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## Long-Term Psychological Adaptation of U.S. Human Resource Personnel in Response to the COVID-19 Pandemic

Samantha Ann Denson  
*Walden University*

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# Walden University

College of Education and Human Sciences

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Samantha Ann Denson

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## Review Committee

Dr. Erica Fowler, Committee Chairperson, Health Education and Promotion Faculty

Dr. Justin Kraft, Committee Member, Health Education and Promotion Faculty

Dr. Jason Baker, University Reviewer, Health Education and Promotion Faculty

Chief Academic Officer and Provost  
Sue Subocz, Ph.D.

Walden University  
2023

Abstract

Long-Term Psychological Adaptation of U.S. Human Resource Personnel in Response to  
the COVID-19 Pandemic

by

Samantha Ann Denson

MPH, Augusta University, 2018

BS, Augusta University, 2016

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Education and Promotion

Walden University

August 2023

## Abstract

Previous research indicated that the COVID-19 pandemic negatively impacted employee psychological outcomes in various workforce sectors. Although research showed that U.S. human resource (HR) employees experienced unique occupational challenges during the pandemic, the literature did not explore pandemic-related psychological outcomes in this population. This quantitative survey-based study included a purposive sample of 294 U.S. HR professionals to explore the pandemic's impact on their psychological well-being. The transactional model of stress and coping served as the theoretical framework to understand the independent effects of appraisal, meaning-based coping, and coping efforts on psychological well-being. A mediation analysis was used to understand the mediating role of coping efforts, and a moderated mediation analysis was used to understand the moderating role of meaning-based coping. Regression analysis indicated that primary appraisal ( $b = 0.01, p < .001$ ), emotion-focused coping ( $b = 0.99, p < .001$ ), and meaning-based coping ( $b = -0.25, p = .008$ ) predicted psychological adaptation. Emotion-focused coping mediated the relationship between psychological adaptation and primary ( $b = 0.004, 95\% \text{ CI } [0.001, 0.007]$ ) and secondary appraisal scores ( $b = 0.006, 95\% \text{ CI } [0.002, 0.010]$ ). HR employees with higher primary appraisal scores or greater use of emotion-focused coping experienced a decrease in psychological well-being. HR employees who used meaning-based coping strategies reported better psychological outcomes. This study creates positive social change through illustrating the importance of prioritizing employees' psychological well-being and underscored the relevance of using tailored health education and promotion efforts to address employees' unique needs.

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## Dedication

I dedicate this labor of love to my remarkable husband, Robert. As I reflect on this journey, I liken your presence and support to Morgan Wonderly's allegory entitled *The Trellis and the Vine*. Thank you for being my strong, sturdy trellis and for supplying the structure and direction that I needed to thrive. Because of you, I was able to flourish, shine, and freely pursue what piqued my intellectual interests and passions. I arrived at this moment in part because of your unwavering stability and strength. With my absolute adoration, I thank you for your love, encouragement, and support throughout this journey.

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At the inception of this journey is my mother. Your presence presaged the words I read in Paulo Coelho's *The Archer*: "A bow that is always armed and braced loses its strength." It was a timely reminder as I continuously learn to be. Your pilgrimage on this Earth was a miraculous one, and I hope my journey is one that venerates yours. Namaste.

Sustaining this journey was the love and support of my family. To Gabbi, Sandra, DeeDee, and Valerie, I could not have been blessed with better sisters. To my nieces and nephews (Justin, Ashante, Elijah, Michi, AJ, Jamiyah, Lauryn, Brianna, Jackson, Jada, Mikayla, and Tristan), may this body of work serve as a tribute to you all for the many ways in which you inspire me, motivate me, and bring joy and balance to my life.

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## Chapter 1: Introduction to the Study

The societal disruption created by the COVID-19 pandemic (caused by the SARS-CoV-2 virus, and hereinafter referred to as the pandemic) was unprecedented. The pandemic impacted every aspect of society, and life as everyone knew it was transformed. Schools were no longer open, nonessential businesses were shut down, borders were closed, mass quarantine and social distancing were in effect, and many employees lost their jobs. Many employees who kept their jobs were either forced to work from home (some without proper accommodations) or encountered increased pressure for productivity in the face of overwhelming work demands (Chu et al., 2020; Jin et al., 2021). The manner in which many employees navigated the pandemic was not sustainable, and those conditions created unanticipated implications for psychological well-being.

The psychological implications of the pandemic were well researched in the U.S. general population (Chee et al., 2020; Park et al., 2020; Park et al., 2022). Psychological implications were also researched in frontline and essential workers because they continued to work in person during the pandemic. Working the front lines meant working in an atypical environment with increased job demands and increased potential for exposure to COVID-19 (Wright et al., 2021). Due to the unique circumstances of their work, frontline and essential workers experienced increased levels of psychological distress due to the pandemic (Kone et al., 2022; McCoyd et al., 2022; Wright et al., 2021). Although pandemic-related psychological implications were well researched for some employee populations that were uniquely impacted by the pandemic (such as

essential and frontline workers), this topic had not been explored in human resource (HR) personnel who were also uniquely impacted.

Due to the pandemic, HR employees managed an increase in job demands by playing critical roles in transitioning employees to work from home, workforce reduction measures, and managing evolving policies and procedures to maintain compliance with pandemic-related legal mandates (Brooks & Ling, 2020; Kaur & Shah, 2021). Although this was not a comprehensive list of the additional responsibilities HR employees faced during the pandemic, it was important to note that research had not been conducted to explore the psychological implications of the pandemic on this sector of the U.S. workforce. This remained true despite HR employees' experience with pandemic-related occupational challenges and the critical role they played in the U.S. workforce.

HR employees were entrusted with personnel and workforce management. They recruited and onboarded new employees, maintained organizational structure, and oversaw employee benefits, compensation, training and development, and performance management. HR employees also managed employee relations, labor laws, legal compliance, workplace safety, employee health, and employee satisfaction (Stone et al., 2021). Based on their scope of practice, HR employees played an essential role in the U.S. workforce. As such, their well-being must be prioritized to ensure the optimization and sustainability of their operations within the organizations where they worked and the employees they served. It was imperative to understand pandemic-related implications for their psychological well-being (Carnevale & Hatak, 2020; Dennerlein et al., 2020; Morosan-Danila et al., 2021). Understanding how a disaster such as the pandemic

impacted U.S. HR employees' psychological well-being may serve to enhance the efficacy of targeted health education and promotion strategies employed within corporate wellness programs.

Chapter 1 includes a brief review of the literature related to the pandemic's impact on the psychological well-being of employees in the U.S. workforce and the gap in the existing literature. The purpose of this study is also explained with a description of the research questions and hypotheses. This is followed by a concise overview of the theoretical foundation for this study, an explanation of the study variables and methodology, and the study assumptions, scope, limitations, and delimitations. This chapter closes with an exploration of the significance of this study and potential contributions to employee wellness programs within the context of the health education and promotion field.

### **Background**

The pandemic created unprecedented challenges that changed society's way of living and working. To contain the spread of COVID-19, several life-altering public safety practices were implemented in the United States, such as mass quarantine, social distancing, and the nationwide closure of nonessential businesses and country borders (Chu et al., 2020; Jin et al., 2021). Although these public safety practices were implemented to safeguard the public's physical well-being, they also created unparalleled levels of social disruption, economic instability, and societal uncertainty that had psychological implications for the U.S. workforce (von Mohr et al., 2021).



For the U.S. workforce, the pandemic led to a reported increase in job insecurity and financial instability (Pamidimukkala & Kermanshachi, 2021; Park et al., 2020). These occupational factors resulted in an increase in stress, depression, anxiety, and suicidal ideation (Giorgi et al., 2020; Kone et al., 2022; Pamidimukkala & Kermanshachi, 2021; Sørengaard & Saksvik-Lehouillier, 2022). Moreover, specific sectors of the U.S. workforce (e.g., frontline and essential workers) experienced an increase in job demands that led to increased levels of burnout, post-traumatic stress disorder, suicide, and substance use (Bufquin et al., 2021; Pamidimukkala & Kermanshachi, 2021). Several factors mediated and moderated the degree that employees experienced decreased psychological well-being.

The pandemic's impact on employees' psychological well-being was mediated by a decrease in perceived control (Usher et al., 2020) and an increase in feelings of uncertainty (Lovejoy et al., 2021) that led to greater psychological distress (Park et al., 2020; Yeo & Li, 2022). Additionally, the use of different coping strategies introduced positive and negative implications for pandemic-related psychological well-being in employees (Chee et al., 2020; Kone et al., 2022; Park et al., 2020). Lastly, age (Bufquin et al., 2021; C.-C. Chen, 2021), sex (C.-C. Chen, 2021; Pamidimukkala & Kermanshachi, 2021; Park et al., 2020), and race (Czeisler et al., 2020) influenced the pandemic's impact on psychological well-being with certain groups (e.g., race, sex, and age groups) being more vulnerable to psychological distress.

The negative psychological implications of the pandemic were reported in the general population or specific sectors of the U.S. workforce with a focus on frontline and

essential workers (Giorgi et al., 2020; Vindegaard & Benros, 2020). However, HR personnel also experienced an increase in job insecurity, work demands, and feelings of uncertainty, but pandemic-related psychological outcomes were not explored in this population (Bagheri & Seyed Naghavi, 2022; Gonçalves et al., 2021; Walker, 2021). A variety of variables mediated or moderated relationships between the pandemic and psychological outcomes. However, those variables were not researched using a comprehensive model that explored the pandemic's impact on psychological well-being while considering the mediating role of coping efforts or the moderating role of meaning-based coping. The gaps demonstrated the need to focus on HR personnel in the United States and called for a single model that allowed for the exploration of all the variables presented by the literature as pertinent to understanding postpandemic psychological outcomes.

It was important to understand the psychological implications of the pandemic because disasters of this scale may have different effects within subgroups of the workforce. These effects may have negatively impacted employee health and well-being (Mazdiyasni & AghaKouchak, 2020). Insights were provided into how the pandemic impacted the psychological well-being of social workers, health care workers, and those in the hospitality industry differently based on the role they played during the pandemic. Insights also highlighted the unique needs of each sector and guidance for meeting each subgroup's needs (Bufquin et al., 2021; C.-C. Chen, 2021; McCoyd et al., 2022; Wright et al., 2021). It was equally important to understand the ways in which the pandemic

impacted the psychological well-being of U.S. HR personnel and their unique needs given their distinctive role during the pandemic.

### **Problem Statement**

The pandemic presented challenges for the U.S. workforce that led to a variety of challenges for the psychological well-being of employees (Choi et al., 2020; Usher et al., 2020). The impact was attributed to the unique challenges that employees experienced during the pandemic, including social distancing mandates, travel restrictions, work-from-home orders, and an increase in job demands and job insecurity (Giorgi et al., 2020; Jin et al., 2021; Yarrington et al., 2021). U.S. employees were challenged to adapt to a new normal in their personal and professional lives (Brooks & Ling, 2020; Bufquin et al., 2021; Giorgi et al., 2020). In addition to HR professionals navigating these changes, they also supported additional pandemic-related burdens.

Some of the additional pandemic-related challenges experienced by HR personnel included mobilizing an entire workforce to a virtual environment, establishing the appropriate employee support programs, and implementing and reevaluating policies and procedures that were compliant with legal mandates that frequently changed as the pandemic evolved (Bagheri & Seyed Naghavi, 2022; Gonçalves et al., 2021). Additionally, HR employees executed workforce reductions, oversaw job restructuring processes, and implemented employee engagement and wellness initiatives to improve morale (Brooks & Ling, 2020; Carnevale & Hatak, 2020; Kaur & Shah, 2021; Maddox-Daines, 2021). Although this list of additional pandemic-related duties burdened by U.S. HR employees was not comprehensive, it highlighted the many challenges they

experienced that were unique to this sector of the workforce (Bagheri & Seyed Naghavi, 2022; Gonçalves et al., 2021). However, the impact of the pandemic on U.S. HR employees' psychological well-being was unknown.

HR professionals played a vital role in the U.S. workforce, including the management of benefits, compensation, training and development, staffing, recruiting, strategic planning, compliance, workplace safety, employee and labor relations, and employee wellness (Stone et al., 2021). With such a critical workplace responsibility to both the company in which they were employed and to the employees they served, it was imperative to understand the pandemic's implications for the psychological well-being of U.S. HR employees. By identifying the unique needs of HR employees who navigated the pandemic, the current study could provide them with necessary resources for their well-being so they can continue to care for the U.S. workforce.

### **Purpose of the Study**

Given the unprecedented nature of the pandemic and the unique role played by HR professionals in navigating the pandemic, the purpose of this quantitative study was to investigate the pandemic's impact on the psychological well-being of a sample of U.S. HR professionals. To accomplish this, I used the transactional model of stress and coping to examine HR professionals' stress response to the pandemic (appraisal) and their resulting psychological well-being (adaptation). I examined the mediating role of coping efforts (emotion-focused and problem-focused coping) along with the moderating role of meaning-based coping. I also explored relationships between psychological adaptation and demographics, including age, sex, and race.

Pandemic appraisal served as the independent variable to understand the degree HR professionals found the pandemic to be stressful based on primary and secondary appraisal. Adaptation served as the dependent variable to discover outcomes related to U.S. HR employees' psychological well-being. I explored coping efforts as a potential mediator between pandemic appraisal and psychological adaptation by determining how a change in behavior or change in thoughts and beliefs influenced psychological outcomes. I examined meaning-based coping as a potential moderator of coping efforts and psychological adaptation by exploring the role of benefit finding and religion or spirituality in psychological outcomes. I explored these variables in a variety of ways in the study research questions and hypotheses.

### **Research Questions and Hypotheses**

I developed the following research questions and hypotheses to aid in the examination of pandemic-related psychological outcomes in U.S. HR personnel. I also considered mediating and moderating variables that were deemed relevant in the literature in a manner that was consistent with constructs from the transactional model of stress and coping:

RQ1: Do pandemic appraisal, coping efforts, and meaning-based coping have independent effects on U.S. HR employees' adaptation?

*H1<sub>0</sub>*: Pandemic appraisal, coping efforts, and meaning-based coping do not have independent effects on adaptation.

*H1<sub>a</sub>*: Pandemic appraisal has an independent effect on adaptation.

*H1<sub>b</sub>*: Coping efforts have an independent effect on adaptation.

*H1<sub>c</sub>*: Meaning-based coping has an independent effect on adaptation.

RQ2: Do coping efforts mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation?

*H2<sub>0</sub>*: Coping efforts do not mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation.

*H2<sub>a</sub>*: Emotion-focused coping efforts mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation.

*H2<sub>b</sub>*: Problem-focused coping efforts mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation.

RQ3: Does meaning-based coping moderate the impact of coping efforts on U.S. HR employees' adaptation?

*H3<sub>0</sub>*: Meaning-based coping does not moderate the relationship between coping efforts and U.S. HR employees' adaptation.

*H3*: Meaning-based coping does moderate the relationship between coping efforts and U.S. HR employees' adaptation.

The research questions and hypotheses included variables that served as key constructs of the transactional model of stress and coping. The transactional model served as the theoretical framework for this study.

### **Theoretical Framework**

The transactional model was developed by Lazarus and Folkman (1984) to explore the role of stress and coping in influencing individual adaptation based on outcomes related to psychological and physical well-being. In doing so, the transactional

model explored how individuals' perceptions (primary and secondary appraisal) determined their level of perceived stress and health outcomes (adaptation) (Wethington et al., 2015). The model also considered how changing behaviors (problem-focused coping) and changing beliefs (emotion-focused coping) mediated the relationship between appraisal and adaptation. Lastly, the model demonstrated the moderating role of religiosity, spirituality, and social support (meaning-based coping) on the relationship between coping efforts and adaptation. At its core, the transactional model of stress and coping provided a framework for understanding the role that perceptions of stress and coping strategies played in influencing outcomes at the individual level.

The transactional model of stress and coping hypothesizes that problem-focused coping is suitable for changeable stressful events and emotion-focused coping is suitable when used in conjunction with problem-focused coping or when used in unchangeable events (Lazarus & Folkman, 1984; Wethington et al., 2015). These hypotheses directly applied to individual perceptions and sense of control over pandemic-related experiences. The transactional model of stress and coping allowed for the examination of the relationship between pandemic appraisal, coping efforts, meaning-based coping, and adaptation using a comprehensive approach that was missing in the existing literature. The logic and implications of this theory's hypotheses, along with how the transactional model was applied in the current study, are discussed in greater detail in Chapter 2.

### **Nature of the Study**

This study was a nonexperimental quantitative study that included survey data to explore pandemic-related psychological outcomes using a purposive sample of U.S. HR

personnel. This design allowed for a large volume of data to be collected for potential generalizability to the U.S. population of HR personnel. Additionally, this design was similar to the approach used in recent studies that explored pandemic-related psychological outcomes to varying degrees in other employee populations (Ben-Ezra & Hamama-Raz, 2021; Jean-Baptiste et al., 2020; Pereira et al., 2020). The variables of interest in the current study were derived from the transactional model of stress and coping and encompassed pandemic appraisal (as measured with the Visual Analog Scale [VAS] for psychosocial stress), coping efforts and meaning-based coping (as measured with the Brief Coping Orientation to Problem Experienced [Brief COPE] Inventory), and psychological outcomes (as measured with the Depression, Anxiety, Insomnia, and Stress-Associated Symptoms [DAISS] scale).

The target population included those who worked as HR personnel in the United States from March 2020 to the period of data collection (April 2023). Participants were recruited using the Walden University Participant Pool, SurveyMonkey Audience, and the social networking sites LinkedIn and Facebook. Data were collected via an online survey. Independent relationships were examined between study variables using ordinary least squares regression. I used mediation analysis to determine whether coping efforts mediated the relationship between pandemic appraisal and adaptation. A moderated mediation analysis was used to determine whether meaning-based coping moderated the relationship between coping efforts and adaptation. Additional details regarding the methodology for this study are included in Chapter 3. The methodology highlighted the relevance of several variables in this study that required further explanation.



## Definitions

This section includes definitions for study variables and relevant terms to minimize ambiguity. Although these variables are operationally defined and explored in greater detail in Chapter 3, a brief definition is provided in this section:

*Adaptation:* Adaptation was defined as the outcome of coping that could take the form of emotional well-being, the ability to function, or individual health behaviors (Wethington et al., 2015). In the current study, adaptation focused on factors of emotional well-being. Adaptation was referred to as psychological outcomes, psychological adaptation, and psychological well-being interchangeably. Doing so was consistent with interpretations of adaptation within the transactional model of stress and coping (see Wethington et al., 2015).

*Appraisal:* Appraisal was considered a determination of stress based on primary appraisal and secondary appraisal. Primary appraisal was defined as the degree to which an event was considered threatening, while secondary appraisal was the degree to which a stressor could be controlled or managed with available resources (Wethington et al., 2015). Within the context of the current study, primary and secondary appraisal of the pandemic were referred to as pandemic appraisal, given that the pandemic was the stressor of interest.

*Coping efforts:* Coping efforts were defined as the strategies an individual engaged in to manage their appraisal of stress. Coping efforts included behaviors intended to alter one's thoughts and feelings about the stressor (emotion-focused coping) or change the stressful situation (problem-focused coping; Wethington et al., 2015).

*Ethnicity:* Consistent with the operational definition used by Czeisler et al. (2020), ethnicity was defined in identifying terms of Hispanic or non-Hispanic.

*HR personnel:* According to Stone et al. (2021), the HR management field consisted of HR personnel who managed people and the relationship between employer and employee within a variety of roles. Those roles included benefits, compensation, training and development, staffing, recruiting, strategic planning, compliance, workplace safety, employee and labor relations, and employee wellness (Stone et al., 2021). In the current study, “HR personnel” was used interchangeably with “HR professional” and “HR employee.”

*Meaning-based coping:* Meaning-based coping was defined as behaviors that produced positive emotions to sustain an individual’s use of a preferred coping technique. Examples included optimism, positive reappraisal, revised goals, or leveraging religious or spiritual beliefs (Wethington et al., 2015). In the current study, coping strategies encompassed problem-focused, emotion-focused, and meaning-based coping.

*Mediate:* When used in reference to variables, mediation was defined as a type of covariate used to explore the relationship between two other variables. A mediating variable possessed the potential to account for some of the effect between two existing variables (Fein et al., 2022). Mediating variables are also referred to statistically as indirect effects.

*Moderate:* When used in reference to variables, moderation was also defined as a type of covariate used to explore the relationship between two other variables. However, a moderating variable possessed the potential to change the strength and direction of the

effect between two existing variables (Fein et al., 2022). Moderating effects are also referred to as interactions.

*Race*: Consistent with the approach used by Czeisler et al. (2020), race included the following options: White, Black, Asian, and other or multiple races.

### **Assumptions**

I based this study on several assumptions about the target population and the study design. First, I assumed that the self-reported data obtained from the study participants would be accurate regarding their eligibility to participate in the study due to the circumstances of their employment as a U.S. HR professional for any duration from March 2020 to the period of data collection (April 2023). I also assumed that the self-reported data would be accurate and reported to the best of the participant's ability regarding their recollection of pandemic-related experiences. Participant honesty was assumed, given the sensitive nature of some of the research questions, specifically questions about substance use and symptoms related to stress, anxiety, and depression. Lastly, if the minimum sample size needed for a small effect was obtained, then statistical validity of the study results was assumed.

### **Scope and Delimitations**

In this current study, I aimed to explore pandemic-related psychological outcomes in a sample of U.S. HR professionals. U.S. HR personnel were selected as the target population given their underrepresentation in the literature regarding pandemic-related psychological outcomes, notwithstanding the existing evidence of their increased burden due to the pandemic. I limited this study to English-speaking individuals at least 18 years

of age or older who resided in the United States at the time of data collection and served as an HR professional for any duration from March 2020 to the period of data collection (April 2023). Data regarding stress and psychological well-being were self-reported and not based on formal psychological evaluations. Consequently, results cannot be generalized to formal psychological presentations of pandemic-related psychological distress. The generalization was intended to occur within the context of the pandemic and not applied to other sectors of the U.S. workforce or in reference to other disasters beyond the COVID-19 pandemic.

### **Limitations**

Several limitations were anticipated in this study. First, this study was based on a cross-sectional design that could only predict relationships between variables, not determine cause and effect. Data that were collected to determine psychological adaptation were not based on formal psychological evaluations. Additionally, recall bias was likely if participants did not accurately recall previous circumstances regarding their pandemic-related experiences. The flashbulb memory concept addressed this limitation because the likelihood of recall bias was reduced given that participants were asked to recall information about a life-altering event. Events of this nature, such as the pandemic, tended to be recalled more vividly and rendered a more reliable response (Moreno-Serra et al., 2022). In addition to recall bias, limitations also existed with sampling and intervariable relationships.

