Doctoral Dissertation

A Study on Mindfulness: The Role of Awareness and Acceptance

PHYU PHYU ZAW

Graduate School for International Development and Cooperation
Hiroshima University

March 2023

A Study on Mindfulness: The Role of Awareness and Acceptance

D195858

PHYU PHYU ZAW

A Dissertation Submitted to
the Graduate School for International Development and Cooperation
of Hiroshima University in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

March 2023

We hereby recommend that the dissertation by Ms. PHYU PHYU ZAW entitled "A Study on Mindfulness: the Role of Awareness and Acceptance" be accepted in partial fulfillment of the requirements for the degree of DOCTOR OF PHILOSOPHY.

Committee on Final Examination:

Dr. TAKAHASHI Yoshi, Professor,
Chairperson

Dr. KANEKO Shinji, Professor

Dr. ICHIHASHI Masaru, Professor

Dr. MAHARJAN Kashav Lall, Professor

Dr. Wiboon KITTILAKSANNAWONG, Professor, Saitama University

Date: January 20, 2023

Approved: Date: March 3, 2023

ICHIHASHI Masaru, Professor
Dean

Graduate School for International Development and Cooperation
Hiroshima University

Dissertation Abstract

A Study on Mindfulness: The Role of Awareness and Acceptance

During the last three decades, the topic of mindfulness has received a growing amount of attention from researchers in both clinical and nonclinical settings. A wealth of evidence now exists demonstrating the relationship between mindfulness and various kinds of psychological and behavioral outcomes. The main objective of the dissertation was to contribute to the continuing research efforts in the field by exploring the role of two important dimensions of mindfulness, namely mindful awareness and mindful acceptance, influencing both psychological outcomes such as emotion regulation and perceived stress, and behavioral outcomes like contextual performance, and organizational citizenship behavior. To fulfill this objective, three different empirical studies were conducted in this dissertation.

The first study explores whether Mindful Self-Compassion (MSC) training intervention have an influence on perceived stress while investigating the roles of mindful awareness and mindful acceptance in the relationship between training and perceived stress as a moderator and a mediator, respectively. The research framework is based on the monitoring and acceptance theory (MAT) and the emotion regulation theory. This study used a randomized controlled trial, where 25 voluntary participants from the alumni of the Ship for South-East Asian Youth Program in Myanmar were randomly assigned to a treatment or a waitlist control group. It was also found that mindful acceptance has a statistically significant full mediation on the relationship between training and perceived stress, with a negative indirect effect. However, mindful awareness did not moderate the relationship between mindful acceptance and perceived stress. The findings contribute to the literature from the perspectives of psychology and adult learning as it uses an experimental research design to investigate the underlying mechanism of the effect of MSC online training on perceived stress, critical in influencing a variety of behaviors.

The second study aims to investigate the relationship between transformational leadership and transactional leadership, as a job resource and contextual performance as a work outcome, mediated by work engagement and moderated by trait mindful awareness as a personal resource. Some researchers highlight work engagement as a mediating mechanism between job resources and individual outcomes, while others suggest that personal resources may improve employees' awareness of the job resources around them and, in turn, improve their performance. Notably, empirical evidence shows that the moderation of trait mindful

awareness is not synergistic, but compensatory, along with the "substitutes for leadership theory." Data were collected from employees in the United States via the online Amazon Mechanical Turk platform. A total of 282 respondents were randomly assigned to one of two vignettes—one reflecting transformational and one reflecting transactional leadership. The findings revealed that the positive relationship between transformational leadership and contextual performance is partially mediated by work engagement. Mindful awareness significantly strengthens the relationship between transformational leadership and work engagement. This study contributes to the literature by providing further empirical evidence on the inconclusive contextualization of mindful awareness as a personal resource.

In the third study, the role of the emotion regulation (ER) as mediating mechanism on the relationship between different facets of trait mindfulness and organizational citizenship behavior (OCB) was explored. There have been previous studies which analyzed mindfulness as a predictor for enhancing OCB. However, to my understanding, there has been no previous research on the mechanism of the relationship between trait mindfulness and OCB. The significant contribution of this study was its distinction of different facets of trait mindfulness in predicting ER and OCB. The results showed that all trait mindfulness facets excluding observing significantly predicts OCB via the full or partial mediation of ER. A significant contribution of the third study was exploring the mediation mechanism of ER on the relationship between five distant facets of trait mindfulness and OCB.

This dissertation, as a whole, contributes to the literature by empirically investigating the role of the two key dimensions of mindfulness – awareness and acceptance – on both psychological and behavioral outcomes of individuals in both community and organizational samples.

Acknowledgment

First and foremost, let me express my sincere gratitude to my academic advisor, Professor TAKAHASHI Yoshi, who guides and supports me throughout this dissertation with his extensive knowledge, insightful feedbacks, unwavering support, and great patience. I also would like to extend my genuine gratefulness to Professor ICHIHASHI Masaru, Professor KANEKO Shinji, Professor MAHARJAN Kashav Lall, and Professor Wiboon KITTILAKSANNAWONG for their precious comments and suggestions to improve my dissertation.

In addition, special thanks should be given to Japanese Government for providing financial support for both of my master and doctoral program through MEXT scholarship.

Moreover, this book is also benefited from all my teachers who taught me during the in-person and online mindfulness teaching training programs and all of my classmates in those programs who shared their insights. Furthermore, I am also grateful to all participants who agreed to participate in my training interventions, shared their ideas and opinions during the training period, and respondents who answered my questionnaires.

Thank should also go to all my friends in IDEC and Hiroshima University who lent a great amount of emotional support during these years.

Last but not least, I am very much grateful to my mum who dedicated her life to lift me up to this stage of my academic journey.

Table of Contents

List of Tables

List of Figures

List of Abbreviations

COR	Conservation of Resources theory
ER	Emotion Regulation
FFMQ	Five Facets Mindfulness Questionnaire
MAT	Monitoring and Acceptance Theory
MSC	Mindful Self-Compassion
OCB	Organizational Citizenship Behavior
PHLMS	Philadelphia Mindfulness Scale
TFL	Transformational Leadership

Chapter 1
Introduction

1.1. Background of the Study

During recent decades, there has been a surge of interest in the mindfulness-related research, and several studies have verified the link between mindfulness and various kinds of psychological and behavioral outcomes in both community and organizational samples. A wealth of evidence now exists, and a substantial body of research has already demonstrated a significant association between trait mindfulness and a wide variety of psychological outcomes including reduction of perceived stress, depression, anxiety, emotional reactivity, and enhancement of resilience, emotion regulation and positive state of mind (Bränström et al., 2011; Hill & Updegraff, 2012; Prakash et al., 2015; Wheeler et al, 2017). In addition, regarding the behavioral outcomes, Brown et al. (2007) suggests that higher level of mindfulness may induce controlling behaviors and making behavioral decisions engendering wellbeing and goal attainment. There have been studies revealing the positive association between overall mindfulness and workplace outcomes such as job performance, job satisfaction, empathy, creativity, prosocial behavior, and organizational citizenship behavior (Askun Celik & Çetin, 2019; Chen et al., 2020, Cheung et al., 2020; Dane & Brummel, 2014; Hafenbrack et al., 2020, Hülsheger et al, 2013; Jobbehdar Nourafkan et al., 2022; Mulligan, 2018; Petal, 2017; Reb et al., 2015).

Rooted in Buddhist psychology, the concept of mindfulness is the lateral translation of *pali* word "*Sati*" which mean wakefulness of mind, intentness of mind, or lucidity of mind (Davids & Stede, 1959). Khang and Whittingham (2010) propose an operational definition of mindfulness based on Buddhism. According to them, mindfulness refers to nonreactive, nonelaborative, nonreified awareness that has meta-cognitive functions, monitoring ongoing awareness and discriminating wisely between aspects of awareness content so that awareness and behavior can be directed according to the goals of genuine happiness, virtue and truth. The authors argue that a significant difference in identifying mindfulness between Buddhist and western psychology, is discernment. Mindfulness in western psychology = advocate an accepting stance toward the present moment experiences, whereas Buddhist psychology clearly encourage to offset negative psychological states (such as pride, anger, jealousy or lust) by using mindful awareness and introspective vigilance (Khang & Whittingham, 2010).

In western psychology, one of the most widely used definition of mindfulness states that it

is a way of paying attention to present moment experience with a mental stance of receptivity and acceptance (John Kabat-Zin, 1994). Baer (2003) also defines mindfulness as the nonjudgmental observation of ongoing stream of internal and external stimuli as they arise. Brown and Ryan (2003) suggest that mindful individuals who are aware of their physical and emotional experiences nonjudgmentally tend to be less vulnerable to the negative emotions resulting from failures, opinions of others, and conflicts. The authors also claim that possessing higher level of mindfulness help individuals to attend to prompts arising from their basic needs, endowing them to regulate their emotions and behaviors accordingly. Klussman et al. (2022) also states that self-awareness and self-acceptance based on this awareness can lead to alignment to one's behaviors correspondingly. In fact, awareness and acceptance are two widely accepted dimensions in mindfulness literature. In this sense, monitor and acceptance theory (MAT) by Lindsay and Creswell (2017) which is a broad evidence-based theoretical framework explaining both correlational studies of self-reported trait mindfulness and intervention studies measuring the changes in self-reported mindfulness can be used to provide a better understanding of the above-mentioned dimensions.

1.2 Theoretical Background

Cardaciotto et al. (2008) propose that most definitions of mindfulness can be categorized into two key dimensions. According to the authors, the first dimension (i.e., mindful awareness) reflects the behavioral component of mindfulness as it encompasses the continuous monitoring of the totality of experience. On the contrary, the second dimension (i.e., mindful acceptance) reflects the way in which that awareness is conducted, with an attitude of acceptance. Acceptance is defined as a mental attitude of nonjudgement, openness and receptivity, and equanimity toward internal and external experiences (Baer et al., 2004; Brown & Ryan; 2004; Lindsay & Creswell, 2017; Debordes et al., 2015). According to Lindsay and Creswell (2017), acceptance skill modifies the way one relates to the present-moment experience, regulating reactivity to affective experience. In the upcoming chapters, the term mindful acceptance is used to illustrate this skill.

It is arguably stated that higher level of mindful awareness will not necessarily occur with simultaneously higher level of mindful acceptance, and vice versa. In addition, some researchers also claim that failure to embrace mindful acceptance when an individual is highly aware of negative external and internal stimuli may lead to negative psychological outcomes such as depression and perceived stress (Cardaciotto et al., 2008; Lindsay & Creswell, 2017).

Therefore, empirically examining mindful acceptance separately from mindful awareness is required, according to Cardaciotto et al. (2008).

1.3 Statement of the Problem

Despite Lindsay and Creswell's (2017) argument on the important role of mindful awareness and mindful acceptance as the distinct dimensions of mindfulness, to my understanding, there has been no previous empirical study differentiating the role of these two dimensions when analyzing their influence on different psychological and behavioral outcomes.

1.4 Purposes of the Study

Therefore, the overall purpose of the dissertation is to explore the roles of these two different dimensions of mindfulness on particular psychological outcomes such as perceived stress, emotion regulation, work engagement, and behavioral outcomes like contextual performance, and organizational citizenship behavior. To fulfill this purpose, three different empirical studies were conducted in this dissertation. The integrated framework of three empirical studies of this dissertation is demonstrated in Figure 1.1. These three different empirical studies are expected to fill the research gaps in the literature and by so doing contribute to the advancement of the field of study.

Table 1.1

Self-reported Mindfulness Measures in the Dissertation in Accordance with the Bidimensional Measures of Mindfulness (Lindsay & Creswell, 2017)

Scales	Mindful awareness	Mindful acceptance	Others
Philadelphia Mindfulness Scale (PHLMS) (Chapter 2 and 4)	*Present moment awareness*: continuous monitoring of ongoing internal and external and internal stimuli; "I notice changes inside my body like my heart beating faster or my muscles getting tense."	*Acceptance:* Nonjudgmental stance toward experiences; "If there is something I don't want to think about, I will try many things to get it out of my mind."	
Five Facets Mindfulness Questionnaire (FFMQ) (Chapter 3)	*Observe*: the tendency to notice and attend to subtle perceptual events; "I pay attention to sensations, such as the wind in my hair or the sun on my face."	*Nonreactivity*: ability to maintain contact with experiences, watch them from a distance and allow them to pass without further reactivity; "I perceive my feelings and emotions without having to react to them." Nonjudgement: acceptance of one's thoughts and feelings; "I think some of my emotions are bad or inappropriate and I shouldn't feel them."	*Describing* and *Acting with Awareness* skills do not discretely measure monitoring or acceptance.

For the current dissertation, two different questionnaires described in Table 1.1 were used to measure mindfulness on the basis of two different skills namely mindful awareness and mindful acceptance. For Chapter 2 and 3, Philadelphia Mindfulness Scale (PHLMS) by Cardaciotto (2005) was used, whereas Five Facets Mindfulness Questionnaire (FFMQ) by Bear et al. (2006) was used for Chapter 4. Previous researchers have already provided empirical evidence that both measures demonstrate good internal consistency and adequately measures mindfulness and its two key dimensions, mindful awareness and mindful acceptance.

1.5 Chapter Outline

To address the research gap mentioned above, three different studies were conducted in this dissertation. These three studies are described in Chapter 2, Chapter 3, and Chapter 4. The whole dissertation is concluded in Chapter 5. An incorporated research framework for the whole dissertation is shown in Figure 1.1.

Chapter 2 analyzes whether MSC training influences perceived stress and investigates the roles of mindful awareness and mindful acceptance in the relationship between training and perceived stress as a moderator and a mediator, respectively. The research framework is based on MAT and the emotion regulation theory. This study used a randomized controlled trial, where 25 voluntary participants from the alumni of the Ship for South-East Asian Youth Program in Myanmar were randomly assigned to a treatment and a waitlist control group. It was also found that acceptance has a statistically significant full mediation on the negative relationship between training and perceived stress. However, awareness did not moderate the relationship between acceptance and perceived stress. The findings contribute to the literature from the perspectives of psychology and adult learning as it uses an experimental research design to investigate the underlying mechanism of the effect of MSC online training on perceived stress, which is critical in influencing a variety of behaviors.

Chapter 3 investigates the relationship between transformational leadership as a job resource and contextual performance as a work outcome, mediated by work engagement and moderated by trait mindful awareness as a personal resource. Data were collected online from employees in the United States via Amazon Mechanical Turk. A total of 282 respondents were randomly assigned to one of two vignettes – one reflecting transformational and one reflecting nontransformational leadership. The findings revealed that the positive relationship between transformational leadership and contextual performance is partially mediated by work engagement. Mindful awareness significantly strengthens the relationship between transformational leadership and work engagement. The findings contribute to the literature by providing further empirical evidence on the inconclusive contextualization of mindful awareness as a personal resource.

Chapter 4 explores the relationship between trait mindfulness and organizational citizenship behavior (OCB) via the mediating mechanism of emotion regulation (ER). There have been previous studies which analyzed mindfulness as a predictor for enhancing OCB. However, to our understanding, there has been no previous research on the mechanism of the relationship between trait mindfulness and OCB. The results show that all the facets (excluding

observing) of trait mindfulness significantly predict OCB via ER. The significant contribution of this study was its distinction of five different facets of trait mindfulness in predicting OCB via the mediating mechanism of ER.

Chapter 5 is the concluding chapter of this dissertation. The overall findings of the dissertation are summarized, and the implications, limitations, and future research directions are discussed in this chapter.

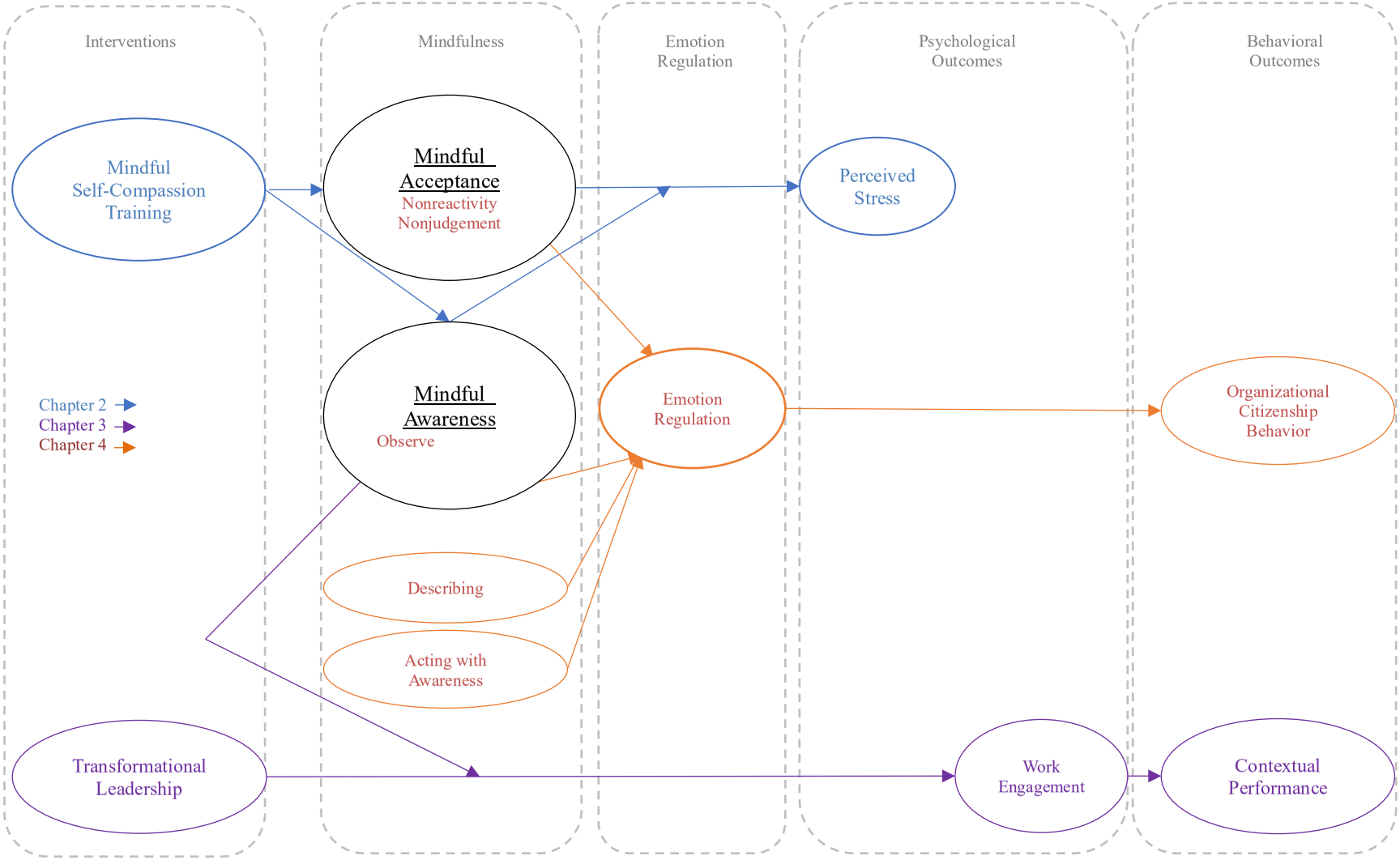


Figure 1.1. Integrated Research Framework

Chapter 2

Mindful Self-Compassion Training Online and Perceived Stress: Exploring Moderation of Awareness and Mediation of Acceptance

2.1. Introduction

For decades, mindfulness-based interventions (MBIs) have been broadly recognized as the most promising type of cognitive behavioral intervention for enhancing the psychological well-being of individuals in both clinical and non-clinical populations (Davis et al., 2015). Diverse MBIs are used with non-clinical populations, such as mindfulness-based stress reduction (MBSR) and the relatively unexplored mindful self-compassion (MSC).

To articulate the specific qualities of the two MBIs, and to explore the underlying mechanism of MBIs' effectiveness, definitions of mindfulness and its two major components need to be elaborated. Mindfulness can be defined as a way of paying attention to the present-moment experience with a mental stance of receptivity and acceptance (Kabat-Zinn, 1994). The monitoring and acceptance theory (MAT) on mindfulness (Lindsay & Creswell, 2017) proposes two components of mindfulness commonly described across its definitions and measures: (a) the use of attention to "monitor" one's present-moment experiences and thereby strengthening the "awareness" of these experiences, and (b) a mental attitude of "acceptance" toward moment-to-moment experiences. Based on Rapgay and Bystrisky's (2009) distinction between attention monitoring and awareness, Van Dam et al. (2010) claimed that the former is a particular cognitive faculty (a specific aspect or domain of mental function, such as language, object recognition, or face perception), and the latter is a directable but broader aspect of consciousness. Mindful awareness refers to the continuous monitoring of experiences with a focus on the current experience rather than a preoccupation with past or future events (Roemer & Orsillo, 2003). We will be using the construct of mindful awareness to operationalize as one component of mindfulness, as it is more proximal to attitudinal and behavioral outcomes. The other component, acceptance, is an orientation of receptivity and noninterference with present-moment experiences that contrasts with tendencies to suppress, avoid, alter, prolong, or fixate on certain stimuli (Lindsay & Creswell, 2019). Lindsay and Creswell (2017) have argued that acceptance skills are necessary to modify the way an individual relates to present-moment experiences and to regulate reactivity to affective experiences.

Returning to features of MBSR and MSC training, both cover mindful awareness and mindful acceptance to develop positive outcomes, but their relative focuses are contrasting. MBSR training, with more emphasis on mindful awareness, uses mindfulness meditation,

mindful movements, and inquiries to train participants to relate differently to stressors and to moment-to-moment experiences in their daily lives. On the other hand, MSC training, while based on and inspired by the MBSR, is a program created to provide participants with tools for coping with difficult emotions that emphasizes self-compassion; mindful acceptance is one of its main components. MSC training encompasses practices for responding to difficult thoughts and emotions with self-kindness, openness, and curiosity. It is a protocol-standardized intervention aimed at increasing mindfulness and compassion to self. Both attitudes promote acceptance of experiences and reduction of suffering associated with experiential avoidance, an antonym of experiential acceptance (Neff & Germer, 2013).

The distinction between the two types of training is important. This is because, in MBI, the two components of mindfulness play different roles in achieving wellbeing outcomes. Lindsay and Creswell (2017) argued that attention monitoring skill predicts cognitive performance in affectively cold contexts whereas an extra acceptance skill is necessary to reduce emotional reactivity in affectively hot contexts. Specifically, mindful acceptance is expected to mediate the relationship between MBIs and wellbeing outcomes such as negative affectivity, stress, and stress-related outcomes, according to the emotion regulation theory (Gross, 1998a) and the experiential learning cycle (Kolb, 1984) developed in the context of adult learning studies. On the other hand, mindful awareness does not mediate such a relationship. Instead, it acts as a moderator between mindful acceptance and outcomes as suggested by the MAT (Lindsay & Creswell, 2017). Stated differently, it is a conditional application of the emotion regulation theory. The MAT, in contrast, interprets the function as an interaction between mindful awareness and mindful acceptance rather than moderation.

