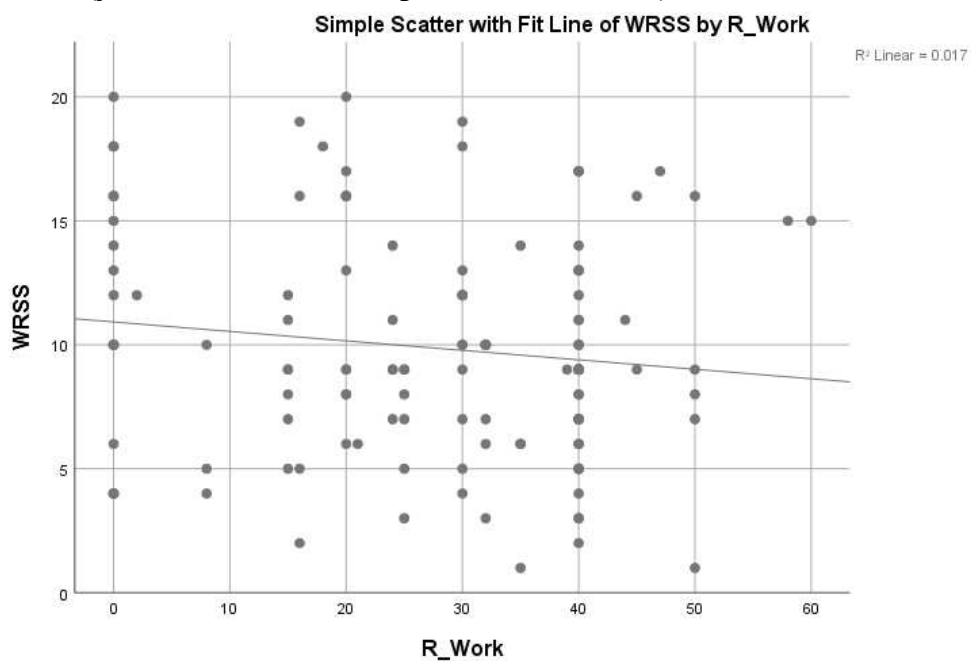


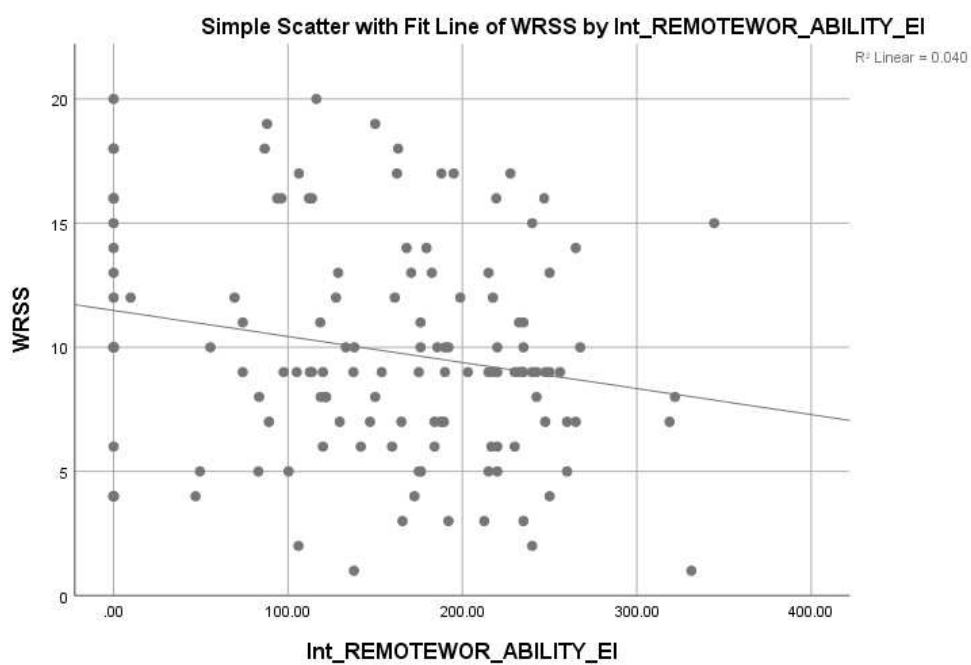
**Q-Q Plot WAS (job-related anxiety)****Q-Q Plot UWES (work engagement)**