Participants in this study were self-selected using purposive sampling and recruitment methods in a virtual environment. Purposive sampling and virtual recruitment

introduced nonresponse bias because those who used social media and those who were motivated to participate in this study may have possessed inherent differences from those who did not use social media or chose not to participate in this study. Additionally, the use of SurveyMonkey Audience to recruit participants may have introduced undue influence on participant responses because this method of recruitment was incentivized by Survey Monkey. To address this limitation, recruitment efforts were focused on obtaining the minimum sample size needed for establishing a small effect to safeguard generalizability.

The absence of independent effects between the variables in the first research question was an anticipated limitation for mediation analysis. However, it was possible for variables to have an indirect-only mediation in which a mediated effect existed in the absence of direct effects (see Gunzler et al., 2013; Zhao et al., 2010). Consequently, the mediation analysis and the moderated mediation analysis for the remaining research questions were completed even in the absence of independent effects.

Lastly, I did not investigate COVID-19 vaccine approval because it related to the psychological adaptation of U.S. HR professionals. Vaccine approval served as a factor for determining whether it was safe for the workforce to return to the office or continue to work from home during the pandemic (El-Mohandes et al., 2021; Khubchandani et al., 2021). Vaccine approval may have played a role in HR employees' decision making for datatransitioning their workforce from home back to the office. Contrastingly, vaccine uptake was more relevant in determining the safety of returning to the office (Khubchandani et al., 2021). However, access to data regarding vaccine uptake within the

employee population may not have been available to inform that decision. Consequently, although I did not investigate vaccine approval specifically, HR professionals were given the opportunity to reflect on their pandemic-related experiences and report how this impacted their psychological outcomes. Although this study possessed limitations, reasonable measures were taken to address these limitations to ensure that this study contributed to the existing literature that explored pandemic-related psychological outcomes.

### **Significance**

Similar to other sectors of the U.S. workforce, HR personnel were uniquely impacted by the pandemic and experienced increased job demands as a result (Kaur & Shah, 2021; Maddox-Daines, 2021). The current study filled a gap in the literature by examining the psychological adaptation of U.S. HR personnel in response to the pandemic. The current study also contributed to the field of health education and promotion by furthering the application of theory, specifically the transactional model of stress and coping, to perspectives of pandemic-related health behaviors. Implications were explored for how the transactional model of stress and coping could be used to develop health education and promotion strategies that leveraged coping efforts to sustain the psychological well-being of HR personnel in the U.S. workforce.

The current study may contribute to positive social change in several ways. First, this study highlighted the importance of employee psychological well-being, a focus that was traditionally deprioritized within corporate wellness programs (Brooks & Ling, 2020). Second, the implications of this study demonstrated the relevance of an evidence-

based approach grounded in theory when developing and implementing health education and promotion initiatives that were intended to address the unique needs of an employee population. A tailored approach for addressing employee needs should replace the one-size-fits-all approach that prevailed in corporate wellness programs (see Daniels et al., 2022). The current study provided evidence that subgroups of employee populations have unique needs that are best addressed with corporate wellness programs that strive to explore the unique needs of their employee populations and implement evidence-based strategies to address those needs.

### **Summary**

Pandemic-related psychological outcomes were well researched in frontline and essential workers due to the degree to which the pandemic altered their ways of working. However, the literature did not provide evidence that pandemic-related psychological outcomes were researched in U.S. HR personnel who also experienced unique occupational challenges during the pandemic. Additionally, the literature did not present an exploration of phenomena using a comprehensive model that took coping strategies and individual factors into consideration. The current study served to fill the gap in the literature by including quantitative survey-based methods to explore the pandemic's impact on the psychological well-being of U.S. HR personnel, and including the transactional model of stress and coping to understand the role of stress appraisal and coping strategies in psychological outcomes. Chapter 2 provides a more thorough review of the literature regarding pandemic-related experiences, an explanation of the

transactional model of stress and coping, and a description of how the transactional model was applied to the current study.



## Chapter 2: Literature Review

I sought to understand the role of appraisal and coping strategies in the psychological adaptation of U.S. HR personnel in response to the pandemic. I quantitatively examined primary appraisal, secondary appraisal, and coping strategies as they related to the psychological well-being of U.S. HR personnel in response to the pandemic. The literature reviewed in this chapter provided evidence for pandemic-related psychological implications for employees that required further exploration. This chapter includes a review of major themes from the existing literature on pandemic-related psychological outcomes, limitations in the current literature, the theoretical foundation used to explore the identified gap, and the literature search strategy that guided this review.

### **Literature Search Strategy**

The electronic review of the literature began with a general search in Walden University's online library using the search terms *pandemic* and *psychological well-being*. This determined the key terms that were used in various combinations, which included *COVID-19, pandemic, coronavirus, epidemic, COVID, psychological well-being, psychological wellness, psychological health, emotional well-being, emotional wellness, emotional health, mental well-being, mental wellness, mental health, job demands, workload, work load, demands, pressure, employee, staff, workers, U.S., USA, U.S.A., United States, America, transactional model of stress and coping, transactional theory of stress and coping, primary appraisal, coping efforts, adaptation, dispositional coping styles, coping, coping skills, coping strategies, human resources, HR, human*

*resource employees, human resource professional, human resource managers, human resource management, HR manager, and HR business partner.* These key terms were used to search databases including EBSCOhost, ProQuest, Sage Journals, Emerald Insight, and Google Scholar.

Articles were excluded if they were not published in English, did not focus on pandemic-related psychological well-being in populations younger than the age of 18 years, or included employee populations from countries that were not considered comparable to the United States. Articles were also excluded if the pandemic did not serve as either the independent variable or the context for exploring psychological well-being, and if the dependent variable did not explore psychological well-being. For inclusion in this literature review, peer-reviewed articles published from March 2020 and beyond were retained, with the exception of seminal literature. Chain searching was used to retain seminal work related to relevant theories. Due to the abundance of literature exploring the psychological impact of the pandemic on health care professionals, a limiter was used to exclude health care professionals as a search term. I found no literature regarding the pandemic-related psychological well-being of HR personnel. Consequently, the search was broadened to focus on the pandemic's implications for HR personnel by exploring the pandemic's impact on their job demands.

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

The articles retained for this literature review revealed a variety of variables with agreed-upon and debated relationships regarding pandemic-related implications for psychological well-being. From those variables, several themes emerged, including

occupational, social, and individual factors that played an essential role in individual psychological well-being in response to the pandemic. The resulting intervariable relationships were mediated by coping styles, perceptions, and aspects of self-concept. Theory and existing literature were used to explore the arguments for each key variable in this literature review.

### **Pandemic-Related Occupational Factors**

Occupational factors such as workplace uncertainty influenced the risk of individuals developing symptoms of psychological distress in response to the pandemic (Vindegard & Benros, 2020). Constructs from two prevailing occupational stress models were commonly used to understand pandemic-related workplace uncertainty (Y. Chen et al., 2022; Ipsen et al., 2021; Tummers & Bakker, 2021). The job strain model states that occupational stress negatively impacts employees' physical and mental health when job demands increase and control decreases (Karasek & Theorell, 1990). For instance, in reference to pandemic-related employee experiences, the job strain model was used to explore the degree to which an employee's perception of decisional latitude (control) predicted their occupational stress level (Ben-Ezra & Hamama-Raz, 2021; Giorgi et al., 2020; Yeo & Li, 2022). More simply, a person's level of control over their work environment determined their perceptions of stress.

Another perspective focused on job demands-resources theory to predict occupational stress. When a disparity exists between resource availability and the level of job demands, the theory predicts that occupational stress will increase (Tummers & Bakker, 2021). The job demands-resources theory predicted pandemic-related mental

health outcomes in employees based on resource availability and changes in job demands (Bufquin et al., 2021; W. Tan et al., 2020; Wright et al., 2021). Consistent with the job strain model and job demands-resources theory, the following subsections address how occupational factors had debated implications for employees' psychological well-being during the pandemic, including job security, working from home, employee workload, and occupational characteristics.

### ***Job Security***

The pandemic created an environment of occupational and financial uncertainty for employees (Giorgi et al., 2020; Obrenovic et al., 2021). Pandemic-related job insecurity epitomized the lack of decisional latitude mentioned in the job strain model (Karasek & Theorell, 1990). Job insecurity, being furloughed, and the resulting financial instability diminished employee autonomy and increased uncertainty (Park et al., 2020). Across multiple studies, furloughed or laid-off employees reported an increase in depression, anxiety, substance abuse, stress, and thoughts of suicide (Bufquin et al., 2021; Giorgi et al., 2020; Obrenovic et al., 2021).

Employees who experienced job insecurity or decreased work hours reported increased anxiety, depression, and suicide (Pamidimukkala & Kermanshachi, 2021; Parent-Lamarche & Boulet, 2021). The resulting financial instability further amplified stress, anxiety, depression, and insomnia (Park et al., 2020; Qui et al., 2020; Vindegaard & Benros, 2020). Although job insecurity was commonplace during the pandemic, employed individuals also encountered unique stressors based on workload and occupational characteristics.

### ***Working From Home***

The shift to working from home during the pandemic was associated with improved psychological well-being (Parent-Lamarche & Boulet, 2021; Yeo & Li, 2022). According to the job strain model, increased decisional latitude led to a decrease in occupational stress (Karasek & Theorell, 1990). Because working from home provided greater autonomy and flexibility (Ipsen et al., 2021), employee well-being was improved with the shift to working from home during the pandemic (Parent-Lamarche & Boulet, 2021; Yeo & Li, 2022). For instance, Parent-Lamarche and Boulet (2021) found that working from home was associated with improved psychological well-being in a sample of 480 Canadian employees from white- and blue-collar jobs in the public, private, and business sectors. However, Yeo and Li (2022) found this relationship to be conditional, in which working from home decreased employee stress only if employees were told in advance about the transition to working from home. Although some employees found relief from occupational stress when working from home due to increased flexibility and autonomy, others experienced the transition differently.

Considering alternative factors, working from home during the pandemic did not improve employees' psychological well-being. According to the logic from the job strain model, working from home diminished decisional latitude for many employees in the form of work–life imbalance and social isolation (Y. Chen et al., 2022; Ipsen et al., 2021; Karasek & Theorell, 1990). Home office constraints, isolation from colleagues, and poor work–life boundaries increased employee stress, burnout, worry, fear, and fatigue (Chee et al., 2020; McCoyd et al., 2022). Yeo and Li (2022) found this relationship to be

conditional, in which working from home increased employee stress if the transition was unexpected and unplanned. The uncertainty and lack of control exacted by the pandemic on working conditions negatively impacted the psychological well-being of some employees. The differential impact of working from home on psychological well-being underscored other occupational factors that required further exploration.

### ***Employee Workload***

Across sectors, employee psychological well-being decreased during the pandemic due to work–life imbalance that resulted from an increase in job demands and working longer hours (Giorgi et al., 2020). The job strain model predicted an increase in employees’ occupational stress based on an increase in job demands and a decrease in control (Karasek & Theorell, 1990). Lovejoy et al. (2021) expanded the concept of occupational stress in the job strain model to include the psychosocial stressors that increased employee vulnerability. The pandemic created an environment in which work–life balance was not tangible due to the intensification of work in various employee populations (Lovejoy et al., 2021; Morgantini et al., 2020; Parent-Lamarche & Boulet, 2021).

The increase in job demands during the pandemic was associated with an increase in burnout (McCoyd et al., 2022; Morgantini et al., 2020; Poelmann et al., 2021; Sørengaard & Saksvik-Lehouillier, 2022), stress (Giorgi et al., 2020; Lovejoy et al., 2021; Yu et al., 2021), depression (Giorgi et al., 2020; Kone et al., 2022; Pamidimukkala & Kermanshachi, 2021), thoughts of suicide (Giorgi et al., 2020; Kone et al., 2022), post-traumatic stress disorder (Giorgi et al., 2020; Kone et al., 2022), and anxiety (Kone et al.,

2022; Pamidimukkala & Kermanshachi, 2021). An increase in job demands during the pandemic negatively impacted work–life balance and was associated with decreased psychological well-being in employees that varied across employment sectors.

### *Occupational Characteristics*

**Frontline and Essential Workers.** Being a frontline/essential worker was associated with a decrease in psychological well-being during the pandemic (Rossi et al., 2020; Shi et al., 2020; Vindegaard & Benros, 2020). From the perspective of the job demands-resources theory, research demonstrated the direct relationship between employee well-being and resource availability (Tummers & Bakker, 2021). For example, frontline workers were exposed to high levels of stress due to the increase in job demands during the pandemic (Wright et al., 2021). Because the increase in job demands was not always associated with a comparable increase in resources, many frontline workers reported an increase in depression, anxiety, substance use, and suicide (Bufquin et al., 2021; Pamidimukkala & Kermanshachi, 2021). Disparities between workload and resource availability illustrated how an employee’s field of work influenced their psychological well-being during the pandemic.

**Managers and Executives.** Some scholarship demonstrated that serving in a managerial role during the pandemic negatively impacted the psychological well-being of managers. The job demands-resources theory provided several implications for managers during the pandemic. In addition to managing a workforce, managers were also responsible for directly influencing their employees’ job demands, resource availability to execute those demands, and the impact of the pandemic on occupational stress and

employee well-being (Tummers & Bakker, 2021). As a result, managers were more likely to report feelings of anxiety, substance abuse, and insomnia when compared to their nonmanagerial counterparts (Wright et al., 2021). Consistent with the implications of the job demands-resources theory, an increase in job demands in response to the pandemic was associated with poor psychological well-being due to the lack of resources available to manage and lead their workforce.

W. Tan et al. (2020) suggested that serving in a managerial role during the pandemic did not impact psychological well-being if the increase in job demands was accompanied by an increase in resource availability. The impact of the pandemic on the psychological well-being of managers and executives in comparison to workers and technicians was not significantly different from a statistical perspective (W. Tan et al., 2020). The job demands-resources theory provides support for this finding, suggesting that the resources made available to managers were enough to compensate for their increased workload. Because all employees possessed the resources they needed, managers and their employees experienced the same psychological outcomes (W. Tan et al., 2020; Tummers & Bakker, 2021). Occupational characteristics were deeply intertwined with employee workload when exploring the pandemic's impact on psychological well-being (Morgantini et al., 2020; Parent-Lamarche & Boulet, 2021).

Although managers and field employees in the same workforce experienced similar challenges such as job insecurity, increased workloads, and work disruptions, managers also experienced unique challenges during the pandemic (W. Tan et al., 2020; Wright et al., 2021). For example, managers navigated challenges with transitioning their



workforce to work from home, diminished resources to support and manage their workforce in a virtual environment, and changes in the economy that negatively impacted the job security of employees. These factors led to increased stress and burnout (Pamidimukkala & Kermanshachi, 2021). Although increases in work demands, managerial challenges, and psychological distress were well studied in industrial, frontline, and essential workers, these experiences were not unique to these fields.

**Human Resource Personnel.** Employee well-being was placed at the forefront of organizational priorities in response to the pandemic (Dennerlein et al., 2020). As a result, HR personnel were responsible for balancing employee well-being while safeguarding organizational sustainability (Morosan-Danila et al., 2021). HR personnel assumed the duties of crisis management by juggling the roles of problem solver, change management specialist, organizational restructuring, human capital developer, and strategic analyst for redesigning business continuity plans that rendered diminished usefulness during the pandemic (Kaur & Shah, 2021; Maddox-Daines, 2021). The increase in job demands illustrated the critical role played by HR personnel in response to the pandemic.

Operating within varied roles led to increased work demands for HR employees (Bagheri & Seyed Naghavi, 2022; Kaur & Shah, 2021; Walker, 2021). Such personnel were responsible for the workforce transition to working from home; job restructuring; establishing parenting, caregiving, and financial support programs; and implementing occupational safety policies, procedures, and communications that evolved with the changing course of the pandemic (Bagheri & Seyed Naghavi, 2022; Carnevale & Hatak,

2020; Dennerlein et al., 2020; Walker, 2021). HR personnel also navigated workforce reductions, managed workforce well-being, and altered talent recruitment, selection, and onboarding processes (Gonçalves et al., 2021). The additional responsibilities represented the increase in work demands experienced by HR personnel in response to the pandemic.

### ***Evaluation of the Literature on Occupational Factors***

Occupational factors such as job insecurity or increased workloads in response to the pandemic led to lower levels of psychological well-being in certain employment sectors (Bufquin et al., 2021; Giorgi et al., 2020; Kone et al., 2022; Park et al., 2020). Although there was an abundance of literature on the pandemic's impact on frontline workers and managers (Pamidimukkala & Kermanshachi, 2021; Tummers & Bakker, 2021), the effects of the pandemic on the psychological well-being of HR personnel in the workforce were not explored. Like other work sectors, HR personnel were subjected to increased job demands, job insecurity, and changing work conditions by working from home (Gonçalves et al., 2021; Kaur & Shah, 2021; Maddox-Daines, 2021). The impact of these occupational factors on the psychological well-being of HR personnel was not explored beyond the examination of HR responsibilities to their workforce in navigating the pandemic. Lastly, existing research that explored the impact of occupational factors on psychological well-being was developed during the first year of the pandemic. Consequently, additional research was needed to understand the long-term implications of pandemic-related psychological well-being while incorporating theory and variables that explored concepts beyond occupational factors, such as social and individual factors.

## **Quarantine and Social Distancing During the Pandemic**

Mass quarantine was required during several months of the first year of the pandemic. Mass quarantine was the restriction of movement to minimize the spread of COVID-19 (Jin et al., 2021). In the United States, this practice restricted individual movement and limited face-to-face interactions with the implementation of work-from-home mandates, shelter-in-place requirements, and nationwide closure of educational institutions, nonessential businesses, and country borders (Chu et al., 2020). Within mass quarantine, social distancing was also required, where a minimum of six feet between individuals was needed to reduce the spread of COVID-19 (Chu et al., 2020; Jin et al., 2021). Mass quarantine and social distancing disrupted the traditional practices of interpersonal relationships by preventing in-person social gatherings and eliminating human touch for those living outside of an individual's household and for those who were exposed to COVID-19 (von Mohr et al., 2021). Due to the social disruption and touch deprivation caused by the pandemic, research explored the impact of mass quarantine and social distancing on the psychological well-being of employees.

Mass quarantine and social distancing decreased psychological well-being during the pandemic (Shi et al., 2020; Vindegaard & Benros, 2020). The decrease in psychological well-being was due to the increase in work demands coupled with the decrease in perceived control and the inability to use social support in traditional ways to cope with pandemic-related psychological distress (Karasek & Theorell, 1990; Wethington et al., 2015). The pandemic resulted in a mass quarantine that increased the prevalence of depression, anxiety, stress, and insomnia (Bräscher et al., 2021; Shi et al.,

2020; Usher et al., 2020). Once mass quarantine was no longer required, 6-foot social distancing was still required. Mass quarantine and social distancing served as varying degrees of social isolation that induced a mental health crisis in employee populations with increased psychological distress, anxiety, depression, and post-traumatic stress disorder (C.-C. Chen, 2021; Kone et al., 2022; Lovejoy et al., 2021; Park et al., 2020).

The inability to engage in normative social behaviors, such as in-person gatherings and close interpersonal contact with those living outside of one's household, inhibited the use of emotion-focused coping to overcome the occupational stress and uncertainty exacted by the pandemic (Philpot et al., 2021; Shi et al., 2020). There was a limited amount of research that focused on the role of mass quarantine and social distancing in U.S. employee populations (Kone et al., 2022). Without traditional social support, individuals used monitoring to navigate the pandemic's unprecedented changes (Bäuerle et al., 2020; Vindegaard & Benros, 2020). There is a need for follow-up studies to understand how quarantine and social distancing during the pandemic affected employees and the role of other relevant factors.

### **Pandemic-Related Knowledge**

Some employees benefited from monitoring information about the pandemic (Bäuerle et al., 2020; Vindegaard & Benros, 2020). According to the transactional model of stress and coping, information-seeking was a positive application of dispositional coping. In other words, individuals who consumed factual information about a stressful event were using dispositional coping to influence their reaction to that stressful event. The use of information-seeking influenced their ability to employ coping efforts and

techniques (use their behaviors and feelings) to either increase or decrease their stress response (Wethington et al., 2015). For example, those who possessed accurate knowledge of the pandemic were less likely to report depression, anxiety, stress, and insomnia (Bäuerle et al., 2020; Vindegaard & Benros, 2020). The positive outcome for information-seeking depended upon a person's preferred coping efforts, in which information-seeking served as a form of active and problem-focused coping that decreased distress and arousal (Miller, 1987; Wethington et al., 2015). Although some individuals benefited from information-seeking, others did not.

Information-seeking was also conceptualized as a negative application of dispositional coping within the transactional model of stress and coping (Wethington et al., 2015). The negative impact of information-seeking held true if it served as a form of emotion-focused coping because information-seeking used in this manner increased distress and arousal (Miller, 1987; Wethington et al., 2015). As a result, those who reported frequent social media exposure to pandemic-related information experienced increased levels of anxiety and fear (Vindegaard & Benros, 2020). Information seeking served as either a positive or negative influence on psychological well-being.

Information-seeking presented unique implications for psychological well-being. For some, information-seeking provided positive implications for psychological well-being while doing the exact opposite for others (Vindegaard & Benros, 2020). Although the difference was attributed to individual preferences for coping strategies, the research did not explore those techniques in detail nor how they led to different psychological outcomes. This gap highlighted the need to further explore the potential mediating role of

coping efforts on pandemic-related psychological outcomes and how individual characteristics influenced the prevalence of pandemic-related psychological distress.

### **Factors Mediating and Influencing Psychological Well-Being During the Pandemic**

Constructs from the transactional model of stress and coping were used to understand the role of mediating factors in influencing psychological well-being during the pandemic (Chee et al., 2020; Kone et al., 2022; Park et al., 2020). Key constructs included primary and secondary appraisal, and emotion-focused and problem-focused coping efforts. Appraisal focused on whether an event was perceived as stressful based on how threatening the event was (primary appraisal) and individual ability to control the impact of the stressful event using available resources (secondary appraisal; Wethington et al., 2015). Coping efforts in the form of behaviors like information seeking were intended to change the stressful situation (problem-focused coping), whereas behaviors like avoidance or seeking social support were intended to alter individual thoughts and feelings about the stressful event (emotion-focused coping; Vindegaard & Benros, 2020).

Several mediating factors explained the varied impacts of the pandemic on psychological well-being (Chee et al., 2020; Park et al., 2020; Zhou et al., 2021). Concepts from the transactional model of stress and coping were used to evaluate the process through which coping efforts and various appraisal indicators were related to employees' psychological responses to the pandemic. The literature provided insight into the differential impact of problem- and emotion-focused coping along with specific aspects of stress appraisal that included individual perceptions and various indicators of self-concept.