MSC training was selected as the MBI for the analysis of the present study, as it emphasizes mindful acceptance over other components of mindfulness or self-compassion. Particularly, MSC training includes the minimum necessary material related to mindful awareness, such as affectionate awareness, only in the second of eight total sessions. In this regard, analyzing MSC training may provide insights beyond the MAT, although the training requires additional time to develop awareness.

Based on the discussion above, the objective of the present study (in line with the MAT and the emotion regulation theory) is to examine how components of mindfulness, that is, mindful awareness and mindful acceptance, play a role in the relationship between MSC training and outcomes. Perceived stress was selected as the outcome variable, as it is a proximal outcome of the emotion regulation process that improves various behavioral outcome variables related to psychological wellbeing. Because of the potential applicability of mindfulness to a

person's experiences and the critical role played by stress in influencing a variety of outcomes, we adopted perceived stress rather than specific behaviors as our outcome.

The contributions of the present study are threefold. Firstly, since the underlying mechanism of MBI including MSC are underexplored, this study can contribute to the literature by exploring this mechanism based on mindful awareness, and mindful acceptance according to the MAT, as well as through the perspective of the emotion regulation theory (Gratz & Tull, 2010) or modified emotion regulation theory as a whole. Secondly, our focus is not on the general population but on the specific sample, that is, self-critical people, and this is how we justifies our selection of MSC as an intervention. Such people are expected to improve their mindful acceptance and in turn reduce their stress. Finally, our experimental research design can be a contribution as well. Many studies have proven that MBIs enhance the psychological wellbeing of diverse individuals (Kotera & Van Gordon, 2021; van der Meulen et al., 2021). Most of these studies are correlational, however, more researchers are examining MBIs using randomized controlled trials (RCTs). These RCT studies focus mainly on MBSR training, and less so on MSC training. To date, only three empirical studies have investigated the effect of MSC training using RCTs (Finlay-Jones et al., 2021; Friis et al., 2016; Neff & Germer, 2013), which have found improvements in outcomes. Only the direct effect of MSC and not the underlying mechanism that involved mindful awareness and mindful acceptance, however, were analyzed.

2.2 Literature Review

As mentioned in the introduction, MSC training aims to improve both mindful awareness and mindful acceptance, although its main emphasis is on mindful acceptance, as it is a critical part of self-compassion. In particular, an important part of the MSC training curriculum involves developing the acceptance and willingness to experience fully pleasant or unpleasant psychological events. The training uses different approaches to support the gradual acceptance of emotional discomfort, adjusting to it over five stages: resisting, exploring, tolerating, allowing, and befriending (Germer, 2009). Thus, individuals can change, avoid, or control internal events without expending their attentional resources. Alternatively, they can increase focus on proper decision-making without the interference of emotions and thoughts (Bond & Bunce, 2003).

Empirical studies support this argument. In their pilot study, Neff and Germer (2012) showed that MSC training resulted in a significant increase in the overall level of mindfulness, as measured by the Cognitive Affective Mindfulness Scale (CAMS-R; Feldman et al., 2007)

which covered awareness, acceptance, attention, and present focus. As the four-component integrated scale had a Cronbach's α of .89, we may expect that MSC training affects not only mindful acceptance but also mindful awareness. Therefore, we propose the following hypotheses for our study.

H1: MSC training has a significant positive influence on mindful awareness.

H2: MSC training has a significant positive influence on mindful acceptance.

The influence of MSC on more distal outcomes, including stress, is also expected.

Empirically, the effects of MSC on relevant outcomes have been investigated as a simple direct relationship without explicitly exploring the underlying mechanism. A meta-analysis of 27 RCT trials by Ferrari et al. (2019) provided support for self-compassion-based interventions improving 11 diverse psychological outcomes, including perceived stress in clinical and non-clinical populations. For example, the Enhancing Self-Compassion (ESC) program, an RCT study by Arimitsu (2016), found that seven weekly 1.5-hour sessions each resulted in the significant reduction of negative thoughts and emotions in the treatment group. Dundas et al. (2017) found that a two-week self-compassion course for university students enhanced their personal growth self-efficacy, and reduced self-judgment, habitual negative self-directed thinking, anxiety, and depression. Two other RCTs also found improvements in outcomes due to the intervention. The first study was by Neff and Germer (2013), who are also the founders of the MSC training. They conducted an RCT specifically for MSC training and concluded that the training is effective in improving individual well-being. The second study by Friis et al. (2016) showed a statistically and clinically significant reduction in depression and diabetes distress in the treatment group after MSC training.

In the present study, perceived stress was selected as the outcome variable. It is an appropriate intermediate outcome variable that leads to various attitudinal and behavioral outcomes related to individual well-being. The relationship between stress and such outcomes has been supported by empirical evidence (Bader & Berg, 2013; Cohen, 1980; Hill et al., 2021; McManus et al., 2004; Sandler, 2000) and therefore, we developed the following hypothesis.

H3: MSC intervention has a significant negative influence on perceived stress.

2.2.1 Mediation of Mindful Acceptance

As mentioned earlier, mindful acceptance is a critical component of MBIs (Block-Lerner et al., 2009). It is considered a dynamic emotion regulation skill and an important mechanism of MBI for improving stress-related health outcomes (Lindsay & Creswell, 2017). The emotion regulation theory (Gross, 1998a) explicates this skill and the first three stages of

the emotion regulatory process by Gross (1998b) can be employed to explain this mechanism. Participants of MBIs are encouraged to intentionally incline toward their present-moment experiences without avoidance (at the situation selection stage), to explore the selected present moment nonjudgmentally (in the selection modification stage), and to attend to that experience in an accepting stance (the attentional deployment stage). According to Robins et al. (2004), fully open acceptance is that which is without constriction, distortion, judgment, evaluation, and attempts to retain an experience or get rid of it; therefore, mindful acceptance is experiencing something without the haze of what one wants and does not want it to be. MBIs that develop experiential acceptance through these stages can lead to a reduction in trainees' stress levels. Along with presenting this argument, Holmes et al. (2006) also suggested that mindful acceptance is the only way to regulate emotions in managing unwanted private events.

The mediating role of emotion regulation has been consistently presented as a central process in mindfulness literature (Glomb et al., 2011; Hayes & Feldman, 2004; Mandal et al., 2011; Roemer & Orsillo, 2003; Shapiro et al., 2006). In particular, Chambers et al. (2009) mentioned that, in mindful emotion regulation, all the mental events are simply allowed to come and go and need not be acted upon (i.e., mindful acceptance). Further, Iani et al. (2019) considered acceptance as a crucial variable in the mindful emotional regulation process. Hayes et al. (1999) argued that brief acceptance training, which involves an accepting and detached lens, helps individuals regulate emotions. This means that mindful acceptance may mediate the relationship between training and outcomes. Even though there have been many empirical studies on mindfulness and MBIs, little or no experimental work has tested the mediation of acceptance as an emotion regulation mechanism (Lindsay & Creswell, 2019) bridging MBIs, including MSC training and wellbeing outcomes. Hence, the fourth hypothesis is as follows.

H4: Mindful acceptance mediates the relationship between MSC training interventions and perceived stress.

2.2.2 Moderating Effect of Mindful Awareness on the Relationship between Mindful Acceptance and Perceived Stress

In contrast to mindful acceptance, mindful awareness does not have a direct effect on individual outcomes. Mindful awareness enhanced by attention monitoring heightens affective experience and reactivity, exacerbates negative symptoms, enhances positive experiences, and improves cognitive functioning outcomes in affectively neutral contexts; thereby, mindful awareness alone is not sufficient to balance attentional control with emotion regulation and improve outcomes (Lindsay & Creswell, 2017). Although adopting trait mindfulness and not

state mindfulness cultivated by MBI, Lindsay and Creswell (2019) found that the interaction between mindful acceptance and mindful awareness had a positive effect on affective functioning and stress-related health outcomes. In this regard, the role of mindful awareness is secondary, although we cannot ignore its role in developing positive outcomes. From the perspective of the emotion regulation theory, mindful awareness works as a boundary condition that determines the effect of MBIs and MSC training. Therefore, the MAT may be understood as a modified version of the emotion regulation theory.

This can be interpreted in the context of adult learning studies, more specifically, the experiential learning cycle of Kolb (1984). The cycle consists of four stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation. After a concrete experience, reflective observation occurs as a combination of awareness through observation and acceptance during the reflection process. Consequently, the combination generates a "theory" (abstract conceptualization) on how to approach the learner's experience based on appropriately regulated emotion. The theory is applied (active experimentation) to deal with further experiences (leading to the next round of concrete experience).

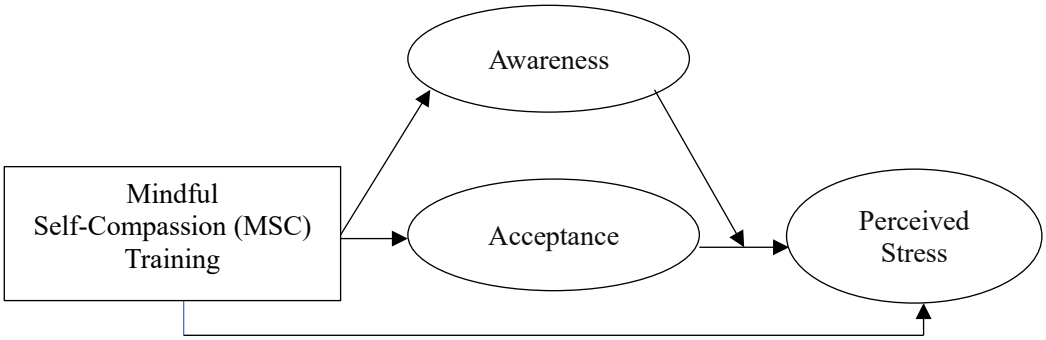
Thus, the MAT predicts that the combination of mindful awareness and mindful acceptance skills improves affective functioning and stress-related health outcomes (Lindsay & Creswell, 2017). According to Lindsay and Creswell (2019), mindful awareness (while their argument started from its antecedent; attention monitoring) skills are associated with beneficial mental and physical health outcomes only when accompanied by acceptance skills. This is because mindful acceptance skills, along with mindful awareness, modify the way one relates to present-moment experience by regulating reactivity to affective experience (Lindsay & Creswell, 2017). We may interpret their argument based on the negative acceptance-perceived stress relationship, which states that the higher the mindful awareness, the stronger the negative relationship between mindful acceptance and perceived stress. This leads to our fifth hypothesis:

H5: Mindful awareness positively moderates the relationship between mindful acceptance and perceived stress.

A conceptual framework of the study is presented in Figure 2.1.

Figure 2.1

Conceptual framework



2.3 Methodology

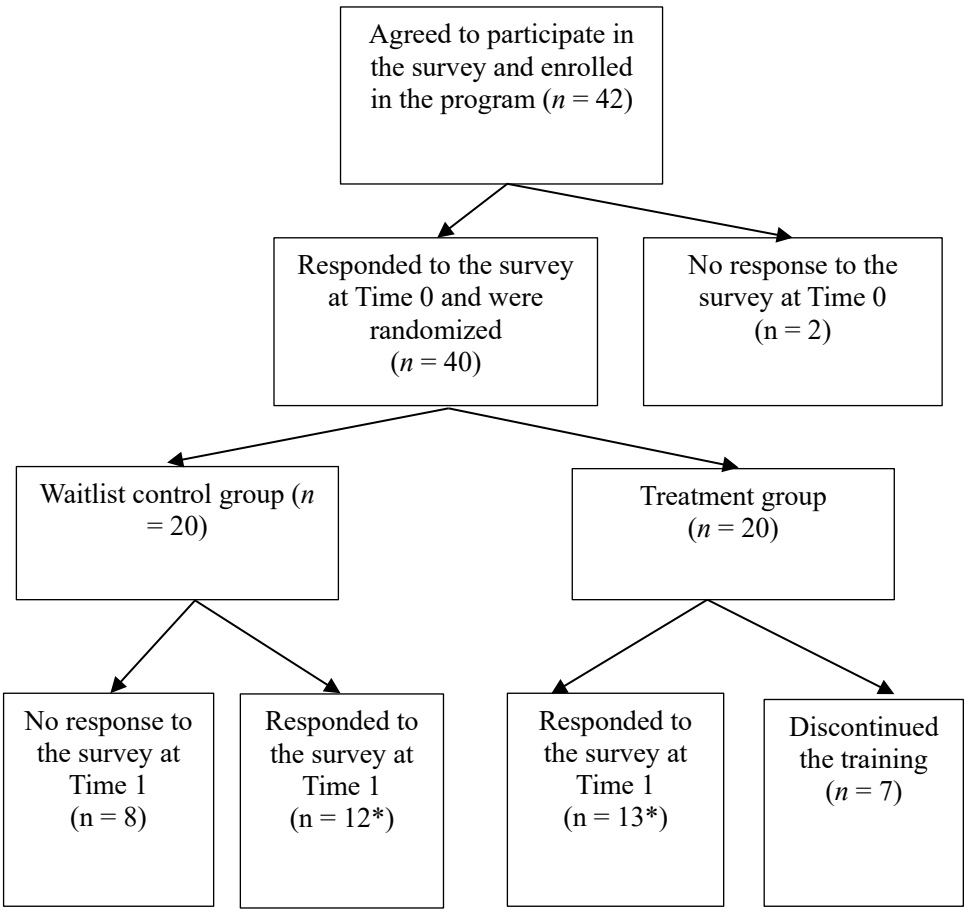
2.3.1 Participants

The participants were alumni of the Ship for South-East Asian Youth Program from Myanmar, a Buddhist dominant country where meditation methods have been commonly utilized. The program has been implemented by member countries of the Association of Southeast Asian Nations and Japan. The aims of the program are to promote friendship and mutual understanding among the youth of Japan and the Southeast Asian countries, to broaden their perspective of the world and to strengthen their spirit of international cooperation and practical skills for international collaboration (Cabinet Office of Japan, n.d.). The participants are selected as the sample because they are above-average and ambitious (and consequently self-critical and stressed) young people for whom the MSC training is highly relevant. The MSC training is intended especially for those people with a self-critical nature, toward promoting increased self-acceptance among them. Therefore, the sample seems to match very well with this type of training program. The program's selection process is highly competitive, and the alumni in Myanmar are typically above-average young individuals who are fluent in the English language (with the IELTS band scores ranging from 7 to 8.5), and socially and academically capable. Participants were recruited via a social media platform commonly used by alumni. Program volunteers were randomly assigned to a treatment or a waitlist control group. Altogether, 42 participants initially volunteered to participate in the program. Among them, 40 participants actually answered the online questionnaire at Time 0. They were randomly assigned to two groups – 20 participants in the treatment group and 20 participants in the waitlist control group. After delivering the eighth session, at Time 1, only 13 participants in the treatment group and 12 participants in the waitlist control group answered the

questionnaire again and were included in the final analysis. Therefore, for both Time 0 and Time 1, only the responses of those participants were used for the purpose of data analysis. Figure 2.2 depicts the participant flow chart.

Figure 2.2

Participant Flow Chart of Pretreatment and Post-treatment Periods



Note. *Number of respondents considered in the analysis.

2.3.2 Intervention

The MSC training intervention developed by Neff and Germer (2013) was delivered online by the first author (an authorized MSC trainer), with the third author as a facilitator. The program involved both formal (sitting meditation) and informal (daily activities) mindful self-compassion practices. The training was delivered by the first author who was also an authorized MSC program trainer in the Myanmar language following standard MSC protocol in eight weekly sessions of 2.5 hours each, plus a 3-hour silent retreat session. Training contents including mindful self-compassion, mindfulness, how to practice loving kindness, how to discover the participant's own compassionate voice, how to meet difficult emotions, and how

to explore challenging relationships etc. were provided didactically and experientially. The training began in December 2020. Due to the COVID-19 pandemic, the training was offered online (in accordance with the Center for Mindful Self-Compassion (CMSC) Professional Training Committee's guidance about teaching MSC online) via Zoom sessions every week.

2.3.3 Ethical Consideration

Informed consent was obtained from all participants before the initial survey was conducted. The ethical review board of the Graduate School for International Development and Cooperation, Hiroshima University, reviewed and approved the study protocol (reference no. 6923).

2.3.4 Measures

The online questionnaire was offered in English language only as all the participants of the current study are fluent in it. The 20-item Philadelphia Mindfulness Scale (PHLMS; Cardaciotto et al., 2008) was used to measure two components of mindfulness; mindful awareness and mindful acceptance. All items are rated on a 5-point Likert-type scale ranging from never (1) to very often (5). Example items include "I am aware of what thoughts are passing through my mind." and "I try to distract myself when I feel unpleasant emotions." The full list of items is provided in the Appendix. Cronbach's alpha values for awareness and acceptance were .80 and .85, respectively.

The 10-item Perceived Stress Scale (PSS) by Cohen et al. (1994) was used to assess perceived stress. All items are rated on a 5-point Likert-type scale ranging from never (0) to very often (4). Example items include "How often have you been upset because of something that happened unexpectedly?" and "How often have you been angered because of things that are outside of your control?" The Cronbach's alpha for perceived stress was .80.

2.4 Data Analysis

For the statistical analysis, we used the following tests: the treatment and control groups were compared using the t-test and chi-square test, in terms of demographic characteristics and the outcome variables of mindful awareness, mindful acceptance, and perceived stress before MSC training. The direct effect of MSC training on the outcomes were analyzed through a t-test. Moreover, the mediation of acceptance between the training and perceived stress as well as the moderation of awareness on the relationship between acceptance and perceived stress were tested using Hayes' (2013) conditional PROCESS analysis.

2.5 Results

The effect of MSC on perceived stress and the role played by awareness and acceptance in the relation between training and outcome as a moderator and a mediator, was investigated in this study. This section reports the results of the statistical analyses conducted.

Table 2.1 presents a correlational matrix and descriptive statistics of mindfulness, perceived stress, and demographic variables. The results show that there was no significant association between mindful awareness and acceptance. However, it was found that mindful acceptance is significantly correlated with perceived stress.

Table 2.1

Descriptive statistics

	Mean	*SD*	1	2	3	4	5	6	7
1. Gender	1.72	0.46							
2. Age	1.64	0.57	0.24						
3. Marital status	0.04	0.20	1.27	.13					
4. Education	2.12	0.67	0.25	.67**	-.04				
5.Employment status	4.12	1.36	0.12	.60**	.13	.63**			
6. Awareness	3.57	0.55	-0.12	-.10	-.17	.01	-.13		
7. Acceptance	2.82	0.67	-0.03	.08	.05	-.24	.13	-.00	
8. Perceived stress	1.83	0.48	0.01	-.20	.20	-.04	-.30	-.20	-.67**

Note. $N = 25$; SD = standard deviation; Gender (Male = 1, Female = 2); Age (18 to 24 = 1, 25 to 34 = 2, 35 to 44 = 3); Marital status (Single = 0, Married = 1); Education (Undergraduate = 1, Graduate = 2, Master degree = 3, Professional degree = 4, Doctorate = 5); Employment status (Student = 1, Unemployed not looking for a job = 2, Unemployed looking for a job = 3, Employed part time = 4, Employed full time = 5). *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

The likelihood ratio chi-square test was used for gender ($\chi^2 = .33$, $p = .57$), marital status ($\chi^2 = 1.51$, $p = .22$), and employment status ($\chi^2 = .71$, $p > .05$), and an independent sample t-test was used for age ($t = 1.70$, $p = .10$) and education ($t = .94$, $p = .36$). No significant difference was found between the two groups in terms of demographic data, indicating that our random assignment was successful in this regard.

The independent sample t-test showed no significant difference between treatment and control groups for outcome variables at Time 0 (immediately before the intervention). Hence, there was no significant difference between both groups for awareness ($t = .37$, $p = .72$), acceptance ($t = -.76$, $p = .45$), and perceived stress ($t = 0.26$, $p = .80$) at Time 0, which indicated that the random assignment was successful. However, a significant difference was found

between both groups for acceptance (t = -3.32, p = .00) and perceived stress (t (23) = 3.57, p = .00) at Time 1 (immediately after the intervention). Here, the treatment group had a higher level of acceptance and a lower level of perceived stress than the control group. Therefore, Hypotheses 2 and 3 were supported. On the other hand, there was no significant difference between both groups for awareness (t = .37, p = .77) at Time 1. Hence, Hypothesis 1 was not supported.

To test the mediation and moderation hypotheses, Hayes's (2013) conditional PROCESS analysis was conducted using SPSS 27. The results of the PROCESS analysis are presented in Tables 2.2 and 2.3.

Table 2.2

Mediation of mindful acceptance on the relationship between MSC training and perceived stress

Predictor	*b*	*SE*	95% *CI*		R^2
			LL	UL	
Total effect	-.56**	.16	-.89	-.24	.36**
Direct effect	-.30	.17	-.65	.05	
			95% *CI*		
	Boot IE	Boot SE	LL	UL	
Indirect effect via mindful acceptance	-.26*	.13	-.54	-.02	.52***

Note. *b* = Unstandardized Coefficient; *SE* = Standard Error; Boot SE = Bootstrapped Standard Error; Boot IE = Bootstrapped Indirect Effect; *CI* = Confidence Interval; LL = Lower Level; UL = Upper Level, *p < .05. **p < .01, ***p < .001.

Table 2.2 shows that acceptance fully mediates the relationship between MSC training and perceived stress, with a significantly negative indirect effect via mindful acceptance (b = -.26, p < .05). Therefore, our hypothesis 4 is supported. Furthermore, it was also found that the mediation model explained greater variance (52%) in perceived stress when compared to the total effect model (37%).

Table 2.3

Conditional effect of mindful awareness on the relationship between mindful acceptance and perceived stress

Predictor	*b*	*SE*	95% *CI*	
			LL	UL
F (20,4) = 8.28***				
Effect on perceived stress				
MSC intervention	-.29	.16	-.62	.04
Mindful acceptance	-.26	.13	-.53	.01
Mindful awareness	-.05	.13	-.33	.23
Mindful acceptance x mindful awareness	-.31	.16	-.66	.03
Conditional effect of mindful awareness	Boot IE	Boot SE	95% *CI*	
			LL	UL
-1SD (-0.55)	-.09	.18	-.47	.30
Mean (0)	-.26	.13	-.53	.01
+1SD (+0.55)		.13	-.70	-.17

Note. *b* = Unstandardized Coefficient; *SE* = Standard Error; Boot SE = Bootstrapped Standard Error; Boot IE = Bootstrapped Indirect Effect; CI = Confidence Interval; LL = Lower Level; UL = Upper Level; *$p < .05$. +1SD = one standard deviation above the mean; -1SD = one standard deviation below the mean.