**Q-Q Plot WLBS (work-life balance)**

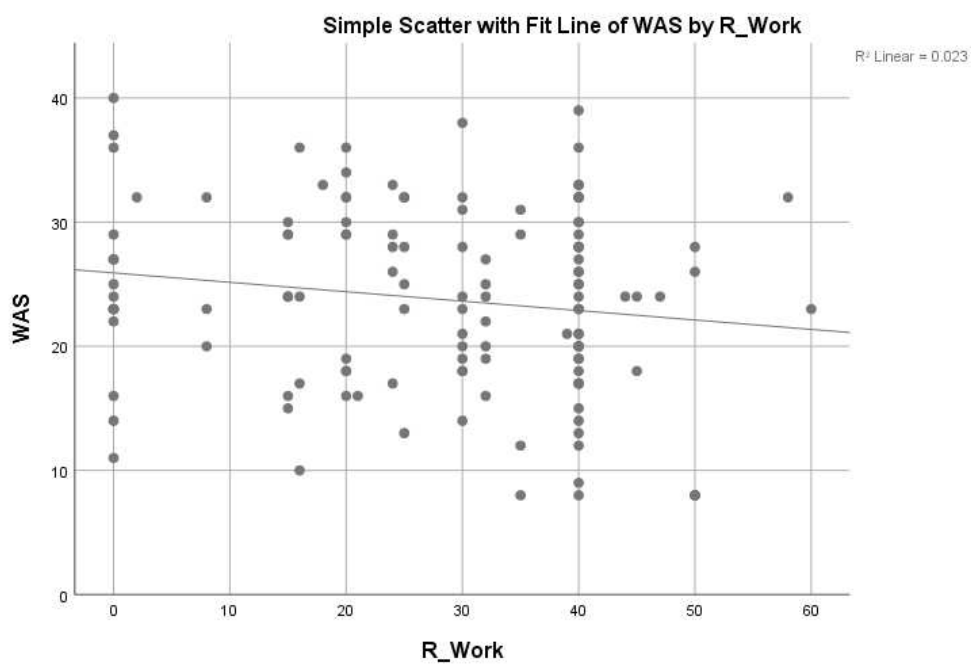
## Appendix D: Scatterplots

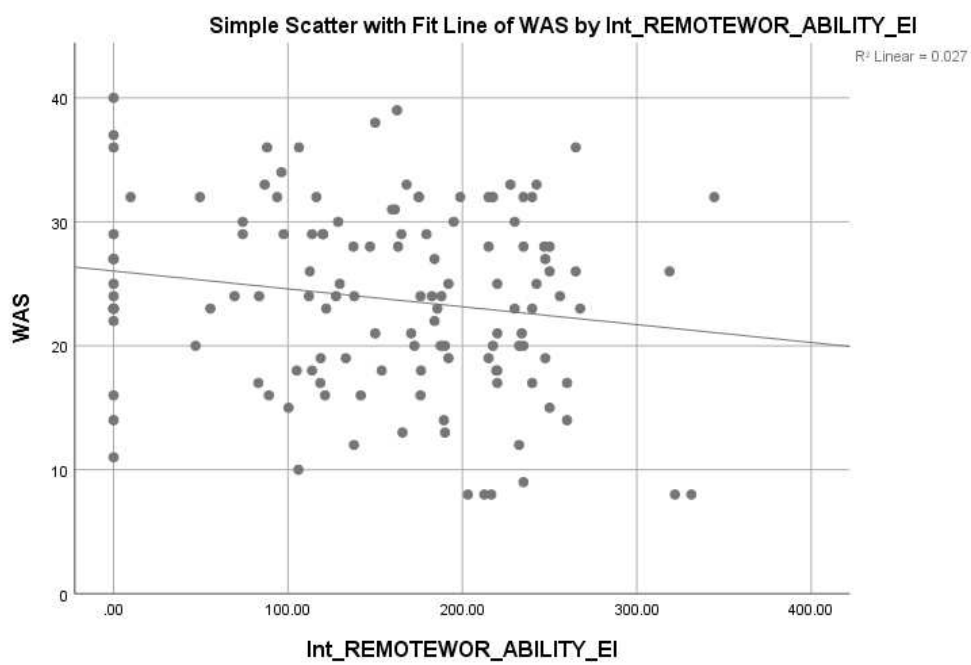