### ***Problem-Focused Coping***

Pandemic-related impacts on psychological well-being were mediated by problem-focused coping efforts that improved psychological outcomes (Chee et al., 2020). Engagement in behaviors to eliminate sources of stress resided at the core of problem-focused coping (Wethington et al., 2015). Behavioral changes shifted individual perceptions about their locus of control in response to the pandemic and increased self-perceptions of individual control. As a result, problem-focused coping mediated the pandemic's impact on employee well-being and led to less severe psychological distress (Chee et al., 2020). Consequently, psychological well-being was enhanced in employees that focused on actively changing their stressful experiences in response to the pandemic by changing their behaviors (Chee et al., 2020; Wethington et al., 2015). In addition to altering their behaviors, employees coped with the pandemic by challenging their thoughts and feelings.

### ***Emotion-Focused Coping***

Emotion-focused coping also mediated pandemic-related psychological well-being and served to improve psychological outcomes in some populations (Kone et al., 2022; Park et al., 2020). The transactional model of stress and coping posits that emotion-focused coping served to alter thoughts and feelings about a stressful experience (Wethington et al., 2015). Seeking social support served as an example of emotion-focused coping whose utility was limited by mass quarantine and social distancing during the pandemic. Distraction and seeking social support were two commonly used emotion-focused coping efforts during the pandemic (Park et al., 2020). Kone et al. (2022) found

that social support mediated a reduction in anxiety and psychological distress while enhancing resiliency. Within the context of meaning-based coping, emotion-focused coping was beneficial and led to the positive reappraisal of the pandemic and positive emotions (Kone et al., 2022; Wethington et al., 2015). However, the positive effects of emotion-focused coping were not guaranteed in avoidant contexts.

Alternatively, emotion-focused coping mediated pandemic-related psychological well-being and served to increase psychological distress (Kone et al., 2022; Park et al., 2020). According to the transactional model of stress and coping, stressful environments negatively affected the ability to cope with stressful events (Lazarus & Folkman, 1984; Wethington et al., 2015). In this instance, it was common for individuals to use avoidant coping with emotion-focused coping efforts that inadvertently had a negative impact on psychological well-being (Wethington et al., 2015). The use of emotion-focused coping in conjunction with avoidance mediated the effect of the pandemic on employees and rendered employees less effective in reducing their pandemic-related stress (Chee et al., 2020; Pereira et al., 2020). Although avoidant coping was deemed a protective mechanism, when it was used in conjunction with emotion-focused coping and in the absence of problem-focused coping, psychological distress resulted (Chee et al., 2020; Pereira et al., 2020; Wethington et al., 2015). With coping efforts incorporated into the literature on pandemic-related responses, research was also conducted to explore the relevance of appraisal.



### ***Control and Uncertainty***

Psychological well-being was associated with perceived control and certainty during the pandemic (Lovejoy et al., 2021; Usher et al., 2020; Yeo & Li, 2022). Both control and uncertainty served as secondary appraisal features within the transactional model of stress and coping because perceived control influenced emotional reactions to stressful events (Wethington et al., 2015). The application of control corresponded with decisional latitude within the job strain model, in which perceived control decreased stress responses (Karasek & Theorell, 1990). Employees reported reduced perceived control due to the pandemic's unpredictable changes (Usher et al., 2020). A decrease in control, coupled with an increase in uncertainty, influenced the pandemic's impact on psychological well-being and led to greater psychological distress depicted by increases in depression, anxiety, and stress (Lovejoy et al., 2021; Park et al., 2020; Usher et al., 2020; Yeo & Li, 2022). Workplace uncertainty decreased decisional latitude, diminished perceived control within secondary appraisal and negatively impacted psychological well-being (Karasek & Theorell, 1990; Wethington et al., 2015). Perceived control and uncertainty were two of several individual concepts that served as influencing variables between the pandemic's impact on psychological well-being.

### ***Perceived Severity and Risk***

Pandemic-related perceptions of severity and risk have been associated with mental health outcomes (Zhou et al., 2021). Within the transactional model of stress and coping, primary appraisal determined the degree to which the evaluation of the stressors influenced perceptions of a stressful event. If an individual perceived a high degree of

severity and risk for a stressful event, they were more likely to experience greater levels of psychological distress (Wethington et al., 2015). Perceived severity and risk influenced the impact of the pandemic on psychological well-being, given that individuals who perceived greater pandemic-related risk and severity suffered greater levels of psychological distress (Zhou et al., 2021). Thus, primary appraisal served as one of several influences on the pandemic's impact on psychological well-being.

### ***Self-Efficacy***

Self-efficacy improved psychological well-being during the pandemic. According to the transactional model of stress and coping, self-efficacy also shaped appraisal (Lazarus & Folkman, 1984). Although not considered a mediating variable in the transactional model of stress and coping (Wethington et al., 2015), self-efficacy played a critical role in mediating the pandemic's impact on psychological well-being in the literature (Zhou et al., 2021). Individuals with higher self-efficacy were more likely to report lower risk perceptions, engage in active/problem-focused coping, and experience less pandemic-related psychological distress (Zhou et al., 2021). Self-efficacy mediated pandemic-related distress by decreasing risk perception and influencing the type of coping efforts used to navigate the pandemic.

### ***Evaluation of the Literature on Mediating and Influencing Factors***

Several factors contributed to varied psychological responses to the pandemic, including the use of different coping efforts and perceptions of control, uncertainty, severity, risk, and self-efficacy (Chee et al., 2020; Park et al., 2020; Zhou et al., 2021). The research was conducted during the first year of the pandemic and did not explore any

long-term implications that the pandemic had on psychological well-being. Additional research was needed to understand the role that these mediating and influencing variables played in long-term psychological outcomes due to the pandemic while also considering demographic differences.

### **Demographic Factors and the Pandemic's Impact on Psychological Well-Being**

Disasters tend to have a greater impact on disadvantaged and vulnerable populations (Mazdiyasi & AghaKouchak, 2020). There were a variety of sociological and ecological theoretical perspectives that considered how individual factors influenced outcomes, including the health belief model, socio-ecological model, and sociocultural environment logic framework (Glanz & Rimer, 2005). The common theme specified that demographic variables influenced health outcomes (Skinner et al., 2015). In the United States, sex, race, and age influenced the pandemic's impact on psychological well-being, and this impact differed across subgroups.

Sex influenced the pandemic's impact on individual well-being due to preferred coping efforts (C.-C. Chen, 2021; Pamidimukkala & Kermanshachi, 2021; Park et al., 2020). According to the transactional model of stress and coping, emotion-focused and problem-focused coping mediated stressful experiences (Wethington et al., 2015). Compared to emotion-focused coping, problem-focused coping was associated with greater levels of psychological well-being in response to stressful events and was more likely to be used by males (Chee et al., 2020; Street & Dardis, 2018). Compared to males, females reported higher levels of pandemic-related stress, anxiety, and depression (C.-C. Chen, 2021; Pamidimukkala & Kermanshachi, 2021; Park et al., 2020). Females were

also more likely to use emotion-focused coping efforts which tend to be less effective at reducing stress (Park et al., 2020; Wethington et al., 2015). Sex-based preferences for coping efforts substantiated the influential role that sex played in the pandemic's impact on psychological well-being.

Race also influenced the pandemic's impact on psychological well-being (Czeisler et al., 2020). For instance, the pandemic exacerbated health care barriers because it negatively impacted access for racial and ethnic minorities (Truong et al., 2022). According to Czeisler et al. (2020), racial and ethnic minorities were among the vulnerable groups that reported an increase in substance use, thoughts of suicide, and poor mental health. With the transition to telehealth, the reduced access to care was coupled with cost barriers and limited digital and health literacy that further marginalized already vulnerable populations (Truong et al., 2022).

Age influenced the pandemic's impact on psychological well-being, with some research finding that younger employee populations were at greater risk (Bufquin et al., 2021; Chee et al., 2020; Pamidimukkala & Kermanshachi, 2021). Park et al. (2020) determined that because older populations were better resourced from an occupational perspective, they were less likely to report as many stressors in response to the pandemic when compared to their younger counterparts. Among older adults, experiencing less stress was consistent with the constructs of the job demands-resources model in which resource availability decreased occupational stress (Tummers & Bakker, 2021). Consequently, younger employees were more likely to experience pandemic-related psychological distress (Bufquin et al., 2021; C.-C. Chen, 2021). Although resource

availability explained this phenomenon, it was not the only factor to consider when determining the pandemic's differential impact on age subgroups.

Despite the assumption that resource availability rendered older populations less likely to experience pandemic-related psychological distress, some research contradicts this. The opposing findings were attributed to the increased susceptibility of older populations to contracting COVID-19 because their immune systems were more compromised with age (Pamidimukkala & Kermanshachi, 2021). According to the transactional model of stress and coping, increased perceptions of susceptibility negatively impacted appraisal (Wethington et al., 2015). As a result, older employees reported higher levels of pandemic-related anxiety and depression attributed to preexisting health conditions (Pamidimukkala & Kermanshachi, 2021). Consequently, perceptions of susceptibility and occupational resource availability played a role in employees' psychological well-being in response to the pandemic.

In other studies, age did not influence the pandemic's impact on employees' psychological well-being (Chee et al., 2020). Age having no impact was supported by the coping strategies within the transactional model of stress and coping that were not age-discriminant or age-dependent (Wethington et al., 2015). According to Chee et al. (2020), younger and older adults were equally likely to report the same degree of psychological distress in response to the pandemic. Consequently, resource availability, perceived susceptibility, and coping efforts played a key role in understanding the impact of age on psychological well-being.

Several factors influenced the pandemic's impact on psychological outcomes, including sex, race, and age. Females and racial minorities reported higher levels of psychological distress in response to the pandemic, with different impacts on various age groups (Chee et al., 2020; C.-C. Chen, 2021; Czeisler et al., 2020). However, the literature that explored these demographic factors was conducted early in the pandemic, with unknown long-term implications for psychological well-being. Consequently, additional research was needed to further explore the role of demographic variables in influencing the pandemic's impact on psychological well-being.

### **Evaluation of the Literature Review and Theoretical Underpinnings**

This literature review demonstrated an abundance of research exploring changes in psychological well-being in response to the pandemic. The theoretical foundations used by most scholars were implicit. Other scholars used the health belief model or a variety of occupational stress models. The health belief model was designed to evaluate factors that influenced changes in health behaviors without regard to how coping strategies mediated or moderated outcomes (Skinner et al., 2015). Additionally, the fragmented use of occupational stress models prevailed in scholars' selection of theoretical foundations. However, the job strain model and the job demands-resources theory only considered occupational factors that impacted psychological well-being (Karasek & Theorell, 1990; Tummers & Bakker, 2021).

Scholars considered occupational, social, individual, mediating, and moderating factors in various combinations within the context of the pandemic (Giorgi et al., 2020). However, this exploration lacked a comprehensive picture of how those factors interacted

with each other in their impact on psychological outcomes. Collectively, the limitations regarding the exploration of research variables demonstrated the need for future research that explored these concepts more holistically with consideration for the unique experiences of different employee populations.

There was an abundance of literature on frontline and essential workers (Rossi et al., 2020; Shi et al., 2020; Vindegaard & Benros, 2020) and a limited amount of literature that explored differential impacts on those in managerial positions (W. Tan et al., 2020; Wright et al., 2021). Notably, most scholars that focused on the psychological well-being of frontline and essential workers did so from the context of increased job demands (Vindegaard & Benros, 2020). Although scholars demonstrated that the increased pressure and demands were also experienced by those in the HR field (Donovan, 2022; Gabriel & Aguinis, 2022; Kaur & Shah, 2021), research was lacking on the psychological well-being of HR personnel in response to the pandemic. Consequently, a more expansive theory like the transactional model of stress and coping was needed to explore the pandemic's impact on the psychological well-being of HR personnel with consideration for the role of mediating and moderating variables as discussed.

### **Theoretical Foundation**

The origins of the transactional model of stress and coping began with the informal and independent exploration of stress and coping. Evidence of the concept of stress dated back to the 13th century. Over nearly a millennium, the definition of stress has evolved as this concept served as the focal point of empirical studies in the humanities and social sciences (Lazarus & Folkman, 1984; Sebastian, 2013). Perceived

initially in the early 1900s as solely a physiological response to an external stimulus, stress quickly became understood as the product of a transaction between a person and their environment (Lazarus & Folkman, 1984; Wethington et al., 2015). Stress was understood as the relationship between a person and their appraisal of an event in their environment (Lazarus & Folkman, 1984). The concept of appraisal warranted the relevance of coping in mediating or moderating the person-environment relationship.

Research on coping surfaced in the early 1900s with distinct origins in comparative psychology and psychoanalytic theory (Lazarus & Folkman, 1984; Lifschutz, 1964). Coping, rooted in Darwinism within comparative psychology, was defined as an act used by animals to limit negative psychological and physiological impacts brought on by environmental stressors (Lazarus & Folkman, 1984). The Darwinian definition of coping was limited and did not include a cognitive-emotional context.

Heavily influenced by Sigmund Freud's id-ego-superego model, ego psychology defined coping as a combination of stress-reducing thoughts and actions in response to a stressful event (Lazarus & Folkman, 1984; Lifschutz, 1964). Coping, as defined in ego psychology, gave rise to the concept of coping as process-oriented efforts (either cognitive or behavioral) to contend with internal or external stressors (Lazarus, 1993; Lazarus & Folkman, 1984). Assessing stress and coping as interrelated constructs, Lazarus and Folkman (1984) developed the transactional model of stress and coping to explore concepts that led to differential responses to stressful events.

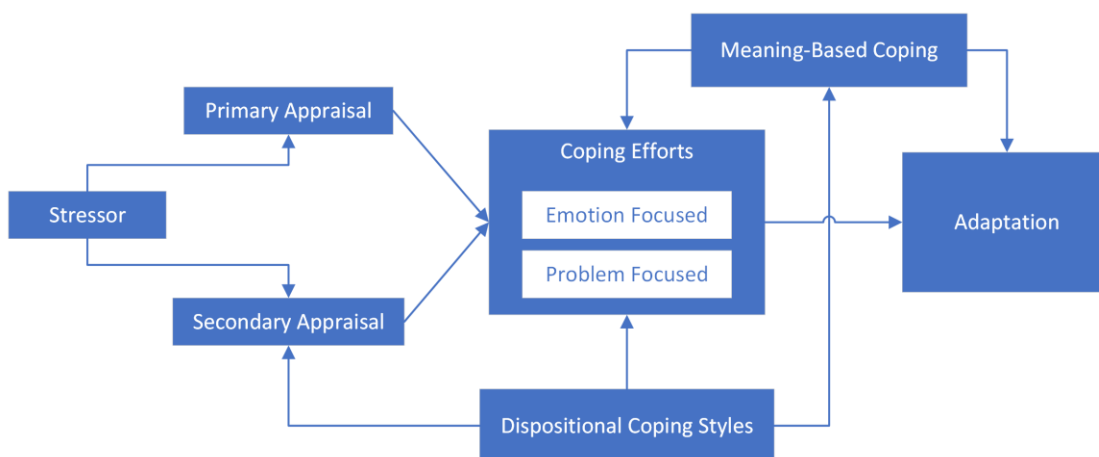


## Transactional Model of Stress and Coping

The transactional model of stress and coping evaluated how people coped with stressful events based on their appraisal of the stressor compared to the resources they possessed to cope with the stressor (Wethington et al., 2015). When the person-environment relationship was assessed, differences existed in how different groups managed the same stressor (Lazarus & Folkman, 1984). These differences were attributed to various factors that served as foundational constructs of the transactional model of stress and coping, as depicted in Figure 1.

**Figure 1**

*Constructs of the Transactional Model of Stress and Coping*



*Note.* A revised configuration for the transactional model of stress and coping as depicted in Wethington et al. (2015).

According to the model, a person engaged in primary and secondary appraisal when they encountered a stressful event (Wethington et al., 2015). Primary appraisal determined the severity of the threat, while secondary appraisal determined the person's

ability to manage the threat (Lazarus & Folkman, 1984; Wethington et al., 2015). Coping efforts were mediators and consisted of the emotional and behavioral response, and coping styles moderated the emotional and behavioral response. The cumulative effect of these variables influenced adaptation (Wethington et al., 2015). These variables were used to explore psychological outcomes in response to stressful events like the pandemic.

### *Appraisal*

Appraisal served as a critical component of the transactional model of stress and coping. Evidence of the systematic study of appraisal in psychology surfaced in the mid-1900s, in which Magda Arnold deemed appraisal as an automatic determination of emotion. Over the course of a few decades, appraisal was understood as a more conscientious process that served to explain why differences existed in how people responded to the same stressor (Lazarus & Folkman, 1984). For example, some managers reported a greater decrease in psychological well-being in response to the pandemic in comparison to other managers who experienced the same stressor (W. Tan et al., 2020; Wright et al., 2021). According to the transactional model of stress and coping, those differences were explained by perceptions of primary and secondary appraisal.

**Primary Appraisal.** Primary appraisal determined perceptions of the stressful significance of an event. It included perceived susceptibility, perceived severity, and motivational relevance. Perceived susceptibility and severity were consistent with the health belief model interpretations (Wethington et al., 2015). Perceived susceptibility was the likelihood of experiencing a pandemic-related negative effect, perceived severity was perceptions about how serious those negative effects would be, and both influenced

adaptation during the pandemic (Zhou et al., 2021). Motivational relevance was defined as an appraisal of the degree to which a stressful event affected personal goals (Smith et al., 1993). If an event was appraised as threatening in terms of susceptibility, severity, or motivational relevance, then primary appraisal created poor adaptation in the form of increased distress.

**Secondary Appraisal.** Individuals experiencing stressful events also engaged in secondary appraisal, which was based on control and resource availability (Wethington et al., 2015). The constructs within secondary appraisal were influenced by Albert Bandura's self-efficacy theory and consisted of perceived control over outcomes, perceived control over emotions, and self-efficacy (Lazarus & Folkman, 1984; Sebastian, 2013). These were a combination of an individual's perception of their ability to use the resources available to them to change the stressful event and control their feelings. During the pandemic, employees who reported greater self-efficacy and perceived control were more likely to experience positive psychological well-being (Lovejoy et al., 2021; Usher et al., 2020; Zhou et al., 2021). Thus, individuals used secondary appraisal to explore their ability to change their situation using the resources available to them to cope and improve adaptation.

### ***Coping as a Process and as a Style***

Lazarus (1993) understood coping as a process and a style through which appraisal led to adaptation. Two approaches to coping were developed to explain the variable efforts (coping as a process) and the characteristic traits (coping as a style) that were used to manage stress (Lazarus, 1993). Coping processes changed over time and

were influenced by the stressful event, whereas coping styles were indicative of personality characteristics that were more stagnant. Coping processes (also known as coping efforts) served as mediators, while coping styles served as moderators in the transactional model of stress and coping (Lazarus, 1993; Wethington et al., 2015).

**Coping Efforts as Mediators.** Primary and secondary appraisal were mediated by coping efforts (Lazarus & Folkman, 1984). Coping efforts were aimed at changing a stressful situation (problem-focused), changing thinking and feelings about a stressful situation (emotion-focused), or engaging in behaviors that produced positive emotions (meaning-based coping; Lazarus & Folkman, 1984; Wethington et al., 2015). Strategies for problem-focused coping included active coping, problem-solving and information seeking. Emotion-focused coping consisted of avoidance, denial, and seeking social support (Wethington et al., 2015). Meaning-based coping was embedded in positive psychology and focused on positive reappraisal, adapting goals, relying on religious or spiritual beliefs, and positive thinking (Lazarus & Folkman, 1984; Wethington et al., 2015). As revealed in the literature that explored emotion-focused coping during the pandemic, coping efforts differentially influenced adaptation based on the moderating role of coping styles (Chee et al., 2020; Kone et al., 2022; Park et al., 2020; Pereira et al., 2020).

**Coping Styles as Moderators.** Primary and secondary appraisal were moderated by coping styles (Wethington et al., 2015). Coping as a style focused on personality-based characteristics that influenced the use of different types of coping strategies (Lazarus, 1993). The transactional model of stress and coping explored dispositional

coping styles as stable behaviors that guided emotional and functional reactions to stressors (Wethington et al., 2015). Behaviors within dispositional coping styles overlapped with different types of coping efforts and included positive outlook (optimism), positive lifestyle changes (benefit finding), and vigilant attentional styles (information seeking; Lazarus & Folkman, 1984; Wethington et al., 2015). Coping, defined as either personality-based or stable over time, related to the literature that explored the differential impact of knowledge-seeking on psychological outcomes, in which some individuals benefited from this practice while others did not (Bäuerle et al., 2020; Vindegaard & Benros, 2020). Being optimistic, finding the benefit in stressful situations and using monitoring to increase active coping (not distress and arousal) all moderated the relationship between appraisal and adaptation in varying ways.

### *Adaptation as Coping Outcomes*

Coping outcomes and adaptation were used interchangeably in the transactional model of stress and coping and were the culmination of the person-environment relationship (Lazarus & Folkman, 1984). As a result, adaptation was understood based on a combination of factors that defined coping outcomes following a stressful event. Those factors included emotional well-being, functional status (physiology of health), and health behaviors that determined the short-term and long-term effects of positive and negative adaptations (Wethington et al., 2015). The transactional model of stress and coping was expanded to consider the role played by socioecological disparities in adaptation.

The transactional model of stress and coping provided predictions for how race and discrimination would impact appraisal and coping (Wethington et al., 2015). According to Wethington et al. (2015), racial discrimination served as a confounding stressor when navigating already stressful events and negatively impacted adaptation. Additionally, belonging to a vulnerable population (racial minorities, females, and those of low socioeconomic status and education level) impacted coping efforts (Wethington et al., 2015). In this context, belonging to a vulnerable population increased the likelihood of using active coping efforts, which typically led to improved adaptation (Wethington et al., 2015). However, negative adaptation resulted when active coping was combined with demographic-related constraints, such as low socioeconomic status and lower education levels (Wethington et al., 2015). Demographic differences explained why some scholars found problem-focused coping beneficial in certain subgroups and others did not (C.-C. Chen, 2021; Czeisler et al., 2020; Pamidimukkala & Kermanshachi, 2021; Park et al., 2020).

### **Hypotheses and Assumptions for Theoretical Foundation**

Psychologist Richard Lazarus began studying coping theory in 1993. Lazarus and Susan Folkman developed what became known as the transactional model of stress and coping in 1984 (Lazarus, 1993; Lazarus & Folkman, 1984). Within their model, they identified a variety of empirically-supported hypotheses regarding the patterns of relationships between appraisal, coping, and adaptation. They also identified assumptions within their model about how humans approached stressful events.

### *Hypotheses*

Distinct hypotheses exist for coping efforts and coping styles. When coping efforts were explored, it was hypothesized that problem-focused coping was more appropriate for changeable stressful events because this form of coping allowed individuals to actively engage in behaviors to reduce their stress. Alternatively, it was hypothesized that emotion-focused coping was more likely to be used in stressful, uncontrollable events (Lazarus & Folkman, 1984; Wethington et al., 2015). The use of emotion-focused coping for uncontrollable experiences was attributed to the fact that individuals tended to use disengaging, emotion-focused coping efforts (e.g., avoidance, denial, and distraction) when they lacked control over a stressor because it diverted attention away from the stressor and reduced stress. Consequently, emotion-focused coping was considered more beneficial when used in combination with problem-focused coping (Wethington et al., 2015).