According to Table 2.3, the interaction term of mindful awareness and mindful acceptance (b = -.31, $p > .05$) on perceived stress was not found to be significant at the 5% level for the current sample. Hence, it can be said that our hypothesis 5 was not supported, though the moderation was significant at the 10% level. However, the conditional effect of mindful awareness on the relationship between mindful acceptance and perceived stress was found to be significant (b = -.43, $p < .05$) when the level of awareness was high (+1SD) and was not significant when the level was mean and low (-1SD). This result may suggest a noteworthy change, which is discussed in detail in the next section.

2.6 Discussion

Contrasting results were found between the hypotheses, including for mindful awareness and other variables (not including awareness). Specifically, the former (H1, H5) was not supported, while the latter (H2, H3, H4) was supported. Based on this, we argue that the direct application of the emotion regulation theory was supported, but the MAT as a modified version of the emotion regulation theory and the experiential learning cycle framework in the context of adult learning studies were not supported. We will focus on the possible reasons why the MAT was not supported in the present study.

In our sample, MSC training did not have a significant positive effect on mindful awareness (H1). This result does not align with the results of Neff and Germer (2013), in which overall mindfulness including awareness was significantly increased after MSC training. Neff and Germer (2013) also found that the effectiveness of training is significantly related to the number of days per week in which participants engaged in formal sitting meditation. In the current study, the trainer strictly followed the MSC agenda of providing in-class didactic and experiential learning for the participants. However, one limitation is that the trainer did not provide participants with guided recordings for home practice, which may lessen the effectiveness of the intervention. Further, participants in the treatment group admitted that they, most of the time, failed to engage in the home practice sitting meditation that enhances mindful awareness between each session. In addition, participants voluntarily agreed to join the research-oriented type of training free-of-charge. Therefore, their motivation to practice the sitting meditation home practices appears to be lower than those who usually have to join the training program with a fee. Moreover, conducting therapeutic training such as MSC training online may decrease the potency of the program when compared to in-person training. Even though the participants were strictly advised to join the session from a private space, they may have experienced various distractions as they joined the training from home, which could have been prevented during in-person sessions. These may be the reasons for the failure to obtain significant results.

In contrast, we found a positive effect of MSC training on mindful acceptance (H2). As mentioned earlier, training depends on both the didactic and experiential learning of participants. In class, didactic and experiential learning topics appear to be potent enough for the participants to cultivate and embrace mindful acceptance. However, in the case of mindful awareness, it is more dose-dependent (altering with the number of days and hours of sitting meditation practices every week).

It was also found that mindful awareness did not moderate the relationship between mindful acceptance and perceived stress, although it was significant at the 10% level (H5). However, the different results based on the specific level of mindful awareness is noteworthy. Specifically, it was found that the relationship between mindful acceptance and perceived stress is significant in cases of high mindful awareness (+1SD) and non-significant in the other cases (mean and -1SD). We could interpret this difference in terms of a non-linear type of moderation in which after reaching a threshold level just above the mean value of mindful awareness level (+0.06SD), moderation would be activated. Training participants with low to middle levels of awareness may face relatively limited experiences necessitating emotion regulation. At the

same time, such experiences are manageable by other means without acceptance-based emotion regulation. In this case, seemingly higher ambitions may work effectively. For example, they may be more likely to change their thoughts about negative experiences by re-framing them as challenge stressors (Cavanaugh et al., 2000), using them as good learning opportunities or expecting more appreciation from others for suppressing negative feelings. Hence, the availability of mindful acceptance does not affect the stress level. However, this cognitive change may not be sufficient for the management of more overwhelming experiences. Such experiences require acceptance-based emotion regulation and tend to be more available when awareness is higher than the threshold. Consequently, acceptance enables participants to reduce their perceived stress. Moreover, the statistically insignificant moderating effect might have derived from the relatively large standard error of each coefficient, potentially due to individual differences and the small sample size.

2.7 Implications

As discussed above, the MAT was not applicable because of the specific conditions in our study. However, we should be cautious in criticizing the theory as the results have provided a case to show the boundary conditions of its applicability.

Through this study, we have come to understand that even though mindful awareness was not given much attention, MSC training can still reduce perceived stress, by the improvement of acceptance. We appreciate MSC training but also recommend caution for two reasons. First, our sample had specific features that may not be found in the general adult population. Second, the role of mindful awareness suggested by the MAT was not significant in our analysis, which may imply that training programs with more emphasis on mindful awareness will produce better results in stress reduction.

2.8 Limitations and Future Research Directions

The major limitation of this study was that we could not confirm the causal effect of mindful acceptance on perceived stress, as there was no direct acceptance intervention. Due to the small sample size, causal mediation analysis, including sensitivity analysis of the effect of the mediator (Imai et al., 2010) may be too strict to diagnose the mediation. One more limitation to address in this study is relying on self-reported questionnaires which add additional concern on making causal conclusion. Using additional methods or sources of data can help control some sources of method variance in future studies.

The small sample size might also have caused unexpectedly non-significant results. Generalizing the results is not advised due to the specific characteristics of the sample. Further research with a larger and more representative sample is necessary to confirm the results of the

current study. Finally, the number of days per week and the number of hours per day in which participants engaged in formal and informal practices were not recorded, which may have contributed to the statistically insignificant effect of MSC training on awareness. Future studies could employ research design and data collection methods to address these limitations.

2.9 Conclusion

This study investigated the influence of online MSC training on voluntary participants in Myanmar during the COVID-19 period, specifically examining the relationship between online MSC training and perceived stress, and the role played by mindful awareness and mindful acceptance as a moderator and mediator respectively. The participants are above-average ambitious, and consequently self-critical youths who are experiencing stress similar to young people all over the world because of the conditions and limitations resultant from COVID-19 restrictions. After eight weeks of online MSC training, it was found that the training had a positive effect on mindful acceptance, a negative effect on perceived stress, and no effect on awareness. It was also found that acceptance played a mediating role in the relationship between training and perceived stress. However, mindful awareness did not moderate the relationship between mindful acceptance and perceived stress. The theoretical framework used included the MAT and the emotion regulation theory.

To the best of our knowledge, there has been little or no research on the effect of online MSC training to date, and this study may be one of the first to provide empirical data on the effect of MSC training on perceived stress with an experimental research design. Furthermore, this study is the first to empirically identify mindful acceptance as a mediator in the relationship between MSC training and perceived stress by incorporating the role of mindful awareness in the process. The indirect path indicating the influence of the intervention on perceived stress via mindful acceptance was found to be statistically significant, as suggested by the emotion regulation theory. However, mindful awareness was neither improved by the training nor moderated the relationship between mindful acceptance and perceived stress, which was contrary to what was expected from the MAT.

Chapter 3
Effect of Transformational Leadership on Contextual Performance Mediated by Work Engagement and Moderated by Mindful Awareness

3.1 Introduction

Researchers and practitioners consistently agree that constructively administering employee performance is crucial for generating positive organizational outcomes. Along with the upheaval of teleworking as a result of the COVID-19 pandemic, self-disciplined, motivated acts of employees or their contextual performance have become vitally important. Contextual performance is defined as the behaviors that support the organizational, social, and psychological environment in which the technical core functions (Borman & Motowidlo, 1993). More specifically, it is a form of extra-role behavior that inclines cooperation and following rules, voluntarily participating in additional work responsibilities that are beyond an employee's formal obligations, and persisting with extra enthusiasm, when necessary, to complete the tasks successfully (Han et al, 2015).

Considering the importance of contextual performance, we were motivated to investigate its antecedents. In compliance with a resource-based approach of Hobfoll (1989), Bakker & Demerouti, 2008 claim that the availability of resources is vital for improving employee performance in the workplace. Resources can be classified into two types, based on their origins —job and personal resources. Job resources refer to those physical, social, or organizational aspects of the job that are functional in achieving work goals, reducing job demands and the associated physiological and psychological costs and stimulating personal growth and development (Nachreiner et al, 2001). On the contrary, personal resources refer to the psychological characteristics or aspects of the self that are generally associated with resilience and the ability to control and impact one's environment successfully (Schaufeli & Taris, 2014).

Among job resources, scholars consistently state that leadership is an essential antecedent of employee outcomes. Iqbal et al. (2015) state that different types of leadership style have different levels of influence on employee performance. Moreover, among various leadership types, transformational leadership, in particular, is inferred as a contextual structural (i.e., durable) resource that affects performance, because leaders are an integral part of employees' social context at work (Hildenbrand & Sacramento, 2018).

Transformational leadership is defined as the process of building commitment to organizational objectives and then empowering employees to accomplish those objectives (Yukl,1998). The role of transformational leaders who can motivate their employees to work toward common goals and ensure autonomy to make independent decisions to improve performance, becomes integral, especially so given that the COVID-19 pandemic is reshaping the workplace, inevitably leading many organizations to shift to a work-from-home arrangement. A better understanding of transformational leadership can be reached by contrasting it with transactional leadership. Transactional leadership is usually described as the exchange of valued outcomes between leaders and employees. Transactional leaders are influential in such a way that employees can obtain their best interest and meet their expectations by following what the leaders want them to complete (Kuhnert & Lewis, 1987). A transactional leader motivates employees to perform as expected, whereas a transformational leader inspires followers to achieve more than expected (Den Hartog et al., 1997). Empirical studies also find positive relationships between transformational leadership and various outcomes; some of these outcomes are proximal, whereas others are distal to the transformational leadership variable. Regarding proximal outcomes, such as job or work engagement, a positive relationship between transformational leadership and job engagement was found in a sample of Spanish employees working in high-tech and knowledge-based small and medium-sized enterprises (Vila-Vázquez et al., 2018). This leadership style was also found to be associated with work engagement in a sample of Spanish employees in the tourism sector (Amor et al., 2020), as well as in a sample of employees in a finance and event management company in Singapore (Chua & Ayoko, 2021). With respect to distal outcomes such as performance, researchers found a significant positive relationship between transformational leadership and outcomes such as employee performance in a sample of firefighters in the United States (Geier, 2016). It was also found to be associated with sustainable employee performance among respondents in the construction industry in China (Jiang & Zhao, 2017), task performance and organizational citizenship behavior among employees in the United States (Carter et al., 2013), task performance in a sample in the United Kingdom (Wills et al., 2017), task and contextual performance in a sample of frontline employees in five-star hotels in China (Chen & Shao, 2022), and contextual performance (Yang et al., 2019). In addition, some researchers argue that transformational leadership is more closely associated with contextual performance, while transactional leadership is more closely associated with individual task performance, in which employees perform activities that contribute to the organizational core (Chen & Shao, 2022). Transformational leaders' tendency to clarify

expectations and goals and encourage cooperation, plus their fair and equal treatment, empowerment, and active interaction with their employees create high-quality relationships that can be reciprocated with contextual performance (Wang et al., 2011).

The mechanism of the relationship between transformational leadership and contextual performance requires further investigation, as the relationship is distal, rather than proximal (Dvir et al., 2002). For example, by using metanalytic path modeling, existing research provides evidence on the effect of work engagement on the relationship between distal antecedents (job characteristics, leadership, and dispositional characteristics) and job performance (such as task performance and contextual performance) (Christian et al., 2011). In this regard, numerous ways by which transformational leadership can affect contextual performance through individual-level mediators such as psychological safety, self-efficacy, personal identification, and intrinsic motivation, have been proposed (Reilly & Aronson, 2009). For example, a meta-analysis of 185 independent studies reveals that trust plays a mediating role in the leadership–performance relationship (Legood et al., 2021). In addition, an existing study shows that transformational leadership has a positive influence on employees' proactive work behaviors, in such a way that leadership—at a different hierarchical level—influences the outcome variable via different mediators, such as the employees' commitment and their confidence to initiate change (Strauss et al., 2009).

The motivational process of the Job Demands-Resources (JD-R) model states that job resources (such as transformational leadership) stimulate work engagement, which in turn enhances positive work outcomes (such as performance) (Schaufeli & Taris, 2014). Work engagement is a positive, fulfilling, and work-related state of mind, characterized by vigor, dedication, and absorption (Schaufeli et al., 2002). It should be investigated because it reflects a more comprehensive work-related affective–motivational state encompassing both health-related outcomes—such as affective wellbeing—and motivation-related outcomes, such as intrinsic motivation (Schaufeli et al., 2006). In addition, work engagement, which is a form of heavy work investment and reflects an employee's dedication to the organizational activities, becomes questionable, particularly in times of upheaval caused by a work-from-home approach. Further, a previous empirical study found that teleworking was associated with a lower level of work engagement during the COVID-19 pandemic (Parent-Lamarche, 2022).

Likewise, transformational leaders who can empower and inspire employees to take on self-managed responsibilities even if they are not under surveillance seem to be a relevant predictor of their subordinates' work engagement, particularly during the pandemic period. An existing empirical study also shows the mediating role of work engagement in the relationship

between transformational leadership and job performance among frontline hotel employees (Buil et al., 2019). Researchers are also interested in personal resources as boundary conditions of the transformational leadership–contextual performance relationship (Kroon et al., 2017). In the literature, self-efficacy, organization-based self-esteem, and optimism are found to be common personal resources (Xanthopoulou et al., 2007). Previous researchers indicate that personal resources may act as moderators that govern the way employees realize, formulate, and react to the environment's goals (Xanthopoulou et al., 2013). In addition, the roles of cognitive processes and individual characteristics in realizing the work environment are supposedly essential factors to consider when predicting work-related individual outcomes (Xanthopoulou et al., 2007). An empirical study indicates that personal resources (e.g., intrinsic work value orientation) can be integrated into the JD-R model in such a way that they strengthen the positive effect of job resources (e.g., job autonomy) on work engagement (Van den Broeck et al., 2011).

Researchers suggest that personal resources such as hope, optimism, and self-efficacy relate to resiliency and the positive core self-concept, whereas mindful awareness is more concerned with how people use their attentional resources to cope with job resources ((Xanthopoulou et al., 2013; Grover et al., 2017). The present study focuses on trait mindful awareness as possessing a higher level of present-moment awareness that enables individuals to allocate their limited attentional resources (i.e., individuals select a limited number of sensory inputs to process while other sensory inputs are neglected) to utilizing available job resources and enhances their ability to deal with and/or deploy the available job resources around them (Grover et al., 2017; Wahn & König, 2017). Based on the JD-R model, we assume that employees with a relatively higher level of personal resources—mindful awareness, in particular—are more aware of and open to the full potential of job resources—with the two working together synergistically. However, one existing study discovered the compensating interaction effect of transformational leadership and mindful awareness on intrinsic motivation in the Netherlands (Kroon et al., 2017), which concurs with the "substitutes for leadership" theory (Kerr & Jermier, 1978). Some researchers argue that mindful awareness can make individuals more resilient to the inadequacy of job resources and cognizant of alternative job resources, considering the ever-changing nature of the work environment (Janssen et al., 2020). Based on the JD-R model, other researchers state that, as a personal resource, mindful awareness buffers the link between emotional demands and psychological stress (Kerr & Jermier, 1978). An empirical study provides evidence that mindful awareness significantly strengthened the negative relationship between work pressure and work engagement within its

sample (Janssen et al., 2020). Since the study adopted the narrower scope of intrinsic motivation as an outcome, we should be cautious to avoid simply comparing this compensating moderation with the strengthening moderation. Nevertheless, when it comes to empirical evidence concerning specific personal resources, the literature appears to be inconclusive, and we should further investigate the results empirically.

Based on the argument above, the present study is expected to contribute to the literature by identifying the underlying mechanism (mediation of work engagement) and boundary condition (moderation of mindful awareness) of the relationship between transformational leadership and contextual performance. The required data were collected online from 282 individuals in the United States via Amazon Mechanical Turk. The respondents were randomly assigned to two vignettes—one reflecting transformational leadership and the other reflecting transactional leadership. The results demonstrated that the positive relationship between transformational leadership and contextual performance is partially mediated by work engagement. Moreover, mindful awareness was found to significantly enhance the relationship between transformational leadership and work engagement. This study contributes to the literature by providing further empirical evidence on the inconclusive contextualization of mindful awareness as a personal resource, and the inconclusive discussion on the role of personal resources as a boundary condition.

Along with the research scope mentioned above, we reviewed the literature below to justify our hypotheses regarding 1) the relationship between transformational leadership and contextual performance, mediated by work engagement and 2) the moderating effect of mindful awareness on the relationship between transformational leadership and work engagement.

3.2 Literature Review

3.2.1. Relationship of Transformational Leadership and Contextual Performance through Work Engagement

First, we reviewed the literature to justify the proposed main relationship between transformational leadership and contextual performance. Existing evidence reveals that transformational leadership has a positive influence on contextual performance. In Western countries, a study found a positive relationship among the employees of a restaurant chain in the United States (Detert & Burris, 2007), while another found the same among employees from different companies in Germany (Rank et al., 2009). These findings were in agreement with a study on employees from different industries and professional backgrounds in the Netherlands (Den Hartog & Belschak, 2012). Evidence has also been collected from Asia,

among MBA students from China (Liu et al., 2010), and among IT professionals in India (Pradhan et al., 2018). Moreover, an existing meta-analysis validates transformational leadership as being positively related to contextual performance (Chiaburu et al., 2014). However, as mentioned earlier, the relationship is likely to be distal, so as to understand the mechanism. Some researchers argue that distal antecedents, such as transformational leadership, might influence contextual performance via the mediating mechanism of proximal motivational factors predicting how an individual experiences a desire to self-invest their energy into performing their work at a high level, indicating that work engagement is a promising mediator (Christian et al., 2011). Another study shows a positive association between work engagement and contextual performance (Meyers et al., 2019).

Transformational leaders typically communicate clear expectations, manage employees fairly, and identify good performers, thereby encouraging their employees' work engagement by fostering a sense of attachment to the job (Macey & Schneider, 2008). Regarding the relationship between work engagement and contextual performance, both individual and organizational factors affect the psychological experience of work, and this experience may lead to certain work behaviors (Kahn, 1990). Some studies also empirically confirm the mediating role of work engagement; a meta-analysis confirms the mediating role of work engagement in the relationship between transformational leadership and contextual performance (Christian et al., 2011). More recent studies provide evidence of the above-mentioned relationship in a sample of 195 project team members in 39 teams from different contractors in Malaysia (Shokory & Suradi, 2018). Furthermore, in a sample of Taiwanese hospital staff, it was found that work engagement mediates the positive relationship between transformational leadership and helping behaviors that are considered to cover an aspect of contextual performance (Lai et al., 2020).

The studies mentioned above aimed to investigate the effect of transformational leadership. One important issue to be clarified is what the expression "low in transformational leadership" means in these studies. The issue stems from the fact that "low in transformational leadership" may not mean a specific type of leadership. Some respondents, as well as some researchers, are more likely to expect laissez-faire leadership, while others may expect transactional leadership, as it is perceived to be a contrasting type of leadership, which makes the discussion confusing. To pose a clearer argument, a "baseline" should be established. For this purpose, transactional leadership is appropriate as the baseline, because it is similar to transformational leadership in its necessity of deliberate intention for implementation, compared to laissez-faire leadership. In fact, both transformational and transactional leaders

actively dedicate their time and effort and attempt to inhibit problems, which is in direct contradiction to the extremely passive laissez-faire leaders who avoid decision making and supervisory responsibilities (Den Hartog et al., 1997). A previous study used transactional leadership vignettes as a baseline to analyze the "effect of transformational leadership," although they called the baseline vignette "non-transformational" (Kovjanic et al., 2013). In line with the above argument, we hypothesized the following:

Hypothesis 1: The positive relationship between transformational leadership, in contrast to transactional leadership, and contextual performance is mediated by work engagement.

3.2.2 Moderation of Mindful Awareness

Next, we focused on a potential contingency for a part of the main relationship; that is, between transformational leadership and contextual performance. Specifically, the above-mentioned mediated relationship is likely to be contingent. Some researchers propose that transformational leadership affects work engagement to various degrees, and under different conditions (Bakker et al., 2011). As previously mentioned, existing research investigated the relationship between transformational leadership and contextual performance via work engagement. However, little attention has been paid to the conditional effect of mindful awareness on the indirect positive relationship between transformational leadership and contextual performance through work engagement, acting as a mediator with a comprehensive perspective.

As mentioned earlier, studies on the role of mindful awareness as a boundary condition in the relationship between transformational leadership and contextual performance were inconclusive. As extensively discussed earlier, the JD-R model suggests positive moderation or a strengthening effect of personal resources on the relationship between job resources and work engagement (Schaufeli & Taris, 2014). Although they are not specifically defined as mindful awareness, other personal resources have been found to offer positive moderation (Van den Broeck et al., 2011). In contrast, some researchers argue that mindfulness can act as a substitute for low levels of transformational leadership in enhancing intrinsic motivation and, in turn, extra-role behavior (equivalent to contextual performance) (Kroon et al., 2017). (However, it is noteworthy that, mindful acceptance, another variable of interest of this dissertation, is not expected to create this kind of moderation as there is no theoretical background supporting the path with mindful acceptance as a moderator.)

Considering the inconclusiveness of the theoretical discussion and empirical findings, a solution may exist in the moderation's boundary condition. Accordingly, to set the sign condition of our moderation hypothesis, we focused on the cultural differences between the previous study conducted in the Netherlands (Kroon et al., 2017) and our study in the United States. More specifically, we address the two countries' cultural differences in masculinity and long-term orientation, according to the cultural dimensions of Hofstede (2005). We propose that people from the Netherlands, who present low masculinity and a high long-term orientation, may be more likely to consider the team's long-term maintenance and development from a mutual cooperation perspective. Therefore, those who have higher mindful awareness and can thus be transformative by themselves tend to motivate themselves to compensate for the lack of transformational leadership. In contrast, people in the United States, who are characterized by high masculinity and low long-term orientation, may be more likely to value straightforward recognition from their leaders with relatively short-term-oriented decisions. Hence, those with higher mindful awareness tend to enhance their own transformative nature under a higher level of transformational leadership. Therefore, we set our second hypothesis as follows:

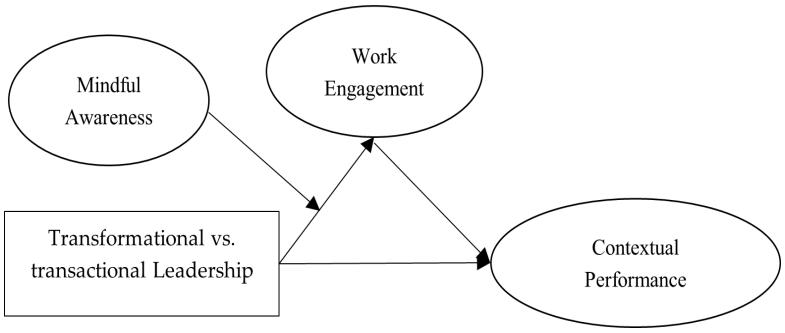
Hypothesis 2: Mindful awareness moderates the indirect effect of transformational leadership on contextual performance through work engagement; the higher the level of mindful awareness, the stronger the effect.

3.2.3 Conceptual Framework

With the two hypotheses developed above, a conceptual framework was developed, as shown in Figure 3.1. As transformational leadership would be interrogated by the hypothetical vignettes, the variable was described in a box. Other variables are expected to be latent.