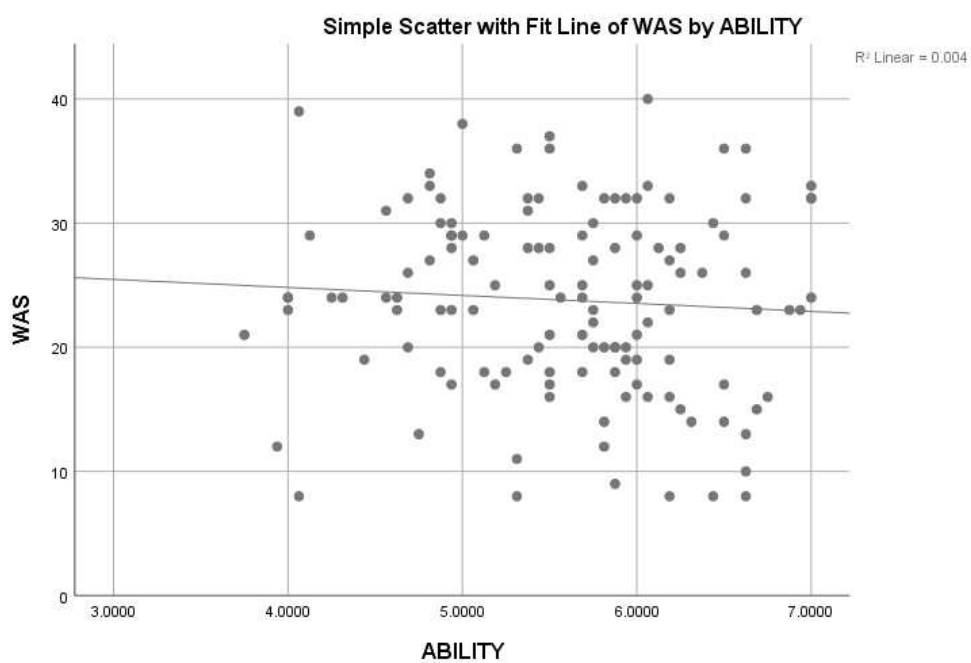
## WRSS (job-related stress and predictor variables)

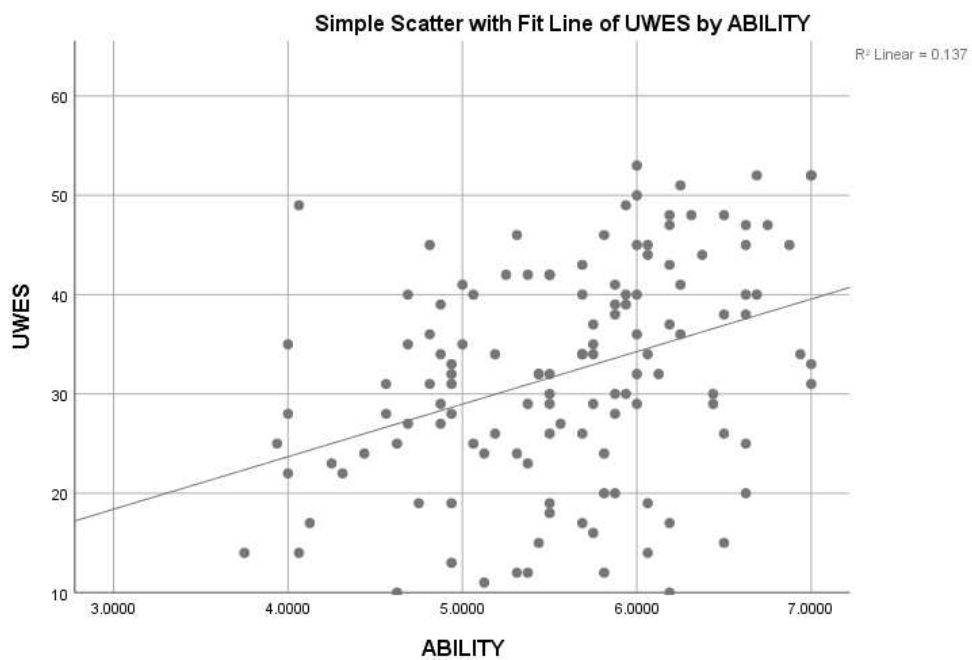
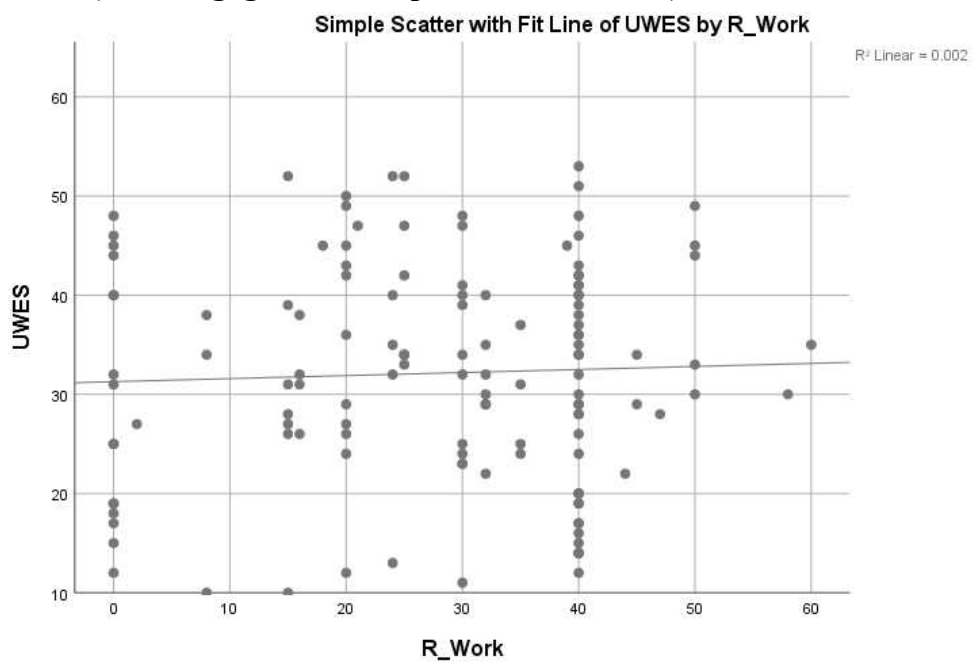


