# LEADER-MEMBER CONGRUENCE IN MINDFULNESS AND WORK OUTCOMES: THE MEDIATING ROLE OF LEADER-MEMBER EXCHANGE

**DAVID O. ADEBESIN**
**Bachelor of Science (Industrial Relations & Personnel Management)**
**Osun State University, Osogbo, Nigeria, 2014**

A thesis submitted
in partial fulfillment of the requirements for the degree of

**MASTER OF SCIENCE (MANAGEMENT)**

in

**HUMAN RESOURCES & LABOUR RELATIONS**

Dhillon School of Business
University of Lethbridge
LETHBRIDGE, ALBERTA, CANADA

# LEADER-MEMBER CONGRUENCE IN MINDFULNESS AND WORK OUTCOMES: THE MEDIATING ROLE OF LEADER-MEMBER EXCHANGE

**DAVID O. ADEBESIN**

Date of Defense: December 22, 2020

| | | |
|---|---|---|
| Dr. M. Ansari | Professor | Ph.D. |
| Dr. A. MacDonald | Associate Professor | Ph.D. |
| Thesis Co-Supervisors | | |
| Dr. J. Wiltshire | Assistant Professor | Ph.D. |
| Reader | | |
| Dr. S. M. Fazel-e-Hasan | Senior Lecturer | Ph.D. |
| External Examiner | | |
| Peter Faber Business School, | | |
| Australian Catholic University | | |
| Dr. C. Carnaghan | Associate Professor | Ph.D. |
| Chair, Thesis Examination Committee | | |

## DEDICATION

I dedicate this research work first to **God Almighty,** the author and publisher of my essence. He has always guided me and supported me in unexplainable ways. I also dedicate my work to my parents, **Mr. Julius O. Adebesin** and **Mrs. Victoria O. Adebesin** for their equal support to my life from birth through adulthood. Without the congruence between both of you, I would not have gotten the wonderful love, guidance, and motivation to aspire for the best. I will also never forget my supervisor **Dr. Mahfooz Ansari** for being not just my supervisor but a mentor, motivator, and father figure.

## ABSTRACT

This study extends the mindfulness literature by introducing the constructs of congruence and leader-member exchange (LMX) into the mindfulness model. I collected dyadic data from 210 subordinates and 58 supervisors in universities and banks in south-west Nigeria. The study revealed that leader mindfulness was positively related to leaders' job satisfaction and work engagement but was not significant for job performance and LMX. Member mindfulness was also positively related to members' job satisfaction, work engagement, and job performance. Further, I found that leader-member mindfulness congruence was positively related to the leaders' job satisfaction and members' job satisfaction and work engagement. Finally, leader LMX mediated the relationship between leader-member mindfulness congruence and member work engagement but did not mediate other work outcomes. This study contributes to the organizational behavior literature by showing the benefits of mindfulness, LMX, and congruence in Sub-Saharan African culture.

## ACKNOWLEDGMENTS

First, I would like to appreciate **Dr. Mahfooz Ansari** for giving me the opportunity to be supervised by him. Working with you was never easy as you challenged me to go beyond my abilities, and I think that was the best part of my experience at the University of Lethbridge. At this moment I am proud of having a master's degree and not just a certificate. You taught me to follow best practices and aspire for excellence and nothing less. You have also imparted into me a strong sense of aspiration, and imbibe me with a wealth of knowledge. Your non-judgmental attitude towards me was my greatest inspiration and I hope to make you proud as I continue with my academic journey and in life generally.

Secondly, I would also like to appreciate **Dr. Adriane Macdonald** for introducing me to mindfulness. It was very interesting to see mindfulness help me through my phase of depression in the last two years. You boosted my energy and confidence with your positive feedback. I never knew I was doing great if I did not get those honest compliments from you. I also appreciate your support and contribution throughout my thesis writing. I will always be grateful and hope to work with you again as I advance in my academic and non-academic career.

I would further like to appreciate **Dr. Jocelyn Wiltshire** for her support throughout my research work. You have taken your time to look through my work and gave me constructive feedback amidst your busy schedules.

I will not forget **Mrs. Tammy Rogness** for always looking out for me and encouraging me to get things done as quickly as I can. You have been very supportive from the beginning of the program to the end. **Dr. Robin Derry**, I will never forget your motherly kindness throughout my master's program. You took the time to look after me having understood the

struggles of international students in a new environment. **Dr. Debra Basil,** I cannot forget your class at the beginning of the program. I was struggling, and I thought I was the dullest student in the class. Your open-door policy enabled you to get me through my struggles and I was happy to not just pass the course but also gain a wealth of knowledge. Your positive feedback at the end of your class sparked me up. Finally, **Auburn Phillips**, thank you for the support as my editor.