Figure 3.1.

Conceptual Framework.



3.3. Data and Methodology

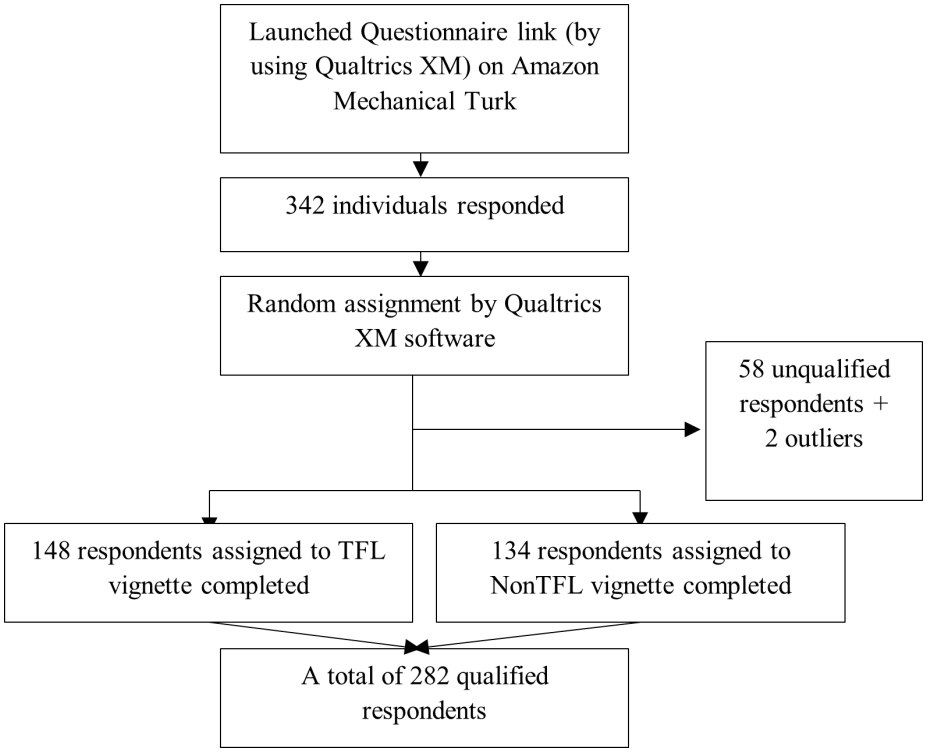
3.3.1. Sample and Procedure

To test the hypotheses, an online survey was conducted with the Amazon Mechanical Turk platform, "an increasingly popular source of experimental participants due to its convenience and low cost (relative to traditional laboratories)", although it "presents challenges related to statistical power and reliability" (Bentley, 2021). A total of 342 individuals responded using the Qualtrics XM survey software. Among them, 58 and 2 respondents were found to be unqualified and outliers, respectively, after a studentized residuals analysis was performed. After removing these participants, 282 respondents with 40-plus working hours in the United States were finally selected for analysis. Due to this data collection approach, we could not access the information of non-participants who registered for the platform and met our criteria. Instead, we assessed the late response bias and found that the early and late participants were not statistically different in terms of gender, age, or educational background. Independent sample *t*-tests were used for age (t (140) = 1.02, $p > 0.05$) and education (t (140) = –0.30, $p > 0.05$), while a chi-squared test was used for gender (χ^2 (1) = 1.26, $p > 0.05$); the results showed that there was no major late response bias. The study design was a randomized controlled trial (RCT) in which participants were randomly assigned (by the Qualtrics XM software) to two different vignettes, one on transformational leadership, and the other on transactional leadership (Appendix B). The two different vignettes were constructed based on items of transformational and transactional leadership from the Multifactor Leadership Questionnaire (MLQ)'s 28-item scale (Bass et al., 2005). In compliance with the developer's request, the

items of the MLQ may not be published. Instead, the factor level information is provided in Appendix B.II. The overall procedure, including sampling, is shown in Figure 3.2.

Figure 3.2

Process of research.



3.3.2. Measures

For the main analysis, we used the transformational versus transactional leadership vignettes (Appendix A), as well as the established scales to measure mindful awareness, work engagement, and contextual performance. Moreover, for the purpose of confirming manipulation by the vignettes, another established scale to measure transformational leadership was adopted.

Regarding the intervention, transformational versus transactional leadership was coded based on the assigned vignette—1 for the former and 0 for the latter.

Mindful awareness was measured using the Philadelphia Mindfulness Scale (PHLMS)'s 10-item scale of awareness (Appendix B.II) (Cardaciotto et al., 2008). Items were rated on a 5-point scale ranging from never (0) to always (4). Example items were "I am aware of what thoughts are passing through my mind" and "When talking with other people, I am aware of the emotions I am experiencing." Cronbach's alpha was 0.80, indicating good reliability.

Work engagement was measured using a 9-item Utrecht Work Engagement Scale (UWES-9; Appendix B.III) (Schaufeli et al., 2006). Items were rated on a 7-point scale, ranging from never (0) to always (6). Example items included "At my work, I feel bursting with energy" and "I am enthusiastic about my job." Cronbach's alpha was 0.97.

Contextual performance was measured using a 12-item scale (Appendix B.V) (Koopmans et al., 2014). Items were rated on a 5-point scale, ranging from seldom (1) to always (5). Example items were "I take on extra responsibilities" and "I actively participate in work meetings." Cronbach's alpha was 0.97.

For the manipulation check, the respondent's perceived transformational leadership for the assigned vignette was measured using the MLQ's 20-item scale regarding transformational leadership (Bass et al., 2005). We excluded the eight items regarding transactional leadership that were used to make the respective vignette, as our purpose here was to measure the perceived transformational leadership based on each vignette. Items were rated on a 5-point scale, ranging from not at all (0) to frequently (4). Example items included "The leader talks optimistically about the future" and "The leader spends time teaching and coaching." Transformational leadership had an acceptable reliability coefficient, with a Cronbach's alpha of 0.98.

Each scale has been utilized previously by researchers and they represent established methods of measurement that have been confirmed as reliable and valid.

3.4. Data Analysis

We first reviewed the descriptive statistics, including demographic data of the respondents and means, standard deviation (SD), and correlations among variables. Second, the manipulation check was carried out with an independent sample *t*-test, to confirm if our intervention was successful. Third, the hypotheses were tested, and some additional analytical results were found. More specifically, a conditional process analysis (Hayes, 2013) was conducted to test the path model, which comprises mediation (H1) and moderated mediations (H2). The conditional indirect effect was analyzed with Model 7 in the Process Macro of IBM SPSS 27. Conditional process analysis has the advantage of analyzing the moderated mediation process as a whole, although we should also be cautious to argue the effect of a mediator on an outcome as the mediator does not intervene. Lastly, simple slope analyses were performed regarding the hypothesized moderation of mindful awareness and that of demographic characteristics.

3.5 Results

3.5.1 Descriptive Statistics

The demographic data are shown in Table 3.1, while mean, SDs, and correlations among the study variables are presented in Table 3.2. Table 3.2 shows that transformational leadership and work engagement are associated with contextual performance. The results revealed no association between mindful awareness and transformational leadership.

Table 3.1

Demographic Information.

		No. of respondents	%
Gender	Male	177	62.8%
	Female	105	37.2%
Age	20 – 24 years	6	2.1%
	25 – 29 years	19	6.7%
	30 – 34 years	52	18.4%
	35 – 39 years	61	21.6%
	40 – 44 years	57	20.2%
	45 – 49 years	29	10.3%
	50 – 54 years	24	8.5%
	55 – 59 years	23	8.2%
	60 years and above	11	3.9%
Education	High school graduate (high school diploma or equivalent including GED)	27	9.6%
	Some college but no degree	48	17.0%
	Associate degree in college (2-year)	26	9.2%
	Bachelor's degree in college (4-year)	133	47.2%
	Master's degree or higher	48	17.0%

Note. $N = 282$, GED = General Education Development test.

Table 3.2 Descriptive Statistics

	Mean	SD	1	2	3	4	5	6	7
Gender	1.37	0.48	1						
Age	4.80	1.91	0.18**	1					
Education	4.45	1.23	–0.10	0.01	1				
Transformational Leadership	2.31	1.16	–0.05	–0.00	0.05	1			
Mindful Awareness	3.55	0.54	0.21**	0.04	0.11	0.08	1		
Work Engagement	4.05	1.48	0.03	–0.01	0.10	0.77**	0.15*	1	
Contextual Performance	3.08	1.08	0.02	–0.00	0.03	0.79**	0.12*	0.86***	1

Note. $N = 282$, SD = standard deviation, Gender (Male = 1, Female = 2), Age (20 to 24 = 1, 25 to 29 = 2, 30 to 34 = 3, 35 to 39 = 4, 40 to 44 = 5, 45 to 49 = 6, 50 to 54 = 7, 55 to 59 = 8, 60 years and above = 9), Education (Less than high school degree = 1, High school graduate (high school diploma or equivalent including GED) = 2, Some college but no degree = 3, Associate degree in college (2-year) = 4, Bachelor degree in college (4-year) = 5, Master degree or higher (4-year) = 6, Likert scales (for transformational leadership) not at all = 0 to frequently if not always = 4, (for Mindful awareness) never = 1 to very often = 5, (For Contextual performance) seldom = 1 to always = 5, (for Work engagement) almost never = 1 to always = 6, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

3.5.2. Manipulation Check

Before conducting the main analysis, we needed to confirm that our intervention through the hypothetical vignettes was successful. For this purpose, we implemented a manipulation check. The authors created the transformational and transactional leadership vignettes (Appendix A) for this study, based on the MLQ items (Bass et al., 2005). As a preliminary check, an independent sample *t*-test was conducted by comparing the transformational vignette and transactional vignette groups in terms of participants' perception of the level of transformational leadership utilizing the original 20-item MLQ. A significant difference was noted in the mean scores of MLQ between the respondents reading the two different vignettes (Table 3.3), in that respondents perceived a stronger transformational leadership behavior in the transformational leadership vignette than that on transactional leadership.

Table 3. 3

Independent sample *t*-test for manipulation check.

Intervention	No.	Mean of perceived TFL	SD	t
Transformational leadership (TFL) vignette	148	3.227	0.584	2.070*
Transactional leadership vignette	134	1.295	0.704	

Note. *$p < 0.05$, SD = Standard Deviation.

3.5.3 Hypothesis Testing

Because of the successful manipulation, we could proceed to the main analysis for hypothesis testing. Table 4, showing the main analysis results, delineates the findings of the process analysis for (1) the mediating effect of work engagement on the relationship between transformational leadership and contextual performance and (2) the moderating effect of mindful awareness on the relationship between transformational leadership and work engagement.

Transformational leadership was related to work engagement as indicated by a significant unstandardized regression coefficient ($B = 1.92$, $p < 0.001$). Work engagement was significantly related to contextual performance ($B = 0.57$, $p < 0.001$), as transformational leadership was ($B = 0.27$, $p < 0.01$), indicating that work engagement partially mediates the relationship between transformational leadership and contextual performance. Hypothesis 1 was thus supported.

The interaction term of transformational leadership and mindful awareness was significantly related to work engagement ($B = 0.96$, $p < 0.001$), supporting Hypothesis 2. The index of moderated mediation was 0.79, with bootstrapped 95% confidence intervals [0.26, 0.83], suggesting that the strength of the hypothesized indirect effect is conditional on the value of the moderator, mindful awareness.

Model 1 explained a significant proportion of variance in work engagement ($R^2 = 0.48$, $p < 0.001$). Similarly, Model 2 explained a significant proportion of variance in contextual performance ($R^2 = 0.73$, $p < 0.001$). The variance inflation factor values for the variables in the two models fall within the acceptable limits (less than 2.5) and indicate no serious multicollinearity problems (Hair et al., 1995).

Table 3.4

Conditional direct and indirect effects of transformational leadership on contextual performance mediated my work engagement and moderated by mindful awareness.

Predictor Variable	*B*	*SE*	*T*	R^2
Model 1: *F* (3,278) = 84.91***				
Effect on the mediator variable: Work Engagement (WE)				
Transformational leadership (TFL, vs. transactional leadership)	1.93***	0.13	15.08	0.48***
Mindful Awareness	–0.04	0.17	–0.20	
Mindful Awareness x TFL	0.95***	0.24	3.95	
Model 2: *F* (2,279) = 405.70***				
Effect on the dependent variable: Contextual Performance (CP)				
Work Engagement (WE)	0.57***	0.00	19.61	0.74***
Transformational leadership (TFL, vs. transactional leadership)	0.26**	0.09	3.03	
Moderated Mediation Analysis				
Bootstrap results for the conditional indirect effect of TFL on CP at values of the moderator (Mindful Awareness)				
Boot indirect effect		Boot SE	LL 95% CI	UL 95% CI
-0.54 (-1SD)	0.81*	0.11	0.59	1.03
0.00 (0SD)	1.10*	0.08	0.93	1.26
0.54 (+1SD)	1.39*	0.11	1.16	1.61
Index of moderated mediation	0.54*	0.15	0.25	0.83

Note. N=282, Bootstrap sample size= 5000, *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$, SD = Standard Deviation, Boot SE = bootstrapped standard error, LL 95% CI = lower level 95% confidence interval, LL 95% CI = upper level 95% confidence interval.

To assess whether the interaction term followed the hypothesized pattern, a simple slope analysis was performed at one SD above and below the mean of the mindful awareness measure. Figure 4.3 illustrates the conditional effect of mindful awareness on the relationship between the two different leadership vignettes and work engagement: the higher the mindful awareness, the stronger the main relationship.

Figure 3.3

Moderation of mindful awareness on the relationship between transformational leadership and work engagement.

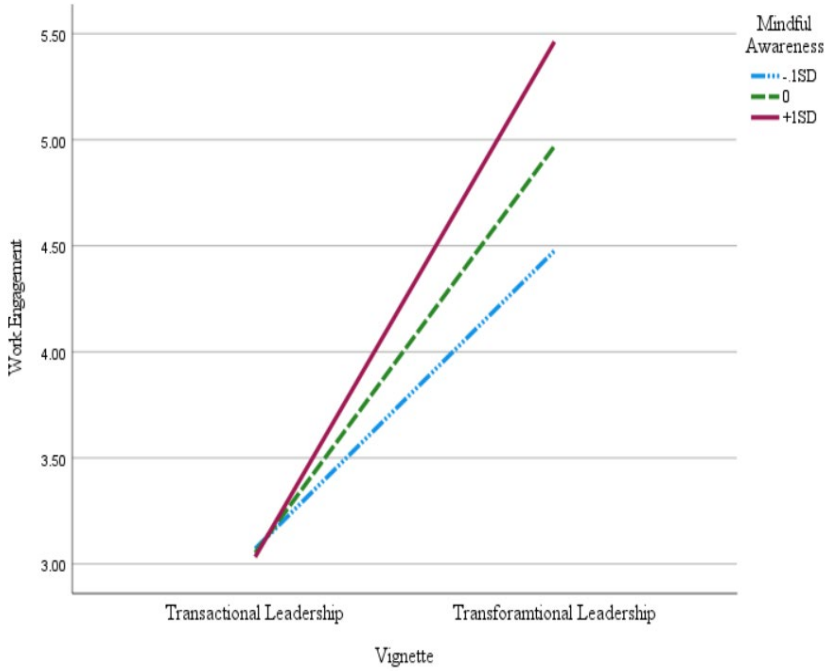
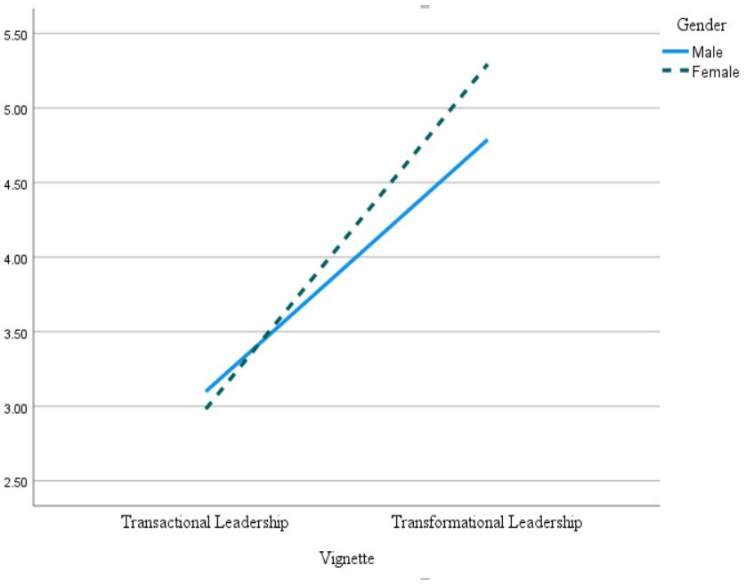


Figure 3.4

Moderation of gender on the relationship between transformational leadership and work engagement.



In addition, among the demographic variables of the current study, gender was found to moderate the relationship between the intervention variable and work engagement, as shown

in Figure 3.4 (B = 0.62, p < 0.05, male = 1, female = 2). The result shows that female respondents were more sensitive to the availability of transformational leadership.

3.6 Discussion

3.6.1. Interpretation

We now discuss the results and their relationship with the theoretical foundations of the study and provide our interpretation of unexpected results.

Based on the results, both hypotheses were supported; thus, the theoretical foundation for the two hypotheses—the JD-R model for the mediation of work engagement and the moderation of mindful awareness—is applicable to our sample from the United States.

Regarding Hypothesis 2, we found the literature to be inconclusive, thus requiring further examination. Mindful awareness is a valuable personal resource to help employees become cognizant of the existing social aspect of contextual resources, such as the instances of transformational leadership around them (Kroon et al., 2015). Such open awareness contributes to a psychological connection with their work and performance. Consistent with this definition, the findings revealed that a higher level of mindful awareness strengthens the indirect positive relationship between transformational leadership and contextual performance via work engagement. More specifically, according to the simple slope analysis results (Figure 3.3), among the transactional leadership vignette respondents, work engagement appeared fairly similar at the three levels of mindful awareness. In contrast, for the transformational leadership respondents, work engagement was considerably different at different levels. Overall, mindful awareness did not predict work engagement statistically, as shown in Table 3.4 (B = -0.04, p > 0.05), although some researchers find that personal resources are directly related to work engagement (Kroon et al., 2017). One possible explanation is that mindful awareness is not activated when facing transactional leadership; therefore, one does not improve their work engagement in this case. We can argue that mindful awareness is considered the antecedent of typical personal resources such as self-efficacy, organizational-based self-esteem and optimism, and that the activation process is necessary to link mindful awareness to the personal resources that are, in turn, related to work engagement.

In addition, the result shows that female respondents were more reactive to the availability of transformational leadership. This result is, to some extent, in line with a previous study which shows that female employees are predicted to show a higher effect of trait-based authentic leadership (which originated from process- or behavior-based transformational leadership) when compared to male employees (Daraba et al., 2021; Tonkin, 2013). Female

employees, unlike their male counterparts, are more likely to play a care-giving role in their family contexts, and thereby are more prone to quick resource depletion. Consequently, they may appreciate the positive support they receive from transformational leaders (who can capture employees' trust, faith, respect, and appreciation) better than their male counterparts. This constitutes a possible reason for their increased sensitivity to the availability of transformational leadership observed in the current study.

3.6.2. Practical Implications

Our results provide some notable practical implications. First, based on the significantly positive effect of transformational leadership on contextual performance, organizations should enhance such leadership among current managers and prioritize the recruitment and selection of individuals with transformational leadership tendencies, especially for managerial positions, to promote employees' contextual performance. Second, the finding that mindful awareness strengthens the effect of transformational leadership on work engagement can imply that organizations should recruit employees with high mindful awareness, so that managers as transformational leaders can more effectively enhance work engagement and, in turn, contextual employee performance. Moreover, especially for those with higher mindful awareness, organizations should emphasize developing their managers' transformational leadership to enhance employees' work engagement.

Additionally, to cope with issues such as quiet quitting that emerged along with the unprecedented changes in workplace contexts since the COVID-19 pandemic, recruiting and maintaining transformational leaders is also vital, as quiet quitting is less about employees and rather more about the leadership that shapes the particular nature of the relationship with those employees (Harvard Business Review, 2022).

3.6.3. Limitations and Future Research Directions

Although this study successfully provides empirical evidence on the effect of transformational leadership (as a contextual resource) on contextual performance, mediated by work engagement and moderated by mindful awareness (as a personal resource), certain limitations should be noted.

The first limitation the usage on self-reported questionnaires for both dependent and independent variables. To address this limitation, future studies should explore longitudinal data collection method and or collecting data from other sources (such as coworkers, friends and family members) other than the respondents himself/herself.

Second, although we conducted an RCT and used transformational and transactional leadership to obtain the experimental data, the mediator (work engagement) was not randomly assigned; therefore, we cannot argue for the effect of work engagement convincingly. A causal mediation analysis can validate the causal effect of work engagement on contextual performance (Imai et al., 2010). Third, a generalization issue exists. Due to the convenience sampling method applied, our participants did not represent the whole population but only the Amazon Mechanical Turk registrants who work 40 plus hours per week in the United States. Thus, the present study should be regarded as a "case study" of a specific sample. Random sampling is the solution; however, we need to find a different source of survey respondents, as Amazon Mechanical Turk is not sufficient due to its restrictions in terms of the survey process. Moreover, future studies could replicate this model in other countries and cultures (with sufficient external validity) and generalize the argument beyond the United States.

3.7 Conclusions

This study aimed to investigate the relationship between transformational leadership as a job resource and contextual performance as a work outcome, mediated by work engagement and moderated by trait mindful awareness; specifically, we examined one of its dimensions, mindful awareness, as a personal resource. Theoretically, both the mediation and moderation are based on the JD-R model.

We analyzed the conditionally mediated relationship using RCT. As predicted, the findings revealed that the positive relationship between transformational leadership and contextual performance is partially mediated by work engagement (B = 1.92, p < 0.001 between transformational leadership and work engagement; B = 0.57, p < 0.001 between work engagement and contextual performance; B = 0.27, p < 0.01 between transformational leadership and contextual performance, directly). Moreover, we found that mindful awareness significantly strengthens the relationship between transformational leadership and work engagement (B = 0.96, p < 0.001).

This study contributes to the literature by providing further empirical evidence on the inconclusive contextualization of mindful awareness as a personal resource in the relationship between transformational leadership and work engagement. Concerning practical implications, organizations should enhance such leadership among current managers and emphasize the recruitment and selection of individuals with transformational leadership tendencies to cope with issues such as quiet quitting in times of upheaval. Moreover, organizations should also consider recruiting and maintaining employees with higher levels of mindful awareness so that

employees can handle the unfavorable working conditions by utilizing their own personal resources of mindful awareness, and without relying too heavily on the availability of job resources around them.