Social support was hypothesized to have an increasingly significant effect on adaptation as the stressor worsened. The effect of social support was attributed to the fact that it served as a stress-resistant resource that increased an individual's sense of purpose and meaning in life (Wethington et al., 2015). Given that the pandemic was threatening, control was diminished, and social support was limited due to mass quarantine and social distancing, these hypotheses were essential in exploring pandemic-related psychological outcomes in the current study.

### *Assumptions*

A variety of assumptions were made for the transactional model of stress and coping, including the expectation that theoretical underpinnings for the model would remain constant. Theoretical underpinnings included the psychoanalytic interpretations of coping, meaning-making constructs of positive psychology, Bandura's self-efficacy theory, and perceptions of susceptibility and severity from the health belief model (Lazarus & Folkman, 1984; Sebastian, 2013; Wethington et al., 2015). Coping efforts were not deemed inherently good or bad and depended upon the person, the environment, and the outcome in the short- and long-term (Lazarus, 1993). Consequently, the same coping effort could have rendered different results when used by different people in the same environment and when used by the same person in different environments. Consequently, individual and environmental factors played an essential role in the coping process (Lazarus, 1993; Wethington et al., 2015). Lastly, the scholars assumed that instead of coping styles being dependent upon the stressful event, they were indications of personality-based predispositions (Lazarus, 1993). It was noted that these assumptions were founded in empirical evidence and demonstrated the model's strengths.

### **Recent Applications of Theoretical Foundation**

The transactional model of stress and coping served as the theoretical foundation for research about social workers in Israel (Ben-Ezra & Hamama-Raz, 2021), a sample of a variety of professionals in Brazil (Pereira et al., 2020), and in the general population in the United States (Jean-Baptiste et al., 2020). Each study used the model differently to



explore pandemic-related psychological outcomes, encountered unique limitations, and established gaps for future research.

Ben-Ezra and Hamama-Raz (2021) used the model to explore how the increase in job demands (stressor) was associated with psychological distress (adaptation) and the mediating role of coping efforts (specifically emotion and problem-focused coping). They found that an increase in job demands was associated with an increase in psychological distress that worsened when individuals engaged in emotion-focused coping (Ben-Ezra & Hamama-Raz, 2021). Pereira et al. (2020) explored coping efforts by assessing the mediating role of positive reappraisal within the construct of meaning-based coping. Consistent with the assumptions of the transactional model of stress and coping, meaning-based coping decreased anxiety in response to the pandemic (Pereira et al., 2020). The researchers only explored one construct (coping efforts) within the transactional model of stress and coping. The transactional model stipulated that additional factors affected adaptation and warranted exploration, such as appraisal and coping styles.

Jean-Baptiste et al. (2020) also explored pandemic-related psychological outcomes, this time by assessing primary appraisal and the role of coping efforts. Variations were found in primary appraisal and the use of emotion-focused and problem-focused coping (Jean-Baptiste et al., 2020). However, they did not explore the mediating role of these different coping efforts in relation to outcomes. The only relationship that was explored was the positive role of social support in improving psychological outcomes (Jean-Baptiste et al., 2020). Anecdotal data obtained in this mixed-methods

study also indicated that racial discrimination played a role in pandemic-related psychological outcomes in which Asian participants experienced greater levels of stress (Jean-Baptiste et al., 2020). This study was conducted early in the pandemic and only provided insight into immediate responses to the pandemic. Because it focused on the general population in the United States, it did not consider the role that occupational factors played in pandemic-related psychological outcomes. Lastly, the work did not explore secondary appraisal or intervariable relationships to an insightful degree.

### **Rationale for Theoretical Foundation**

Because the pandemic altered many aspects of human life, the current study needed a theory that was broad enough to explore a variety of dimensions that affected psychological well-being, specific enough to focus on psychological well-being as an outcome, and perceptive enough to explore the processes and inherent individual characteristics that mediated and moderated those outcomes. The transactional model of stress and coping was adequately broad, specific, and perceptive in its approach.

The transactional model of stress and coping was related to the research questions that explored the pandemic-related psychological outcomes in HR personnel because it allowed for the exploration of the relevant aspects of the person-environment relationship in response to a stressful event. The transactional model was used to assess U.S. HR personnel's perceptions of stress in response to the pandemic using primary and secondary appraisal.

The model was also used to explore how coping efforts mediated psychological adaptation in response to the pandemic and how meaning-based coping moderated

psychological adaptation. In this instance, the transactional model was used to provide insight into the role that emotion-focused, problem-focused, and meaning-based coping had on psychological adaptation. The transactional model was also used to explore psychological outcomes as an adaptation. Consequently, this transactional model was used to understand the role of appraisal and coping strategies in the psychological adaptation of HR personnel, a population in which an increase in work demands was well-documented, but pandemic-related psychological implications were not researched.

### **Summary and Conclusions**

The literature review revealed that occupational, social, and individual factors played a critical role in the appraisal of the pandemic as a stressful event with psychological implications. The literature review also provided guidance on the demographic variables that influenced psychological outcomes and coping strategies that played moderating and mediating roles. In terms of occupational factors, an increase in job demands served as the justification for exploring pandemic-related psychological implications in frontline and essential workers using either occupational stress models that were empirically limiting or fragments of stress and coping theories. Although the literature also reported an increase in the job demands on HR personnel, there was no research on the pandemic-related psychological implications for this population in the United States. The current study explored the relationship between the pandemic and psychological adaptation in HR professionals using the pertinent constructs of the transactional model of stress and coping and the quantitative methods described in the research methodology section.

### Chapter 3: Research Method

The purpose of this quantitative study was to examine the extent to which appraisal of the pandemic impacted the psychological well-being of U.S. HR personnel and the role played by coping efforts and meaning-based coping. I used a cross-sectional online survey including validated scales focusing on pandemic appraisal, coping strategies, and psychological outcomes. Purposive sampling was used to target U.S. HR professionals to participate in this study via online advertisements. This chapter includes a description of the research design, methodology, data analysis plan, and threats to validity.

#### **Research Design and Rationale**

The variables in this quantitative study were drawn from the transactional model of stress and coping and included pandemic appraisal, coping efforts (problem-focused and emotion-focused coping), meaning-based coping, and psychological adaptation. The methodology used in this study was a quantitative survey-based approach that focused on examining the impact of coping efforts and meaning-based coping on the relationship between pandemic appraisal and psychological adaptation. A quantitative survey-based approach was appropriate due to the study's objective of validating a theory by fitting several constructs of the transactional model of stress and coping to a sample of U.S. HR employees in relation to their navigation of the pandemic.

To achieve the project goals, I aimed to use a representative sample that rendered generalizable results. Due to the importance of external validity in achieving this goal, a quantitative analysis was the preferred approach (see Choy, 2014). Additionally, given

the human-focused nature of the constructs of the transactional model of stress and coping, this study required human subjects to measure intervariable relationships. A quantitative, survey-based, cross-sectional design with human subjects was the best fit for this study.

According to the literature review, most scholars who investigated the pandemic's impact on psychological well-being used a cross-sectional survey-based design similar to the current study. In each instance, scholars focused on how a singular experience (e.g., occupational factors, social factors, or coping strategies) influenced psychological well-being with no consideration given to appraisal or a comprehensive review of how coping efforts and adaptation were related (Ben-Ezra & Hamama-Raz, 2021; Chee et al., 2020; Park et al., 2020). In the current study, a cross-sectional survey-based design was used to explore relationships between several constructs of the transactional model of stress and coping, including pandemic appraisal, emotion-focused and problem-focused coping efforts, meaning-based coping techniques, and psychological adaptation. Unlike previous literature that addressed pandemic-related psychological implications, the current study included a comprehensive application of theory and a distinct methodological approach.

### **Methodology**

This section includes a description of the methodology that was best suited for answering the research questions for this study. The target population, sampling methods, and recruitment methods are explained. This is followed by the operationalization of study variables and a description of the validated instrumentation that was used to collect

data. The chapter concludes with a description of data collection procedures, threats to validity, ethical considerations, and the data analysis plan.

### **Population and Sampling**

The target population of this study was U.S. employees who worked as HR personnel for any duration from March 2020 to the period of data collection (April 2023). Pandemic-related psychological outcomes were well researched in frontline and health care workers (Giorgi et al., 2020; Vindegaard & Benros, 2020). However, research regarding pandemic-related psychological adaptation was not conducted on the study's target population. As of 2021, there were 782,800 HR employees in the United States (Bureau of Labor Statistics, 2022). It was from this population that the sample for the current study was derived.

The sample used in this study included English-speaking U.S. employees 18 years of age or older who worked in the U.S. HR field for any time from March 2020 to the period of data collection (April 2023). Employment in the HR field at the time of data collection was not required if prospective participants were employed in such a capacity at any point in time since the onset of the pandemic. A nonprobability sampling method (purposive sampling) was used in this study. With this approach, participants were self-selected only if they met the selection criteria. Purposive sampling was best suited for this study because it was a timely and cost-effective approach for this exploratory research (see Stratton, 2021). To aid in the purposive sampling process, I targeted online HR groups with advertisements to participate in this study.

Sample size calculation for ordinary least squares (OLS) regression was estimated using G\*Power v3.1.9.7. It was standard practice to use regression-based tests to estimate the necessary sample size for OLS regression and mediation studies (see Fritz & MacKinnon, 2007). An effect size of .02 was used to accommodate for the moderation necessary in the statistical analysis for the current study. Additionally, five predictors were used based on the study variables. Lastly, a significance level of .05 was selected with the preset power of 89.44% typical for a two-tailed, linear multiple regression (fixed model) and single regression coefficient procedure. The sample size estimated for this study was 518 participants.

### **Recruitment**

Social networking sites and SurveyMonkey Audience were used to recruit a purposive sample of U.S. adults 18 years of age or older who worked in the HR field in the United States for any time from March 2020 to the period of data collection (April 2023). An advertisement flyer used as an invitation to participate in the study was posted on LinkedIn and Facebook, with advertising also targeting social media pages for professional organizations in the HR field listed on LinkedIn and Facebook (see Appendix A). The Walden University Participant Pool was used to recruit participants. A letter of request was also sent to the chief HR officer for a potential partner organization requesting that they circulate the advertisement flyer within the organization's social media outlets (see Appendix B). Participants were invited to complete an online survey consisting of a series of questions derived from validated scales and analyzed using the procedures described later in this chapter.

## **Operationalization of Variables and Instrumentation**

Several constructs of the transactional model of stress and coping were assessed to understand the pandemic's impact on the psychological well-being of HR personnel. Those concepts included pandemic appraisal, coping efforts, meaning-based coping, and psychological adaptation. Each variable was operationally defined and measured using a validated and reliable scale.

### ***Adaptation***

Psychological adaptation in the context of the pandemic served as the dependent variable in this study. In the existing literature, post-traumatic stress, anxiety, depression, and insomnia were the most frequently assessed measures for pandemic-related psychological well-being (Giorgi et al., 2020; Vindegaard & Benros, 2020). In the current study, psychological adaptation was operationally defined as a participant's level of stress, anxiety, depression and insomnia in response to the pandemic. I explored psychological adaptation using the DAISS scale.

The DAISS scale was developed by Chiu et al. (2021a) and tested on 423 patients in Taiwan to understand how the pandemic impacted the mental health burden of psoriasis patients (Chiu et al., 2021b). The four-item DAISS scale demonstrated excellent test-retest reliability (Intraclass Correlation Coefficient = .94) and an average item content validity index for all items of 1.00, with a total level of agreement at 100% (Chiu et al., 2021a). The DAISS scale was strongly correlated with a validated measure of postcrisis psychological distress ( $\rho = .66, p < .001$ ), thereby establishing convergent validity (Chiu et al., 2021a). To make the scale appropriate for the current study, I



modified the verbiage to ask participants how they felt “following the COVID-19 pandemic” instead of “during the COVID-19 pandemic” (see Appendix I). Permission to reuse and modify this scale was granted for noncommercial research and educational purposes (see Appendix J). Additional details about this scale’s internal consistency and rating system can be found in Table 1.

### ***Pandemic Appraisal***

Pandemic appraisal served as the independent variable in this study. Pandemic appraisal consisted of two separate variables (primary appraisal and secondary appraisal) and measured an individual’s perception of an event as stressful and controllable, respectively. Pandemic appraisal was operationally defined as an individual’s appraisal of the pandemic’s impact on their personal or professional life in terms of stress, challenge, manageability, and controllability, consistent with theoretical interpretations (see Gaab et al., 2005; Wethington et al., 2015). Pandemic appraisal was measured with the VAS for psychosocial stress.

The original VAS was created by Hayes and Patterson in 1921 (Gaab et al., 2005). Researchers created a derivative of the VAS to measure psychosocial stress by comparing psychobiological measures of stress to self-reported measures of appraisal in a sample of 81 healthy male adults (Gaab et al., 2005). Although the sample was not a representative sample, the four-item VAS demonstrated internal consistency, as indicated in Table 1. The VAS for psychosocial stress also demonstrated convergent validity by being at least as discriminant as the Primary Appraisal Secondary Appraisal scale at assessing primary and secondary appraisal with statistically significant correlations ( $r =$

.22,  $p = .02$ ,  $r = .29$ ,  $p = .004$ , respectively; Gaab et al., 2005). The four-item VAS included two measures to assess primary appraisal and two measures to assess secondary appraisal. The scale included the phrase “past situation” to refer to a stressful event. In the current study, the verbiage was clarified to refer to the pandemic when participants completed the scale (see Appendix E). Permission to reuse and modify this scale was obtained from Elsevier (see Appendix F).

### ***Coping Efforts and Meaning-Based Coping***

According to the transactional model of stress and coping, stress was purported to be mediated by emotion-focused and problem-focused coping and moderated by meaning-based coping (Wethington et al., 2015). In the current study, problem-focused coping consisted of three domains and was operationally defined as the use of active coping, planning, and instrumental support. Emotion-focused coping consisted of six domains and was operationally defined as the use of social support, self-distraction, denial, venting, substance use, and behavioral disengagement. Meaning-based coping consisted of two domains and was operationally defined as the use of positive reappraisal and drawing on religious or spiritual beliefs. These operational definitions were consistent with their theoretical interpretations (see Carver, 1997; Wethington et al., 2015). The Brief COPE Inventory was used to measure each domain of the coping strategies as they were operationally defined.

The Brief COPE Inventory was created by Carver in 1997 as a 28-item shortened version of the full COPE scale developed in 1989. The Brief COPE measure was originally used to assess coping in a diverse sample of 168 adults who were participating

in a Hurricane Andrew recovery study (Carver, 1997). The Brief COPE Inventory included 14 domains of coping with two questions per domain covering strategies for emotion-focused and problem-focused coping, meaning-based coping, and dispositional coping styles. Questions regarding dispositional coping styles were not relevant to the current study and were not included in the study survey. The exclusion of irrelevant questions rendered a 22-item scale with demonstrated internal consistency, as indicated in Table 1. The questions contained in the Brief COPE Inventory were randomized because there were two similar criteria for each of the 11 domains (see Appendix G). Permission to reuse and modify this scale was granted for noncommercial research and educational purposes (see Appendix H).

Problem-focused coping was transformed into a simple index variable assessed with six questions across three domains (active coping, planning, and instrumental support). Emotion-focused coping was also transformed into a simple index variable that was measured using 12 questions across six domains (social support, self-distraction, denial, venting, substance use, and behavioral disengagement). Lastly, meaning-based coping was transformed into a simple index variable with four questions across two domains (positive reappraisal and drawing on religious or spiritual beliefs). Each index variable was created via simple averaging.

To compute the simple average, I calculated the mean and divided it by the total number of questions for each coping strategy. For example, the mean for problem-focused coping was calculated by averaging the answers to the six questions and dividing by six. Higher scores indicated greater use of problem-focused coping. The same

methodology was applied to emotion-focused coping and meaning-based coping.

Cronbach's alpha was computed to ascertain reliability. The practice of creating a simple index variable was consistent with statistical recommendations (see Wagner, 2020).

**Table 1**

*Study Variables, Instrumentation, and Internal Consistency*

Variable name	Scale (measure)	$\alpha^{1, 2, 3}$
Psychological adaptation	DAISS (5-point Likert)	.91
Pandemic appraisal	VAS for psychosocial stress	
Primary appraisal	(VAS)	.63
Secondary appraisal		.71
Problem-focused coping	Brief COPE <sup>4</sup> (4-point Likert)	
Active coping		.68
Planning		.73
Instrumental support		.64
Emotion-focused coping	Brief COPE <sup>4</sup> (4-point Likert)	
Venting		.50
Substance use		.90
Behavioral disengagement		.65
Social support		.71
Self-distraction		.71
Denial		.54
Meaning-based coping	Brief COPE <sup>4</sup> (4-point Likert)	
Positive reappraisal		.64
Religion		.82

<sup>1</sup> Reliability values for DAISS are from Chiu et al. (2021a).

<sup>2</sup> Reliability values for VAS are from Gaab et al. (2005).

<sup>3</sup> Reliability values for Brief COPE are from Carver (1997).

<sup>4</sup> In Carver (1997), acceptance, humor, and self-blame scales used to measure dispositional coping styles were omitted.

***Demographic Variables***

Age, sex, race, and ethnicity served as influencing variables in previous studies (Bufquin et al., 2021; C.-C. Chen, 2021; Czeisler et al., 2020; Pamidimukkala & Kermanshachi, 2021; Park et al., 2020). In the current study, data on demographic

variables were collected for age, sex, race, and ethnicity. Age was defined in years and asked as an open-response question (see Czeisler et al., 2020). Sex was defined as female, male, nonbinary, or prefer not to say (see Czeisler et al., 2020). Race was defined as White, Black, Asian, and other or multiple races (see Czeisler et al., 2020). Ethnicity was defined as Hispanic or non-Hispanic.

To better describe research participants, I collected information on income, education, and employment status. Income was defined in increments (see Appendix K) and in accordance with Czeisler et al. (2020). Education was defined as the highest level of education obtained, starting from less than high school up to a professional or terminal degree (see Appendix K; Czeisler et al., 2020). Lastly, employment status was measured based on whether an individual was working full-time or part-time or whether they were unemployed or retired (see Czeisler et al., 2020).

Although there are other demographic variables that could be incorporated into the current study, specifically geographical location, the literature indicated that temporary and permanent relocation during the pandemic was higher than in preceding years. Interstate moves increased in the years following the pandemic primarily due to changes in employment and the increased availability of remote work (Dalton & Groen, 2022; Lei & Liu, 2022; S. Tan et al., 2023). This increased the likelihood that individuals lived in multiple states in the years following the onset of the pandemic. Consequently, responses to the pandemic in the United States were explored independent of geography, given the postpandemic increase in migration.

## **Participation and Data Collection Procedures**

Data were collected using Survey Monkey, allowing participants to complete the survey on a smartphone, computer, laptop, or tablet. Each participant was required to complete an electronic informed consent form prior to participating in the survey. The informed consent form summarized the purpose of the study, how the collected data would be used, any risks associated with participation, and contact information.

Participants answered a series of screening questions (see Appendix C) after completing the informed consent. The screening questions were used to verify eligibility. Eligibility questions inquired about age, employment as an HR professional, and country of residence. After completing the survey, the participants answered demographic questions (see Appendix K). The demographic questions were used to obtain demographic data about sex, race, ethnicity, income, education, and employment status. Participation was anonymous, and participants had the option to refuse to answer survey questions. All questions were answered in sequential order, with the exception of questions from the Brief COPE Inventory that were randomized.

Participants were debriefed when exiting the study. The debrief included the researcher's email address for any follow-up questions that participants may have regarding the study and the contact number for a public mental health hotline (see Appendix D). Any emails received were deleted once the study concluded.

### **Threats to Validity**

In this study, anticipated limitations and threats to validity were explored and mitigated. Internal validity determined the degree to which the methodology and data

analysis for this study answered the research questions with minimal bias (Andrade, 2018). External validity determined if the study results within the sample were representative of true findings in the target population. In this section, limitations and threats to the internal and external validity of this study are explored, along with insights into how they were addressed.

Although convenient for the current study, a cross-sectional research design possessed predictive limitations in which a cause-and-effect relationship between the pandemic and psychological outcomes could not be determined (Setia, 2016; Solem, 2015). Given the timing of this study, an experimental design or longitudinal study was not possible. Recall bias was an additional concern. Recall bias occurred when there was a deviation between what the participant reported and what actually occurred (Wang & Cheng, 2020). Consequently, recall bias was a threat to validity in this study because data were collected using surveys and self-reported information based on participants' recollection of historical experiences during the pandemic. Because the data in this study focused on occurrences during and following the pandemic, the flashbulb memory concept served to reduce recall bias. According to the flashbulb memory concept, the likelihood of recall bias was reduced when participants recalled information about major events because such experiences tended to be recalled more vividly and rendered a more reliable memory (Moreno-Serra et al., 2022). Because this study focused on experiences related to the pandemic, the flashbulb memory concept suggested that recall bias was minimal.

Participants in this study were self-selected using purposive sampling and SurveyMonkey Audience. A purposive sampling recruitment strategy introduced nonresponse bias because those who were motivated to participate in this study possessed inherent differences from those who chose not to participate in this study (Stratton, 2021; Wang & Cheng, 2020). Because Survey Monkey provides an incentive for SurveyMonkey Audience participants, undue influence on participant responses may have been introduced. To address this threat to validity, as many participants as possible were recruited to participate in this study, demographic variables were collected to explore representation, only validated scales were included in the instrumentation, and the findings of this study would not be overstated to apply to the target population if the minimum sample size for establishing, at minimum, a small effect was not met.

Limitations for mediation analysis would exist if pandemic appraisal, coping efforts, and meaning-based coping did not have independent effects on adaptation. Historically, it was common practice to terminate mediation analysis if direct effects did not exist between two study variables based on Baron and Kenny's procedures for establishing mediation (Zhao et al., 2010). However, theory and practice indicated that it was possible for a variable to mediate an independent and dependent variable even though a direct effect did not exist between the latter two (Gunzler et al., 2013; Zhao et al., 2010). When a covariate mediated without having a direct effect on the variables, it was known as indirect-only mediation (Zhao et al., 2010). As it applied to this study, it was possible for the relationship between pandemic appraisal and adaptation to be 100% mediated by coping efforts in the absence of direct effects. Consequently, the mediation



analysis and the moderated mediation analysis for the remaining research questions were completed even in the absence of independent effects.