To all my faculty members unmentioned, you are all appreciated for your support as well, I do not underestimate any of you. You are all very awesome and great teachers.

TABLE OF CONTENTS

## LIST OF TABLES

## LIST OF FIGURES

# CHAPTER 1: INTRODUCTION

Organizations are increasingly faced with challenges due to an increase in technological change, workforce diversity, and global competition, to name a few. Leaders, likewise, their members must work together to solve these issues and maintain business competitiveness (Lewis, 2000). To achieve this goal, organizational members would need to keep abreast with everything happening in their environment, which could be very stressful and challenging. It would also require some unique traits and abilities. For the organizational leaders, researchers have recommended how they can initiate effective leadership: "it is about developing high levels of self-management by switching off the autopilot and getting in the driver's seat of your life" (Hougaard, Carter, & Coutts, 2016, p. 53). However, with these challenges posed to leaders, they must learn to develop and/or acquire this unique trait that will enable them to perform effectively considering the circumstances. The members/subordinates would also require a similar trait, which will foster their goal achievement and help them build a strong interpersonal relationship with their leaders. This can be actualized through mindfulness.

Mindfulness is a process of bringing one's attention to moment-by-moment experience (Kabat-Zinn, 2005). It has recently been gaining attention in the psychotherapy and industrial-organization (I-O) psychology literature. Its importance in personal life and association with positive outcomes such as increased task performance, promotion of physical health, and improved psychological health (Dane, 2011) has caught the attention of organizational leaders, consultants, employees, and trainers alike (Hyland, Lee, & Mills, 2015; Zhang, Waldman, Han, & Li, 2014). Based on the benefits research has reported, organizations such as Google (Kelly, 2012) and General Mills (Gelles, 2012) have incorporated mindfulness into their training and development programs. Mindfulness supports and guides can be found in many books, online

bookstores, and apps created to assist people in cultivating mindfulness in their daily lives (Sutcliffe, Vogus, & Dane, 2016).

A review of mindfulness literature (e.g., Conze, 1956; Kabat-Zinn, 1982) has demonstrated the benefits of mindfulness in Eastern as well as Western cultures. Many studies show that mindfulness can be meaningful both in organizations and in personal life (Sutcliffe et al., 2016). For instance, it serves as a Western therapy for the development of interpersonal relationships (Hayes, Strosahl, & Wilson, 1999; Sutcliffe et al., 2016). Trait mindfulness was negatively associated with aggressiveness and hostility (Heppner et al., 2008). Mindfulness in the organizational context was also positively related to work outcomes such as job performance (Dane, 2011; Dane & Brummel, 2013; Hyland et al., 2015), employee well-being (Brown & Ryan, 2003), emotional regulation, and job satisfaction (Hülsheger, Alberts, Feinholdt, & Lang, 2013). Although the construct of mindfulness relates to the practice of meditation, it originates from the Buddhist tradition of mind training (Hyland et al., 2015). Other sources have shown that mindfulness meditation practices are not restricted to the Buddhist culture, but those other religions like Christianity, Islam, and Hinduism also embark on contemplative practices related to meditation (Lopez, 2002; Plante, 2010). This evidence makes mindfulness especially meaningful and measurable in any part of the world. However, its measurement may be viewed from different perspectives, as some scholars argue that mindfulness can be developed both at the trait and state levels (Sutcliffe et al., 2016). Mindfulness does not only develop through contemplative practices but is also a dispositional trait in some individuals (Brown & Ryan, 2003).

The documented benefits of mindfulness have led organizational researchers (e.g., Kawakami, White, & Langer, 2000; Reb, Narayanan, & Chaturvedi, 2014) to extend its

theoretical underpinning to the area of leadership. There is a vast body of work on leadership, and many theories and types of leadership behaviors have been in this literature for some decades (Bass & Bass, 2008). In this stream of research, irrespective of styles of leadership, leaders are faced with many challenges beyond the observed traits and behavioral patterns most leadership writers have echoed as characteristic of effective leadership (Hougaard et al., 2016). For instance, some researchers and business practitioners have called for enhanced leadership performance that will fit the complexity of today's business environment. This would enable leaders to address challenges that require more concentration; "it is about ensuring we are doing the right things as opposed to just lots of things. It is about ensuring we are managing not just our activities but also our mind and remaining focused, calm, and clear even in demanding business environments" (Hougaard et al., 2016, p. 49).