Chapter 4

The Mediating Role of Emotion Regulation on the Relationship between Mindfulness and Organizational Citizenship Behavior

4.1. Introduction

Dispositional tendency to be mindful in daily life is theorized to have a widespread effect on human functioning and behaviors according to the findings across multiple methodologies including correlational studies, RCTs and person-centered approaches. (Brown et al., 2007). Trait or dispositional mindfulness refers to a relatively stable characteristic of an individual and reflects an ability to remain mindful across different situations and contexts (Baer et al., 2006; Davis et al., 2009; Truong et al., 2020). It is distinct from state mindfulness, which is described as a characteristic feature displayed in a given situation or time (Bishop et al, 2006; Lau et al., 2006; Tanay & Bernstein, 2013; Truong et al., 2020).

Trait mindfulness has been commonly analyzed as a unitary construct even though there has been a great deal of theoretical and empirical support for its multidimensional nature (Bear et al., 2006; Carpenter et al., 2019; Macdonald, 2021; Macdonald & Baxter, 2017; Rau & Williams, 2016). Based on the previous mindfulness constructs, Bear et al. (2006) proposed five facets of mindfulness, namely observing (being aware of inner and outer sensations, emotions, and cognitions), describing (being able to mentally or verbally label sensations, emotions and cognitions), acting with awareness (being focused on one's current activity, rather than acting automatically), nonjudging of inner experiences (taking a nonevaluative stance toward thoughts and feelings), and nonreactivity to inner experiences (allowing sensations, cognitions, and emotions to come and go, without attention getting caught up in them) (Bränström et al., 2011). In fact, Five Facets Mindfulness Questionnaire (FFMQ) by Bear et al. (2006) is a widely recognized as one of the most comprehensive constructs which evaluates both the attentional and attitudinal components of mindfulness when compared to other constructs such as Mindfulness Attention and Awareness Scale (MAAS) (Sørensen et al., 2018; Zhuang et al., 2017).

In addition, Monitor and Acceptance Theory (MAT) by Lindsay and Creswell (2017) states that attention monitoring (observing facet in FFMQ) and acceptance (nonjudging and nonreactivity facets) are the basic mechanisms essential to trait mindfulness. There are two core tenets in MAT. The first core tenet states that attention monitoring skills can exacerbate both positive and negative experiences, whereas the second tenets claims that acceptance skills can enhance emotion regulation.

Several efforts have been made by previous researchers claiming that these five facets are useful in understanding the relationship between mindfulness and other conceptually related variables (Bravo et al., 2016; Kinnunen et al., 2019; Pearson et al., 2015; Tagney et al., 2017). Previous studies have demonstrated the link between trait mindfulness and various kinds of individual wellbeing outcomes. A wealth of evidence now exists, and a substantial body of research has already demonstrated a statistically significant association between trait mindfulness and a wide variety of negative psychological outcomes including perceived stress, depression, anxiety, emotional reactivity and positive psychological outcomes such as resilience and positive state of mind (Bränström et al., 2011; Hill & Updegraff, 2012; Prakash et al., 2015).

As mentioned above, researchers have conducted empirical studies on the relationships between multiple facets of trait mindfulness and psychological outcomes but there is a room for further exploration as follows. For one thing, the studies on behavioral outcomes especially in work setting is still limited. There have been some studies revealing the positive association between overall mindfulness and OCB (Askun Celik & Çetin, 2019; Mulligan, 2018; Petal, 2017; Tanover, 2022), with considering its relevance as an extra role work behavior. However, the relationship between the mindfulness facets and OCB or other work behavior has not been analyzed specifically. For the other, the results on the relationship between the trait mindfulness facets and psychological outcomes suggested different roles of the facets but the empirical results have not been convincing. In order to be more conclusive, exploration of underlying mechanisms is likely to be effective. Among the potential mediators in this process, ER has been more commonly analyzed.

Extending the current literature, the main objective of this study is to investigate the role of the habitual use of cognitive ER strategies as mediating mechanisms in the relationship between different facets of trait mindfulness and OCB.

4.2 Literature Review

Brown et al. (2007) suggests that higher level of trait mindfulness, or individual's predisposition to be mindful in their daily life, may induce controlling behaviors and making behavioral decisions engendering wellbeing and goal attainment. Out of the axioms of mindfulness namely intention, attention and attitude (IAA) proposed by Shapiro et al (2006), Glomb et al. (2011) also states that an employee with a higher level of mindfulness, with its attentional components, in particular, is very probable to be a good listener and a better decision maker, very probable to be aware of a coworker who needs help, and the mutual benefits

associated with that help, thereby inherently improve social relationship and increase task performance. However, there have been only a few studies showing the association between mindfulness and behavioral outcomes. Furthermore, much of the existing literature is found to be conducted outside the work environment (Dane & Brummel, 2014; Glomb et al., 2016). Patel (2017) provided empirical evidence that mindfulness is associated with OCB by claiming that the level of mindfulness, especially its attitudinal components predict how individuals become more aware of their present moment experiences, and which in turn could leads to an increase in OCB. OCB refers to any behavior that contributes to the overall effectiveness of the organization, and it is neither a part of the employee's formal job descriptions, nor a basis on which the employee is formally rewarded. (Organ, 1988: Podsakoff, 1997). Chang et al. (2015) states that individuals with higher level of mindfulness can go beyond a self-centered state and see the integration between their work and the outside world, and thereby the contribution they can make for others. Furthermore, as mindful individuals have relatively higher level of empathy, focus and attention, they are better able to recognize the coworkers who need their help, and also clearly aware of the responsibilities, cost and difficulties for taking the extra roles to help them (Glomb et al., 2011; Jobbehdar Nourafkan et al., 2022). There have been prior studies revealing the positive association between mindfulness and OCB (Askun Celik & Çetin, 2019; Jobbehdar Nourafkan et al., 2022; Mulligan, 2018; Petal, 2017; Reb et al., 2015).

4.2.1 Mediation of ER on the relationship between Mindfulness Facets and OCB

Furthermore, Wheeler et al. (2017), in his review based on neuroscience research, claimed that individuals high in trait mindfulness (even without the intervention of formal training) display greater activity in brain areas that is related to ER. In fact, there has been plenty of studies demonstrating the link between mindfulness and ER (Arch & Craske, 2006; Broderick & Jennings, 2012; Brown et al., 2007; Chambers et al., 2009; Desrosiers et al., 2013; Hill & Updegraff, 2012; Hülsheger et al., 2013; Inai et al., 2019; Luberto et al., 2014; MacDonald, 2021; MacDonald & Baxter, 2017; Roemer et al., 2015).

ER is defined as the process of modulating one or more aspects of an emotional experience or response (Gross, 1998). According to the process model of emotion regulation by Gross (2014), in the emotion generative process of an individual, there are five stages of ER strategies namely situation selection, situation modification, attentional deployment, cognitive change, and response modulation. Among them, the first two strategies – situation selection and situation modification – are about changing the environment that fosters the emergence of emotion. The last strategy – response modulation is about directly influencing the emotion's

physiological, experiential, or behavioral components. However, the third and fourth strategies – cognitive change and attentional deployment – represent strategies directed at regulating emotions without literally adjusting the environment. When considering about the link between trait mindfulness and ER, cognitive emotion regulation questionnaire (CERQ) which is theoretically based on the process model of ER and encompasses both cognitive components of ER strategies mentioned above, is relatively more appropriate to the context. Bednar et al. (2020), based on their empirical study, claimed that ER is not a unitary construct within mindfulness, but appears to be separated into distinct what and how scales. Moreover, recent evidence suggests that five different facets of mindfulness significantly predict emotion regulation (Macdonald, 2021) in a sample of undergraduate students in the United States. For the present study, cognitive ER which assesses attentional and cognitive change strategies, seems appropriate to explore the role of ER as an underlying mechanism between mindfulness and organizational behaviors. According to Thompson (1991), cognitive emotion regulation refers to the cognitive ways of managing the intake of emotionally arousing information. In addition, Granefski et al. (2001) stated that there are nine dimensions of cognitive ER encompassing self-blame, rumination, catastrophizing, and other blame, acceptance, putting into perspective, positive refocusing, refocus on planning, and positive reappraisal (Matins et al., 2011). Furthermore, previous literature has already stated the significant role of ER strategies in predicting human behaviors as those strategies have a prevalent effect on the functioning of human beings. (Cicchetti et al., 1991; Barnett, 1991; Cole et al., 2004; Gross, 2014; Martins et al., 2016).

As mentioned just above, ER has been found as a proxy outcome of mindfulness and its conceptual foundation including its dimensions has been extensively analyzed. However, even though there has been increasing interest in the psychological mechanism through which trait mindfulness predicts various psychological and behavioral outcomes, up until now there have only been a few empirical studies exploring on this topic. For example, Brown et al. (2014) shows that different facets of mindfulness (excluding observing) significantly predict positive health outcomes via the psychological mechanisms including cognitive flexibility, values clarification, self-regulation, and exposure.

Glomb et al. (2011) suggests that trait mindfulness may have an influence on work related outcomes like improved communication, better coping with stressful events, and faster recovery from negative events via the mechanism of affective regulation. There were also studies indicating the mediating role of the habitual use of ER strategies of the relationship between mindfulness and negative psychological outcomes such as depression, anxiety,

perceived stress, resilience, criminogenic cognition, and subjective wellbeing (Desrosiers et al., 2013; Hölzel et al., 2011; Nyklíček, 2011; Prakash et al., 2015; Shi-man et al., 2015; Sünbül & Güneri, 2019). Especially, the mechanism by which trait mindfulness is associated with positive behavioral outcomes such as OCB via ER is not well-explored until now, leaving a gap in the literature. Moreover, Hanley and Garland (2017) also argued the possibility that different facets of mindfulness predict outcome variables differently. As we mentioned earlier, there has been previous studies showing the relationship between the overall mindfulness and ER as well as OCB, However, relatively little is known and analyzed on how different facets of mindfulness predicts ER and in turn OCB. Note that observing facet of mindfulness is an exception. According to previous studies, the propensity to notice one's internal and external experiences (observing facet) is found to have no significant association with psychological variables (Brown et al, 2015; Carpenter et al., 2019; Curtiss & Klemanski, 2014; Rudkin Medvedev & Siegert, 2018). Even though research in this field is still young, building on the foundation of those existing research, to extend the current literature, we hypothesized as follows.

H1: ER does not mediate the positive relationship between observing facet of mindfulness and OCB.

H2: ER mediates the positive relationship between describing facet of mindfulness and OCB.

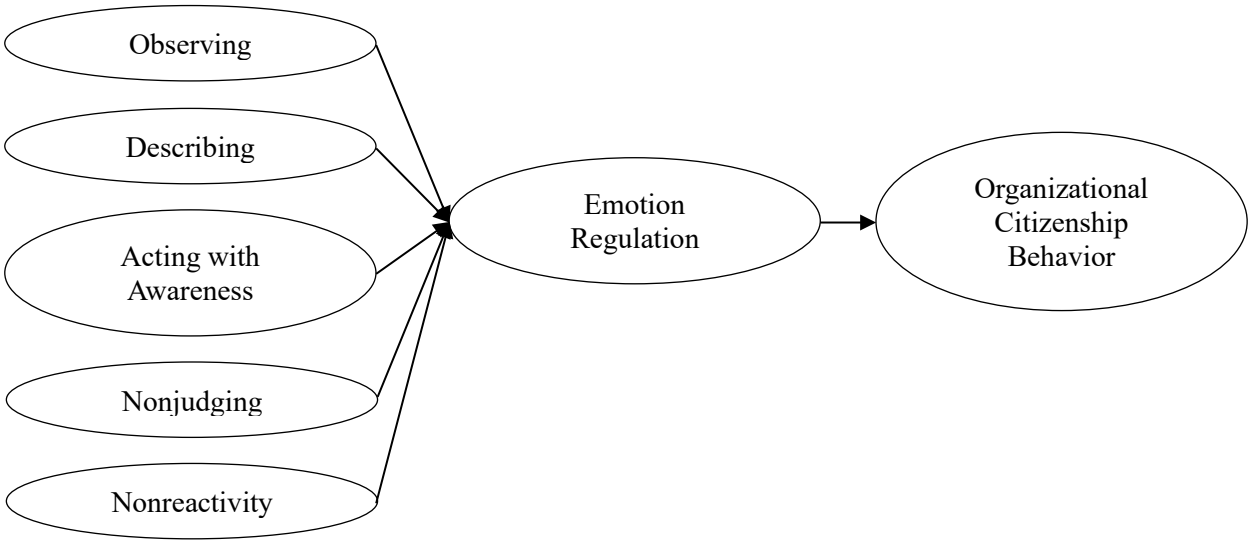
H3: ER mediates the positive relationship between acting with awareness facet of mindfulness and OCB.

H4: ER mediates the positive relationship between nonjudging facet of mindfulness and OCB.

H5: ER mediates the positive relationship between nonreactivity facet of mindfulness and OCB.

Figure 4.1

Conceptual Framework



4.3 Methods

4.3.1 Sample and Procedure

Participants were 343 full-time employees with 40 plus working hours in organizations in the United States. They were recruited online through Amazon Mechanical Turk with a monetary incentive of two dollars as compensation for completing the questionnaire via the link to Qualtrics XM survey software.

4.3.2 Measures

Different facets of mindfulness were measured by the 39-item scale of mindfulness from the Five Facets Mindfulness Questionnaire (FFMQ) by Bear et al. (2006). Items were rated on a 5-point scale ranging from never or very rarely true (0) to very often or always true (4). Example items were "I do jobs or tasks automatically without being aware of what I am doing." and "I tell myself that I shouldn't be thinking the way I am thinking." The Cronbach's alpha for five different facets namely observing, describing, acting with awareness, nonjudging and nonreactivity were .89, .94, .91, .94 and .89 respectively.

Emotion regulation is measured with 18-item short form of Cognitive Emotion Regulation Questionnaire (CERQ-short) that assesses the use of nine cognitive emotion regulation strategies that people use after experiencing negative life events or situations (Garnefski & Kraaij, 2007). Each subscale consists of two items representing different emotion regulation strategies such as self-blame, rumination, catastrophizing and blaming others for maladaptive emotion regulation and acceptance, putting into perspective, positive refocus, refocus on planning, positive reappraisal for adaptive emotion regulation. Items were rated on a 5-point scale ranging from almost never (1) to almost always (5). Example items were "I think I can become a stronger person as a result of what has happened (positive refocus)". And "I am preoccupied with what I think and feel about what I have experienced (catastrophizing) (reversed)." The Cronbach's alpha for CERQ was .86.

OCB was measured by using the 24-item scale (Podsakoff et al., 1993). Items were rated on a 5-point scale ranging from almost never (1) to almost always (5). Example items were "I take steps to try to prevent problems with other members." and "I obey company rules and regulations even when no one is watching." The Cronbach's alpha was .89.

4.3.3 Data Analysis

To test the mediation model, the conditional process analysis by Hayes (2013) was conducted with IBM SPSS 27 software.

4.4 Results

4.4.1 Descriptive Statistics

The demographic information of the respondents for the current study is presented in Table 4.1. Moreover, mean, standard deviations, and correlations among the study variables are shown in Table 4.2. Results reveal the expected association between the variables of interest in the present study. In addition, it was also found that four facets of mindfulness (excluding describing) are also significantly correlated with ER.

Table 4.1

Demographic Information

		No. of respondents	%
Gender	Male	206	60.1%
	Female	137	39.9%
Age	20 – 24 years	8	2.3%
	25 – 29 years	13	3.8%
	30 – 34 years	79	23.0%
	35 – 39 years	73	21.3%
	40 – 44 years	82	23.9%
	45 – 49 years	33	9.6%
	50 – 54 years	23	6.7%
	55 – 59 years	22	6.4%
	60 years and above	10	2.9%
Education	High school graduate (high school diploma or equivalent including GED)	42	12.2%
	Some college but no degree	41	12.0%
	Associate degree in college (2-year)	44	12.8%
	Bachelor's degree in college (4-year)	181	52.8%
	Master's degree or higher	35	10.2%

Note. N = 343, GED = General Education Development test.

Table 4.2

Descriptive Statistics

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Gender	1.40	0.49	1									
2. Age	4.66	1.78	.31**	1								
3. Education	4.37	1.19	-.08	-.09	1							
4. A: Observing [a]	3.37	0.77	.07	-.00	.01	1						
5. B: Describing [b]	3.68	0.92	-.06	-.10	.06	.26**	1					
6. C: Acting with Awareness [c]	3.70	0.85	-.13*	.02	-.06	.11*	.50**	1				
7. D: Nonjudgment [d]	3.70	0.88	-.08	-.03	-.07	-.02	.52**	.52**	1			
8. E: Nonreactivity [e]	3.43	0.76	-.14	-.05	.03	.16**	.38**	.42**	.42**	1		
9. ER	2.86	0.51	-.09	-.19**	.11*	.22**	-.04	-.15**	-.15**	.26**	1	
10. OCB	3.86	0.60	.05	.10	.12*	.15**	.36**	.27**	.27**	.41**	.30**	1

Note. $N = 343$. SD = standard deviation, Gender (Male = 1, Female = 2), Age (20 to 24 = 1, 25 to 29 = 2, 30 to 34 = 3, 35 to 39 = 4, 40 to 44 = 5, 45 to 49 = 6, 50 to 54 = 7, 55 to 59 = 8, 60 years and above = 9), Education (Less than high school degree = 1, High school graduate (high school diploma or equivalent including General Education Development (GED) = 2, Some college but no degree = 3, Associate degree in college (2-year) = 4, Bachelor degree in college (4-year) = 5, Master degree or higher (4-year) = 6.

For all models, 2 out of 18 items of CERQ and 5 out of 24 items of OCB were commonly removed. [a, b, c, e] In Model A, B, and C, 1 out of 8 items of each different facets of FFMQ were removed, and in Model E, 1 out of 7 items of nonreactivity facet was removed.

*$p < 0.05$, **$p < 0.01$.

4.4.2 Late Response Bias Check

To check whether there was non-response bias, or a difference in the exposure or outcome occurred during the process of data collection between participants and non-participants, late response bias check, as the second-best way, was conducted with demographic data such as age, gender, and education, because information of non-respondents was not accessible. The results from independent sample t-tests of age (t (170) =.00, $p > .05$) and education (t (170) = .76, $p > .05$), plus the chi-square test for gender (χ^2 (1) = 0.63, $p > .05$) show that there was no statistical difference between earlier and late responses demographically.

4.4.3 Model Fitness

Table 4.3

Model Fit Summary

Model	CMIN/ DF	GFI	AGFI	TLI	CFI	NFI	SRMR	RMSEA	PCLOSE
Cutoff	<3 (Hair et al., 2006)	>0.80 (Forza & Filippini, 1998)	>0.80 (Hair et al., 1992, Bollen, 1989)	>0.90 (Forza & Filippini, 1998)	>0.90 (Hair et al., 2010)	>0.80 (Bentler &Bonett , 1980)	<0.08 (Hu & Bentler, 1999)	<0.06 (Hu & Bentler, 1999)	>0.05 (Hu & Bentler, 1999)
Observing	1.845	0.842	0.803	0.923	0.935	0.871	0.0486	0.050	0.541
Describing	1.773	0.849	0.812	0.936	0.946	0.886	0.0510	0.048	0.829
Acting with Awareness	1.855	0.840	.800	0.927	0.938	0.877	0.0477	0.050	0.494
Nonjudging	1.736	0.846	0.810	0.936	0.946	0.882	0.0451	0.046	0.923
Nonreactivity	1.74	0.854	0.816	0.935	0.946	0.882	0.0445	0.046	0.911

Note. CMIN = minimum fit function Chi-square, DF = Degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, TLI = Tucker-Lewis index, CFI = comparative fit index, NFI = normed fit index, SRMR = standardized root mean squared residual), RMSEA = root mean square error of approximation, PCLOSE = p-value for test of close fit.

Table 4.3 represents the model fit indices for each model of the five hypotheses. According to the table, it can be seen that all the values of the minimum fit function Chi-square divided by the degree of freedom (CMIN/DF) are less than the suggested cutoff value of 3 (Hair et al., 2006). Moreover, goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), and normed fit index (NFI) values were found to be greater than 0.8, Tucker-Lewis index (TLI) and comparative fit index (CFI) were found to be greater than 0.9, all indicating the acceptable fit of the data (Awang, 2012; Etezadi-Amoli & Farhoomand, 1996, Forza & Filippini, 1998; Greenspoon & Saklofske, 1998, Hair et al., 2010). The RMSEA values being below 0.06 also reveal a good fit (Hu & Bentler,1999). In addition, goodness of fit of the models was also examined through the standardized root mean square residual (SRMR), all of the SRMR values were found to be lower than 0.08, the suggested cutoff by Hu and Bentler (1999). Overall, it can be said that fit indices for all of the five hypothesized models reveal an acceptable fit with statistical significance to the data.

4.4.4 Hypothesis Testing

The mediating role of ER on the relationship between the five facets of mindfulness and OCB is presented in Table 4.4.

According to Table 4.4, it was found that there was no mediation of ER on the relationship between the observing facet (which represents monitoring skill) of mindfulness and OCB as the direct effect (b = .09, $p < .05$) was positively significant whereas the indirect effect (b = .03, Bootstrap CI_{95} = -.02 and .08) was not statistically significant. Therefore, it can be concluded that H1 is supported.

For the relationship between describing facet of mindfulness and OCB, the results show that ER plays the role of partial mediation as both the direct (b = .15, $p < .001$) and indirect (b = .11, Bootstrap CI_{95} = .07 and .15) effects were positively significant. Therefore, it can be concluded that H2 is supported.

Table 4.4

Mediation of Emotion Regulation on the Relationship between Mindfulness Facets and OCB

	IV to MV		MV to DV		IV to DV (with mediator)		IV to DV (without mediator)		IV to DV (with and without mediator)	
	b	SE	*b*	SE	*b*	SE	*b*	SE	*b*	SE
Observing->ER->OCB	.06	.04	.53***	.05	.03	.01	.09*	.04	.12**	.04
Describing->ER->OCB	.25***	.03	.44***	.05	.11*	.02	.15***	.03	.26***	.03
Acting with Awareness ->ER->OCB	.33***	.03	.47***	.05	.16*	.02	.10**	.04	.25***	.04
Nonjudging->ER->OCB	.23***	.03	.50***	.05	.12*	.02	.06	.03	.18***	.04
Nonreactivity->ER-> OCB	.41***	.04	.43***	.05	.18*	.03	.15***	.04	.33***	.04

Note. N = 343. IV = independent variable, DV = dependent variable, MV = mediator variable, FFMQ = Five Facets Mindfulness Questionnaire, ER = Emotion Regulation, OCB = Organizational Citizenship Behavior. *p < .05. **p < .01, ***p < .001.

For the relationship between acting with awareness facet of mindfulness and OCB, it can be found that ER plays the role of partial mediation as both the direct (b = .10, p < .01) and indirect (b = .16, Bootstrap CI_{95} = .12 and .20) effects were positively significant. Therefore, it can be concluded that H3 is also supported.