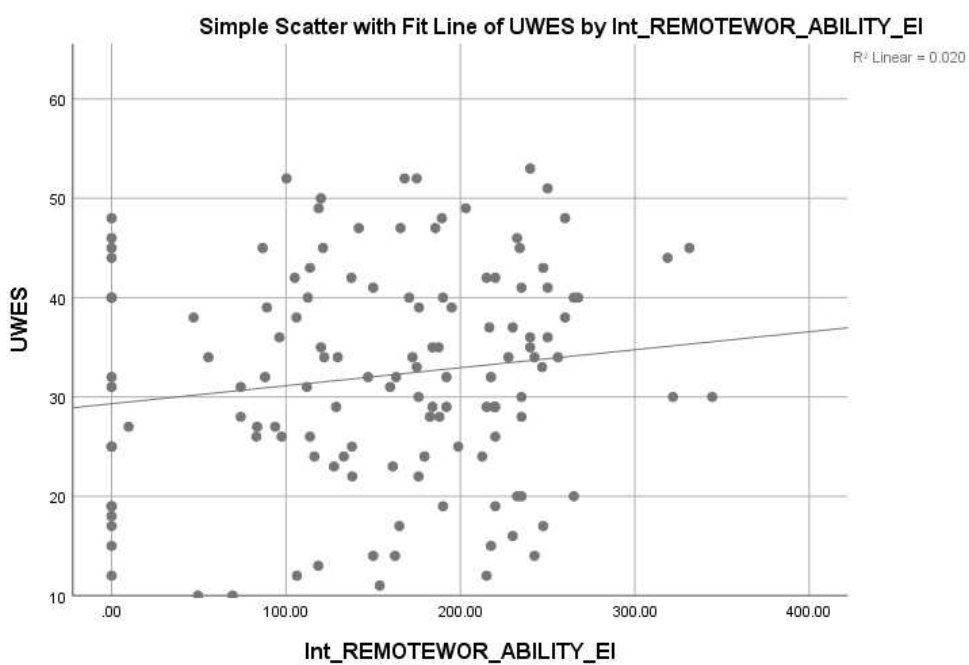


### WAS (job-related anxiety and predictor variables)

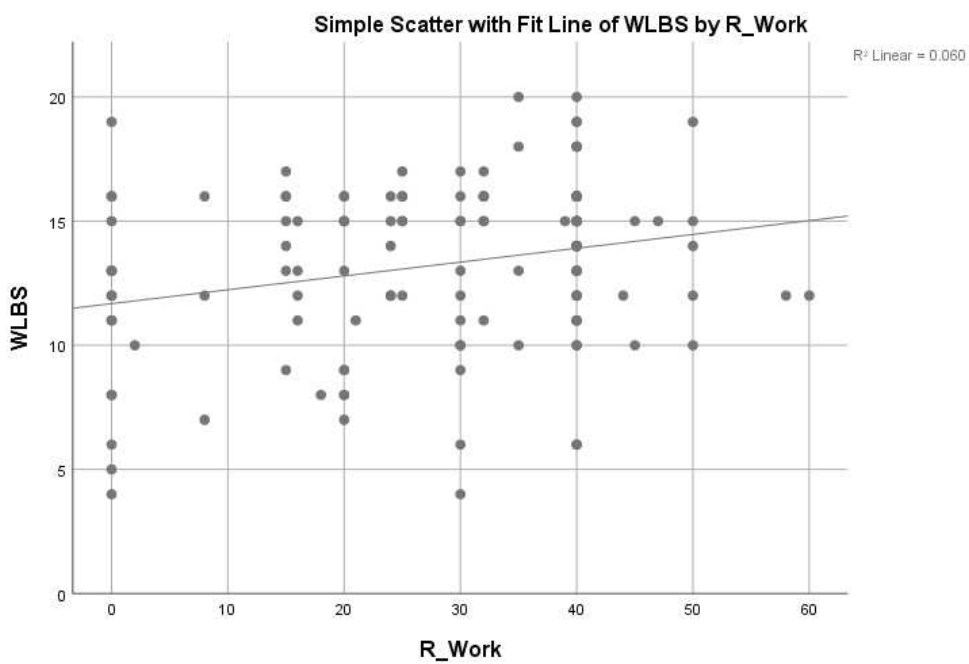


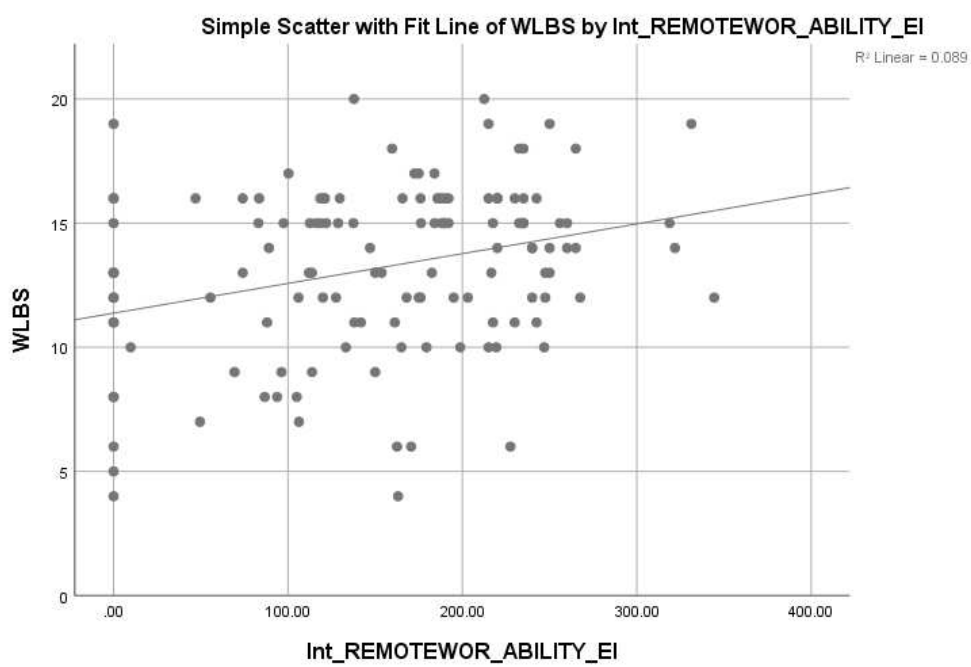
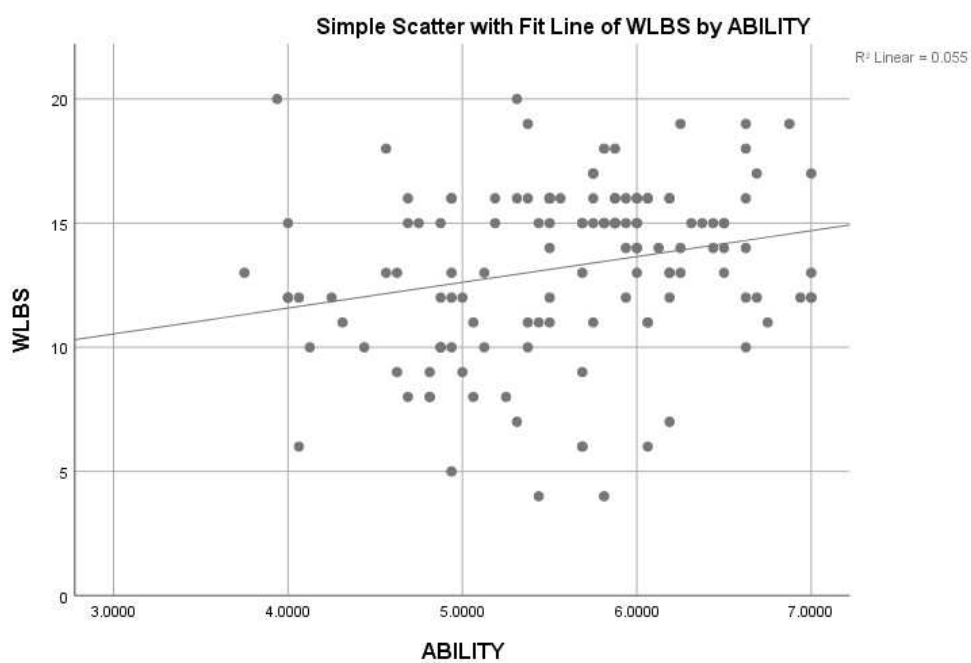