Dane (2011) has argued that mindfulness can increase multiple external attention, improve the coping capacity of individuals in a dynamic workplace, and enhance their affective and intuitive stimuli. Mindfulness is more encompassing, unlike other similar constructs like awareness, which refers to a person's ability to experience what is in mind consciously (Mikulas & Mikulas, 2011), and attention, which is the clear and vivid possession by the mind concerning different concomitant object and trains of thought (Evans, 1990). Therefore, the mindfulness process consists of both being aware of oneself and its environment, moreover, paying attention to observations for selection. In essence, mindfulness helps us be more aware of ourselves and others, which is an authentic tool for leading people and organizations (Hougaard et al., 2016).

Further, previous studies have also revealed that mindfulness helps to build interpersonal relationships (Hayes et al., 1999; Sutcliffe et al., 2016), and this can be inferred to help develop strong exchange relationships between the leaders and their members. In this sense, we expect

that when leaders and members are mindful, it will help to develop strong leader-member exchange (LMX) relationships. LMX, a leadership theory grounded in social exchange theory (Blau, 1964) is positively related to specific organizational outcomes such as job performance (Gerstner & Day, 1997), job satisfaction, affective commitment, and normative commitment; and negatively related to turnover intentions (Dulebohn, Bommer, Liden, Brouer, & Ferris, 2012). A meta-analysis of LMX in 23 different national cultures also supported the positive outcomes of mindfulness (Rockstuhl, Dulebohn, Ang, & Shore, 2012). Mindfulness enables leaders to build their inner abilities, thus making mindfulness an essential skill for leading effectively in today's business. A notable scholar of management, Peter Drucker, suggests that people cannot manage others unless they have learned to manage themselves (Drucker, 2008). Hence, mindfulness has previously been characterized by leadership, but there is limited empirical evidence (Reb, Narayanan, & Chaturvedi, 2012).

Against this background, the present study revisits relevant literature on mindfulness, LMX, congruence, and work outcomes. Whereas previous research has examined the relationship between mindfulness and specific work outcomes (see Dane, 2011; Hülsheger et al., 2013; Hyland et al., 2015; Schultz, Ryan, Niemiec, Legate, & Williams, 2014; Sutcliffe et al., 2016), some areas are yet to be investigated. For example, research has just begun on the relationship between mindfulness, LMX, and work outcomes. Reb, Chaturvedi, Narayanan, and Kudesia (2019) conducted two studied which assessed triadic relationships (leader-member-peer) and dyadic relationships (leader-member) revealed that higher mindfulness of leaders leads to higher dyadic exchange relationships with their members as perceived by them. Leader mindfulness also influenced members' in-role and extra-role performance, and this relationship was partially mediated through LMX quality (see Reb et al., 2019). Studies on congruence are

there in the OB literature, with much attention on work value congruence (see Adkins & Russel, 1997; Meglino, Ravlin, & Adkins, 1989). However, we are aware of no research on the relationship between the congruence of leader-member mindfulness and work outcomes.

Nevertheless, researchers such as Kristof-Brown et al. (2005) have argued that most studies in OB have focused on a single dimension of fit, and calls for insight into its multiple dimensions. The present study seeks to address these gaps by investigating the congruence of leader-member mindfulness in an organizational context. However, mindfulness will be assessed on LMX, as well as work outcomes, such as job satisfaction, job performance, and work engagement. Leader LMX will also serve as a mediator between the congruence of leader-member mindfulness and work outcomes. This is significant because the mindfulness construct is just growing in the organizational literature, and this current research will contribute by extending the generalizability of findings of the construct.

### 1.1 Research Objectives

The fundamental objective of this study was to investigate the congruence of leader-member mindfulness and its relationship with work outcomes. The relationships between leader mindfulness and leader job satisfaction and work engagement were assessed. Member mindfulness relationships with member job satisfaction and work engagement were also assessed. Further, leader LMX was used as a mediator between leader-member mindfulness and work outcomes for leaders and members. Finally, the study aimed to extend the investigation of mindfulness and LMX to the Sub-Saharan African culture, specifically Nigeria, as there has been no such study conducted in that culture.

## 1.2 Significance of the Study

Although the organizational literature has begun to explore the benefits and positive impacts of mindfulness, more areas still need investigation. Specifically, this study builds on previous work on mindfulness by incorporating leader LMX as a mediator variable between mindfulness and work outcomes, as shown in Figure 1. Doing this enabled the study to offer more explanations about the construct in terms of how it aids different work outcomes. More so, the study extends the inquiry of mindfulness and LMX to another culture, specifically Sub-Saharan Africa, as we are aware of no study conducted in that region. However, this helped to contribute more explanation to the generalizability of the mindfulness and LMX construct. And lastly, the study offers practical explanations to human resource managers and other organizational practitioners on the importance of mindfulness as a trait for achieving work outcomes and developing positive behaviors, thus reducing detrimental work outcomes.