The results also show that that ER fully mediates the relationship between the nonjudging facet (which represents acceptance skill) of mindfulness and OCB as the direct (b = .06, p > .05) was found to be statistically not significant whereas the indirect (b = .12, Bootstrap CI_{95} = .08 and .16) effect was significant. Therefore, it can be concluded that H4 is

supported.

Finally, it was also found that ER partially mediates the relationship between the nonreacting (which also represents acceptance skill) facet of mindfulness and OCB as both the direct (b = .15, p < .001). and indirect (b = .18, Bootstrap CI_{95} = .13 and .23) effects were positively significant. Therefore, it can be concluded that H5 is supported.

The results showed that all facets excluding observing (i.e, monitoring skill), significantly predicts OCB via the full or partial mediation of ER. Out of two facets, nonjudging and nonreactivity, which represent acceptance skill, the positive association between nonjudging facet and OCB was significant without the mediation of ER (i.e., no mediation). On the other hand, ER partially mediate the positive association between nonreactivity facet and OCB.

4.5 Discussion

The findings of the present study provide preliminary empirical evidence on how five different facets of mindfulness predict OCB via ER. The results which demonstrate that four out of five facets excluding observing having significant association with ER, are consistent with the previous studies which shows four of these facets except observing were consistently related way to a variety of outcome variables (Lilja et al., 2012; Macdonald; 2021).

All the results, as discussed in the literature review, can be explained by MAT by Lindsey and Creswell (2017). Among them, some specific points will be elaborated below.

The first core tenet of MAT theory states that observing (or attention monitoring skill) is not adequate enough for enhancing performance on cognitive tasks that balance attentional control with ER. Consequently, in the present study, ER did not play the mediating role on the relationship between observing facet and OCB.

On the contrary, it was also found that nonjudging and nonreactivity facets show statistically significant correlations with ER. These results are in line with the second core tenet of MAT which argues that acceptance skill, or nonjudging and nonreactivity facets in this study,

modify one's relation to present moment experience and enhance cognitive tasks that involve ER, and this skill is necessary for reducing affective reactivity. (Lindsey and Creswell, 2017). In addition, it was also found that the correlation coefficient between nonreactivity facet and ER is much greater than that of between nonjudging facet and ER. This may be due to the fact that letting one's thoughts and feelings go without elaborating and focusing on them (nonreactivity) might have more influence on ER than just taking nonjudgmental stance towards those experiences when facing an emotionally charged information or situation.

4.6 Practical Implications

A significant contribution of the current study was the distinction of different individual facets of mindfulness when investigating their relationships to OCB via ER. The results of the current study contribute to the understanding of why employees with different levels in specific facets of mindfulness describe variant OCB levels.

Results from the current study may help not only the people themselves to regulate their emotion and consequently better decision making, but also recruiters to facilitate the recruitment process by choosing more mindful candidates (and those who have higher score in each different facet but observing) having the potential to have higher level of OCB. In addition, the information can also help the managers in creating and providing a work environment that can enhance subjective wellbeing of employees as OCB indicates the behavioral consequences of employee job satisfaction, and navigate in making decision which employees to provide development opportunity in positions which may require higher level of OCB.

4.7 Limitations and Future Research Direction

The findings of the present study must be considered in the context of the following limitations.

The very first limitation to address in this study is the usage of self-reported questionnaires. Using additional methods or sources of data can help control some sources of

method variance in future studies.

Second, there is the possible impacts of confounding variables on the current conceptual framework. Future RCT studies for the current conceptual framework with some kind of mindfulness-based interventions (MBIs) is still necessary to address this limitation.

Third, the respondents of the current study are full-time employees with 40 plus working hours in organizations in the United States. Therefore, caution should be exercised when considering the generalizability of the research. Future studies with employees with different types of employment and or different culture will be useful to fill this gap. Furthermore, the current study didn't collect the data on the type of organizations that the respondents worked for. Further studies which compare respondents from different types of organization can contribute to the literature by filling up this gap.

Furthermore, acknowledging the limitation of conducting this kind of mediational analyses in a cross-sectional dataset given the inherent assumptions of causality (Lindenberger & Pötter, 1998), the present study was conducted as a preliminary attempt to examine the pathway through which different facets of mindfulness predict OCB via ER. Additional research using rigorous methodologies such as causal mediation analysis (Imai et al., 2010) is still required to provide more compelling evidence for the path mentioned above. In addition, the limitation of the current results with respect to causality leads to implications for future research to investigate more by using experimental studies with a particular kind of mindfulness-based intervention such as mindfulness-based stress reduction (MBSR) is still necessary to confirm these relationships.

Another limitation to address is the usage of variable centered approach in a model containing FFMQ as a variable. Lilja et al. (2013) suggested person-centered approach emphasizing on patterns of FFMQ scale rather than linear association with outcome variables. To fill this gap, implementing the person-centered approach (Bravo et al., 2016; Kinnunen et al., 2019; Pearson et al., 2015) for the current framework can be an interesting task for the future research.

Chapter 5
Conclusion

5.1. Summary of the Empirical Study Results

As mentioned in the chapters ahead, this dissertation focuses on exploring the role of the two different dimensions of mindfulness, namely awareness and acceptance, on both psychological outcomes such as emotion regulation and perceived stress, and behavioral outcomes like contextual performance and OCB. The findings from the three empirical studies in the previous chapters are as follows.

Firstly, in Chapter 2, the impact of MSC training intervention on perceived stress was explored, with an emphasis on the roles of awareness and acceptance in the relationship between the training intervention and perceived stress as a moderator and a mediator, respectively. A randomized controlled trial with 25 voluntary participants from the alumni of the Ship for South-East Asian Youth Program in Myanmar was used for this study. The findings reveal that acceptance has a statistically significant full mediation on the negative relationship between the training and perceived stress. However, awareness did not moderate the relationship between acceptance and perceived stress.

Secondly, in Chapter 3, the relationship between transformational leadership as a contextual resource and contextual performance as a work outcome, mediated by work engagement and moderated by trait mindfulness as a personal resource, was investigated from a total of 282 respondents were randomly assigned to one of two vignettes – one reflecting transformational and one reflecting nontransformational leadership. The results show that the positive relationship between transformational leadership and contextual performance is partially mediated by work engagement. Mindful awareness, an important dimension of mindfulness, significantly strengthens the relationship between transformational leadership and work engagement.

Finally, in Chapter 4, the mediating role of ER on the relationship between five different facets of trait mindfulness and OCB was explored with a sample of 343 online respondents from United States. The results showed that all facets excluding observing (i.e, mindful awareness skill), significantly predicts OCB via the full or partial mediation of ER. Out of two facets, nonjudging and nonreactivity, which represent mindful acceptance skill, the positive association between nonjudging facet and OCB was significant without the mediation of ER (i.e., no mediation). On the other hand, ER partially mediate the positive association between nonreactivity facet and OCB.

5.2. Implications

The findings of three different empirical studies in this dissertation have the following implications.

The results of Chapter 2 reveals that, even though awareness was not given much attention, MSC training can still reduce perceived stress, by the improvement of acceptance. We appreciate MSC training but also recommend caution for two reasons. First, the sample in Study 1 possesses specific features that may not be found in the general adult population. Second, the role of awareness suggested by the MAT was not significant in our analysis, which may imply that training programs with more emphasis on awareness will produce better results in stress reduction.

The results in Chapter 3 showing the significant positive effect of transformational leadership on contextual performance suggest that organizations should pay attention to the augmenting such leadership among current managers and emphasize recruiting, selecting and developing individuals with transformational leadership tendencies, especially for managerial positions, to promote employees' contextual performance. In addition, the interaction of transformational leadership (as a contextual resource) and mindful awareness (as a personal resource) can increase work engagement, and consequently contextual performance, can

imply that organizations should consider recruiting employees with relatively higher level of mindful awareness so that managers as transformational leaders can better stimulate employee work engagement and, in turn, contextual employee performance that contributes to the maintenance and or enhancement of the work context.

The findings reported in Chapter 4 suggested that all facets of trait mindfulness excluding observing, significantly predicts OCB via the full or partial mediation of ER. A significant contribution of this chapter was the distinction between five facets of mindfulness in predicting OCB via ER. This chapter provide informative empirical evidence that individuals who scores relatively higher level in distinct facets of trait mindfulness (excluding observing) has the potential to regulate their emotion better, and consequently has the potential to possess higher levels of OCB. This kind of information may help managers in organization which require employees with higher level of OCB, to make better decision on both recruitment of new employees and/or in selecting people.

5.3. Limitations and Future Research Directions

Like any other studies, the three studies in this dissertation must also be considered in the context of their own limitations.

For Chapter 2, the major limitation is its small sample size and the specific characteristics of the sample which constrains the generalizability of the results. Further research with a larger and a more representative sample is necessary to confirm the results of this chapter.

Regarding chapter 3, despite the usage of the randomization of transformational and nontransformational leadership vignettes to produce the experimental data, the mediator (work engagement) was not randomized; therefore, we cannot argue the effect of work engagement persuasively. In addition, a generalization issue exists along with collecting the data only from the respondents living in the United States. Future studies could replicate this model in other

countries and cultures. Third, we used a single measure for mindful awareness and did not consider the potential bias of measurement, although there is an ongoing debate regarding which set of questionnaires should measure mindful awareness or, more broadly, the whole mindfulness. An analysis based on multiple measures of mindfulness is required to address this limitation.

In the case of Chapter 4, the limitation is of conducting mediational analyses in a cross-sectional dataset given the inherent assumptions of causality. Chapter 4 was conducted as a preliminary attempt to examine the pathway through which mindfulness might be associated with OCB via ER. Additional research using rigorous methodologies is still required to provide more compelling evidence for this kind of relationship. Investigating more by using experimental studies with a particular kind of mindfulness-based intervention can be interesting research directions for the future studies.

REFERENCES

Aldao, A., Jazaieri, H., Goldin, P. R., & Gross, J. J. (2014). Adaptive and maladaptive emotion regulation strategies: Interactive effects during CBT for social anxiety disorder. Journal of anxiety disorders, 28(4), 382–389. https://doi.org/10.1016/j.janxdis.2014.03.005

Amor, A. M., Vázquez, J. P. A., & Faíña, J. A. (2020). Transformational leadership and work engagement: Exploring the mediating role of structural empowerment. *European Management Journal*, *38*(1), 169–178. https://doi.org/10.1016/j.emj.2019.06.007.

Arimitsu, K. (2016). The effects of a program to enhance self-compassion in Japanese individuals: A randomized controlled pilot study. *The Journal of Positive Psychology*, *11*(6), 559–571. https://doi.org/10.1080/17439760.2016.1152593

Askun Celik, D., & Çetin, F. (2019). Shedding some Light on the Blind Spots concerning Organizational Citizenship Behavior. In Academy of Management Proceedings (Vol. 2019, No. 1, p. 15242). Briarcliff Manor, NY 10510: *Academy of Management*. https://doi.org/10.5465/AMBPP.2019.15242abstract

Avolio, B. J., & Bass, B. M. (2004). Multifactor Leadership Questionnaire (MLQ); Mind Garden. Accessed April 19, 2021. https://www.mindgarden.com/16-multifactor-leadership-questionnaire.

Awang, Z. (2012). A Handbook on Structural Equation Modeling Using AMOS. *Universiti Technologi MARA Press, Malaysia*, 83–102.

Bader, B., & Berg, N. (2013). An empirical investigation of terrorism-induced stress on expatriate attitudes and performance. *Journal of International Management, 19*, 163–175. https://doi.org/10.1016/j.intman.2013.01.003

Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky Inventory of Mindfulness Skills. Assessment, 11(3), 191–206. https://doi.org/10.1177%2F1073191104268029

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using Self-Report

Assessment Methods to Explore Facets of Mindfulness. Assessment, 13(1), 27–45. https://doi.org/10.1177/1073191105283504

Bednar, K., Voracek, M., & Tran, U. S. (2020). Common factors underlying the five facets of mindfulness and proposed mechanisms: A psychometric study among meditators and non-meditators. Mindfulness, 11(12), 2804-2817. https://doi.org/10.1007/s12671-020-01492-6

Bakker, A. B., & Leiter, M. P. (2010). Work engagement: A handbook of essential theory and research. London. Psychology press. https://doi.org/10.4324/9780203853047

Bakker, A. B., Albrecht, S. L., & Leiter, M. P. (2011). Key questions regarding work engagement. European journal of work and organizational psychology, 20(1), 4-28. https://doi.org/10.1080/1359432x.2010.485352.

Bakker, A. B., & Demerouti, E. (2007). The job demands‐resources model: State of the art. Journal of managerial psychology. 22(3), 309-328. https://doi.org/10.1108/02683940710733115.

Bakker, A. B., & Demerouti, E. (2008a). Towards a model of work engagement. *Career Development International*. 13(3), 209–223. https://doi.org/10.1108/13620430810870476.

Bakker, A. B., Schaufeli, W. B., Leiter, M. P., & Taris, T. W. (2008, b). Work engagement: An emerging concept in occupational health psychology. *Work & Stress*, 22(3), 187-200. 209–23. https://doi.org/10.1108/13620430810870476

Bass, Bernard M.; Avolio, Bruce J., *Multifactor Leadership Questionnaire (MLQ)—Tests, Training*; Available online: https://www.mindgarden.com/16-multifactor-leadership-questionnaire (accessed on 19 April 2021).

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, *13*(1), 27–45. https://doi.org/10.1177/1073191105283504

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of

covariance structures. *Psychological Bulletin*, *88*(3), 588–606.

Bentley, J. W. (2021). Improving the statistical power and reliability of research using Amazon Mechanical Turk. *Accounting Horizons*, *35*(4), 45–62. https://doi.org/10.2308/HORIZONS-18-052

Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., Segal, Z. V., Abbey, S., Speca, M., Velting, D., & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice, 11*(3), 230–241. https://doi.org/10.1093/clipsy.bph077

Block-Lerner, J., Wulfert, E., & Moses, E. (2009). ACT in context: an exploration of experiential acceptance. *Cognitive and Behavioral Practice*, *16*(4), 443–456. https://doi.org/10.1016/j.cbpra.2009.04.005

Bollen, K. A. (1989). *Structural equations with latent variables.* New York: John Wiley. Campbell, J. R. (1976). Psychometric Theory. In M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology* (pp. 119-154). Chicago: Rand McNally.

Bond, F. W., & Bunce, D. (2003). The Role of Acceptance and Job Control in Mental Health, Job Satisfaction, and Work Performance. *Journal of Applied Psychology, 88*(6), 1057–1067. https://psycnet.apa.org/doi/10.1037/0021-9010.88.6.1057

Borman, W. C., & Motowidlo, S. M. (1993). Expanding the criterion domain to include elements of contextual performance. In Personnel Selection in Organizations (Vol. 6). Edited by Schmitt, Neil, and Walter C Borman. San Francisco: Jossey-Bass, 71–98.

Borman, W. C., & Motowidlo, S. J. (1997). Task performance and contextual performance: The meaning for personnel selection research. Human performance, 10(2), 99-109.https://doi.org/10.1207/s15327043hup1002_3

Brumback, G. B. (2010). Performance Management: Putting Research into Action. Personnel Psychology, 63(2), 501-507. https://doi.org/10.1111/j.1744-6570.2010.01178_7.x.

Bravo, A. J., Boothe, L. G., & Pearson, M. R. (2016). Getting personal with mindfulness: A latent profile analysis of mindfulness and psychological outcomes. Mindfulness, 7(2), 420-432. https://doi.org/10.1007/s12671-015-0459-7

Bränström, R., Duncan, L. G., & Moskowitz, J. T. (2011). The association between dispositional mindfulness, psychological well‐being, and perceived health in a Swedish population‐based sample. British journal of health psychology, 16(2), 300-316. https://doi.org/10.1348/135910710X501683

Broderick, P. C., & Jennings, P. A. (2012). Mindfulness for adolescents: A promising approach to supporting emotion regulation and preventing risky behavior. New directions for youth development, 2012(136), 111-126. https://doi.org/10.1002/yd.20042

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. Journal of Personality and Social Psychology, 84(4), 822–848. https://doi.org/10.1037/0022-3514.84.4.822

Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Mindfulness: Theoretical foundations and evidence for its salutary effects. Psychological inquiry, 18(4), 211–237. https://doi.org/10.1080/10478400701598298

Buil, I., Martínez, E., & Matute, J. (2019). Transformational leadership and employee performance: The role of identification, engagement and proactive personality. *International Journal of Hospitality Management*, *77*, 64–75. https://doi.org/10.1016/j.ijhm.2018.06.014

Cabinet Office of Japan. (n.d.). The Ship for Southeast Asian and Japanese Youth Program (SSEAYP). Retrieved September 5, 2021, from https://www8.cao.go.jp/youth/kouryu/en/sseayp/sseayp.html

Cardaciotto, L., Herbert, J. D., Forman, E. M., Moitra, E., & Farrow, V. (2008). The assessment of present-moment awareness and acceptance: The Philadelphia Mindfulness Scale. *Assessment*, *15*(2), 204–223. https://doi.org/10.1177%2F1073191107311467

Carpenter, J. K., Conroy, K., Gomez, A. F., Curren, L. C., & Hofmann, S. G. (2019). The relationship between trait mindfulness and affective symptoms: A meta-analysis of the Five Facet Mindfulness Questionnaire (FFMQ). Clinical psychology review, 74, 101785.

https://doi.org/10.1016/j.cpr.2019.101785

Carter, M. Z., Armenakis, A. A., Feild, H. S., & Mossholder, K. W. (2013). Transformational leadership, relationship quality, and employee performance during continuous incremental organizational change. Journal of organizational behavior, 34(7), 942–958. https://doi.org/10.1002/job.1824

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

Chambers, R., Gullone, E., & Allen, N. B. (2009). Mindful emotion regulation: An integrative review. *Clinical Psychology Review*, *29*(6), 560–572. https://doi.org/10.1016/j.cpr.2009.06.005

Chang, J. H., Huang, C. L., & Lin, Y. C. (2015). Mindfulness, basic psychological needs fulfilment, and well-being. *Journal of Happiness Studies*, 16(5), 1149–1162. https://doi.org/10.1007/s10902-014-9551-2

Chiaburu, D. S., Smith, T. A., Wang, J., & Zimmerman, R. D. (2014). Relative importance of leader influences for subordinates' proactive behaviors, prosocial behaviors, and task performance. *Journal of Personnel Psychology*. 13(2)70–86. https://doi.org/10.1027/1866-5888/a000105

Christian, M. S., Garza, A. S., & Slaughter, J. E. (2011). Work engagement: A quantitative review and test of its relations with task and contextual performance. *Personnel Psychology*, 64(1), 89–136. https://doi.org/10.1111/j.1744-6570.2010.01203.x

Chen, S. C., & Shao, J. (2022). Feminine traits improve transformational leadership advantage: investigation of leaders' gender traits, sex and their joint impacts on employee contextual performance. *Gender in Management,* 37(5), 569–586. https://doi.org/10.1108/GM-06-2020-0167

Chen, Z., Allen, T. D., & Hou, L. (2020). Mindfulness, empathetic concern, and work–family outcomes: A dyadic analysis. *Journal of Vocational Behavior*, *119*, 103402. https://doi.org/10.1016/j.jvb.2020.103402

Cheung, S. Y., Huang, E. G., Chang, S., & Wei, L. (2020). Does being mindful make people more creative at work? The role of creative process engagement and perceived leader humility. Organizational Behavior and Human Decision Processes, 159, 39–48. https://doi.org/10.1016/j.obhdp.2019.12.003

Chua, J., & Ayoko, O. B. (2021). Employees' self-determined motivation, transformational leadership and work engagement. *Journal of Management & Organization*, *27*(3), 523–543. https://doi.org/10.1017/jmo.2018.74.

Cicchetti, D., Ganiban, J., & Barnett, D. (1991). Contributions from the study of high-risk populations to understanding the development of emotion regulation. In J. Garber & K. A. Dodge (Eds.), The development of emotion regulation and dysregulation (pp. 15–48). Cambridge University Press. https://doi.org/10.1017/CBO9780511663963.003

Cifre, E., Salanova, M., & Rodríguez‐Sánchez, A. M. (2011). Dancing between theory and practice: Enhancing work engagement through work stress intervention. Human Factors and Ergonomics in Manufacturing & Service Industries, 21(3), 269-286. https://doi.org/10.1002/hfm.20232

Cohen, S. (1980). Aftereffects of stress on human performance and social behavior: A review of research and theory. *Psychological Bulletin, 88*(1), 82–108. https://doi.org/10.1037/0033-2909.88.1.82

Cohen, S., Kamarck, T., & Mermelstein, R. (1994). Perceived stress scale. *Measuring Stress: A Guide for Health and Social Scientists*, *10*(2), 1–2.

Cole, P. M., Martin, S. E., & Dennis, T. A. (2004). Emotion regulation as a scientific construct: Methodological challenges and directions for child development research. Child development, 75(2), 317-333. https://doi.org/10.1111/j.1467-8624.2004.00673.x

Daraba, D., Wirawan, H., Salam, R., & Faisal, M. (2021). Working from home during the corona pandemic: Investigating the role of authentic leadership, psychological capital,

and gender on employee performance. *Cogent Business & Management*, *8*(1).https://doi.org/10.1080/23311975.2021.1885573

Dane, E., & Brummel, B. J. (2014). Examining workplace mindfulness and its relations to job performance and turnover intention. *Human Relations*, 67(1), 105–128. https://doi.org/10.1177/0018726713487753

Davids, T. W. R., & Stede, W. (Eds). (1959). *The Pali Text Society's Pali-English dictionary.* London: Luzac & Company, Ltd.

Davis, K. M., Lau, M. A., & Cairns, D. R. (2009). Development and preliminary validation of a trait version of the Toronto Mindfulness Scale. *Journal of Cognitive Psychotherapy*, *23*(3), 185–197. https://doi.org/10.1891/0889-8391.23.3.185

Davis, M. C., Zautra, A. J., Wolf, L. D., Tennen, H., & Yeung, E. W. (2015). Mindfulness and cognitive–behavioral interventions for chronic pain: Differential effects on daily pain reactivity and stress reactivity. *Journal of Consulting and Clinical Psychology*, *83*(1), 24. https://dx.doi.org/10.1037%2Fa0038200

Deikman, A. J. (1996). "I" = Awareness. Journal of Consciousness Studies, 3(4), 350–356.

Demerouti, E., & Bakker, A. B. (2011). The job demands-resources model: Challenges for future research. SA Journal of Industrial Psychology, 37(2), 01–09. Retrieved December 30, 2021, fromhttp://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S20710763201100020001&lng=en&tlng=en.

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

Desrosiers, A., Vine, V., Klemanski, D. H., & Nolen‐Hoeksema, S. (2013). Mindfulness and emotion regulation in depression and anxiety: common and distinct mechanisms of action.