**UWES (work engagement and predictor variables)**



### WLBS (work-life balance and predictors)

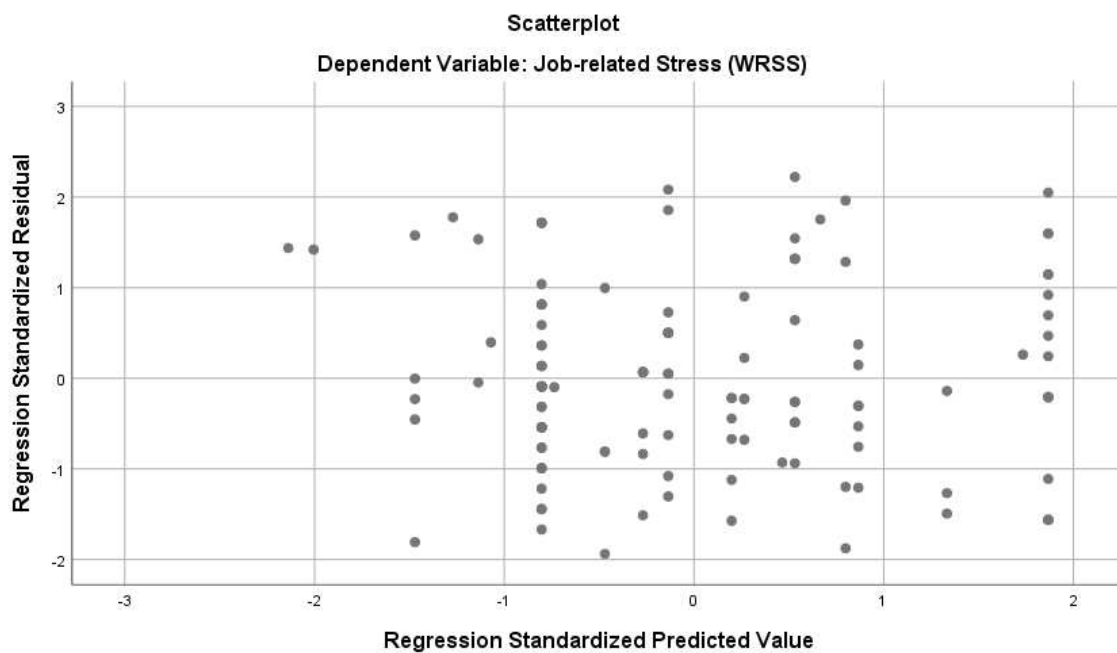




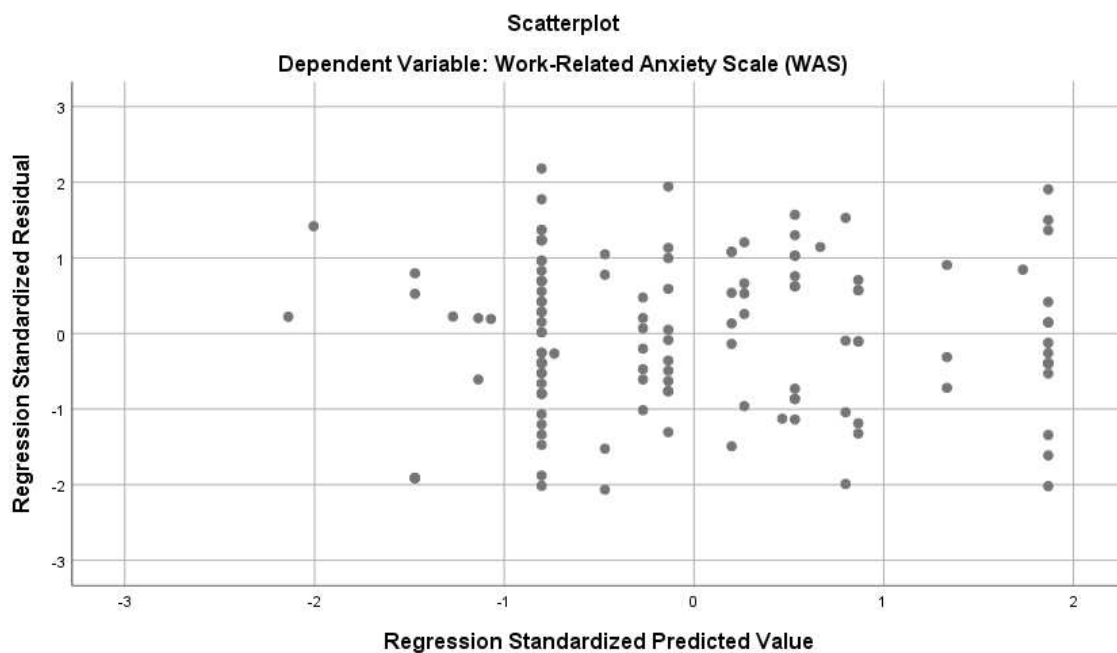


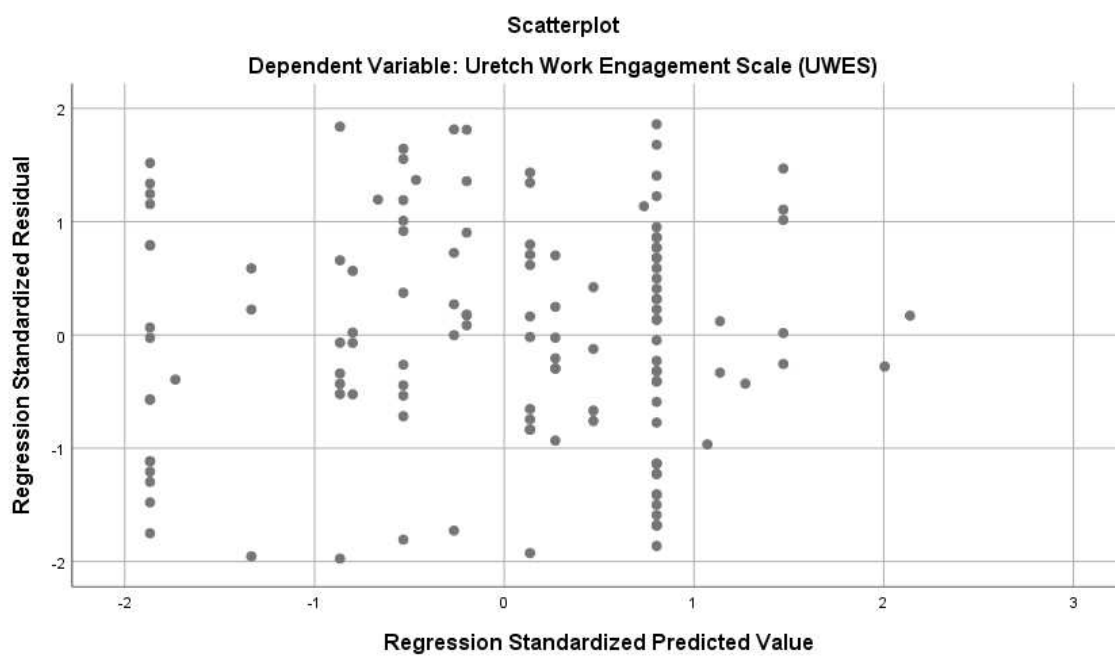
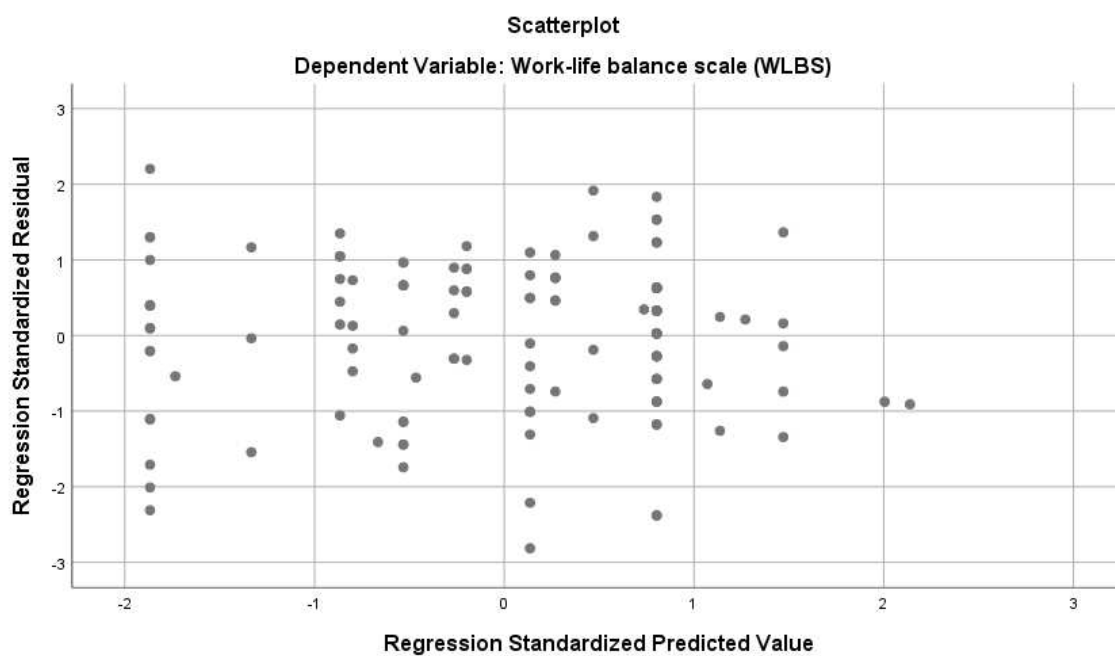
## Appendix E: Scatterplots (Residuals vs. Fitted Values)