Lastly, this study did not investigate the role that COVID-19 vaccine approval or uptake played in the psychological adaptation of U.S. HR professionals. According to Khubchandani et al. (2021), vaccine approval facilitated returning employees to the office. El-Mohandes et al. (2021) reported that vaccine coverage was associated with returning sectors of the workforce to the office. Consequently, vaccine approval and uptake served as factors for determining if it was safe for the workforce to return to the office during the pandemic (El-Mohandes et al., 2021; Khubchandani et al., 2021). Although vaccine approval may have played a role in HR employees' decision making for transitioning their workforce from home back to the office, vaccine uptake was more relevant in determining the safety of returning to the office. However, access to data regarding actual vaccine uptake within their employee population may not have been available to inform that decision. Consequently, this study did not directly investigate the role that vaccine approval may have played in HR employees' psychological adaptation. However, HR professionals were given the opportunity to reflect on their pandemic-related experiences and provided information on how those circumstances impacted their psychological outcomes. As a result, the psychological effects of transitioning employees back to the office after vaccine approval was possibly reflected in their responses.

Despite these limitations, this descriptive study advanced knowledge in the field of health education and promotion in its attempt to validate the transactional model of stress and coping and predict the role of appraisal, coping efforts, and meaning-based

coping techniques in influencing adaptational outcomes. In addition to addressing limitations and threats to validity, this study also followed ethical procedures.

### **Ethical Procedures**

Approval from the Institutional Review Board (IRB) was obtained to conduct this study using human subjects. The IRB approval number was 03-28-23-1030326. Because this study explored experiences associated with psychological well-being, anonymity and safeguarding each participant's psychological well-being were ethical concerns. This study included informed consent and all data were collected anonymously; no emails, names, or IP addresses were obtained. Data were stored on Survey Monkey and downloaded for analysis to the researcher's laptop, which was password-protected with anti-spyware and antivirus software. Upon completion of this study, all data will be deleted following Walden University's five-year data-keeping requirement. The informed consent document and debrief provided access to a free, publicly available mental health resource that participants could utilize if they encountered any negative experiences or feelings due to participation in this study.

### **Data Analysis Plan**

The Statistical Package for the Social Sciences (SPSS v.28) was used to analyze the data in this study. Only information from eligible participants was included in the data analyses. Screening questions that determined eligibility included age, employment as an HR professional for any duration of time from March 2020 to the date of data collection (April 2023), and residing in the United States during that time frame as well. The research questions and hypotheses were as listed.

RQ1: Do pandemic appraisal, coping efforts, and meaning-based coping have independent effects on U.S. HR employees' adaptation?

$H1_0$ : Pandemic appraisal, coping efforts, and meaning-based coping do not have independent effects on adaptation.

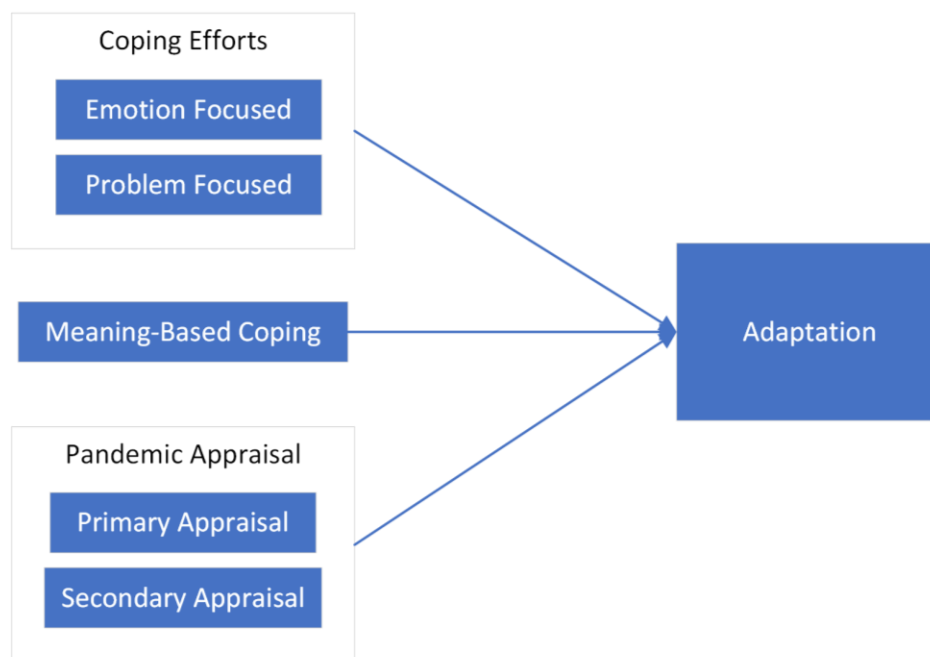
$H1_a$ : Pandemic appraisal has an independent effect on adaptation.

$H1_b$ : Coping efforts have an independent effect on adaptation.

$H1_c$ : Meaning-based coping has an independent effect on adaptation.

## Figure 2

*H1<sub>a-c</sub> Model: Independent Effects of Study Variables*



RQ2: Do coping efforts mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation?

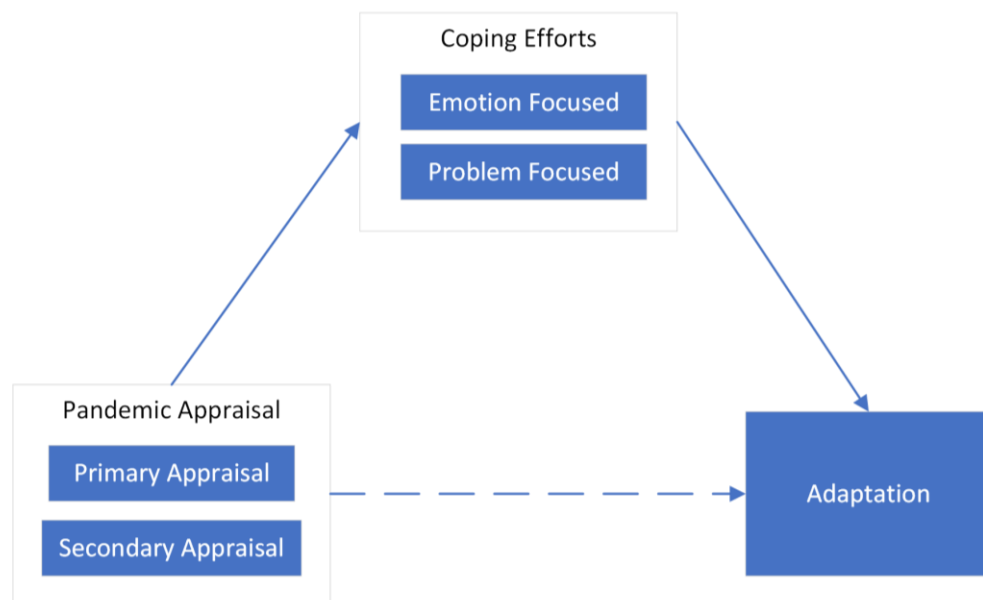
$H2_0$ : Coping efforts do not mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation.

$H2_a$ : Emotion-focused coping efforts mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation.

$H2_b$ : Problem-focused coping efforts mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation.

### Figure 3

*H2<sub>a-b</sub> Model: Coping Efforts as a Mediator*



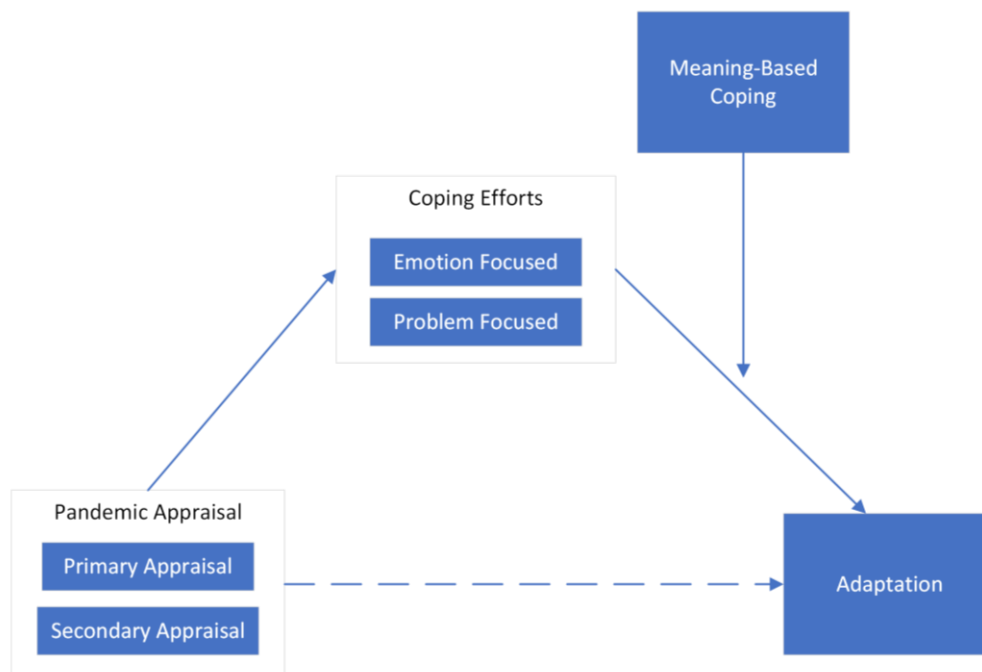
RQ3: Does meaning-based coping moderate the impact of coping efforts on U.S. HR employees' adaptation?

$H3_0$ : Meaning-based coping does not moderate the relationship between coping efforts and U.S. HR employees' adaptation.

*H3*: Meaning-based coping does moderate the relationship between coping efforts and U.S. HR employees' adaptation.

**Figure 4**

*H3 Model: Meaning-Based Coping as a Moderator*



An OLS regression was the anticipated analysis for the hypotheses associated with RQ1. OLS regression determined if pandemic appraisal, coping efforts, and meaning-based coping had independent effects on psychological adaptation. For this analysis, the dependent variable was continuous (Fein et al., 2022). Psychological adaptation served as the dependent variable in this study and was measured using the DAISS. Although the DAISS used a Likert scale, it was common practice for ordinal data to be treated as continuous data without negatively impacting validity and reliability (Robitzsch, 2020). Consequently, this assumption was met. Additionally, the independent

and dependent variables must be linear, p-plots were used to ascertain that errors were normally distributed, and variance inflation factors were used to verify that multicollinearity did not exist. Mahalanobis distance was calculated to ensure there were no multivariate outliers. If predictors of the Mahalanobis values were at the  $p < .001$  level, then the value was considered an outlier and excluded (Tabachnick & Fidell, 2019). Lastly, a scatterplot of residuals was used to determine homoscedasticity and linearity of residuals (Fein et al., 2022).

If the data for this study passed the assumptions associated with RQ1, then they also passed the assumptions needed for the mediation analysis used to explore RQ2 and the moderated mediation analysis anticipated for RQ3. To verify this, the previously described assumptions for OLS regression were also tested using the mediators of emotion-focused and problem-focused coping as the dependent variable as well.

### **Summary**

This research endeavor explored pandemic-related psychological outcomes using a quantitative, survey-based approach. Purposive sampling and advertising on virtual platforms were used to obtain participants from the target population of U.S. HR professionals who worked for any duration of time from March 2020 to the date of data collection (April 2023). Using the procedures outlined in the data analysis plan, this study explored psychological adaptation (dependent variable), pandemic appraisal (independent variable), and coping strategies (mediating and moderating variables) using validated instrumentation, including the DAISS Scale, VAS, and Brief COPE Inventory,

respectively. Upon approval by the Institutional Review Board, participant recruitment and data collection commenced. Chapter 4 presents the study analysis and results.

## Chapter 4: Results

This quantitative study was conducted to examine the degree to which constructs of the transactional model of stress and coping influenced psychological outcomes in response to the pandemic. Interactions between pandemic appraisal, coping efforts, meaning-based coping, and psychological adaptation were examined. The following research questions and hypotheses were used to guide this study:

RQ1: Do pandemic appraisal, coping efforts, and meaning-based coping have independent effects on U.S. HR employees' adaptation?

*H1<sub>0</sub>*: Pandemic appraisal, coping efforts, and meaning-based coping do not have independent effects on adaptation.

*H1<sub>a</sub>*: Pandemic appraisal has an independent effect on adaptation.

*H1<sub>b</sub>*: Coping efforts have an independent effect on adaptation.

*H1<sub>c</sub>*: Meaning-based coping has an independent effect on adaptation.

RQ2: Do coping efforts mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation?

*H2<sub>0</sub>*: Coping efforts do not mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation.

*H2<sub>a</sub>*: Emotion-focused coping efforts mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation.

*H2<sub>b</sub>*: Problem-focused coping efforts mediate the relationship between pandemic appraisal and U.S. HR employees' adaptation.



RQ3: Does meaning-based coping moderate the impact of coping efforts on U.S. HR employees' adaptation?

*H3<sub>0</sub>*: Meaning-based coping does not moderate the relationship between coping efforts and U.S. HR employees' adaptation.

*H3*: Meaning-based coping does moderate the relationship between coping efforts and U.S. HR employees' adaptation.

This chapter describes the data collection process, response rates, and sample characteristics. This is followed by an explanation of how missing data were handled, the assumption testing results, and each scale's reliability. This chapter concludes with results that present the findings from the statistical analysis for each research question and its corresponding hypotheses.

### **Data Collection**

This section includes the data collection time frame, recruitment activities and outcomes, and response rates. The exploration of response rates includes insights into disqualification and abandonment rates. This section also contains details about the baseline descriptive and demographic characteristics. This section concludes with an exploration of how representative the sample was compared to the target population of U.S. HR professionals.

### **Data Collection and Response Rates**

Data collection commenced on March 29, 2023, and concluded on April 19, 2023. Data collection began with a web-based survey link circulated within HR groups on LinkedIn and Facebook. The potential partner organization declined to market the study

flyer within its membership. Because the web-based survey link rendered a low response rate, IRB approval was obtained to use SurveyMonkey Audience to recruit participants. Recruitment via SurveyMonkey Audience was launched on April 11<sup>th</sup> to target HR professionals in the United States. Sixteen responses were obtained via the web-based survey link, and 465 responses were obtained from SurveyMonkey Audience, for 481 participants.

Of the 481 participants, 41.1% ( $n = 185$ ) were disqualified because they did not meet the eligibility criteria for country of residence or field of employment. Additionally, the abandonment rate was 31.6%, with 152 participants deciding not to finish the survey. Abandonment was defined as a participant who qualified to participate based on their responses to the eligibility questions but did not answer any questions beyond the screening questions. Using this definition, responses were not retained for those who abandoned the study. The abandonment rate was attributed to the length of the survey. According to Heerwegh and Loosveldt (2006), survey length was considered a demotivating aspect of participating in online surveys and contributed to an increased abandonment rate. Considering those who were disqualified and the abandonment rate, this rendered a response rate of 61.1% ( $n = 294$ ).

An a priori power analysis indicated a sample size of 518 participants to detect a moderated effect size of .02 with 80% power at a .05 alpha level. Only 294 participants were included in the final data set for this study. Sensitivity analyses indicated that a sample of 294 produced a power of .80 with a .05 alpha level for an  $f^2$  of .032. This value is equivalent to  $r = .18$ . Because this value was still within the boundaries of what is

considered a small effect, there was reasonable power to detect moderated effects (see Cohen, 1992). Consequently, the data analysis plan was completed as intended.

Given the sensitive nature of the study questions regarding psychological well-being, answering questions from the VAS, Brief COPE Inventory, and DAISS was optional. Consequently, some participants did not answer every survey question. Incomplete data were retained for statistical analysis based on the data required for each research question. When completing the OLS regression, I included all responses ( $N = 294$ ) in the analysis. When conducting the mediation analysis, I retained 247 responses in the analysis. When completing the moderated mediation analysis, I included 244 responses in the analysis. Responses were unavailable for participants who did not answer questions in the VAS, Brief COPE Inventory, or DAISS. Sample characteristics were assessed for the study participants.

### **Sample Descriptives and Demographic Characteristics**

Table 2 presents demographic data for the sample. Incomplete responses were retained for statistical analysis. Consequently, the data in Table 2 represent participants who provided demographic information and do not reflect the full sample size.

Most study participants identified as female (53%,  $n = 145$ ). Age ranged between 19 to 80 years ( $M = 42.2$ ,  $SD = 13.0$ ), with most participants employed full-time (92%,  $n = 253$ ) or part-time (5%,  $n = 13$ ). Most of the study sample identified as non-Hispanic (80.6%,  $n = 216$ ) and White (70.4%,  $n = 193$ ) with an average tenure in the HR field of 10 years ( $SD = 9.2$ ,  $n = 148$ ). The most recent comprehensive assessment of the demographic characteristics of the HR field took place in 2020 and consisted of feedback

from over one million U.S. HR employees. National U.S. averages indicated that most HR employees were non-Hispanic, White (64%), and female (73%), with an average age of 41 years (Deloitte, 2021). The current study sample adequately represented the target population given the similarities in sex, age, and race distribution.

In regard to education, 6% of participants possessed a terminal degree ( $n = 17$ ), 26% a master's degree ( $n = 71$ ), 36% a bachelor's degree ( $n = 98$ ), 20% some college ( $n = 56$ ), and 12% a high school diploma or less ( $n = 32$ ). National data from 2020 for U.S. HR employees indicated that most employees in the field possessed a bachelor's degree (73%) or master's degree (26%), with less than 1% possessing a terminal degree (Deloitte, 2021). These national data did not include educational information for those with less than a bachelor's degree. Consequently, the data may slightly overstate U.S. HR employees' education level. Regarding representation, the current study sample included more terminal degrees and fewer bachelor's degrees compared to the target population.

Annual income data indicated that 9% of participants made more than \$200,000 ( $n = 25$ ), 33% earned between \$100,001 and \$200,000 ( $n = 89$ ), 40% made between \$50,001 and \$100,000 ( $n = 110$ ), 13% made between \$25,001 and \$50,000 ( $n = 35$ ), and 5% made less than \$25,000 ( $n = 13$ ). National averages for the U.S. HR employee population indicated that 3% earned more than \$200,000, 15% earned between \$100,001 and \$200,000, 30% earned between \$50,001 and \$100,000, 39% made between \$25,001 and \$50,000, and 13% earned less than \$25,000. Compared to national averages, the study sample reported higher earnings. Although the study sample reported higher earnings and fewer individuals who possessed a bachelor's degree, the sample was

representative of the target population in terms of age, sex, race, and ethnicity (see Table 2).

**Table 2***Participant Descriptive Characteristics*

Characteristic	<i>n</i>	%
Sex		
Male	128	46.7
Female	145	52.9
Prefer not to answer	1	0.4
Race		
Asian	7	2.6
Black	59	21.5
White	193	70.4
Other or multiple races	15	5.5
Ethnicity		
Non-Hispanic	216	80.6
Hispanic	52	19.4
Education		
Less than high school	2	0.7
High school diploma	30	11.0
Some college	56	20.4
Bachelor's degree	98	35.8
Master's degree	71	25.9
Professional or terminal degree	17	6.2
Income level		
Less than \$25,000	13	4.8
\$25,001 - \$50,000	35	12.9
\$50,001 - \$100,000	110	40.4
\$100,001 - \$200,000	89	32.7
More than \$200,000	25	9.2
Employment status		
Full-time	253	92.3
Part-time	13	4.7
Unemployed	8	2.9

*Note.* Due to rounding, some total percentages may not be equal to 100.

## Study Results

This section begins with a review of the reliability of the instrumentation. Thereafter, the results associated with each research question are provided. For RQ1, the results of the OLS regression are detailed, along with findings from the independent effects of each variable. This is followed by a report of the findings from the mediation analysis for RQ2. The results for RQ2 begin with an exploration of the regressions provided by the mediation analysis. This is followed by a description of the direct and indirect effects that emotion-focused and problem-focused coping presented for the mediation of primary and secondary appraisal. This section concludes with an analysis of the findings related to the moderated mediation analysis for RQ3.

### Psychometric Properties of Instrumentation

Table 3 presents means, standard deviations, and correlations. Each correlation coefficient is accompanied by its 95% confidence interval (CI) to define the plausible range of population correlations that could have caused the sample correlation (see Cumming, 2014). Lastly, the table provides Cronbach's alpha for each scale to indicate internal consistency. The independent variable was pandemic appraisal, which consisted of primary and secondary appraisals. The scale for primary appraisal consisted of two items and demonstrated good internal consistency ( $\alpha = .87$ ). The scale for secondary appraisal also consisted of two items and demonstrated acceptable internal consistency ( $\alpha = .74$ ). The dependent variable was a psychological adaptation, which consisted of four items that demonstrated good internal consistency ( $\alpha = .88$ ).

Coping efforts served as the mediating variable and consisted of emotion-focused and problem-focused coping. Emotion-focused coping included 12 items and demonstrated good internal consistency ( $\alpha = .88$ ). Problem-focused coping included six items and good internal consistency ( $\alpha = .84$ ). Lastly, meaning-based coping served as the moderating variable. It consisted of four items that demonstrated acceptable internal consistency ( $\alpha = .78$ ).

**Table 3**

*Range, Means, Standard Deviations, Correlations, and Reliabilities*

Variable	Range	Mean (SD)	1	2	3	4	5	
Psychological adaptation <i>n</i> = 265	1-4	3.11 (1.14)	.88					
Primary appraisal <i>N</i> = 281	0-100	70.17 (23.27)	.36** [.25, .46]	.87				
Secondary appraisal <i>N</i> = 278	0-100	65.19 (21.42)	.16* [.03, .28]	.42** [.31, .51]	.74			
Emotion-focused coping <i>N</i> = 264	1-4	2.42 (0.69)	.57** [.47, .65]	.24** [.12, .36]	.26** [.14, .38]	.88		
Problem-focused coping <i>N</i> = 272	1-4	3.11 (0.65)	.18** [.05, .30]	.30** [.18, .41]	.32** [.21, .43]	.36** [.25, .47]	.84	
Meaning-based coping <i>N</i> = 275	1-4	2.91 (0.81)	.14* [.01, .26]	.18** [.05, .30]	.26** [.14, .37]	.47** [.37, .56]	.58** [.49, .66]	.78

*Note.* *M* and *SD* represent mean and standard deviation, respectively. Values in square brackets indicate the lower level and the upper level for the 95% confidence interval for each correlation. \* indicates  $p < .05$  and \*\* indicates  $p < .01$  for the correlations. Scale reliabilities are on the diagonal.

**Assumption Testing**

OLS regression tested the hypotheses associated with RQ1. Consequently, assumption testing was completed to ensure that the best possible estimates were



obtained. Assumptions regarding the linearity of residuals, normality of residuals, multicollinearity, multivariate outliers, and homoscedasticity were completed. The assumptions for OLS regression are the same for the mediation analysis used to explore RQ2 and the moderated mediation analysis used for RQ3, as these approaches were extensions of OLS regression. To verify that the assumptions were met for all research questions, the assumptions for OLS regression were also tested using the mediators (emotion-focused and problem-focused coping) as independent variables. The following sections report the results of assumption testing.