Depression and Anxiety, 30(7), 654–661. https://doi.org/10.1002/da.22124

Den Hartog, D. N., & Belschak, F. D. (2012). When does transformational leadership enhance employee proactive behavior? The role of autonomy and role breadth self-efficacy. Journal of Applied Psychology, 97(1), 194–202. https://doi.org/10.1037/a0024903

Den Hartog, V. M. JJ, & Koopman, PL (1997). Transactional versus transformational leadership: An analysis of the MLQ. *Journal of Occupational/ Organizational Psychology*, *70*, 19–34. https://doi.org/10.1111/j.2044-8325.1997.tb00628.x.

Detert, J. R., & Burris, E. R. (2007). Leadership behavior and employee voice: Is the door really open? *Academy of Management Journal*, 50(4), 869-884. https://doi.org/10.5465/amj.2007.26279183

Dimidjian, S., & Linehan, M. M. (2003). Defining an agenda for future research on the clinical application of mindfulness practice. *Clinical Psychology*: Science and Practice, 10(2), 166–171. https://doi.org/10.1093/clipsy.bpg019

Dundas, I., Binder, P. E., Hansen, T. G., & Stige, S. H. (2017). Does a short self‐compassion intervention for students increase healthy self‐regulation? A randomized control trial. *Scandinavian Journal of Psychology*, *58*(5), 443–450. https://doi.org/10.1111/sjop.12385

Dvir, T., Eden, D., Avolio, B. J., & Shamir, B. (2002). Impact of transformational leadership on follower development and performance: A field experiment. *Academy of Management Journal*, 45(4), 735–744. https://doi.org/10.5465/3069307

Farahani, S., Rafiepoor, A., & Jafari, T. (2019). The Role of Mediator of Cognitive Emotion Regulation Strategies in the Relationship between Mindfulness and Perceived Stress in People with High Blood Pressure. *International journal of applied behavioral sciences*, 6(2), 52–59.

Feldman, G., Hayes, A., Kumar, S., Greeson, J., & Laurenceau, J. P. (2007). Mindfulness and emotion regulation: The development and initial validation of the Cognitive and

Affective Mindfulness Scale-Revised (CAMS-R). *Journal of Psychopathology and Behavioral Assessment*, *29*(3), 177–190. https://doi.org/10.1007/s10862-006-9035-8

Ferrari, M., Hunt, C., Harrysunker, A., Abbott, M. J., Beath, A. P., & Einstein, D. A. (2019). Self-compassion interventions and psychosocial outcomes: A meta-analysis of RCTs. *Mindfulness*, *10*(8), 1455–1473. https://doi.org/10.1007/s12671-019-01134-6

Finlay-Jones, A., Strauss, P., Perry, Y., Waters, Z., Gilbey, D., Windred, M. A., Murdoch, A., Pugh, C., Ohan, J. L., & Lin, A. (2021). Group mindful self-compassion training to improve mental health outcomes for LGBTQIA+ young adults: Rationale and protocol for a randomised controlled trial. *Contemporary clinical trials*, *102*, 106268. https://doi.org/10.1016/j.cct.2021.106268

Forza, C., & Filippini, R. (1998). TQM impact on quality conformance and customer satisfaction: a causal model. *International Journal of Production Economics*, *55*(1), 1–20. https://doi.org/10.1016/S0925-5273(98)00007-3

Friis, A. M., Johnson, M. H., Cutfield, R. G., & Consedine, N. S. (2016). Kindness matters: a randomized controlled trial of a mindful self-compassion intervention improves depression, distress, and HbA1c among patients with diabetes. *Diabetes Care*, *39*(11), 1963–1971. https://doi.org/10.2337/dc16-0416

Germer, C. (2009). *The Mindful Path to Self-Compassion: Freeing Yourself from Destructive Thoughts and Emotions*. Guilford Press.

Garnefski, N., Kraaij, V., & Spinhoven, P. (2001). Negative life events, cognitive emotion regulation and emotional problems. Personality and Individual differences, 30(8), 1311–1327. https://doi.org/10.1016/S0191-8869(00)00113-6

Garnefski, N., & Kraaij, V. (2006). Cognitive emotion regulation questionnaire–development of a short 18-item version (CERQ-short). Personality and individual differences, 41(6), 1045–1053. https://doi.org/10.1016/j.paid.2006.04.010

Geier, M. T. (2016). Leadership in Extreme Contexts: Transformational Leadership,

Performance Beyond Expectations? Journal of Leadership & Organizational Studies, 23(3), 234–247. https://doi.org/10.1177/1548051815627359

Glomb, T. M., Duffy, M. K., Bono, J. E., & Yang, T. (2011). Mindfulness at work. In Research in personnel and human resources management. Emerald Group Publishing Limited. https://doi.org/10.1108/S0742-7301(2011)0000030005

Gratz, K. L., & Tull, M. T. (2010). Emotion regulation as a mechanism of change in acceptance- and mindfulness-based treatments. *Assessing mindfulness and acceptance processes in clients: Illuminating the theory and practice of change*, *2*, 107–33.

Gross, J. J. (1998a). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression and physiology. *Journal of Personality and Social Psychology*, *74*, 224–237. https://doi.10.1037//0022-3514.74.1.224

Gross, J. J. (1998b). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, *2*(3), 271–299. https://doi.org/10.1037/1089-2680.2.3.271

Gross, J. J. (2014c). Emotion regulation: Conceptual and empirical foundations. In J. J. Gross (Ed.), Handbook of emotion regulation (pp. 3–20). The Guilford Press.

Grover, S. L., Teo, S. T., Pick, D., & Roche, M. (2017). Mindfulness as a personal resource to reduce work stress in the job demands‐resources model. Stress and Health, 33(4), 426–436. https://doi.org/10.1002/smi.2726

Hair, J. F., Anderson, R. E., Tatham, R. L., and Black, W. C. (1992). *Multivariate data analysis.*

New York: Sage Publications.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). Multivariate date analysis with readings. Englewood Cliff, NJ: Prentice.

Hair, J., Black, W., Babin, B., Anderson, R. and Tatham, R. (2006) *Multivariate Data Analysis*, Pearson Education, London.

Hair, J., Black, W., Babin, B., Anderson, R. and Tatham, R. (2010) *Multivariate Data Analysis*, Prentice Hall, Upper Saddle River NJ.

Han, T. S., Chiang, H. H., McConville, D., & Chiang, C. L. (2015). A longitudinal investigation of person–organization fit, person–job fit, and contextual performance: The mediating role of psychological ownership. Human Performance, 28(5), 425–439. https://doi.org/10.1080/08959285.2015.1021048.

Hafenbrack, A. C., Cameron, L. D., Spreitzer, G. M., Zhang, C., Noval, L. J., & Shaffakat, S. (2020). Helping people by being in the present: Mindfulness increases prosocial behavior. *Organizational Behavior and Human Decision Processes*, 159, 21–38. https://doi.org/10.1016/j.obhdp.2019.08.005

Hanley, A. W., & Garland, E. L. (2017). The mindful personality: A meta-analysis from a cybernetic perspective. *Mindfulness*, *8*(6), 1456–1470. https://doi.org/10.1007/s12671-017-0736-8

Harvard Business Review. Available online: https://hbr.org/2022/08/quiet-quitting-is-about-bad-bosses-not-bad-employees?utm_campaign=hbr&utm_medium=social&utm_source=linkedin (accessed on 8 September 2022).

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experimental approach to behavior change (2nd ed.).* New York, NY: Guilford Press.

Hayes, A. F. (2013). Mediation, moderation, and conditional process analysis. introduction to mediation, moderation, and conditional process analysis: A regression-based approach. *New York: Guilford Publications*, 1–20.

Hayes, A. F., & Preacher, K. J. (2013). Conditional process modeling: Using structural equation modeling to examine contingent causal processes. In G. R. Hancock & R. O. Mueller (Eds.), Structural equation modeling: A second course (pp. 219–266). IAP Information Age Publishing.

Hayes, A. M., & Feldman, G. (2004). Clarifying the construct of mindfulness in the context of emotion regulation and the process of change in therapy. *Clinical Psychology: Science and Practice*, *11*(3), 255. https://psycnet.apa.org/doi/10.1093/clipsy.bph080

Hildenbrand, K., Sacramento, C. A., & Binnewies, C. (2018). Transformational leadership and burnout: The role of thriving and followers' openness to experience. Journal of Occupational Health Psychology, 23(1), 31–43. https://doi.org/10.1037/ocp0000051

Hill, D., Conner, M., Clancy, F., Moss, R., Wilding, S., Bristow, M., & O'Connor, D. B. (2021). Stress and eating behaviors in healthy adults: A systematic review and meta-analysis. Health Psychology Review, https://doi.org/10.1080/17437199.2021.1923406

Hill, C. L. M., & Updegraff, J. A. (2012). Mindfulness and its relationship to emotional regulation. Emotion, 12(1), 81–90. https://doi.org/10.1037/a0026355

Hobfoll, S. E. (1989). Conservation of resources: a new attempt at conceptualizing stress. American psychologist, 44(3), 513–524.

Hobfoll, S. E. (2002). Social and psychological resources and adaptation. Review of general psychology, 6(4), 307–324. https://doi.org/10.1037%2F1089-2680.6.4.307

Holmes, P., Georgescu, S., & Liles, W. (2006). Further delineating the applicability of acceptance and change to private responses: The example of Dialectical Behavior Therapy. *The Behavior Analyst Today, 7*(3), 311–324. http://dx.doi.org/10.1037/h0100157

Hofstede, G. (2005). Hofstede. Geert Jan. Cultures and Organizations: Software of the Mind, 2nd Ed., McGraw Hill, New York, NY.

Hölzel, B. K., Lazar, S. W., Gard, T., Schuman-Olivier, Z., Vago, D. R., & Ott, U. (2011). How does mindfulness meditation work? Proposing mechanisms of action from a conceptual and neural perspective. *Perspectives on psychological science*, *6*(6), 537–559. https://doi.org/10.1177/1745691611419671

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55. https://doi.org/10.1207/s15328007sem1103_2

Hülsheger, U. R., Alberts, H. J. E. M., Feinholdt, A., & Lang, J. W. B. (2013). Benefits of

mindfulness at work: The role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *Journal of Applied Psychology*, 98(2), 310–325. https://doi.org/10.1037/a0031313

Iani, L., Lauriola, M., Chiesa, A., & Cafaro, V. (2019). Associations between mindfulness and emotion regulation: The key role of describing and nonreactivity. Mindfulness, 10(2), 366–375. https://doi.org/10.1007/s12671-018-0981-5

Imai, K., Keele, L., & Tingley, D. (2010). A General Approach to Causal Mediation Analysis. *American Psychological Association, 15*(4), 309–334. https://doi.org/10.1037/a0020761

Iqbal, N., Anwar, S., & Haider, N. (2015). Effect of leadership style on employee performance. Arabian Journal of Business and Management Review, 5(5), 1–6. https://doi.org/10.4172/2223-5833.1000146.

Janssen, E., Van Strydonck, I., Decuypere, A., Decramer, A., & Audenaert, M. (2020). How to foster nurses' well‐being and performance in the face of work pressure? The role of mindfulness as personal resource. Journal of Advanced Nursing, 76(12), 3495–3505. https://doi.org/10.1111/jan.14563

Jiang, W., Zhao, X., & Ni, J. (2017). The impact of transformational leadership on employee sustainable performance: The mediating role of organizational citizenship behavior. Sustainability, 9(9), 1567–1584. https://doi.org/10.3390/su9091567

Jobbehdar Nourafkan, N., Tanova, C., & Gokmenoglu, K. K. (2022). Can Mindfulness Improve Organizational Citizenship and Innovative Behaviors Through its Impact on Well-Being Among Academics? *Psychological Reports*, 0(0). https://doi.org/10.1177/00332941211069517

Judge, T. A. (1997). The dispositional causes of job satisfaction: A core evaluations approach. Research in organizational behavior, 19, 151–188.

Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness meditation in everyday life*. New York: Hyperion.

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. Academy of management journal, 33(4), 692–724. https://doi.org/10.5465/256287

Kang, C., & Whittingham, K. (2010). Mindfulness: A dialogue between Buddhism and clinical psychology. *Mindfulness*, *1*(3), 161–173. https://doi.org/10.1007/s12671-010-0018-1

Kerr, S., & Jermier, J. M. (1978). Substitutes for leadership: Their meaning and measurement. Organizational behavior and human performance, 22(3), 375–403. https://doi.org/10.1016/0030-5073(78)90023-5

Kinnunen, S. M., Puolakanaho, A., Tolvanen, A., Mäkikangas, A., & Lappalainen, R. (2019). Does mindfulness-, acceptance-, and value-based intervention alleviate burnout? A person-centered approach. International Journal of Stress Management, 26(1), 89–101. https://psycnet.apa.org/doi/10.1037/str0000095

Klussman, K., Curtin, N., Langer, J., & Nichols, A. L. (2022). The Importance of Awareness, Acceptance, and Alignment with the Self: A Framework for Understanding Self-Connection. Europe's journal of psychology, 18(1), 120–131. https://doi.org/10.5964/ejop.3707

Kolb, D. (1984). *Experiential Learning as the Science of Learning and Development.* Prentice Hall.

Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., Van Buuren, S., Van der Beek, A. J., & De Vet, H. C. (2014). Improving the individual work performance questionnaire using rasch analysis. *Journal of applied measurement*, *15*(2), 160–175. http://www.ncbi.nlm.nih.gov/pubmed/24950534

Kotera, Y., & Van Gordon, W. (2021). Effects of self-compassion training on work-related well-being: A systematic review. *Frontiers in psychology*, *12*, 1142. https://doi.org/10.3389/fpsyg.2021.630798

Kovjanic, S., Schuh, S. C., & Jonas, K. (2013). Transformational leadership and performance: An experimental investigation of the mediating effects of basic needs satisfaction and work engagement. *Journal of Occupational and Organizational Psychology*, *86*(4), 543–

555. https://doi.org/10.1111/joop.12022

Kroon, B., Menting, C., & van Woerkom, M. (2015). Why mindfulness sustains performance: the role of personal and job resources. Industrial and Organizational Psychology, 8(4), 638–642. https://doi.org/10.1017/iop.2015.92

Kroon, B., van Woerkom, M., & Menting, C. (2017). Mindfulness as substitute for transformational leadership. Journal of Managerial Psychology. 32(4), 284–297 https://doi.org/10.1108/JMP-07-2016-0223

Kuhnert, K. W., & Lewis, P. (1987). Transactional and transformational leadership: A constructive/developmental analysis. *Academy of Management review*, *12*(4), 648–657. https://doi.org/10.5465/amr.1987.4306717.

Lau, M. A., Bishop, S. R., Segal, Z. V., Buis, T., Anderson, N. D., Carlson, L., ... & Devins, G. (2006). The Toronto mindfulness scale: Development and validation. *Journal of clinical psychology*, *62*(12), 1445–1467. https://doi.org/10.1002/jclp.20326

Legood, A., van der Werff, L., Lee, A., & Den Hartog, D. (2021). A meta-analysis of the role of trust in the leadership-performance relationship. *European Journal of Work and Organizational Psychology*, *30*(1), 1–22. https://doi.org/10.1080/1359432X.2020.1819241

Lai, F. Y., Tang, H. C., Lu, S. C., Lee, Y. C., & Lin, C. C. (2020). Transformational leadership and job performance: The mediating role of work engagement. *Sage Open*, *10*(1). https://doi.org/10.1177/2158244019899085

Lilja, J. L., Lundh, L. G., Josefsson, T., & Falkenström, F. (2013). Observing as an essential facet of mindfulness: a comparison of FFMQ patterns in meditating and non-meditating individuals. Mindfulness, 4(3), 203–212. https://doi.org/10.1007/s12671-012-0111-8

Lindenberger, U., & Pötter, U. (1998). The complex nature of unique and shared effects in hierarchical linear regression: Implications for developmental psychology. Psychological Methods, 3(2), 218–230. https://doi.org/10.1037/1082-989X.3.2.218

Lindsay, E. K., & Creswell, J. D. (2017). Mechanisms of mindfulness training: Monitor and Acceptance Theory (MAT). *Clinical Psychology Review*, *51*, 48–59. https://doi.org/10.1016/j.cpr.2016.10.011

Lindsay, E. K., & Creswell, J. D. (2019). Mindfulness, acceptance, and emotion regulation: Perspectives from Monitor and Acceptance Theory (MAT). *Current Opinion in Psychology*, *28*, 120–125. https://doi.org/10.1016/j.copsyc.2018.12.004

Liu, W., Zhu, R., & Yang, Y. (2010). I warn you because I like you: Voice behavior, employee identifications, and transformational leadership. *The leadership quarterly*, 21(1), 189–202. https://doi.org/10.1016/j.leaqua.2009.10.014

Luberto, C.M., Cotton, S., McLeish, A.C. *et al.* Mindfulness Skills and Emotion Regulation: the Mediating Role of Coping Self-Efficacy. *Mindfulness* **5**, 373–380 (2014). https://doi.org/10.1007/s12671-012-0190-6MacDonald, H. Z. (2021). Associations of Five Facets of Mindfulness with Self-Regulation in College Students. *Psychological Reports*, *124*(3), 1202–1219. https://doi.org/10.1177/0033294120937438

MacDonald, H.Z., Baxter, E.E. Mediators of the Relationship Between Dispositional Mindfulness and Psychological Well-Being in Female College Students. *Mindfulness* **8**, 398–407 (2017). https://doi.org/10.1007/s12671-016-0611-z

Macey, W. H., & Schneider, B. (2008). The meaning of employee engagement. Industrial and organizational Psychology, 1(1), 3–30. https://doi.org/10.1111/j.1754-9434.2007.0002.x

Mandal, S. P., Arya, Y. K., & Pandey, R. (2011). Mindfulness, emotion regulation and subjective wellbeing: An overview of pathways to positive mental health. *Indian Journal of Social Science Research*, *8*(1-2), 159–167.

McKee, L. G., Duprey, E. B., & O'Neal, C. W. (2021). Emotion socialization and young adult internalizing symptoms: the roles of mindfulness and emotion regulation. Mindfulness, 12(1), 53-60. https://doi.org/10.1007/s12671-018-1079-9

McManus, I. C., Keeling, A., & Paice, E. (2004). Stress, burnout and doctors' attitudes to work

are determined by personality and learning style: A twelve-year longitudinal study of UK medical graduates. *BMC Medicine, 2*, 29. http://www.biomedcentral.com/1741-7015/2/29

Meyers, M. C., Kooij, D., Kroon, B., de Reuver, R., & van Woerkom, M. (2019). Organizational support for strengths use, work engagement, and contextual performance: The moderating role of age. Applied Research in Quality of Life, 15(2), 485–502. https://doi.org/10.1007/s11482-018-9702-4

Montani, F., Vandenberghe, C., Khedhaouria, A., & Courcy, F. (2020). Examining the inverted U-shaped relationship between workload and innovative work behavior: The role of work engagement and mindfulness. *Human Relations*, 73(1), 59–93. https://doi.org/10.1177%2F0018726718819055

Mulligan, R. (2018). Mindfulness Matters: The Effects of Mindfulness on Organizational Citizenship Behavior. CMC Senior Theses. 1992. https://scholarship.claremont.edu/cmc_theses/1992

Neff, K. D., & Germer, C. K. (2013). A pilot study and randomized controlled trial of the mindful self‐compassion program. *Journal of Clinical Psychology*, *69*(1), 28–44. https://doi.org/10.1002/jclp.21923

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

Nyklíček I. (2011) Mindfulness, Emotion Regulation, and Well-Being. In: Nyklíček I., Vingerhoets A., Zeelenberg M. (eds) Emotion Regulation and Well-Being. Springer, New York, NY. https://doi.org/10.1007/978-1-4419-6953-8_7

Organ, D. W. (1988). Organizational citizenship behavior: The good soldier syndrome. Lexington Books/D. C. Heath and Com.

Parent-Lamarche, A. (2022). Teleworking, Work Engagement, and Intention to Quit during the COVID-19 Pandemic: Same Storm, Different Boats? *International Journal of*

Environmental Research and Public Health, *19*(3), 1267. https://doi.org/10.3390/ijerph19031267.

Patel, T. (2017). Benefits of Mindfulness in the Workplace: The Effects of Mindful Practices on Counterproductive Workplace Behaviors and Organizational Citizenship Behaviors. http://hdl.handle.net/10415/6049

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., & Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. Journal of management, 26(3), 513–563. https://doi.org/10.1016/S0149-2063(00)00047-7

Pearson, M. R., Lawless, A. K., Brown, D. B., & Bravo, A. J. (2015). Mindfulness and emotional outcomes: Identifying subgroups of college students using latent profile analysis. Personality and Individual Differences, 76, 33–38. https://doi.org/10.1016/j.paid.2014.11.009

Podsakoff, P. M., MacKenzie, S. B., & Hui, C. (1993). Organizational citizenship behaviors and managerial evaluations of employee performance: A review and suggestions for future research. Research in personnel and human resources management.

Podsakoff, P. M., Ahearne, M., & MacKenzie, S. B. (1997). Organizational citizenship behavior and the quantity and quality of work group performance. Journal of Applied Psychology, 82(2), 262–270.

Pradhan, S., Jena, L. K., & Bhattacharyya, P. (2018). Transformational leadership and contextual performance: Role of integrity among Indian IT professionals. International journal of productivity and performance management. 67(2), 445–462. https://doi.org/10.1108/IJPPM-08-2016-0186

Prakash, R. S., Hussain, M. A., & Schirda, B. (2015). The role of emotion regulation and cognitive control in the association between mindfulness disposition and stress. Psychology and Aging, 30(1), 160–171. https://doi.org/10.1037/a0038544

Rapgay, L., & Bystrisky, A. (2009). Classical mindfulness. *Annals of the New York Academy of Sciences*, *1172*(1), 148. https://doi.org/10.1111/j.1749-6632.2009.04405.x

Rank, J., Nelson, N. E., Allen, T. D., & Xu, X. (2009). Leadership predictors of innovation and task performance: Subordinates' self-esteem and self-presentation as moderators. *Journal of Occupational and Organizational Psychology*, 82(3), 465–489. https://doi.org/10.1348/096317908X371547

Rau, H. K., & Williams, P. G. (2016). Dispositional mindfulness: A critical review of construct validation research. *Personality and Individual Differences*, *93*, 32–43. https://doi.org/10.1016/j.paid.2015.09.035

Reilly, R. R., & Aronson, Z. H. (2009). Managing contextual performance. Performance management: Putting research into action, 297–328. In Smither, J. W., & London, M. (Eds.). (2009). Performance management: Putting research into action (Vol. 21). John Wiley & Sons.

Robins, C. J., Schmidt, H. III, & Linehan, M. M. (2004). Dialectical Behavior Therapy: Synthesizing Radical Acceptance with Skillful Means. In S. C. Hayes, V. M. Follette, & M. M. Linehan (Eds.), *Mindfulness and Acceptance: Expanding the Cognitive-Behavioral Tradition* (pp. 30–44). Guilford Press.