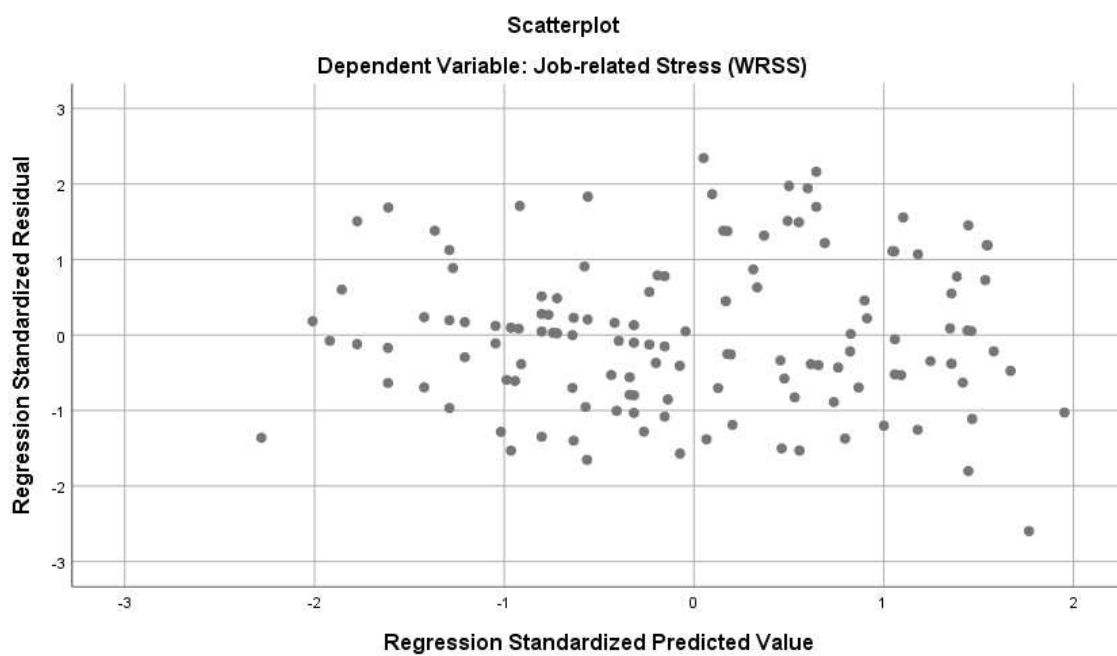
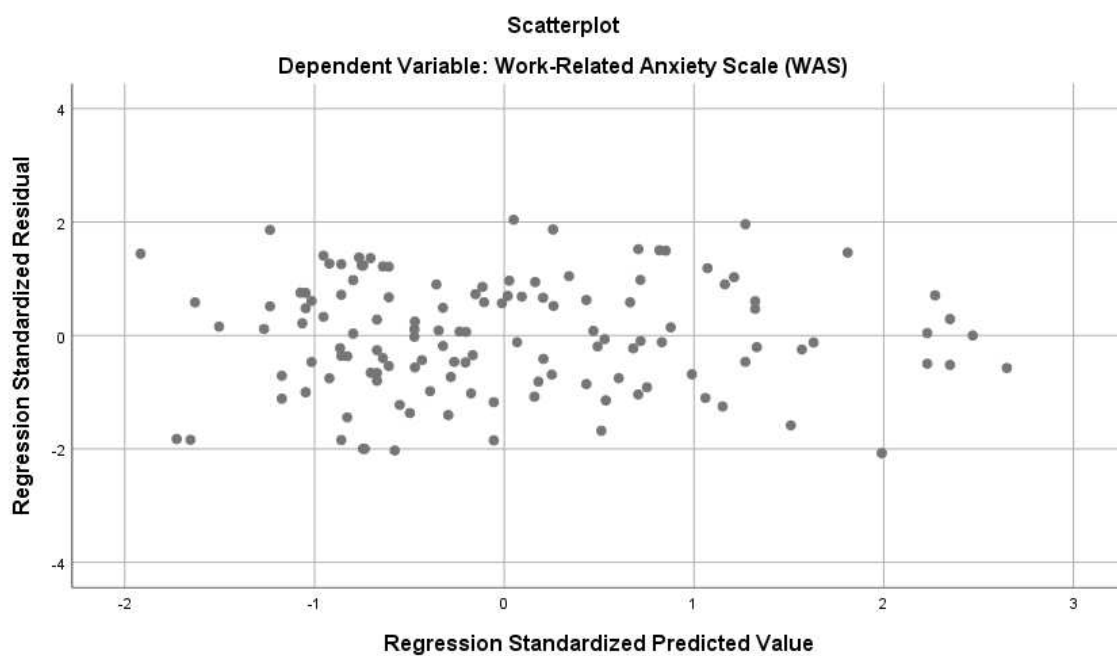
## Model 1