### ***Variable Type and Linearity***

According to Fein et al. (2022), the dependent variable in OLS regression must be continuous. The dependent variable in this study, psychological adaptation, was measured using the DAISS, a Likert-based scale. According to Robitzsch (2020), ordinal data can be treated as continuous without negatively impacting validity and reliability. In this study, treating psychological adaptation as a continuous variable did not negatively impact the scale reliability ( $\alpha = .88$ ). Consequently, this assumption was met. The OLS regression also assumed that the independent and dependent variables had a linear relationship (Tabachnick & Fidell, 2019). The scatterplots indicated that primary and secondary appraisals possessed a linear, minimally correlated relationship. As a result, this assumption was also met.

### ***Normal Distribution, Linearity, and Multicollinearity***

Additional assumptions for OLS regression required that errors be normally distributed, homoscedastic, linear, and free from multicollinearity (Tabachnick & Fidell,

2019). To ascertain the normality of residuals, p-plots were assessed for residual values. The p-plots rendered lines approximately straight and diagonal without being skewed in any particular direction. Consequently, this assumption was met. A plot of standardized predicted scores (x) by standardized residuals (y) showed no evidence of non-linearity, satisfying the linearity of the residuals assumption. The tolerance values of variance inflation factors were used to test the assumption regarding multicollinearity. According to Tabachnick and Fidell (2019), tolerance values no less than .2 are acceptable. The absence of multicollinearity assumption was met because all tolerance values were greater than .2 in this study.

#### ***Multivariate Outliers and Homoscedasticity***

OLS regression also assumed no multivariate outliers existed in the data (Tabachnick & Fidell, 2019). In this study, Mahalanobis distance was calculated to ensure no multivariate outliers. According to Tabachnick and Fidell (2019), cases with Mahalanobis values that were at the  $p < .001$  level should be considered outliers and excluded (Tabachnick & Fidell, 2019). This study's largest Mahalanobis value was 18.8, with five predictors that produced a  $p = .002$ . Because all cases were above the  $p < .001$  threshold, there were no multivariate outliers, and all cases were included in the data analysis.

Lastly, OLS regression assumed homoscedasticity (Fein et al., 2022). A scatterplot of standardized predicted scores by standardized residuals was used to determine homoscedasticity. The variance was constant across observations with no evidence of unequal scatter. Consequently, the assumption of homoscedasticity was met.

In conclusion, all assumptions for OLS regression were met, and the data analysis plan was completed as intended.

### **Results for RQ1: Independent Effects**

OLS regression analysis tested for independent effects between each study variable and the dependent variable, psychological adaptation. The following five study variables were predictors: primary appraisal, secondary appraisal, emotion-focused coping, problem-focused coping, and meaning-based coping. Findings for the OLS regression included unstandardized coefficients as was normative for research questions leading to mediation analysis (Hayes, 2022). The results of the OLS regression are presented in Table 4, with the squared semi-partial correlations serving as the best measure of effect size. Findings indicated that the five predictors explained 40.3% of the variance in psychological adaptation,  $R^2 = .40$ ,  $F(5,238) = 32.09$ ,  $p < .001$ . Primary appraisal significantly predicted psychological adaptation ( $b = 0.01$ ,  $p < .001$ ), as did emotion-focused coping ( $b = 0.99$ ,  $p < .001$ ), and meaning-based coping ( $b = -0.25$ ,  $p = .008$ ).

**Table 4***OLS Regression Results Predicting Psychological Adaptation*

<i>Predictor</i>	<i>b</i>	<i>b</i> 95% CI	<i>sr</i> <sup>2</sup>	<i>sr</i> <sup>2</sup> 95% CI
(Intercept)	0.72*	[0.10, 1.34]		
Primary appraisal	0.01**	[0.01, 0.02]	.06	[.01, .11]
Secondary appraisal	-0.00	[-0.01, 0.00]	.00	[-.01, .02]
Emotion-focused coping	0.99**	[0.80, 1.18]	.27	[.18, .35]
Problem-focused coping	0.01	[-0.21, 0.23]	.00	[-.00, .00]
Meaning-based coping	-0.25**	[-0.43, -0.07]	.02	[-.01, .04]

*Note.*  $R^2 = .403^{**}$ , 95% CI [.30, .47]. *b* represents unstandardized regression weights.  $sr^2$

represents the semi-partial correlation squared. The [*LL*, *UL*] indicates the lower and upper limits of a confidence interval, respectively. \* indicates  $p < .05$ . \*\* indicates  $p < .01$ . Significant *b*-weights indicate the squared semi-partial correlation is also significant.

***Independent Effect of Primary Appraisal***

This study used two indicators for primary appraisal, including perceived stress and perceived challenges. As primary appraisal scores increased, perceived stress and challenges increased. This study used four indicators for psychological adaptation, including depression, anxiety, insomnia, and stress, as defined within the DAISS. Higher scores on psychological adaptation indicated worse psychological outcomes. Based on findings from the OLS regression, HR employees with higher scores for primary appraisal presented higher scores for psychological adaptation, meaning that psychological outcomes were worse as perceived stress and challenges increased.

***Independent Effect of Emotion-Focused Coping***

This study used 12 items for emotion-focused coping within six domains, venting, substance use, behavioral disengagement, social support, self-distraction, and denial. As

emotion-focused coping scores increased, the more likely an individual was to engage in behaviors within those six domains. Findings from the OLS regression indicated that participants with higher scores for emotion-focused coping presented higher scores for psychological adaptation. The more emotion-focused coping strategies an HR professional engages in, the poorer their psychological outcomes.

### ***Independent Effect of Meaning-Based Coping***

This study used four indicators for meaning-based coping within two domains, positive reappraisal, and religiosity/spirituality. As meaning-based coping scores increased, an individual was more likely to engage in behaviors within the two domains. Based on findings from the OLS regression, HR professionals with higher scores for meaning-based coping presented lower scores for psychological adaptation. The more meaning-based coping strategies participants used, the better their psychological outcomes.

### ***Predictors Lacking Statistical Significance***

Although secondary appraisal and problem-focused coping did not have a statistically significant independent effects on psychological adaptation, variables can have an indirect-only mediation in which a mediated effect exists in the absence of direct effects (Gunzler et al., 2013; Zhao et al., 2010). As a result, the mediation and moderated mediation analyses for the remaining research questions were completed.

### ***Summary of Results for Independent Effects***

Based on the findings from the OLS regression, the null hypothesis was rejected for primary appraisal, emotion-focused coping, and meaning-based coping. For

secondary appraisal and problem-focused coping, the null hypothesis was not rejected. Given that pandemic appraisal consisted of two constructs, only one demonstrating statistically significant findings, the analyses for RQ2 and RQ3 explored primary and secondary appraisals separately. The same method applied to coping efforts: emotion-focused and problem-focused coping. This was also done because the data analysis technique for RQ2 and RQ3 required one independent variable per model. This method of separating the variables was consistent with best practices (Hayes, 2022).

### **Results for RQ2: Mediation Analysis**

To understand if emotion-focused coping or problem-focused coping mediated the relationship between pandemic appraisal and psychological adaptation, a mediation analysis was completed using Hayes PROCESS Model 4. Because PROCESS Model 4 does not allow for two independent variables, two separate mediation analyses were conducted. The first analysis used primary appraisal as the independent variable and secondary appraisal as the covariate to test for mediation. This test provided equivalent estimates for models with two independent variables but did not test mediation for the covariate, necessitating a second analysis. The second analysis used secondary appraisal as the independent variable and primary appraisal as the covariate to test for mediation, thus allowing for a test of mediation for the secondary appraisal variable. This approach was consistent with common practices for using PROCESS Model 4 with multiple independent variables (Hayes, 2022).

### ***Primary Appraisal and Mediating Effects of Coping Efforts on Adaptation***

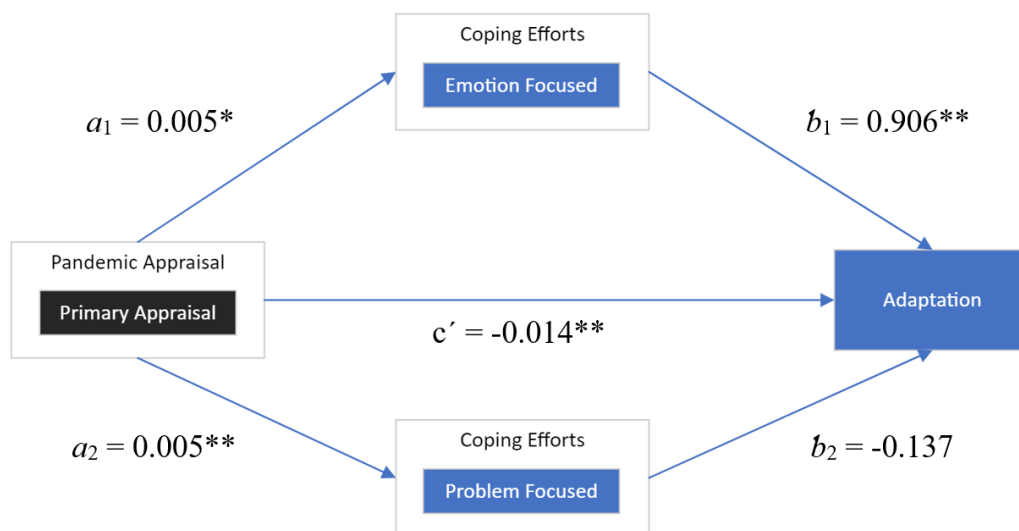
In the first mediation analysis, secondary appraisal served as the covariate while testing for the mediating effects of coping efforts on primary appraisal and psychological adaptation. PROCESS presents separate regression analyses representing the prediction of each mediator by independent variables and covariates. The initial regression explored how much variation in emotion-focused coping was attributed to primary and secondary appraisal (the path for a primary appraisal is represented as  $a_1$  in Figure 5). According to this regression, primary and secondary appraisals significantly predicted emotion-focused coping,  $R^2 = .09$ ,  $F(2,244) = 11.99$ ,  $p < .001$ . The second regression explored how much variation in problem-focused coping was attributed to primary and secondary appraisal (the path for a primary appraisal is illustrated as  $a_2$  in Figure 5). According to this regression, primary and secondary appraisals significantly predicted problem-focused coping,  $R^2 = .14$ ,  $F(2,244) = 19.57$ ,  $p < .001$ .

The third regression explored how much variation in psychological adaptation was attributed to primary appraisal, emotion-focused, and problem-focused coping (illustrated in Figure 5 as  $c'$ ,  $b_1$ , and  $b_2$ , respectively). According to this regression, 38.6% of the variance in adaptation was explained by primary appraisal, secondary appraisal, emotion-focused coping, and problem-focused coping,  $R^2 = .39$ ,  $F(4,242) = 38.06$ ,  $p < .001$ . More emotion-focused coping related to higher psychological adaptation scores ( $b = 0.91$ ,  $p < .001$ ). Problem-focused coping was unrelated to higher psychological adaptation scores ( $b = 0.14$ ,  $p < .001$ ). The direct and indirect effects of primary appraisal

on psychological adaptation were the most relevant information pertained to the process being modeled.

### Figure 5

*Statistical Diagram of Coping Efforts Mediated Effects on the Primary Appraisal and Adaptation Relationship*



*Note.* \* indicates  $p < .05$ . \*\* indicates  $p < .01$ . This is a revised configuration for the statistical diagram of the parallel multiple mediator models, as depicted in Hayes (2022).

**Direct Effects: Emotion-Focused Coping as Mediator.** As illustrated in Figure 5, the direct effect ( $c' = 0.01, p < .001$ ) quantified the effect of primary appraisal on psychological adaptation, independent of the effect of the mediators (emotion-focused coping and problem-focused coping) on psychological adaptation after accounting for secondary appraisal, as well as emotion-focused coping and problem-focused coping. HR professionals who scored higher on primary appraisal were more likely to report higher scores for psychological adaptation when compared to those who scored lower on primary appraisal. Consistent with the findings from the OLS regression in RQ1, HR



employees who perceived greater stress or challenges during the pandemic experienced worse psychological outcomes.

**Indirect Effects: Emotion-Focused Coping as Mediator.** The first indirect effect of primary appraisal on psychological adaptation was modeled through emotion-focused coping. Significance tests for indirect or mediated effects employed the 95% percentile bootstrapped confidence interval. The percentile bootstrap was the preferred significance test for indirect or mediated effects because it was appropriate for the non-normal distribution of such effects, whereas tests that provided a probability value (e.g., Sobel test) assumed normality (Hayes, 2022). The indirect effect of primary appraisal on psychological adaptation was statistically significant,  $b = 0.004$ , 95% CI [0.001, 0.007], within which emotion-focused coping significantly mediated the relationship between primary appraisal and psychological adaptation. This indirect effect is estimated as  $a_1b_1 = 0.005(0.906) = 0.004$  (see Figure 5). This indicated that two cases that differed by one unit on primary appraisal were estimated to vary by 0.004 units in their psychological adaptation through emotion-focused coping. In other words, HR professionals who reported higher perceived stress and challenges (primary appraisal) presented higher scores on psychological adaptation (worse psychological outcomes) due to their use of emotion-focused coping strategies.

As indicated in Table 5, the 95% confidence interval indicated that the total indirect effect of primary appraisal through both mediators simultaneously was likely somewhere between 0.001 and 0.007 in the population. Although this supported the claim that emotion-focused coping and problem-focused coping collectively mediated the effect

of primary appraisal on psychological adaptation, it was important to note that findings for problem-focused coping were not statistically significant. The contrast between indirect effects indicated that emotion-focused coping was the stronger mediated effect, as discussed in the next section.

**Table 5**

*Mediated Effects of Coping Efforts on the Primary Appraisal-Adaptation Relationship*

Effect	<i>b</i>	95% CI	<i>SE</i>
Direct effect: primary appraisal → psychological adaptation	0.014**	[0.008, 0.019]	.003
Indirect effect: primary appraisal → emotion-focused coping	0.004*	[0.001, 0.007]	.002
Indirect effect: primary appraisal → problem-focused coping	-0.001	[-0.002, 0.004]	.001
Total indirect effect	0.003*	[0.002, 0.007]	.002
Contrast comparing indirect effects	0.005*	[0.002, 0.008]	.002

*Note.* *b* represents path coefficients. The [*LL*, *UL*] indicates the lower and upper limits of a confidence interval, respectively. \* indicates  $p < .05$ . \*\* indicates  $p < .01$ . *SE* indicates standard error.

**Indirect Effects: Problem-Focused Coping as Mediator.** A second indirect effect of primary appraisal on psychological adaptation was modeled through problem-focused coping, estimated as  $a_2b_2 = 0.005(-0.137) = -0.001$ . In this estimation,  $a_2$  represented the variation in problem-focused coping attributed to primary appraisal, and  $b_2$  represented the effect of problem-focused coping on psychological adaptation (as illustrated in Figure 5). However, the findings were not statistically significant. As a result, problem-focused coping did not mediate the relationship between primary appraisal and psychological adaptation.

When considering the relationship between primary appraisal and psychological adaptation, comparing the strength of the two mediated effects (labeled as contrast comparing indirect effects in Table 5) indicated that emotion-focused coping was the

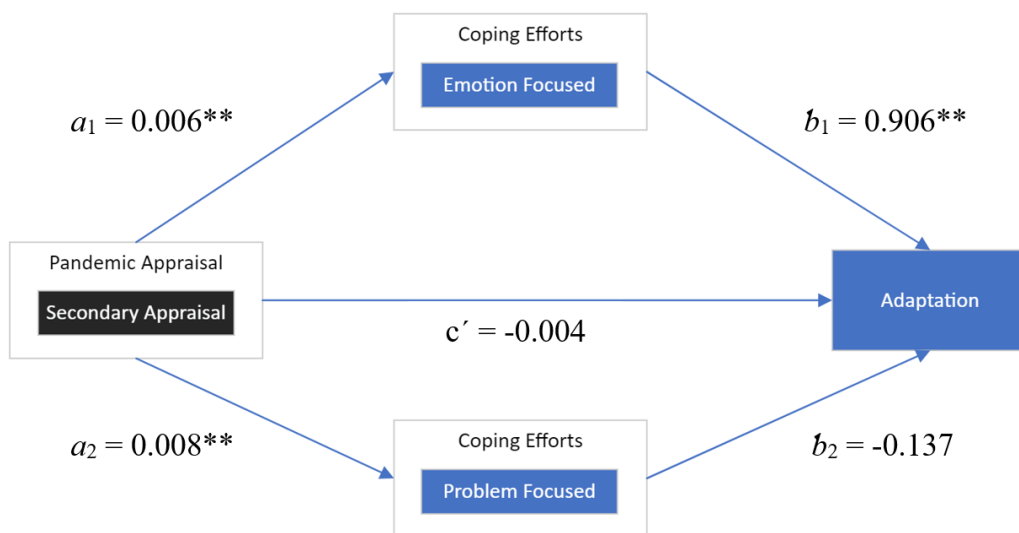
stronger mediated effect compared to problem-focused coping (0.004 and -0.001, respectively).

### ***Secondary Appraisal and Mediating Effects of Coping Efforts***

In the second mediation analysis, primary appraisal served as the covariate while testing for the mediating effects of coping efforts on secondary appraisal and psychological adaptation. The findings from the regressions explored in the first mediation analysis for primary appraisal were identical in this second mediation analysis because all the data and variables in the regression were the same. The only difference was the coefficients used to represent intervariable relationships because secondary appraisal served as the independent variable instead of primary appraisal (see Figure 6). The direct and indirect effects of secondary appraisal on psychological adaptation provided pertinent information related to the process being modeled.

**Figure 6**

*Statistical Diagram of Coping Efforts Mediated Effects on the Secondary Appraisal and Adaptation Relationship*



*Note.* \* indicates  $p < .05$ . \*\* indicates  $p < .01$ . This is a revised configuration for the statistical diagram of the parallel multiple mediator models, as depicted in Hayes (2022).

**Direct Effects: Emotion-Focused Coping as Mediator.** As illustrated in Figure 6, the direct effect between secondary appraisal and psychological adaptation, independent of the mediating effect of coping efforts, was not statistically significant ( $c' = -0.004, p = .17$ ). Consistent with the findings from the OLS regression in RQ1, a secondary appraisal was not a statistically significant predictor of psychological adaptation.

**Indirect Effects: Emotion-Focused Coping as Mediator.** The first indirect effect of secondary appraisal on psychological adaptation was modeled through emotion-focused coping. The total effect of secondary appraisal on adaptation was not statistically significant ( $b = 0.001, p = .87$ ). Because two mediators were included in this PROCESS

model, each were assessed for statistical significance. Emotion-focused coping significantly mediated the relationship between secondary appraisal and psychological adaptation  $b = 0.006$ , 95% CI [0.002, 0.010]. The indirect effect through emotion-focused coping was estimated as  $a_1b_1 = 0.006(0.906) = 0.006$ , as shown in Figure 6.

Consequently, two cases that differed by one unit on secondary appraisal were estimated to vary by .006 units in their psychological adaptation through emotion-focused coping. In other words, HR employees who reported greater perceived control during the pandemic (secondary appraisal) presented higher scores on psychological adaptation (worse psychological outcomes) due to their use of emotion-focused coping.

As demonstrated in Table 6, the 95% confidence interval indicated that the total indirect effect of secondary appraisal through both mediators simultaneously was somewhere between 0.001 and 0.009. Similar to the previous model, this supported the claim that emotion-focused coping and problem-focused coping collectively mediated the effect of secondary appraisal on psychological adaptation. However, results indicated that findings for problem-focused coping were not statistically significant.

**Table 6***Mediated Effects of Coping Efforts on the Secondary Appraisal-Adaptation Relationship*

Effect	<i>b</i>	95% CI	<i>SE</i>
Direct effect: secondary appraisal_psychological adaptation	-0.004	[-0.010, 0.002]	.003
Indirect effect: secondary appraisal_emotion-focused coping	0.006*	[0.002, 0.010]	.002
Indirect effect: secondary appraisal_problem-focused coping	-0.001	[-0.003, 0.001]	.001
Total indirect effect	0.005*	[0.001, 0.009]	.005
Contrast comparing indirect effects	0.007*	[0.003, 0.012]	.002

*Note.* *b* represents path coefficients. The [*LL*, *UL*] indicates the lower and upper limits of a confidence interval, respectively. \* indicates  $p < .05$ . \*\* indicates  $p < .01$ . *SE* indicates standard error.

**Indirect Effects: Problem-Focused Coping as Mediator.** The second indirect effect of secondary appraisal on psychological adaptation was modeled through problem-focused coping, estimated as  $a_2b_2 = 0.008(-0.137) = -0.001$ . In this estimation,  $a_2$  represented the variation in problem-focused coping attributed to secondary appraisal, and  $b_2$  represented the effect of problem-focused coping on psychological adaptation (as illustrated in Figure 6). Because this finding was not statistically significant,  $b = 0.001$ , 95% CI [-0.003, 0.010], it was determined that problem-focused coping did not mediate the relationship between secondary appraisal and psychological adaptation.

When considering the relationship between secondary appraisal and psychological adaptation, comparing the strength of the two mediated effects indicated that emotion-focused coping was the stronger mediated effect compared to problem-focused coping (0.006 and -0.001, respectively). Based on the results of PROCESS Model 4, the null hypothesis for emotion-focused coping was rejected, and the null hypothesis for problem-focused coping was not rejected.

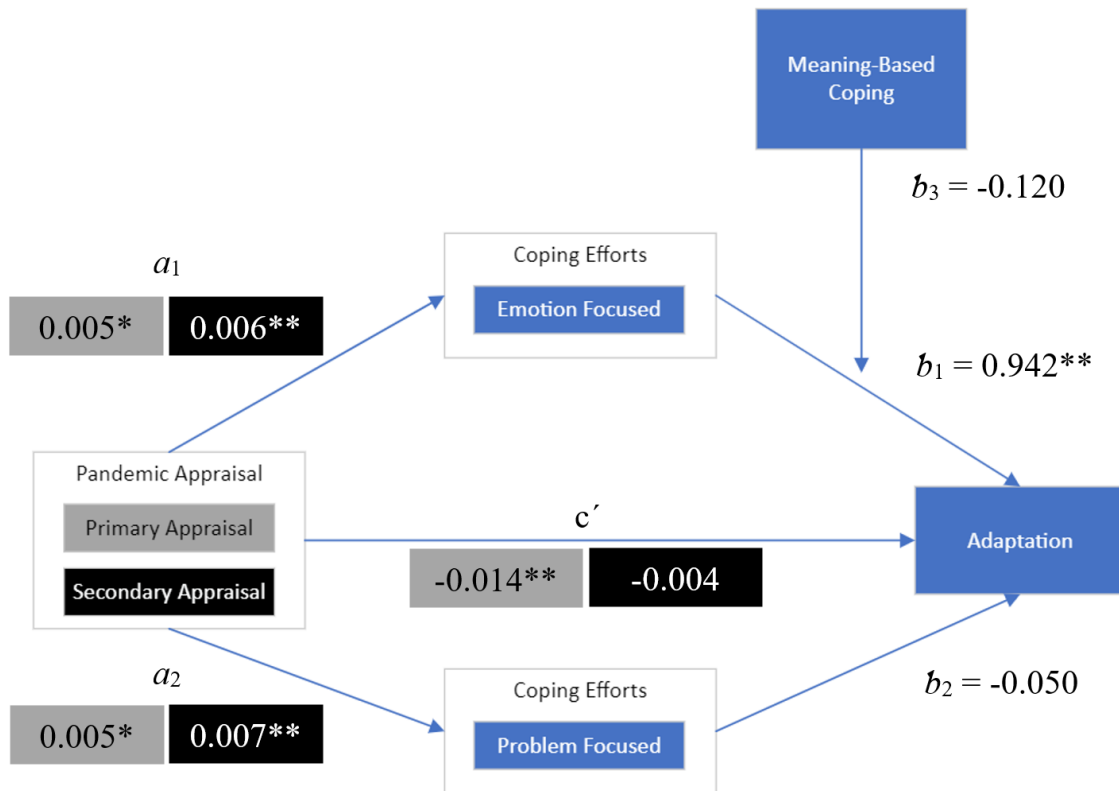
### Results for RQ3: Moderated Mediation Analysis

To understand if meaning-based coping moderated the relationship between coping efforts and psychological adaptation, two moderated mediation analyses were completed using Hayes PROCESS Model 14. Two separate moderated mediation analyses were conducted because PROCESS Model 14 does not allow for two independent variables. The first analysis used primary appraisal as the independent variable and secondary appraisal as the covariate to test for moderation. The second analysis used secondary appraisal as the independent variable and primary appraisal as the covariate to test for moderation. As with the mediation analysis, this approach was consistent with best practices (Hayes, 2022).