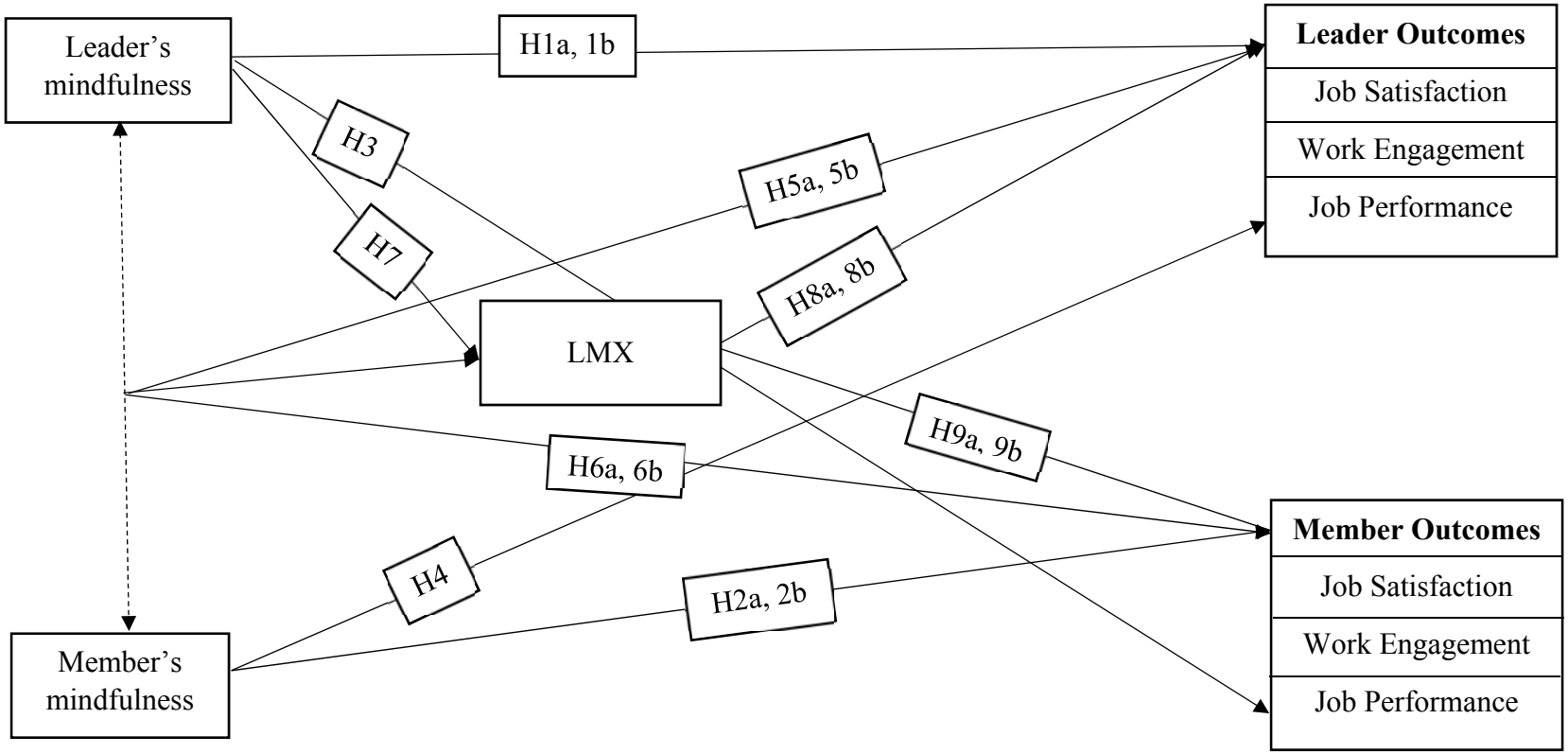



**Figure 1 - Hypothesized model of leader-member congruence in mindfulness, leader LMX, and work outcome**

*Note.* Solid lines = direct relationships; dotted line = interaction.

# CHAPTER 2: LITERATURE REVIEW

## 2.1 Mindfulness

Mindfulness has begun to gain attention in the literature of various disciplines (see Malinowski & Lim, 2015; Olafsen, 2016; Schutte & Malouff, 2011; Sutcliffe et al., 2016; Vogus & Sutcliffe, 2012). Mindfulness is a contemplative practice that is a form of meditation. There are two kinds of meditation and distinguishing them will enable us to understand it (Kabat-Zinn, 1982). The two types are concentration meditation and mindfulness meditation (Kabat-Zinn, 1982). Concentration meditation is a kind of meditation learned by focusing attention on a *single object*. In contrast, mindfulness meditation enables one to focus attention on *more than one object*— that is, observing changing objects while paying focus (Kabat-Zinn, 1982).