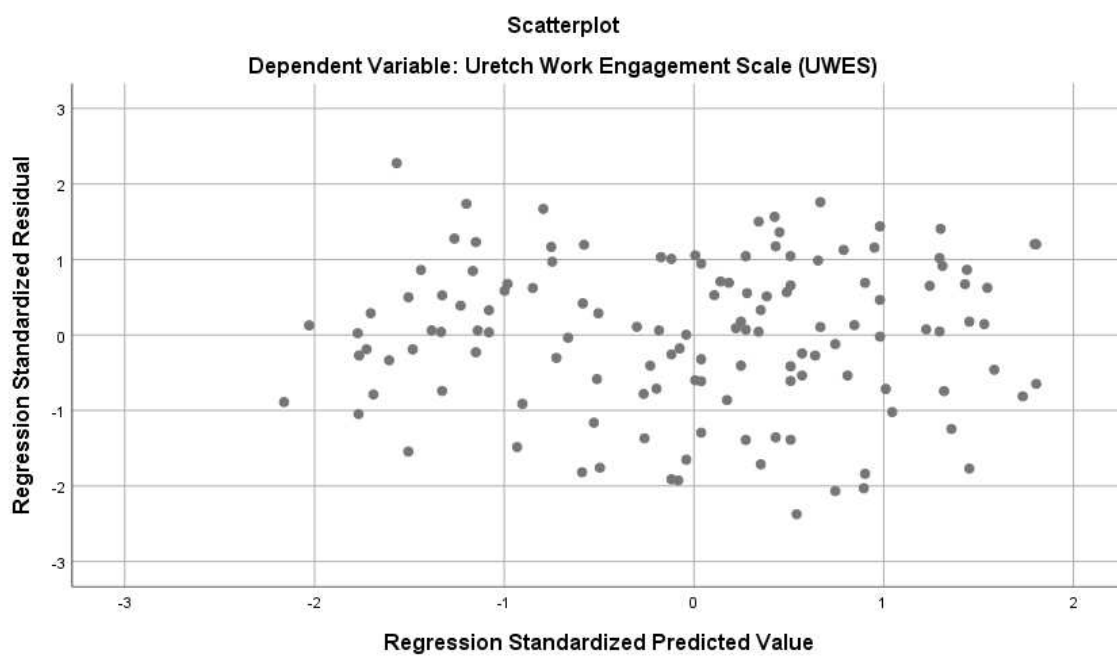
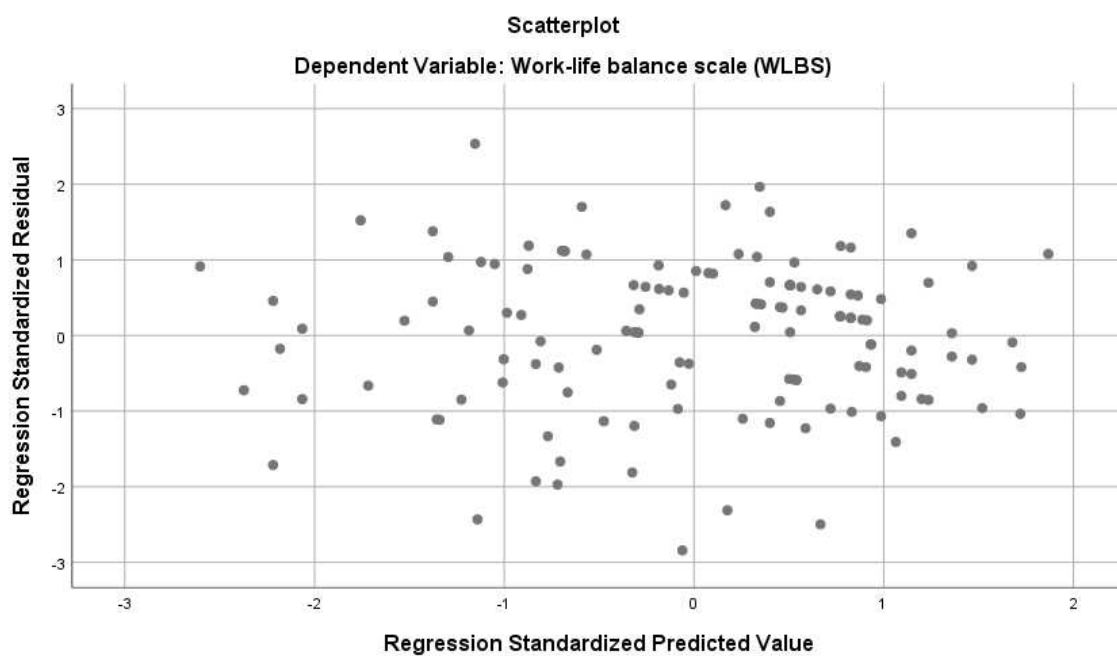


## Model 2

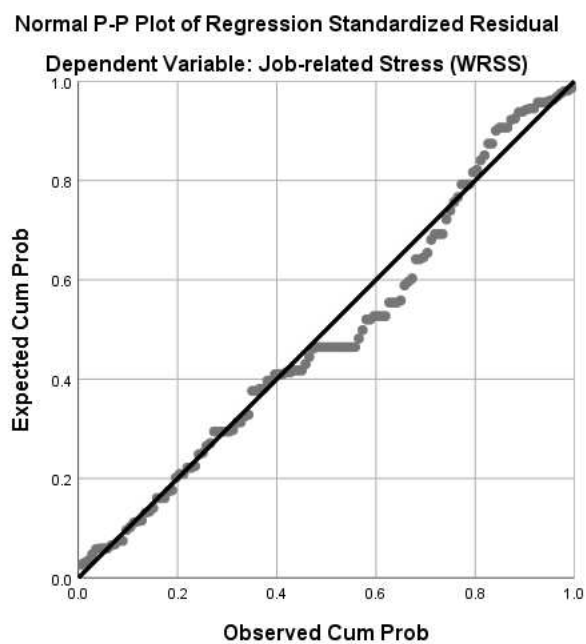
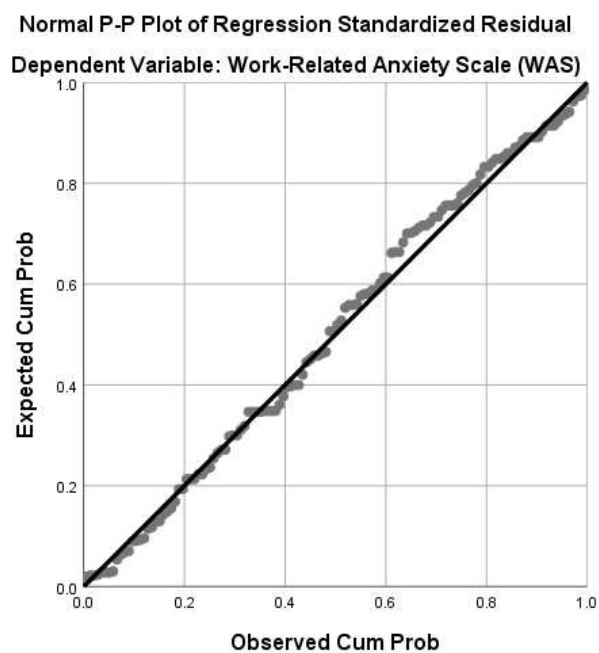