The moderated effect of emotion-focused coping was modeled through primary appraisal and secondary appraisal, as indicated in Figure 7. The index of moderated mediation (*IMM*) was not statistically significant for either effect, indicating that meaning-based coping did not moderate the mediated effect of emotion-focused coping efforts on the relationship between primary appraisal and psychological adaptation,  $IMM = 0.001$ , 95% CI [-0.001, 0.002] and  $IMM = -0.001$ , 95% CI [-0.002, 0.001], respectively. Turning to moderation of the mediated effect of problem-focused coping of the secondary appraisal-psychological adaptation relationship, results again were not significant for either emotion- or problem-focused coping,  $IMM = 0.001$ , 95% CI [-0.001, 0.003] and  $IMM = -0.001$ , 95% CI [-0.004, 0.001].

**Figure 7**

*Statistical Diagram of the Moderated Effects of Meaning-Based Coping on the Mediated Effect of Coping Efforts on Pandemic Appraisal and Adaptation*



*Note.* \* indicates  $p < .05$ . \*\* indicates  $p < .01$ . This is a revised configuration for the statistical diagram of the conditional process model, as depicted in Hayes (2022).

Table 7 provides additional details regarding the moderated effects. Because none of the findings for moderated effects were statistically significant, meaning-based coping did not moderate the mediated effect of coping efforts on the relationship between pandemic appraisal and psychological adaptation. Consequently, the null hypothesis was not rejected.



**Table 7***Moderated Effects of Meaning-Based Coping on Pandemic Appraisal-Adaptation**Relationship*

Effect	<i>IMM</i>	95% CI	<i>SE</i>
Primary appraisal_emotion-focused coping	0.001	[-0.001, 0.002]	.001
Primary appraisal_problem-focused coping	-0.001	[-0.002, 0.001]	.001
Secondary appraisal_emotion-focused coping	0.001	[-0.001, 0.003]	.001
Secondary appraisal_problem-focused coping	-0.001	[-0.004, 0.001]	.001

*Note.* *IMM* represents path coefficients from the index of moderated mediation. The [LL,

*UL*] indicates the lower and upper limits of a confidence interval, respectively. \*

indicates  $p < .05$ . \*\* indicates  $p < .01$ . *SE* indicates standard error.

**Results From Post Hoc Analyses**

A Pearson correlation was completed to understand if age was related to psychological adaptation, as indicated in previous literature. In this study, age was weakly correlated with decreased psychological outcomes in older HR employees,  $r(263) = -.264, p < .001, 95\% \text{ CI } [-.373, -.148]$ . Independent samples t-tests were used to explore sex-related differences in psychological adaptation and the use of emotion-focused coping as demonstrated in the existing literature. In this study, a comparison of males and females revealed there was no statistically significant difference in psychological adaptation,  $95\% \text{ CI } [-.38, .17], t(246.3) = -0.755, p = .46, d = 0.09$ . Further comparisons demonstrated there was no statistically significant difference in the use of emotion-focused coping among males and females,  $95\% \text{ CI } [-.28, .05], t(240.4) = -1.39, p = .17, d = 0.17$ . Lastly, there were no statistically significant differences between psychological adaptation when comparing racial minorities to non-minorities,  $F(3, 261) = 3.39, p = .019, \eta^2 = .038$ .

## Summary

This quantitative study aimed to explore the degree to which constructs from the transactional model of stress and coping influenced psychological outcomes for HR professionals as they navigated the pandemic. Specifically, this study explored the independent effects of pandemic appraisal, coping efforts, and meaning-based coping on psychological adaptation. This study also investigated if coping efforts mediated the relationship between pandemic appraisal and psychological adaptation. Lastly, this study explored if meaning-based coping moderated the relationship between coping efforts and psychological adaptation using a representative sample of U.S. HR employees and scales with demonstrated internal consistency.

The regression model demonstrated that the five study predictors explained 40.3% of the variance in psychological adaptation. Findings related to the predictive abilities of primary appraisal, emotion-focused coping, and meaning-based coping were statistically significant. HR professionals who reported increased perceived stress, challenges, and use of emotion-focused coping strategies during the pandemic experienced a decrease in psychological well-being. HR professionals that reported increased use of meaning-based coping strategies while navigating the pandemic experienced better psychological well-being.

PROCESS Model 4 was used to explore the mediating role of emotion-focused and problem-focused coping for the relationship between primary and secondary appraisal (in two separate analyses) and psychological adaptation. The total indirect effect of primary appraisal on psychological adaptation was statistically significant.

When looking at each mediator individually, emotion-focused coping mediated the primary appraisal-psychological adaptation relationship, but problem-focused coping did not indicate a statistically significant mediating presence. Emotion-focused coping was the stronger mediated effect, with HR professionals who perceived the pandemic as stressful or challenging experiencing poor psychological outcomes when they used emotion-focused coping strategies.

The total indirect effect of secondary appraisal on psychological adaptation was also statistically significant. A review of each mediator indicated that emotion-focused coping mediated the secondary appraisal-psychological adaptation relationship, but problem-focused coping did not demonstrate a statistically significant mediating effect. Again, emotion-focused coping was the stronger mediated effect, with HR professionals who experienced greater perceived control during the pandemic presenting with poor psychological outcomes when they used emotion-focused coping strategies. In both models, the use of emotion-focused coping strategies resulted in a decrease in psychological adaptation.

PROCESS Model 14 explored the moderating role of meaning-based coping between coping efforts and psychological adaptation. The models produced results that were not statistically significant. The data did not indicate that meaning-based coping moderated the relationship between coping efforts and psychological adaptation. It is important to note that failure to reject some of the null hypotheses indicated that the data analysis did not prove the hypotheses to be false; it is not an indication that the null hypothesis was true. Chapter 5 reviews the implications of this finding in greater detail.

This discussion continues in Chapter 5 with an interpretation of the study findings, implications for psychological adaptation, the transactional model of stress and coping, and social change, along with the study limitations and recommendations for future research.

## Chapter 5: Discussion, Conclusions, and Recommendations

The current study was conducted to understand the psychological implications of the pandemic in U.S. HR employees. HR professionals were critical in business operations and employee relations in response to the pandemic. Although HR professionals experienced an increase in work demands similar to other sectors of the workforce, research exploring the psychological implications of the pandemic on U.S. HR employees was lacking (Bagheri & Seyed Naghavi, 2022; Carnevale & Hatak, 2020; Maddox-Daines, 2021). Consequently, this nonexperimental quantitative study was conducted to investigate the pandemic's impact on the psychological well-being of a sample of U.S. HR professionals. The transactional model of stress and coping served as the theoretical foundation for examining pandemic appraisal, the mediating role of coping efforts, and the moderating role of meaning-based coping on psychological adaptation.

A purposive sample of 294 U.S. HR employees was recruited to complete an online survey that assessed stress appraisal, coping strategies, and psychological well-being. HR employees who reported higher levels of perceived stress (primary appraisal) and greater use of emotion-focused coping strategies during the pandemic experienced decreased psychological well-being. Alternatively, HR professionals who used religion or positive reappraisal (meaning-based coping) to navigate the pandemic reported better psychological outcomes. Findings from the regression model also indicated that secondary appraisal and problem-focused coping did not have independent effects on psychological adaptation.

Results regarding mediated effects of emotion-focused coping on the relationship between primary appraisal and psychological adaptation demonstrated statistical significance. HR employees who believed their pandemic-related experiences were stressful experienced a decrease in psychological well-being when they used emotion-focused coping strategies to navigate the pandemic. Emotion-focused coping also mediated the relationship between secondary appraisal and psychological adaptation. Interestingly, even when HR employees perceived their pandemic-related experiences as controllable and manageable, they experienced decreased psychological well-being when using emotion-focused coping strategies. The mediated effects demonstrated that using emotion-focused coping led to a decrease in psychological well-being. Problem-focused coping did not mediate the relationship between pandemic appraisal and psychological adaptation, and meaning-based coping did not moderate the relationship between coping efforts and adaptation.

### **Interpretation of the Findings**

The results from this study are interpreted in the following sections, beginning with implications that compare the results of the current study to previous research. The role played by each study variable is explored about psychological adaptation. Thereafter, the interpretation of findings transitions to an overview of how this study's results confirmed, disconfirmed, or extended knowledge in the health education and promotion discipline, specifically within the niche of employee wellness. This section concludes with the same approach to review the study implications for the transactional model of stress and coping.

## **Implications for the Psychological Adaptation of U.S. HR Employees**

An exploration of predictors revealed that appraisal and coping strategies explained roughly 40% of the variance in psychological adaptation, with significant relationships found for primary appraisal, emotion-focused coping, and meaning-based coping. The mediated effects of emotion-based coping were also significant. Although there was a failure to reject several null hypotheses, there were implications for statistically significant findings. As a result, implications for each predictor, mediator, and moderator of psychological adaptation are provided in the following sections, along with implications for demographic-related findings.

### ***Primary Appraisal in U.S. HR Employees***

It was common for employees to experience an increase in workload following the pandemic (Ben-Ezra & Hamama-Raz, 2021; McCoyd et al., 2022; Poelmann et al., 2021). These findings were consistent across several sectors of the U.S. workforce, including the HR field (Bagheri & Seyed Naghavi, 2022; Parent-Lamarche & Boulet, 2021; Yu et al., 2021). However, the degree to which pandemic-related challenges (i.e., increased workload) impacted the psychological well-being of U.S. HR employees was unclear. Evidence from other sectors of the U.S. workforce indicated that higher levels of perceived stress (primary appraisal) were associated with poor psychological outcomes (Zhou et al., 2021). The findings from the current study confirm the same outcome for U.S. HR employees. The relationship between primary appraisal and adaptation supports the notion that greater perceptions of stress and pandemic-related challenges led to increased levels of depression, anxiety, insomnia, or stress.

### ***Secondary Appraisal in U.S. HR Employees***

Evidence from other sectors of the U.S. workforce also indicated that higher levels of self-efficacy and perceived control (secondary appraisal) were associated with better psychological outcomes (Zhou et al., 2021). The current study did not confirm any predictive effects of secondary appraisal on psychological adaptation in U.S. HR employees, thereby providing a novel contribution to the existing literature because the current study appeared to be the first test of this relationship. Although the effect of secondary appraisal on adaptation was not significant, other variables played a role in this relationship.

### ***Emotion-Focused Coping in U.S. HR Employees***

In the current study, emotion-focused coping strategies were integral to psychological adaptation. U.S. HR employees who used emotion-focused coping strategies during the pandemic reported higher levels of stress, anxiety, depression, and insomnia. This remained the case even when HR employees possessed higher self-efficacy and perceptions of control (secondary appraisal). Using emotion-focused coping strategies to manage stress and navigate pandemic-related challenges was not beneficial to psychological outcomes. These findings confirm the existing literature on this topic in other sectors of the U.S. workforce.

The effect of emotion-focused coping on psychological adaptation depends on whether emotion-focused coping strategies were used in an avoidant context (Chee et al., 2020; Park et al., 2020; Pereira et al., 2020). Within the six domains of emotion-focused coping, four were considered forms of avoidance (self-distraction, denial, substance use,



and behavioral disengagement). Social support and venting were considered nonavoidant forms of emotion-focused coping (Wethington et al., 2015). Individuals who used avoidant emotion-focused coping strategies experienced poor psychological outcomes compared to those who used social support and venting (Chee et al., 2020; Kone et al., 2022; Pereira et al., 2020). Given the socially isolating nature of the pandemic, there were limitations on leveraging others for social support and venting (C.-C. Chen, 2021; Kone et al., 2022; Lovejoy et al., 2021). It is likely that the feasibility of emotion-focused coping strategies during the pandemic relied on avoidant contexts that negatively impacted psychological outcomes both in the current study and within the existing literature.

#### ***Problem-Focused Coping in U.S. HR Employees***

In this study, problem-focused coping did not present independent or mediated effects on psychological adaptation in U.S. HR employees. As a result, problem-focused coping did not impact psychological outcomes or account for any effects between appraisals and adaptation. This finding conflicts with existing evidence in the literature, in which members of the U.S. workforce who engaged in problem-focused coping strategies experienced better psychological outcomes than those who did not (Chee et al., 2020). Consequently, findings for the independent effect of problem-focused coping on psychological adaptation in U.S. HR employees provide a novel contribution to the existing literature.

### ***Meaning-Based Coping in U.S. HR Employees***

In this study, meaning-based coping did not moderate the mediated effects of coping efforts on psychological adaptation. Using or not using meaning-based coping did not impact the strength or direction of the relationship between coping efforts and psychological adaptation. However, findings regarding independent effects indicated that meaning-based coping led to better psychological outcomes in U.S. HR employees. Individuals experienced less anxiety, depression, insomnia, or stress when they used religion, spirituality, or thought about the pandemic in more positive ways (positive reappraisal). The existing literature that explored pandemic-related implications on psychological well-being in the U.S. workforce did not investigate the role that meaning-based coping may have played in the relationship between appraisal, coping efforts, and adaptation. As a result, findings from the current study produced novel contributions by extending knowledge in the existing literature.

### ***Demographic-Related Study Implications for U.S. HR Employees***

A review of demographic data explained differences in pandemic-related psychological outcomes (C.-C. Chen, 2021; Czeisler et al., 2020; Park et al., 2020). Post hoc analyses explored demographic-related differences in psychological outcomes and preferred coping strategies. The following sections provide insights into adaptation differences based on age, sex, and race, along with an exploration of implications for each demographic characteristic.

**Age.** Age was weakly correlated with a decrease in psychological adaptation. Older HR employees showed a small reduction in psychological adaptation. The existing

literature indicated different psychological outcomes due to age, with some scholars suggesting that being younger was associated with worse psychological outcomes (Bufquin et al., 2021; C.-C. Chen, 2021; Park et al., 2020), being older was associated with worse psychological outcomes (Pamidimukkala & Kermanshachi, 2021), or age was unrelated to psychological outcomes (Chee et al., 2020). The dissonance between study results is attributed to various factors that may not have been age dependent or age discriminant. Examples included degree of resourcefulness (Park et al., 2020), health status (Pamidimukkala & Kermanshachi, 2021), and preferred use of coping strategies (Wethington et al., 2015). Although the age-related findings in the current study do not provide novel contributions to the literature, results emphasize the need for a multifactor assessment of variables that impacted adaptation.

**Sex.** The results of this study indicated there was no difference in psychological adaptation scores of male and female HR employees in the United States. This result disconfirms evidence in the existing literature that indicated females were more likely to experience poor psychological outcomes in comparison to males following the onset of the pandemic (C.-C. Chen, 2021; Pamidimukkala & Kermanshachi, 2021; Park et al., 2020). The current study also indicated no difference in coping strategies used by males or females, disconfirming previous evidence that showed females as more likely to use emotion-focused coping strategies (Park et al., 2020). These novel contributions to the existing literature revealed no sex-related differences in preferred coping strategies or psychological adaptation.

**Race.** According to existing research, the challenges exacted by the pandemic negatively impacted racial minorities more than their nonminority counterparts (Bufquin et al., 2021; Czeisler et al., 2020). Findings in the current study sample of U.S. HR employees did not confirm that racial minorities were more likely to experience poorer psychological outcomes when compared to their nonminority counterparts. The current study also disconfirms previous indications from Czeisler et al. (2020) that racial minorities were more likely to engage in avoidant-based emotion-focused coping strategies. This novel contribution to the existing literature indicated that using different coping strategies was not race-dependent.

#### ***Summary of Study Implications for Psychological Adaptation***

Findings from this study confirm several aspects of what was known about psychological adaptation, while also providing opposing evidence and extending knowledge beyond previous results. This study confirms the negative implications of emotion-focused coping on psychological adaptation. Findings did not support the benefit of problem-focused coping in improving psychological adaptation, nor did they provide evidence that being a racial minority or a female impacted preferred coping strategies or negatively impacted psychological outcomes. This study extended knowledge in the existing literature by highlighting the relevance of meaning-based coping and its positive impact on psychological adaptation.

It is essential to note the context for the implications of this study. These results are compared to literature that focused on different sectors of the U.S. workforce to varying points during the pandemic. Consequently, pandemic-related psychological

outcomes and the role of appraisal and coping efforts were inevitably different during the pandemic's rapid evolution and periods of stagnation, and across different sectors of the U.S. workforce that were impacted differently by the pandemic. Many of the implications of this study are better understood by exploring the study findings about the theoretical framework.

### **Implications for the Transactional Model of Stress and Coping**

The transactional stress and coping model served as this study's theoretical framework. It provided the context needed to explore the psychological implications of the pandemic while considering the role played by individual perceptions and behaviors that led to different outcomes. Key constructs of the transactional model included appraisal, coping strategies, and adaptation (Lazarus & Folkman, 1984). Study implications for the transactional model of stress and coping are discussed in the following sections.

#### ***Primary and Secondary Appraisal in Theory and Practice***

According to Lazarus and Folkman (1984), primary and secondary appraisal are conscientious processes for explaining why people experience the same stressor differently. To understand primary appraisal, perceptions of stress and motivational relevance were explored. Perceptions of control and resource availability were used to understand secondary appraisal (Wethington et al., 2015). In theory, stronger perceptions of stress and weaker perceptions of controllability lead to poor adaptation, whereas lower perceptions of stress and higher perceptions of controllability lead to better psychological adaptation (Lazarus & Folkman, 1984; Wethington et al., 2015). However, the

relationship between appraisal and adaptation was not as straightforward in the current study sample as it is explained in the transactional model.

Contrary to theory-based predictions, the secondary appraisal was unrelated to adaptation. The current study does not confirm the notion that secondary appraisal influences adaptation. This could be because many of the changes resulting from the pandemic were uncontrollable. Those changes included mass quarantine, social distancing, and the nationwide closure of nonessential businesses and country borders (Chu et al., 2020; Jin et al., 2021). Because these experiences were beyond individual's control, it is possible that the influence of secondary appraisal on adaptation was diminished.

Alternatively, primary appraisal influenced adaptation as predicted in the transactional model. Higher levels of primary appraisal related to decreased psychological well-being in U.S. HR employees. Whereas much of the change exacted by the pandemic was beyond individual control, perceptions of those changes were controllable in primary appraisal. Consequently, those who perceived the pandemic as stressful or challenging also experienced poor adaptation in terms of increased stress, depression, anxiety, or insomnia. It is important to note that the relationship between appraisal and adaptation is not solely direct; there are indirect relationships in theory and practice.

### ***Coping Strategies in Theory and Practice***

Coping strategies consist of changing thoughts and feelings (emotion-focused coping), changing the situation (problem-focused coping), and producing positive

emotions (meaning-based coping) to navigate a stressful situation (Lazarus & Folkman, 1984). Problem-focused coping strategies included active coping, planning, and instrumental support. Emotion-focused coping included seeking social support, self-distraction, denial, venting, substance use, and behavioral disengagement. Meaning-based coping included positive reappraisal (i.e., positive thinking) and drawing on religious or spiritual beliefs (Carver, 1997; Wethington et al., 2015). Activities within each coping strategy led to different outcomes based on the transactional model and the current study's results.

According to the transactional model, problem-focused coping was more appropriate for changeable stressful events because it allowed individuals to actively engage in behaviors that reduced their stress (Lazarus & Folkman, 1984; Wethington et al., 2015). With this in mind, it is not surprising that the current study sample of U.S. HR employees did not demonstrate significant findings for problem-focused coping because many of the changes resulting from the pandemic were beyond individual control. What was within individual control was the ability to alter thoughts and feelings (emotion-focused coping) and engage in behaviors that produced positive emotions (meaning-based coping).

Consistent with theoretical assumptions, HR employees' use of emotion-focused coping inadvertently led to negative psychological outcomes. This study's results were constant even in the presence of high levels of perceived control and situational manageability (secondary appraisal). It was assumed that emotion-focused coping was more likely to be used in stressful, uncontrollable situations because it allowed

individuals to leverage avoidant emotion-focused coping techniques to divert attention away from the stressor in the hopes of reducing stress (Wethington et al., 2015). This study suggests that although avoidant emotion-focused coping strategies may have diverted attention away from stressors and challenges presented by the pandemic, these approaches did not diminish stress. Instead, emotion-focused coping led to poor psychological adaptation. Drawing conclusions from the transactional model, emotion-focused coping is expected to negatively impact adaptation because the pandemic reduced an individual's ability to leverage social support in traditional ways (i.e., social gatherings, physical touch) due to mass quarantine orders and social distancing. Consequently, individuals may have been more likely to leverage avoidant emotion-focused coping strategies because the use of social support was limited.

The transactional model included meaning-based coping as a moderator of coping efforts and adaptation, wherein positive reappraisal and religion/spirituality sustained the coping process and enabled emotion-focused or problem-focused coping (Wethington et al., 2015). The findings from this study did not confirm that relationship. Meaning-based coping did not moderate the relationship between coping efforts and adaptation in U.S. HR employees. However, meaning-based coping had an independent effect on adaptation in which HR professionals experienced enhanced psychological outcomes when they engaged in positive reappraisal or leveraged spiritual/religious beliefs. This extends theoretical knowledge in which meaning-based coping did not require reenactment of coping efforts to improve psychological adaptation. Consequently, meaning-based coping



may not always moderate the relationship between coping efforts and adaptation to improve psychological outcomes.