Mindfulness has no generally agreed-upon definition among scholars; however, it has been defined based on personal understanding of the construct in different fields. These personal definitions make it challenging for scholars to operationalize (Grossman, 2008). For instance, a definition of mindfulness that is more related to the Buddhist theorizing of the concept sees it as "keeping one's consciousness alive to the present reality" (Hanh, 1976, p. 11) and this is more relevant to the fundamental perception of the concept. In the clinical psychology field, it was conceptualized as a non-judgmental way to pay attention to a particular purpose and in a certain way (Kabat-Zinn, 2009). Also, Bishop (2004) defines mindfulness as a way of bringing one's attention to the moment-by-moment occurrences. The clinical definition of mindfulness views it as a state-level construct where one develops a clear and vivid understanding and awareness of the state of being without judging one's actions and regulating what is observed. Finally, organizational psychology researchers have viewed mindfulness as "the state of being attentive to and aware of what is taking place in the present" (Brown & Ryan, 2003, p. 822). However, as proposed in different fields, these definitions express some similar characteristics like

concentration, awareness, attention, and non-judgment, to name a few, which are all categorized as part of the mindfulness process. There is no superior definition of the construct, but it has more convergent underlying meanings in the literature among these fields (Sutcliffe et al., 2016). Although there are similarities in the meaning of these definitions. The organizational psychology scope of mindfulness upholds that the construct develops either through mindfulness training or an innate trait or both in individuals. Hence, this makes it assessable and meaningful in the psychological, organizational, and management applications.

Mindfulness occurs at both the individual and collective levels (Dierynck, Leroy, Savage, & Choi, 2016; Sutcliffe et al., 2016). Individual mindfulness is an act of accepting one's present moment activities in a nonjudgmental way, which is related to a psychological state and a person's traits (Brown & Ryan, 2003; Dane, 2011; Dierynck et al., 2016). Collective mindfulness, as portrayed in the works of Weick, Sutcliffe, and Obstfeld (2008) is referred to as mindful organizing, which originates from the works of Langer (1989). To further conduct a meaningful investigation and acquire an exciting result, academic scholars must agree on a standard definition of mindfulness for operationalization (Hyland et al., 2015). For a clarified understanding of mindfulness, we discuss the different definitions proposed by scholars on both individual and collective mindfulness.

## 2.2 Individual and Collective Mindfulness

It has already been mentioned that mindfulness occurs individually and collectively (Dierynck et al., 2016; Sutcliffe et al., 2016). Tables 1 and 2 summarize different propositions of individual and collective mindfulness, respectively. Definitions of individual mindfulness can be perceived as an intrapsychic process within an individual (Sutcliffe et al., 2016). For instance, Bishop (2004) defined individual level mindfulness as "a process of regulating attention in order

to bring a quality of non-elaborative awareness to current experience and a quality of relating to one's experience within an orientation of curiosity, experiential openness, and acceptance" (p. 234).

Collective mindfulness, on the other hand, is associated with the activities of high-reliability organizations (HROs). It is concerned with how organizations posed with a high level of risks in their operations strive to minimize disaster at work, through what is called "mindful organizing" (see Weick et al., 2008). Collective mindfulness is an act of being mindful in a highly hazardous environment by applying principles and procedures, including being sensitive to procedural approaches, continuous follow-ups with failures, initiating a resilient attitude, aspiring for more exceptional expertise, and seeking meaningful ideas (Ausserhofer et al., 2013).

The conceptual development of mindfulness describes it as a mental process that encompasses being attentive to situations or events, both internally and externally (Dane, 2011). However, several individual mindfulness definitions express it as a psychological process. Hence, most of the definitions are grounded in psychological research and develop their definition from the work of Brown and Ryan (2003) in the *Journal of Personality and Social Psychology* (Sutcliffe et al., 2016). A general connotation behind the definitions of collective mindfulness is linked to the act of being mindful in a collective way, which is relevant for achieving effective organizational activities.

For this study, we focused on the individual level of mindfulness and adopted Brown and Ryan (2003) conceptualization of mindfulness, which is defined as being receptive and paying attention to psychological state. This individual psychological process of attention occurs at both the trait and state levels (Sutcliffe et al., 2016). However, the definition of Brown and Ryan (2003) is quintessential to this study because its broader span of conceptualizing mindfulness is

perceived at both the trait and state levels. Our study is, therefore, interested in the dispositional aspect of mindfulness (for non-meditators) in leaders and members to see how this trait could enhance leader-member relationships that, in turn, improve work outcomes.