**Model 3****Model 4**

**Model 5****Model 6**

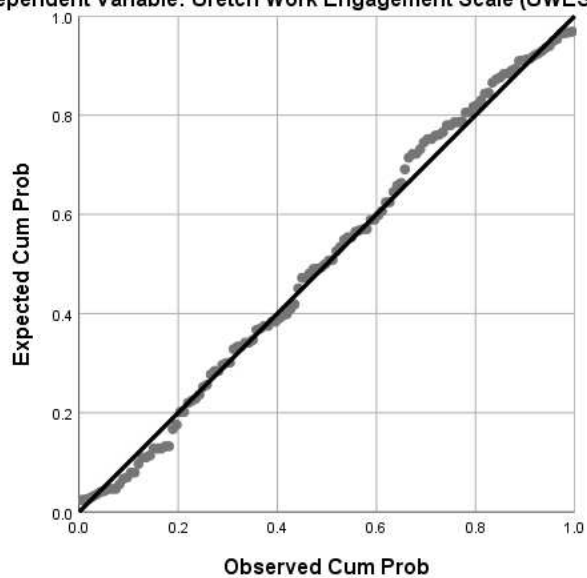
**Model 7****Model 8**

## Appendix F: P-P Plots for Normality Distribution of Residuals

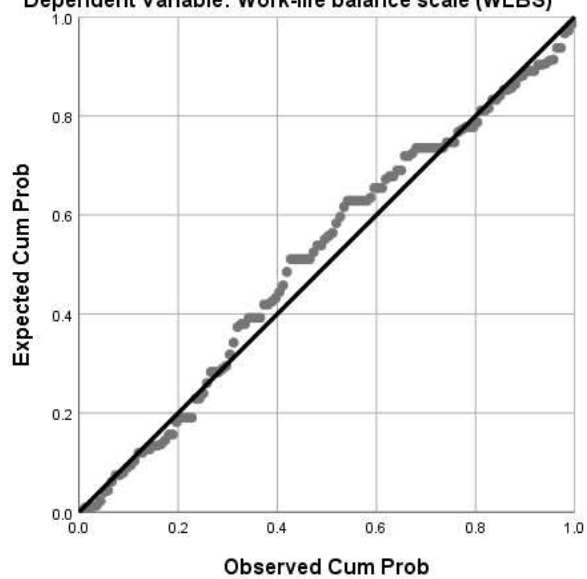
**Model 1****Model 2**

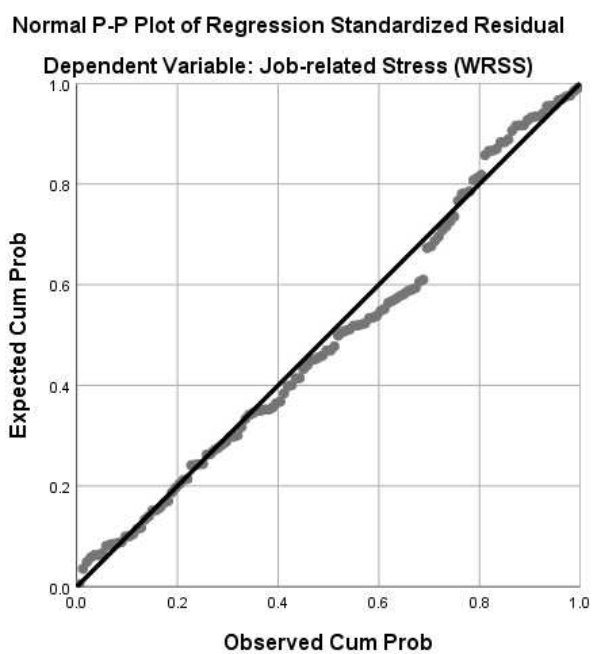
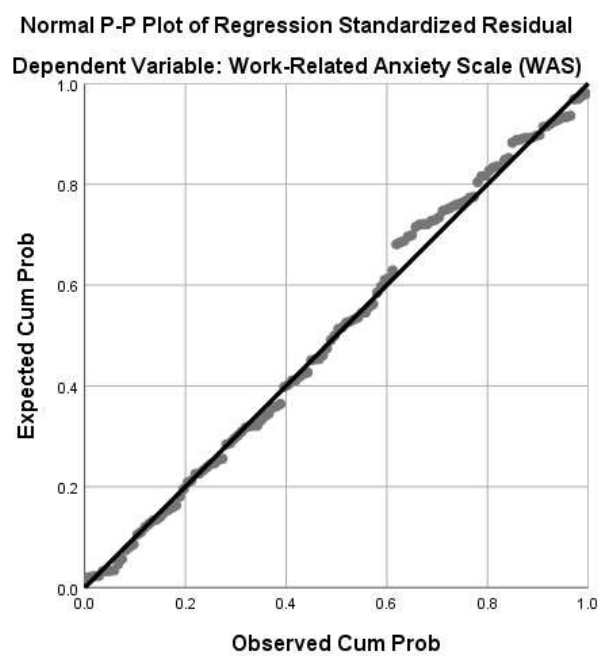
**Model 3**

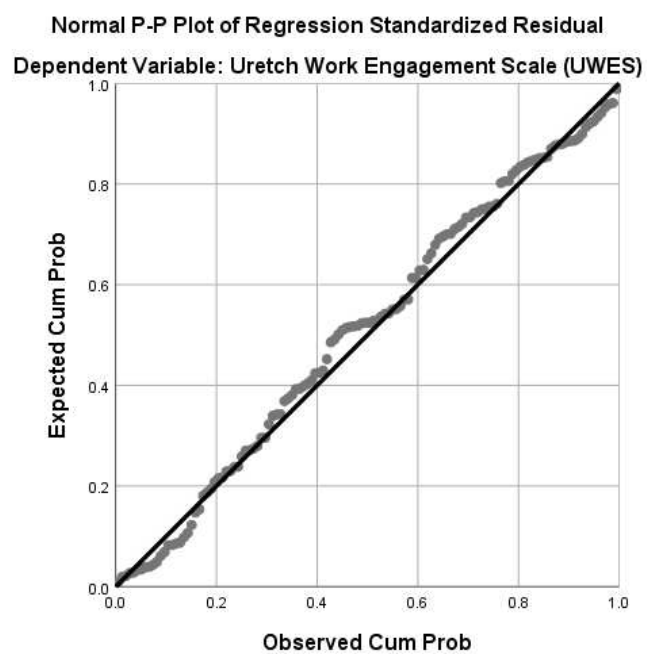
Normal P-P Plot of Regression Standardized Residual  
Dependent Variable: Uretch Work Engagement Scale (UWES)

**Model 4**

Normal P-P Plot of Regression Standardized Residual  
Dependent Variable: Work-life balance scale (WLBS)



**Model 5****Model 6**

**Model 7****Model 8**