### ***Demographic-Related Implications in Theory and Practice***

According to Wethington et al. (2015), the transactional model predicted that those in vulnerable populations were more likely to use problem-focused coping and experience negative adaptation when navigating a stressful experience. Vulnerable populations consisted of racial minorities, females, and those of lower socioeconomic status (Wethington et al., 2015). This theoretical assumption is not supported. Findings did not indicate that vulnerable populations were more likely to use problem-focused coping, nor were they more likely to experience negative adaptation. Again, the former is likely attributed to the fact that some pandemic-related experiences were not controllable or changeable, rendering problem-focused coping strategies less useful.

### ***Summary of Theoretical Implications for the Transactional Model of Stress and Coping***

This study provides several implications for the transactional model of stress and coping by substantiating some aspects of theory and extending knowledge where dissonance between results and theory occurred. This study confirms theoretical expectations that high levels of primary appraisal and the use of emotion-focused coping strategies related to negative implications for psychological adaptation. However, the theoretical relationships between appraisal, coping, and adaptation did not exist for secondary appraisal or problem-focused coping. Secondary appraisal and problem-focused coping relied on perceived control for improved psychological outcomes

(Lovejoy et al., 2021; Usher et al., 2020; Wethington et al., 2015). The lack of independent effects was likely due to the uncontrollable nature of changes exacted by the pandemic.

Findings for meaning-based coping indicated that it did not moderate the coping efforts and adaptation relationship as described in theory. Instead, meaning-based coping directly improved psychological adaptation for U.S. HR employees during the pandemic. This implication extends what is known about meaning-based coping within the transactional model. All the implications for the transactional model of stress and coping emphasized how the application of constructs from the model, along with anticipated outcomes, depended on the person-environment relationship, in which environment referred to the stressful event.

### **Beyond Theory: Social Change Implications**

The implications for U.S. HR employees' psychological well-being were apparent in the study results. Study findings suggests potential impacts for positive social change at the individual, organizational, and practice level. Implications for positive social change at each level are discussed in the following sections. Social change implications for the transactional model of stress and coping are also discussed, where theoretical knowledge is extended.

### **Pandemic-Related Psychological Adaptation at the Individual Level**

The pandemic imposed unprecedented changes and challenges for U.S. HR employees (Chu et al., 2020; Jin et al., 2021). In the current study, primary appraisal, emotion-focused coping, and meaning-based coping provided insights for improving

psychological outcomes. As a result, U.S. HR employees could experience enhanced psychological well-being by prioritizing stress management and avoiding health behaviors such as substance use, behavioral disengagement, self-distraction, and denial. Additionally, they can improve their psychological well-being using meaning-based coping strategies, specifically, positive reframing and reliance on religious or spiritual beliefs. Although theoretical implications suggest that problem-focused coping strategies were better suited for increasing psychological well-being, this was not confirmed in the current study (Wethington et al., 2015). Consequently, problem-focused coping strategies are not advised for navigating uncontrollable experiences like the pandemic.

### **Pandemic-Related Psychological Adaptation at the Organizational Level**

This work demonstrated the pandemic's impact on the psychological well-being of U.S. HR employees. At the organizational level, it is imperative to prioritize employees' psychological well-being because organizational factors tend to drive psychological outcomes (Dillon et al., 2022). Several strategies have been recommended to improve employees' psychological well-being. These recommendations include a cultural shift to one that prioritizes well-being in the workplace, reducing the stigma and fear that surrounds employee use of mental health resources, and budget allocations to improve access to mental health resources beyond the employee assistance program (Blanchard et al., 2022; Dillon et al., 2022).

Moving beyond the traditional employee assistance program is recommended due to the historically low resource utilization. This poor utilization continued throughout the pandemic despite increased mental health concerns (Brooks & Ling, 2020).

Consequently, organizations would benefit by employing a framework that includes self-efficacy resources, social support networks, and open communication to increase employee perceptions that the organization is sensitive to their needs and pandemic-related psychological impacts (Becker et al., 2022; Brooks & Ling, 2020; Straus et al., 2022). In doing so, the employee benefits from enhanced psychological well-being, and the organization benefits from improved performance and productivity (Straus et al., 2022).

### **Pandemic-Related Psychological Adaptation at the Practice Level**

Health education and promotion serve as the foundation of employee wellness programs (Msuya & Kumar, 2022). Those who manage employee wellness programs must be familiar with the areas of responsibility for health education and promotion to be successful. Some areas include planning, implementing, and evaluating wellness program initiatives based on the target population's needs and capacity while using enhanced communication strategies (McKenzie et al., 2023). The implications of the current study suggests that different sectors have unique needs. Consequently, wellness program initiatives would benefit from targeting the unique needs of the population served.

Additionally, managers of employee wellness programs must create purposeful and intentional programs to develop and evaluate program objectives. In some ways, this may make wellness programs more prescriptive, but the goal is to manage a wellness program that leads to more than just value for the organization's investment. Instead, wellness program managers must leverage evidence-based approaches to improve employee well-being (Daniels et al., 2022). In the context of the current study, that means

improving psychological well-being by implementing an evidence-based mental health program that incorporates the strategies provided herein. The result, as explored by Dillon et al. (2022), is implementing a holistic and targeted wellness program initiative that improves employee health outcomes.

According to Johnson et al. (2005), those who managed health education programs spent most of their time implementing wellness programs. However, nearly 60% of those who managed health education programs did not engage in any research before developing or implementing the program. They also did not evaluate their programs for effectiveness or activities to advance their knowledge or the profession (Johnson et al., 2005). It is imperative to increase wellness program managers' awareness of the health education and promotion areas of responsibility (regardless of their educational background or credentials) so they can apply these concepts to practice. As a result, those who manage employee wellness programs will be empowered to engage in more evidence-based practices that professionalize the field of corporate wellness and advances the health education and promotion profession.

### **Social Change Implications for the Transactional Model of Stress and Coping**

The framework for the transactional model of stress and coping stipulated that meaning-based coping moderated the relationship between coping efforts and adaptation (Wethington et al., 2015). The current study indicates that meaning-based coping independently affected psychological adaptation without serving as a moderating variable. The relationship between meaning-based coping and psychological adaptation extends theoretical knowledge. As a result, the purpose of meaning-based coping was not

solely to allow for the reenactment of coping efforts by moderating that relationship but also to serve as a separate buffer that improved psychological outcomes.

### **Limitations of the Study**

This study relied on self-reported data, which introduced limitations because it required participants to rely on their memory when responding. Because the data collected in this study were self-reported, participants' ability to accurately recall their pandemic-related experiences was questionable. Even though the flashbulb memory concept indicated that people tend to recall life-altering events more accurately, recall bias still served as a potential limitation in this study (Moreno-Serra et al., 2022).

Another limitation focused on psychological implications. The data collected using the DAISS were not based on formal psychological evaluations. Consequently, results cannot be generalized to formal psychological presentations of pandemic-related psychological distress. Responses regarding the length of employment in the HR field rendered poor quality data. The question from the survey was double-barreled, asking for start and end dates within one open response textbox. Although formatting guidance was provided in the question, the data provided by participants were inconsistent in format and depth of information.

Participants were self-selected using purposive sampling and virtual recruitment methods. This introduced nonresponse bias in which there may have been inherent differences between those who participated in the study and those who did not. Additionally, SurveyMonkey Audience was used to recruit participants. Individuals who participated using this recruitment method may have been motivated to participate solely

due to the incentive provided by SurveyMonkey once they completed the survey.

Providing details to the researcher regarding the amount that participants were compensated was not standard practice for Survey Monkey at the time of this study. As a result, there may have been an undue influence on participants for their responses, and bias in the enrollment strategy may have been introduced (Resnik, 2015).

Additionally, this study used a cross-sectional research design that introduced predictive limitations in which the cause and effect between appraisal, coping strategies, and psychological adaptation could not be determined (Setia, 2016; Solem, 2015). As a result, this study was limited to predicting relationships between variables. Although it can be deduced that variables possessed an influential role on each other, causation cannot be established with a cross-sectional study design.

Lastly, the actual sample size for this study was less than the estimated sample size. It consisted of HR professionals that were slightly more educated with higher earnings than the target population. However, there was reasonable power to conduct the data analysis as planned because the sensitivity analyses indicated that the study sample was within the boundaries of a small effect (Cohen, 1992). Notably, a small effect size still allowed for limited practical applications (Schäfer & Schwarz, 2019). A larger, well-powered sample would have provided a greater chance of detecting effects. Given the limitations of this study, results have limited generalizability to HR professionals in the United States within the context of the COVID-19 pandemic. The findings and implications of this study are not intended for other sectors of the U.S. workforce, HR employees working outside of the United States, nor within the context of any other

natural disaster or other type of pandemic. The study limitations, along with the implications for this study, appropriate recommendations for future research.

### **Recommendations for Future Research**

From a methodological perspective, future research focused on pandemic-related psychological adaptation in U.S. HR employees would benefit from having a larger sample size. This would allow for greater statistical power and increase researchers' ability to detect effects when analyzing data. This cross-sectional study provided a snapshot of U.S. HR employees' psychological outcomes. A large-scale, longitudinal study would permit researchers to explore long-term implications for pandemic-related adaptation and potential cause-and-effect relationships between the study variables. Although the findings from this study are cross-sectional, results indicated that different workforce sectors experienced different psychological outcomes during the pandemic. As a result, future research should target other workforce sectors to understand their unique psychological outcomes.

Additional recommendations for future research include exploring how the length of employment in the HR field relates to psychological adaptation. This study's responses regarding the length of employment did not provide quality data. The responses were inconsistent in format and did not provide the depth of information to assess how the length of employment interacted with psychological adaptation. The final recommendation for future research focuses on expanding the exploration of emotion-focused coping and meaning-based coping. With emotion-focused coping, it would be beneficial to compare the role of avoidant and non-avoidant strategies in psychological



outcomes. With meaning-based coping, it would be helpful to understand better how knowledge was extended for theoretical interpretations of the role that meaning-based coping strategies played in the person-environment relationship. Consequently, a qualitative study focusing on emotion-focused coping and meaning-based coping in greater depth could yield greater insights into why and how participants used these variables to navigate the pandemic and how these variables impacted psychological adaptation.

### **Conclusion**

When faced with an unprecedented experience like the COVID-19 pandemic, organizations were forced to swiftly respond to mandates for safeguarding the health and well-being of their workforces. U.S. HR employees played a critical role in that transition. They also facilitated business operations and employee relations as the pandemic continuously evolved (Bagheri & Seyed Naghavi, 2022; Gonçalves et al., 2021). This great responsibility was shouldered in addition to navigating the pandemic itself. Knowing the impact of the pandemic on other sectors of the U.S. workforce and the unique role played by HR employees, this provided impetus for research exploring the pandemic-related psychological outcomes in U.S. HR professionals.

Using what was revealed by the existing literature and using the transactional model of stress and coping as the theoretical foundation for this study, the pandemic-related psychological adaptation of U.S. HR employees was explored. This investigation occurred within the constructs of primary and secondary appraisal, emotion- and problem-focused coping, and meaning-based coping. Psychological adaptation focused

on symptoms the existing literature indicated were common during the pandemic, including depression, anxiety, insomnia, and stress. Consistent with theoretical interpretations and existing research, this study confirmed the negative psychological implications of emotion-focused coping and primary appraisal. Alternatively, the benefits of problem-focused coping and secondary appraisal were not confirmed and likely were attributed to the uncontrollable nature of pandemic-related experiences. A novel contribution of this study demonstrated the positive psychological implications of meaning-based coping beyond its theoretical role as a moderator.

Consistent with the seminal work of Lazarus (1993), perceptions regarding appraisal did not wholly determine psychological adaptation, and coping efforts were not inherently good or bad. Much of what was known about coping and stress depended upon the person, the stressful event, and the evolution of both in the short and long term (Lazarus, 1993). Findings from the current study confirmed that individual factors and pandemic-related experiences differed from theoretical implications and the existing literature in several ways. This is attributed to the understanding that appraisal and coping strategies used by different people in the same environment could yield different outcomes. Similarly, the same person using the same coping strategies in different environments could also render different results. These differences illustrated how imperative it was to understand the nuances of these varied outcomes. With greater understanding, theory, and research can be applied to practical endeavors to improve the psychological well-being of U.S. HR employees within employee wellness programs.

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### Appendix A: Social Media Advertisement Flyer With Caption

If you have worked in the human resources field, then join this anonymous study to share the factors that may have impacted your psychological well-being in response to the COVID-19 pandemic. For this study, you are invited to describe your experiences coping with the pandemic.

Participation in this study is voluntary and will take approximately 20 minutes. Your responses are 100% anonymous. Volunteers must meet the requirements below:

- 18 years of age or older
- currently residing in the U.S.
- employed in the U.S. as a human resource professional for any duration from March 2020 to the present

This survey is part of the doctoral study for Samantha Denson, a Ph.D. student at Walden University. Follow this link to participate in this study from March 29, 2023 - April 29, 2023 or until an adequate number of responses are obtained.

Please review the attached flyer and email Samantha Denson if you have any questions.

# Research volunteers needed!

If you work in the human resources field, then join this anonymous study to share the factors that may have impacted your psychological well-being in response to the COVID-19 pandemic.



## You are a perfect fit if:

You are 18 years of age or older

Currently residing in the U.S.

Employed in the human resources field in the U.S. for any length of time from March 2020 until now.

—

Participate in this study voluntarily, 100% anonymously, and from March 29, 2023 - April 29, 2023 or until an adequate number of responses are obtained.

Questions?  
Email Samantha Denson.

## Meet the Researcher



The researcher presiding over this study is Samantha Denson, a doctoral candidate at Walden University.

The study is entitled "Long-Term Psychological Adaptation of U.S. Human Resource Personnel in Response to the COVID-19 Pandemic".

The aim of this study is to explore the long-term impact of the COVID-19 pandemic on the psychological well-being of human resource personnel in the U.S.

**Thank you in advance for your consideration and time!**

## Appendix B: Letter of Request for the Potential Partner Organization

To whom it may concern,

Please accept this correspondence as an official request of your support for a research study exploring long-term, pandemic-related psychological outcomes in human resource personnel. My name is Samantha Denson and I am a doctoral candidate at Walden University conducting research for my doctoral dissertation titled “Long-Term Psychological Adaptation of U.S. Human Resource Personnel in Response to the COVID-19 Pandemic”. This study will explore the long-term impact of the COVID-19 pandemic on the psychological well-being of human resource personnel in the U.S. This will provide insight into the prevailing psychological outcomes experienced by human resource personnel and inform employee health and wellness strategies.

Please be advised that no personally identifiable information will be obtained from participants; thereby ensuring that participation in this study is anonymous. This study will be conducted via an online survey and will take approximately 20 minutes to complete. I am interviewing employees currently residing in the U.S., 18 years of age or older, who served in a human resource role in the U.S. anytime from March 2020 to the present. The research questions are intended to collect data on demographics, coping strategies used to navigate the pandemic, and psychological outcomes. A publicly available mental health resource will be provided to all survey participants following their completion of the study. This email is to request that you consider sharing the attached advertisement flyer and caption with members of the potential partner organization so that they are aware of the opportunity to participate in this study and

further academic research that focuses on the psychological well-being of human resource personnel.

Respectfully,

Samantha Denson, MPH, CCWS

Doctoral Candidate, PhD in Health Education and Promotion

Walden University



### Appendix C: Screening Questions

Thank you for taking advantage of the opportunity to participate in this research study. Before starting the survey, please share a little information about yourself by answering the questions below.

1. Do you currently live in the U.S.?
  - a. Yes
  - b. No
  
2. Did you serve as a human resource professional in the U.S. for any duration from March 2020 until the present? For example, a human resource professional is someone who supports an organization's employees in roles such as benefits, compensation, training and development, staffing, recruiting, strategic planning, compliance, workplace safety, employee and labor relations, or wellness, to name a few.
  - a. Yes
  - b. No
  
3. Using two-digit month and two-digit year, please indicate your start and end date of serving as a human resource professional. If you are still employed as a human resource professional, include your start date and put "present" as your end date.

#### Appendix D: Debrief Form

Thank you for participating in this study! The goal of this study is to examine if and how the COVID-19 pandemic impacted the psychological well-being of human resource professionals in the U.S. As such, you answered several questions regarding your stress response to the pandemic, the behaviors you engaged in to cope with the pandemic, and how the pandemic influenced your mental health. If participation in this study has caused you to feel distressed or overwhelmed, please call 988 to be connected to a trained counselor with the National Suicide Prevention Lifeline. Your conversation with them is confidential and they will be able to provide you with additional support and connect you to the appropriate resources.

You can ask questions of the researcher by emailing the researcher, Samantha Denson. If you want to talk privately about your rights as a participant or any negative parts of the study, you can call Walden University's Research Participant Advocate. Walden University's approval number for this study is 03-28-23-1030326. It expires on March 27, 2024. Thank you once again for your participation!

## Appendix E: Visual Analog Scale to Assess Appraisal

1. The following is a list of questions meant to assess your stress response to the COVID-19 pandemic. When thinking about the “past situation” please refer to your collective experiences navigating changes brought on by the COVID-19 pandemic.

Please evaluate the extent to which each statement applied to you using the sliding scale below, ranging from strongly disagree to strongly agree.

a) The past situation was stressful to me.

strongly disagree strongly agree



b) I found the past situation to be a challenge.

strongly disagree strongly agree



c) I knew what I had to do to influence the past situation.

strongly disagree strongly agree



d) I did something to influence the course of the past situation.

strongly disagree strongly agree



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## Appendix F: Permission to use the Visual Analog Scale to Assess Appraisal

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Portions I would like to use the 4-item VAS scale as indicated in the appendix. I plan to change the verbiage from "past situation" to refer to the pandemic and give credit to the original authors.

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## Appendix G: Brief COPE Inventory Questionnaire

2. The following is a list of questions meant to understand your preferred coping strategies in response to the COVID-19 pandemic. Please reflect on your collective experiences navigating changes brought on by the COVID-19 pandemic and identify to what degree did you engage in the activities listed below based on the scale below.

1.....2.....3.....4

I did not do this at all    I did this a little bit    I did this a medium amount    I did this a lot

- |  |               |
|--|---------------|
| a) I concentrated my efforts on doing something about the situation I was in.                                | 1...2...3...4 |
| b) I took action to try to make the situation better.  | 1...2...3...4 |
| c) I tried to come up with a strategy about what to do.  | 1...2...3...4 |
| d) I thought hard about what steps to take.  | 1...2...3...4 |
| e) I tried to see it in a different light to make it seem more positive.                                     | 1...2...3...4 |
| f) I looked for something good in what was happening.  | 1...2...3...4 |
| g) I tried to find comfort in my religion or spiritual beliefs.  | 1...2...3...4 |
| h) I prayed or meditated.  | 1...2...3...4 |
| i) I received social support from others.  | 1...2...3...4 |
| j) I received comfort and understanding from someone.  | 1...2...3...4 |
| k) I tried to get advice or help from other people about what to do.   | 1...2...3...4 |
| l) I received help and advice from other people.   | 1...2...3...4 |
| m) I turned to work or other activities to take my mind off things.  | 1...2...3...4 |
| n) I did something to think about it less, such as watching TV, reading, daydreaming, sleeping, or shopping. | 1...2...3...4 |
| o) I said to myself "this isn't real".   | 1...2...3...4 |
| p) I refused to believe that it was happening.   | 1...2...3...4 |
| q) I said things to let my unpleasant feelings escape.   | 1...2...3...4 |
| r) I expressed my negative feelings.   | 1...2...3...4 |
| s) I used alcohol or other drugs to make myself feel better.   | 1...2...3...4 |
| t) I used alcohol or other drugs to help me get through it.  | 1...2...3...4 |
| u) I gave up trying to deal with it.   | 1...2...3...4 |
| v) I gave up the attempt to cope.  | 1...2...3...4 |

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## Appendix H: Permission to Use and Modify the Brief COPE Inventory



### Brief COPE Inventory

**PsycTESTS Citation:**

Carver, C. S. (1997). Brief COPE Inventory [Database record]. Retrieved from PsycTESTS. doi: <https://dx.doi.org/10.1037/t04102-000>

**Instrument Type:**

Inventory/Questionnaire

**Test Format:**

28 items; responses range from 0 (I haven't been doing this at all) to 3 (I've been doing this a lot).

**Source:**

Supplied by author.

**Original Publication:**

Carver, Charles S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine*, Vol 4(1), 92-100. doi: [https://dx.doi.org/10.1207/s15327558ijbm0401\\_6](https://dx.doi.org/10.1207/s15327558ijbm0401_6)

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### Appendix I: Depression, Anxiety, Insomnia, and Stress-Associated Symptoms Scale

3. The following is a list of questions meant to understand your emotional response to the COVID-19 pandemic. To what degree do you agree or disagree with the following statements based on the scale below.

- |  | 1.....               | 2.....   | 3.....                        | 4..... | 5                 |
|--|----------------------|----------|-------------------------------|--------|-------------------|
|  | strongly<br>disagree | disagree | neither agree<br>nor disagree | agree  | strongly<br>agree |
| a) I have felt depressed more frequently following the COVID-19 pandemic than before the outbreak.   |                      |          |                               |        | 1...2...3...4...5 |
| b) I have had more panic, trembling of hands, fear, breathing difficulty, a sense of increased heart rate, or heart missing a beat following the COVID-19 pandemic than before the outbreak. |                      |          |                               |        | 1...2...3...4...5 |
| c) I have suffered from insomnia symptoms more frequently following the COVID-19 pandemic than before the outbreak.  |                      |          |                               |        | 1...2...3...4...5 |
| d) I have felt exhausted, agitated, had difficulty winding down, and had difficulty relaxing more frequently following the COVID-19 pandemic than before the outbreak.                       |                      |          |                               |        | 1...2...3...4...5 |

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## Appendix J: Permission to Use the DAISS Scale

**Depression, Anxiety, Insomnia, and Stress-Associated Symptoms Scales**

## PsycTESTS Citation:

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Instrument Type:  
Rating Scale

## Test Format:

Items are rated on a five-point scale (from "1 = strongly disagree" to "5 = strongly agree").

## Source:

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## Appendix K: Demographic Questions

Thank you once again for participating in this research study. Please share a little more information about yourself by answering the questions below.

4. How old are you in years?
5. What is your sex?
  - a. Female
  - b. Male
  - c. Non-binary
  - d. Prefer not to say
6. What is your race?
  - a. White
  - b. Black
  - c. Asian
  - d. Other or multiple races
7. What is your ethnicity?
  - a. Hispanic
  - b. Non-Hispanic
8. What is your highest level of education obtained?
  - a. Less than high school
  - b. High school diploma
  - c. Some college
  - d. Bachelor's degree

- e. Master's degree
  - f. Professional or terminal degree
9. What is your income level?
- a. <\$25,000
  - b. \$25,001-\$50,000
  - c. \$50,001-\$100,000
  - d. \$100,001-\$200,000
  - e.  $\geq$ \$200,001
10. What is your employment status?
- a. Employed, full-time
  - b. Employed, part-time
  - c. Unemployed
  - d. Retired