**Table 1 - Representative Definitions of Individual Mindfulness**

| Source | Definition |
|---|---|
| Nyanaponika (1972) | "The clear and single-minded awareness of what actually happens to us and in us at the successive moments of perception" (p. 5). |
| Hanh (1976) | "Keeping one's consciousness alive to the present reality" (p. 11). |
| Kabat-Zinn (2009) | "Paying attention in a particular way: on purpose, in the present moment, non-judgmentally" (p. 4). |
| Epstein (1995) | "Bare attention in which moment-to-moment awareness of changing objects of perception is cultivated" (p. 96). |
| Harvey (2000) | "A state of keen awareness of mental and physical phenomena as they arise within and around [oneself]" (p. 38). |
| Brown and Ryan (2003) | "The state of being attentive to and aware of what is taking place in the present" (p. 822). |
| Baer, Smith, and Allen (2004) | "Nonjudgmental observation of the ongoing stream of internal and external stimuli as they arise" (p. 125). |
| Bishop (2004) | "A process of regulating attention in order to bring a quality of nonelaborative awareness to current experience and a quality of relating to one's experience within an orientation of curiosity, experiential openness, and acceptance" (p. 234). |
| Dane (2011) | "Mindfulness involves attending to external (environmental) and internal (intrapsychic) phenomena" (p. 1000). |
| Carlson (2013) | "Mindfulness involves simply noticing thoughts and emotions as they arise without elaboration or rumination" (p. 176). |
| Baas et al. (2014) | "A state of conscious awareness resulting from living in the moment" (p. 1092). |
| Reb et al. (2014) | "Present-moment awareness with an observing, non-judging stance" (p. 4). |

**Table 2 - Representative Definitions of Collective Mindfulness**

| Author | Definition |
|---|---|
| Knox, Simpson, and Garite (1999) | "Actively and continuously question assumptions; promote orderly challenge of operating routines and practices so successful lessons of the past do not become routine to the point of safety degradation; "outside view" actively solicited or created through active multidisciplinary review of the routine and debriefing of the unusual to prevent normalization of deviance" (p. 26). |
| Hargadon and Bechky (2006) | "Describes the amount of attention and effort that individuals allocate to a particular task or interaction, and, through mindful interpretation by group members of an ongoing experience and the mindful generation of appropriate actions, collective cognition connects individual ideas and experiences, both redefining and resolving the demands of emerging situations" (p. 486). |
| Hoy, Gage, and Tarter (2006) | "Preoccupation with mistakes, reluctance to simplify, sensitivity to day-to-day operations, resilience, and deference to expertise" (p. 241). |
| Mu and Butler (2009) | "An elevated state of awareness of expectations, a nuanced appreciation of the specific context, and an alertness to potentially significant changes in the face of new and unprecedented situations; takes into account the specific organizational situation rather than following bandwagon effects" (p. 29). |
| Valorinta (2009) | "Mindfulness refers to processes that keep organizations sensitive to their environment, open and curious to new information, and able to effectively contain and manage unexpected events in a prompt and flexible fashion" (p. 964). |
| Hales, Kroes, Chen, and Kang (2012) | "When, in an organizational context, an individual maintains a level of alertness to the activities surrounding his/her job or task and awareness of how he/she contributes to an overall process that produces a good or service for a customer" (p. 570). |
| Ndubisi (2012) | "Systems and processes to promote individual and collective mindfulness; a way of working marked by a focus on the present, attention to operational detail, willingness to consider alternative perspectives, and an interest in investigating and understanding failures" (p. 537). |
| Ausserhofer et al. (2013) | "To stay mindful, despite hazardous environments, frontline employees consider constantly five principles: tracking small failures, resisting oversimplification, remaining sensitive to operations, maintaining capabilities for resilience, and taking advantage of shifting locations of expertise" (p. 157). |

## 2.3 Trait and State Mindfulness

Mindfulness has been theorized and measured both at the trait and state levels (Hülsheger et al., 2013; Sutcliffe et al., 2016); see Tables 1 and 2 for additional explanations. Most historical understanding of the construct viewed it as a state of consciousness learned through contemplative practices (Conze, 1956). Some authors have defined mindfulness as a state-level construct, but mindfulness is also endowed in some people (Dane, 2011). There is an inherent quality in humans that could enable them to be mindful at one point or another (Kabat-Zinn, 2005). Hence, mindfulness exists in many individuals, both as meditator and non-meditator. Mindfulness develops in meditators through mindfulness meditation practices, while some non-meditators acquire mindfulness as an inherited trait (Giluk, 2009; Weick & Sutcliffe, 2006).