Roemer, L., & Orsillo, S. M. (2003). Mindfulness: A promising intervention strategy in need of further study. *Clinical Psychology: Science and Practice, 10*(2), 172–178. https://doi.org/10.1093/clipsy.bpg020

Roemer, L., Williston, S. K., & Rollins, L. G. (2015). Mindfulness and emotion regulation. Current Opinion in Psychology, 3, 52–57. https://doi.org/10.1016/j.copsyc.2015.02.006

Sackett, P. R. (2002). The structure of counterproductive work behaviors: Dimensionality and relationships with facets of job performance. International journal of selection and assessment, 10(1‐2), 5–11. https://doi.org/10.1111/1468-2389.00189

Sandler, M. E. (2000). Career decision-making self-efficacy, perceived stress, and an integrated

model of student persistence: A structural model of finances, attitudes, behavior, and career development. *Research in Higher Education, 41*(5), 537–580. https://doi.org/10.1023/A:1007032525530

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. Educational and psychological measurement, 66(4), 701–716. https://doi.org/10.1177%2F0013164405282471

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. Journal of Happiness studies, 3(1), 71–92. https://doi.org/10.1023/A:1015630930326

Schaufeli, W. B., & Taris, T. W. (2014). A critical review of the job demands-resources model: Implications for improving work and health. *Bridging occupational, organizational and public health*, 43-68. https://doi.org/10.1007/978-94-007-5640-3_4.

Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. *Journal of clinical psychology*, *62*(3), 373–386. https://doi.org/10.1002/jclp.20237

Shi-Man, L. I. U., Ke-Ting, L. I. U., Tian-Tian, L. I., & Li, L. V. (2015). The impact of mindfulness on subjective well-being of college students: The mediating effects of emotion regulation and resilience. Journal of psychological science, (4), 889. http://www.psysci.org/EN/Y2015/V/I4/889

Shokory, S. M., & Suradi, N. R. M. (2018). Transformational Leadership and its impact on extra-role performance of project team members: The mediating role of work engagement. *Academy of Strategic Management Journal*, 17(5), 1–6. https://doi.org/1939-6104-17-5-218.

Shoss, M. K., Hunter, E. M., & Penney, L. M. (2016). Avoiding the issue: Disengagement coping style and the personality–CWB link. Human Performance, 29(2), 106–122. https://doi.org/10.1080/08959285.2016.1148036

Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. Journal of Applied Psychology, 68(4), 653–663. https://doi.org/10.1037/0021-9010.68.4.653

Sørensen, L., Osnes, B., Visted, E., Svendsen, J. L., Adolfsdottir, S., Binder, P. E., & Schanche, E. (2018). Dispositional mindfulness and attentional control: The specific association between the mindfulness facets of non-judgment and describing with flexibility of early operating orienting in conflict detection. *Frontiers in psychology*, *9*, 2359. https://doi.org/10.3389/fpsyg.2018.02359

Spector, P. E., Fox, S., Penney, L. M., Bruursema, K., Goh, A., & Kessler, S. (2006). The dimensionality of counterproductivity: Are all counterproductive behaviors created equal? Journal of vocational behavior, 68(3), 446–460. https://doi.org/10.1016/j.jvb.2005.10.005

Sünbül, Z. A., & Güneri, O. Y. (2019). The relationship between mindfulness and resilience: The mediating role of self-compassion and emotion regulation in a sample of underprivileged Turkish adolescents. Personality and Individual Differences, 139, 337–342. https://doi.org/10.1016/j.paid.2018.12.009

Strauss, K., Griffin, M. A., & Rafferty, A. E. (2009). Proactivity directed toward the team and organization: The role of leadership, commitment and role‐breadth self‐efficacy. British journal of management, 20(3), 279–291. https://doi.org/10.1111/j.1467-8551.2008.00590.x

Tanay, G., & Bernstein, A. (2013). State Mindfulness Scale (SMS): Development and initial validation. *Psychological Assessment, 25*(4), 1286–1299. https://doi.org/10.1037/a0034044

Tangney, J. P., Dobbins, A. E., Stuewig, J. B., & Schrader, S. W. (2017). Is there a dark side to mindfulness? Relation of mindfulness to criminogenic cognitions. Personality and Social Psychology Bulletin, 43(10), 1415–1426. https://doi.org/10.1177%2F0146167217717243

Tanova, C. (2022). Can Mindfulness Improve Organizational Citizenship and Innovative Behaviors Through its Impact on Well-being Among Academics? Psychological Reports,

https://doi.org/ 10.1177/00332941211069517

Tonkin, T. H. (2013). Authentic versus transformational leadership: Assessing their effectiveness on organizational citizenship behavior of followers. *International Journal of Business and Public Administration*, *10*(1), 40–61. https://link.gale.com/apps/doc/A335188936/AONE?u=anon~65599d68&sid=googleScholar&xid=bd0639ca

Truong, Q. C., Krägeloh, C. U., Siegert, R. J., Landon, J., & Medvedev, O. N. (2020). Applying generalizability theory to differentiate between trait and state in the Five Facet Mindfulness Questionnaire (FFMQ). *Mindfulness*, *11*(4), 953–963. https://doi.org/10.1007/s12671-020-01324-7

Van Dam, N. T., Earleywine, M., & Borders, A. (2010). Measuring mindfulness? An item response theory analysis of the Mindful Attention Awareness Scale. *Personality and Individual Differences*, *49*(7), 805–810. https://doi.org/10.1016/j.paid.2010.07.020

Van den Broeck, A., Van Ruysseveldt, J., Smulders, P., & De Witte, H. (2011). Does an intrinsic work value orientation strengthen the impact of job resources? A perspective from the Job Demands–Resources Model. *European Journal of Work and Organizational Psychology*, *20*(5), 581–609. https://doi.org/10.1080/13594321003669053

van der Meulen, R. T., Valentin, S., Bögels, S. M., & de Bruin, E. I. (2021). Mindfulness and self-compassion as mediators of the Mindful Work Training on perceived stress and chronic fatigue. *Mindfulness*, *12*(4), 936–946. https://doi.org/10.1007/s12671-020-01557-6

Vila-Vázquez, G., Castro-Casal, C., Álvarez-Pérez, D., & del Río-Araújo, L. (2018). Promoting the sustainability of organizations: Contribution of transformational leadership to job engagement. *Sustainability*, *10*(11), 4109. https://doi.org/10.3390/su10114109.

Wahbeh, H., Lu, M., & Oken, B. (2011). Mindful awareness and non-judging in relation to

posttraumatic stress disorder symptoms. *Mindfulness*, *2*(4), 219–227.

Wahn, B., & König, P. (2017). Is attentional resource allocation across sensory modalities task-dependent? *Advances in Cognitive Psychology, 13*(1), 83–96. https://doi.org/10.5709/acp-0209-2

Walumbwa, F. O., Mayer, D. M., Wang, P., Wang, H., Workman, K., & Christensen, A. L. (2011). Linking ethical leadership to employee performance: The roles of leader–member exchange, self-efficacy, and organizational identification. Organizational behavior and human decision processes, 115(2), 204–213. https://doi.org/10.1016/j.obhdp.2010.11.002

Wang, G., Oh, I.-S., Courtright, S. H., & Colbert, A. E. (2011). Transformational Leadership and Performance Across Criteria and Levels: A Meta-Analytic Review of 25 Years of Research. *Group & Organization Management*, *36*(2), 223–270. https://doi.org/10.1177/1059601111401017

Willis, S., Clarke, S., & O'Connor, E. (2017). Contextualizing leadership: Transformational leadership and Management ‐ By ‐ Exception ‐ Active in safety ‐ critical contexts. *Journal of Occupational and Organizational Psychology*, 90(3), 281–305. https://doi.org/10.1111/joop.12172

Wheeler, M. S., Arnkoff, D. B., & Glass, C. R. (2017). The neuroscience of mindfulness: How mindfulness alters the brain and facilitates emotion regulation. *Mindfulness*, *8*(6), 1471–1487. https://doi.org/10.1007/s12671-017-0742-x

Wupperman, P., Neumann, C. S., & Axelrod, S. R. (2008). Do deficits in mindfulness underlie borderline personality features and core difficulties? *Journal of Personality Disorders*, *22*(5), 466–482. https://doi.org/10.1521/pedi.2008.22.5.466

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14(2), 121–141. https://doi.org/10.1037/1072-5245.14.2.121

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2012). A diary study on the happy worker: How job resources relate to positive emotions and personal resources. *European Journal of Work and Organizational Psychology*, *21*(4), 489–517. https://doi.org/10.1080/1359432X.2011.584386.

Xanthopoulou, D., Bakker, A. B., & Fischbach, A. (2013). Work engagement among employees facing emotional demands: The role of personal resources. *Journal of Personnel Psychology, 12*(2), 74–84. https://doi.org/10.1027/1866-5888/a000085

Yang, C., Chen, Y., Zhao, X. R., & Hua, N. (2019). Transformational leadership, proactive personality and service performance: The mediating role of organizational embeddedness. *International Journal of Contemporary Hospitality Management*, 32(1), 267–287. https://doi.org/10.1108/IJCHM-03-2019-0244

Yukl, G. (1998). *Leadership in Organizations*; Prentice Hall: Upper Saddle River, NJ, USA.

Zhuang, K., Bi, M., Li, Y., Xia, Y., Guo, X., Chen, Q., ... & Qiu, J. (2017). A distinction between two instruments measuring dispositional mindfulness and the correlations between those measurements and the neuroanatomical structure. *Scientific Reports*, *7*(1), 1–9. https://doi.org/10.1038/s41598-017-06599-w

Appendix A

Questionnaire for Chapter 2

I. 1. Gender:

1 = Male; 2 = Female

1. Marital Status:

0 = Single, 1 = Married

2. Age

0 = 18 to 24 years, 2 = 25 to 34 years, 3 = 35 to 44 years

3. Highest education

0 = undergraduate student, 2 = bachelor's degree, 3 = master's degree, 4 = professional degree, 5 = doctorate

4. Employment status

1 = student, 2 = unemployed not looking for work, 3 = unemployed looking for work, 4 = employed part-time, 5 = employed full-time.

II. Mindful Awareness from the Philadelphia Mindfulness Scale (PHLMS)

(Cardaciotto et al., 2008).

1 = Never, 2= Rarely, 3=Sometimes, 4= Often, 5=Very often.

1. I'm aware of what thoughts are passing through my mind.
2. I try to distract myself when I feel unpleasant.
3. When talking with other people, I am aware of their facial and body expressions.
4. There are aspects of myself I don't want to think about.
5. When I shower, I am aware of how the water is running over my body.
6. I try to stay busy to keep thoughts or feelings from coming to mind.
7. When I am startled, I notice what is going on inside my body.
8. I wish I could control my emotions more easily.

9. When I walk outside, I am aware of the smells and how the air feels against my face.

10. I tell myself that I shouldn't have certain thoughts.

11. When someone asks how I am feeling, I can identify my emotions easily.

12. There are things I try not to think about.

13. I am aware of thoughts I'm having when my mood changes.

14. I tell myself that I shouldn't feel sad.

15. I notice changes inside my body, like my heart beating faster or my muscles getting tense.

16. If there is something I don't want to think about, I'll try many things to get out of my mind.

17.Whenever my emotions change, I am conscious of them immediately.

18. I try to put my problems out of my mind.

19. When talking with other people, I am aware of the emotions I am experiencing.

20. When I have a bad memory, I try to distract myself to make it go away.

III. Perceived Stress (Cohen et al., 1994)

0 = Never, 1= Seldom/Rarely, 2=Sometimes, 3= Often, 4=Very often.

1. How often have you been upset because of something that happened unexpectedly?

2. How often have you felt that you are unable to control the important things in your life?

3. How often have you felt nervous and 'stressed'?

4. How often have you felt confident about your ability to handle your personal problems? *

5. How often have you felt that things were going your way? *

6. How often have you found that you could not cope with all the things that you had to do?

7. How often have you been able to control irritations in your life?*

8. How often have you felt that you were on top of things?*

9. How often have you been angered because of things that were outside of your control?

10. How often have you felt difficulties were piling up so high that you could not overcome them?

*Reversely coded items

Appendix B

Vignettes for Chapter 3

I. Transformational Leadership Vignette

Mr. Smith is your department manager. He is a man of dedication, conscientiousness, and optimism. Promoting positive values and maintaining professional standards of behaviors in an ethically appropriate manner are essentially his norms. In addition, he possesses the skill, energy, and self-confidence to guide and facilitate efforts for change in the department. Additionally, Mr. Smith is a well-known trouble-shooter in the organization, retrieving, translating, and utilizing data to solve impending problems.

He typically clearly communicates expectations to his team members and expresses his commitment to goals and shared visions. Further, he emphasizes the importance of teamwork. When necessary, he offers further guidance and support to the team members (including you) in achieving their full potential while accomplishing organizational goals. He is also good at motivating his team members by introducing meaningful challenges in their assigned tasks, driving everyone towards a satisfying and rewarding future. Mr. Smith encourages his team to seek new and creative approaches to problems and refrains from criticizing a team member's ideas, especially when they differ from his. Most importantly, he deliberately communicates his trust in his team members' ability to attain targets. In addition, Mr. Smith is an active listener. He usually attempts to pay attention to understand the need of each team member. He assigns tasks to the team members as a means of developing them per their differences.

II. Nontransformational Leadership Vignette

Mr. Smith is your department manager. He emphasizes order and structure and is a man of discipline. However, his strict and rigid standards may discourage the creative problem-solving skills of team members (including you). He is inherently resistant to change and

unwilling to take proactive actions to counteract possible obstacles as he lacks the insight to foresee them. It seems like his emphasis is on maintaining the status quo – a well-organized and structured working environment – and keeping the ship afloat. Even though he is good at handling routine, he usually becomes incompetent to cope with issues requiring creative solutions. He prefers to work within the existing systems and limitations and attempts to function within the boundaries to reach targets.

He usually informs his team members that their performance will be evaluated monthly. He intends to elicit the desired performance from team members through rewards and punishments. Particularly, he tends to reward or criticize team members individually, without very much emphasis on teamwork. One of his priorities is to ensure that predetermined criteria and guidelines are met accurately. He refrains from interfering with the workflow unless an issue arises. Rather, Mr. Smith focuses on closely monitoring loopholes, errors, and deviations from standards and taking corrective actions.

Questionnaire for Chapter 3

I. Demographic Questions:

1. Gender:

1 = Male; 2 = Female

2. Age

1 = 20 to 24 years, 2 = 25 to 29 years, 3 = 30 to 34 years, 4 = 35 to 39 years, 5 = 40 to 44 years, 6 = 45 to 49 years, 7 = 50 to 54 years, 8 = 55 to 59, 9 = 60 years and above

3. Highest education

1 = less than high school degree, 2 = High school graduate (high school diploma or equivalent including GED), 3 = Some college but no degree, 4 = Associate degree in college (2-year), 5 = bachelor's degree in college (4-year), 6 = Master's degree or higher.

II. Transformational Leadership (Multifactor Leadership Questionnaire - MLQ)

(Avolio and Bass, 1995) 20 items

0= Not at all, 1= Once in a while, 2= Sometimes, 3= Fairly often, 4=Frequently, if not always

Cannot show the detail items as the copyright version is used here.

III. Mindful Awareness from the Philadelphia Mindfulness Scale (PHLMS)

(Cardaciotto et al., 2008).

1 = Never, 2= Rarely, 3=Sometimes, 4= Often, 5=Very often.

1. I'm aware of what thoughts are passing through my mind.
2. When talking with other people, I am aware of their facial and body expressions.
3. When I shower, I am aware of how the water is running over my body.
4. When I am startled, I notice what is going on inside my body.
5. When I walk outside, I am aware of the smells and how the air feels against my face.
6. When someone asks how I am feeling, I can identify my emotions easily.
7. I am aware of thoughts I'm having when my mood changes.
8. I notice changes inside my body, like my heart beating faster or my muscles getting tense.
9. Whenever my emotions change, I am conscious of them immediately.
10. When talking with other people, I am aware of the emotions I am experiencing.

IV. Work Engagement [Utrecht Work Engagement Scale (UWES-9)]

(Schaufeli et al., 2006)

0=Never, 1 = Almost never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Very often, 6 = Always

1. At my work, I would feel bursting with energy.
2. At my job, I feel strong and vigorous.
3. I am enthusiastic about my job.

4. My job inspires me.

5. I feel like going to work when I get up in the morning.

6. I feel happy when I am working intensely.

7. I'm proud of the work that I do.

8. I am immersed in my work.

9. I get carried away when I am working.

V. Contextual Performance (Koopman et al., 2014)

1 = Seldom, 2 = Sometimes, 3 = frequently, 4 = Often, 5 = Always.

1. I take on extra responsibilities.

2. I start new tasks myself when my old ones were finished.

3. I take on challenging work tasks when available.

4. I work at keeping my job knowledge up to date.

5. I work at keeping my job skills up to date.

6. I come up with creative solutions to new problems.

7. I keep looking for new challenges in my job.

8. I do more than was expected of me.

9. I actively participate in work meetings.

10. I actively look for ways to improve my performance at work.

11. I grasp opportunities when they present themselves.

12. I know how to solve difficult situations and setbacks quickly.

Appendix C

Questionnaire of Chapter 4

I. Demographic Questions:

1. Gender:

   1= Male; 2 = Female

2. Age

   1 = 20 to 24 years, 2 = 25 to 29 years, 3 = 30 to 34 years, 4 = 35 to 39 years, 5 = 40 to 44 years, 6 = 45 to 49 years, 7 = 50 to 54 years, 8 = 55 to 59, 9 = 60 years and above

3. Highest Education

   1 = less than high school degree, 2 = High school graduate (high school diploma or equivalent including GED), 3 = Some college but no degree, 4 = Associate degree in college (2-year), 5 = bachelor's degree in college (4-year), 6 = Master's degree or higher.

II. Five Facets Mindfulness Questionnaire (FFMQ) (Bear et al., 2006)

1 = Never or very rarely true, 2 = Rarely true, 3 = Sometimes true, 4 = Often true, 5 = Very often or always true

1. When I'm walking, I deliberately notice the sensations of my body moving.
2. I'm good at finding the words to describe my feelings.
3. I criticize myself for having irrational or inappropriate emotions.
4. I perceive my feelings and emotions without having to react to them.
5. When I do things, my mind wanders off and I'm easily distracted.
6. When I take a shower or a bath, I stay alert to the sensations of water on my body.
7. I can easily put my beliefs, opinions, and expectations into words.
8. I don't pay attention to what I'm doing because I'm daydreaming, worrying or otherwise distracted.
9. I watch my feelings without getting lost in them.

10. I tell myself that I shouldn't be feeling the way I'm feeling.

11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.

12. It's hard for me to find the words to describe what I am thinking.

13. I am easily distracted.

14. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.

15. I pay attention to sensations, such as the wind in my hair or sun on my face.

16. I have trouble thinking of the right words to express how I feel about things.

17. I make judgements about whether my thoughts are good or bad.

18. I find it difficult to stay focused on what's happening in the present.

19. When I am having distressing thoughts and images, I "step back" and am aware of the thought or image without getting taken over by it.

20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.

III. Cognitive Emotion Regulation Questionnaire (CERQ-short)

(Garnefski & Kraaij ,2007)

Everyone gets confronted with negative or unpleasant events now and then and everyone responds to them in his or her own way. By the following questions, you are asked to indicate what you generally think when you experience negative or unpleasant events.

1 = Almost never, 2 = Often, 3 = Somewhat frequently, 4 = Very frequently, 5 = Almost always

1. I feel that I am the one who is responsible for what happened.

2. I think that basically the cause must lie within myself.

3. I think that I have to accept that this has happened.

4. I think that I have to accept the situation.

5. I often think about how I feel about what I have experienced.

6. I am preoccupied with what I think and feel about what I have experienced.

7. I think of pleasant things that have nothing to with it.

8. I think of something nice instead of what has happened.

9. I think about how to change the situation.

10. I think about a plan of what I can do best.

11. I think I can learn something from the situation.

12. I think I can become a stronger person as a result of what has happened.

13. I think that it hasn't been too bad compared to other things.

14. I tell myself that there are worse things in life.

15. I keep thinking about how terrible it is what I have experienced.

16. I continually think how horrible the situation has been.

17. I feel that others are responsible for what has happened.

18. I feel that basically the cause lies with others.

IV. Organizational Citizenship Behavior (OCB)

(Podsakoff et al., 1993)

1 = Almost never, 2 = Often, 3 = Somewhat frequently, 4 = Very frequently, 5 = Almost always

1. I consume a lot of time complaining about trivial matters.

2. I always focus on what's wrong rather than on the positive side.

3. I tend to make "mountains out of molehills".

4. I always find fault with what the group is doing.

5. I am the classic squeaky wheel that always need greasing.

6. I take steps to try to prevent problems with other members.

7. I am mindful of how my behavior affects other people's job within the group.

8. I do not abuse the rights of others.

9. I try to avoid creating problems for other members

10. I consider the impact of my actions on other members.

11. I help others who have been absent.
12. I help others who have heavy workloads.
13. I help orient new people even though it is not required.
14. I willingly help others who have work related problems.
15. I am always ready to lend a helping hand to those around me.
16. Attendance of work is above the norm.
17. I do not take extra breaks.
18. I obey company rules and regulations even when no one is watching.
19. I am one of the most conscientious employees.
20. I believe in giving an honest day's work for an honest day's pay.
21. I attend meetings that are not mandatory but are considered important.
22. I attend functions that are not required but are considered important.
23. I keep abreast of changes in the organization.
24. I read and keep up with organization announcements, memos, and so on.

Appendix D

The Research Ethic Approval

Appended form No. 1

Application for Review

/11 /20/2020

To the Chair of the Ethics Committee of
Graduate School for International Development and Cooperation

Review Item	☑ Research plan	☐ Research report
Title	Mindfulness-Based Training Intervention and Employee Wellbeing	
Name of the Applicant	Name: Phyu Phyu Zaw	Extension number:
(Academic Advisor)	(Course, if the applicant is a student.) Yoshi TAKAHASHI Department: Development Policy	(ID No., if the applicant is a student.) D195858 Position: Doctoral student
(Academic Advisor)	Name:Yoshi TAKAHASHI (Sign)	Extension number: 6923
Other (Publication, etc.)		

Notes:
1. The applicant's signature or seal is required in the ""Name of the Applicant"" field.
2. Check ☐ "Research plan" if you are applying before you begin the research.
3. Check ☐ "Research result" if you are applying after or during the research.
4. Specify about publication means, conference name, journal name and etc.in the "Other (Publication, etc.)" field if you check "Research result"

·····(the Ethics Committee Only)·····

Determination	1. Approved	2. Changes Recommended	3. Not Approved	4. Not Applicable
Reason for Determination or Recommendation	Approved December 16,2020			