Brown and Ryan (2003) argued that mindfulness occurs through meditation and a psychological state. Both dispositional and state mindfulness is a predictor of self-regulated behavior, and it helps develop a positive emotional state. A vast number of studies have also supported the assumption behind trait level mindfulness because of dispositional attributes found in some people who do not engage in any form of meditation practice (Baer et al., 2004; Giluk, 2009; Walach, Buchheld, Buttenmüller, Kleinknecht, & Schmidt, 2006), which also means mindfulness has a trait-like attribute and some psychological connotations (George, 1996).

Among the evidence of trait-level mindfulness is the observed use of self-report measures like the Mindful Attention Awareness Scale (MAAS) (Brown & Ryan, 2003; Carlson & Brown, 2005) and the Kentucky Inventory of Mindfulness Skills (KIMS) (Baer et al., 2004) in those without meditation experience. Different measures including the Toronto Mindfulness Scale (TMS) (Lau et al., 2006) and State Mindfulness Scale (SMS) (Tanay & Bernstein, 2013) have been used by researchers to investigate mindfulness, and its correlates on meditators. However,

the positive results from the use of MAAS for non-meditators have shown that the construct shares both trait and state attributes. Hence, mindfulness is both a state and trait quality of consciousness (Dane, 2011). However, in this study, mindfulness was conceptualized as a trait construct. The dispositional aspect of mindfulness (Baer et al., 2004) was assessed on both leaders and members working in organizational settings. Findings from the study would support the evidence of dispositional mindfulness and its relationship with work-related outcomes.

## 2.4 Impact of Mindfulness

Mindfulness had long been a practice for meditation in Eastern culture, but a professor of medicine, Jon Kabat-Zinn, was the first to introduce the construct into Western culture in the late 1970s (Kabat-Zinn, 2009). Mindfulness was first extended from its traditional usage to the clinical field as training to reduce stress on chronic pain patients and improve their level of self-regulation. With positive results from the study, findings also suggested that meditation practices can lead to behavioral and attitudinal changes (Kabat-Zinn, 1982). However, the findings of the study could not be generalized at that time because it was the first of its kind in the applied field of clinical psychology.

After the introduction of the mindfulness construct into Western culture, more researchers in the field of health and psychology have shown great interest in the benefits of mindfulness. For example, mindfulness training serves as a clinical intervention (Baer et al., 2004). It has been deemed as a stress depressant and beneficial to health (Grossman, Niemann, Schmidt, & Walach, 2004). It has also been widely used as cognitive therapy to prevent depressive relapse and control attention (Teasdale, Segal, & Williams, 1995). Lastly, mindfulness was considered therapy for emotional regulation difficulties in generalized anxiety disorders (Roemer et al., 2009).

## 2.5 Mindfulness in Psychotherapy Fields

Many types of research have claimed the benefits of mindfulness to human well-being. They support the idea of Mindfulness-Based Stress Reduction (MBSR), which purports that mindfulness training is an intervention in health-related situations, both physical and mental (Grossman et al., 2004). Grossman et al. conducted a meta-analysis to verify the claims of MBSR. They concluded that MBSR is meaningful for solving many chronic health disorders and other problems like heart disease, pain, cancer, depression, and anxiety. Although MBSR could support their propositions as expected, their study only claims an immediate effect on its dependent measures.

Having witnessed the health benefits attributed to the MBSR program (Kabat-Zinn, 1982; Kabat-Zinn, Lipworth, & Burney, 1985), another growing concern of the construct of mindfulness emerged as cognitive therapy (see Ma & Teasdale, 2004; Teasdale et al., 2000; Witkiewitz, Marlatt, & Walker, 2005). Mindfulness-Based Cognitive Therapy (MBCT) entered the field of psychotherapy as a method for reducing the relapse of depression in the early 2000s (Ma & Teasdale, 2004; Teasdale et al., 2000). The rationale behind the introduction of the MBCT for treating acute depression was a result of its success and cost-efficiency. MBCT benefited from the combination of "acute pharmacotherapy with psychological prophylaxis" (Ma & Teasdale, 2004, p. 31). It, however, enabled psychotherapists to focus more on how patients could avoid "future relapse and recurrence" (Ma & Teasdale, 2004, p. 31).

Apart from the growing benefits of MBSR and MBCT, mindfulness has also impacted several therapeutic aspects by helping to correct behavioral disorders. For instance, the use of mindfulness as an acceptance and commitment therapy (ACT; Hayes, 2004; Hayes et al., 1999), dialectical behavior therapy (DBT; Lynch, Bronner, & Baer, 2006), and mode deactivation

therapy/relapse disorder (MDT; Swart, Winters, & Apsche, 2014). According to Lynch et al. (2006), mindfulness is a core skill in DBT because it exists in the DBT module, which leads to success in the DBT treatment. Moreover, it has been applied in DBT to treat depression in older adults with comorbid personality disorders. Also, MDT has been an intervention for adolescents with behavioral problems, such as comorbid disorders. In other words, MDT is specifically a third-wave therapy for curing adolescents with this kind of disorder (Swart et al., 2014). Furthermore, mindfulness has been a cognitive-behavioral therapy for addictive behavior with alcohol and drug use disorder (Witkiewitz et al., 2005).

In summary, mindfulness has been found to have positive results for clinical, health, and psychological treatments. These benefits are not restricted to those areas, as researchers in industrial organizations have also begun to explore its benefits on the organization (Dane & Brummel, 2013). Some studies that show the organizational benefits of mindfulness are discussed.

## 2.6 Mindfulness in Organizational Research

Based on the growing concern and evidence of mindfulness in health and clinical psychology (Grossman et al., 2004; Kabat-Zinn et al., 1985), the organizational literature has begun to explore the benefits of mindfulness (see Schultz et al., 2014). Although the construct of mindfulness is still developing in the management and industrial-organizational (I-O) psychology context (Arendt, Verdorfer, & Kugler, 2019; Dane, 2011; Dane & Brummel, 2013; Hyland et al., 2015; Olafsen, 2016), many benefits can be utilized if research is taken rigorously in such areas. Moreover, some of the benefits of mindfulness that have been evident in the management and I-O psychology literature show that it can be applied beyond what is currently

understood. Mindfulness research at the workplace has mostly been found to have individual benefits (Vich, 2015).

In a systematic review, Vich (2015) discussed some of the roles of mindfulness research in organizations and the challenges being posed for future investigations. Mindfulness is gainful in several ways in terms of organizational and workplace context-- for example, the promotion of physical health, task performance, and psychological health (Dane, 2011). A study conducted by Dane and Brummel (2013) in a dynamic service work environment found that workplace mindfulness was positively related to job performance when considering three work engagement dimensions (vigor, dedication, and absorption). They also found workplace mindfulness to be negatively related to turnover intentions (having a feeling of changing one's job), but the relationship between mindfulness and turnover intentions was not statistically significant while considering the three work engagement dimensions. However, in the view of Dane (2011), the impact of mindfulness on job performance is a function of the different task environments and the level of expertise in such tasks. This means that mindfulness may not lead to job performance in all cases and kinds of tasks. Hence, an extensive investigation of mindfulness and its correlates may help identify areas where it is or not applicable in promoting job performance.

Another study of mindfulness conducted by Schultz et al. (2014) investigated how mindfulness and managerial autonomy-support affect employees' work adjustment. In their study, participants were recruited via online platform Mechanical Turk and consisted of 280 US employees with high diversity in terms of age, race, and occupation. They concluded that (a) mindfulness moderated the relationship between work environment and underlying psychological need frustration, such that high levels of mindfulness only had a weak association; and (b) mindfulness had a negative relationship with employees' work ill-being after controlling

for factors like work climate and need frustration. Hence, mindfulness plays a role in the well-being of employees and creates resilience.

Researchers like Hülsheger et al. (2013) conducted two studies on the role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. The first study was a five-day diary study with 219 employee participants, and the second was a field experiment with 64 participants. The diary study hypothesized mindfulness to be negatively related to emotional exhaustion and positively related to job satisfaction. The relationship was analyzed both within and between-person levels and mediated by surface acting. The second study consisted of randomly assigning participants to two self-training mindfulness groups, intervention, and control groups. The study successfully supported their conjectures.

Consequently, all the numerous impacts of mindfulness, whether in terms of state-level (induced through meditation) or trait level (dispositional factor) in both non-organizational and organizational contexts, show that mindfulness is essential. Moreover, the evidence of a few studies in I-O psychology assessing the work outcomes of mindfulness has made it essential to increase the empirical evidence and a summary of these outcomes is presented in Table 3. One of the I-O psychology issues that seem to be gaining attention in the mindfulness literature is leadership. Although many leadership theories exist, we apply the Leader-Member Exchange (LMX) theory to this research. It is essential to understand how mindfulness affects this exchange relationship by assessing its organizational outcomes.

**Table 3 - Organizational Outcomes of Mindfulness**

| Variables | Leader | Member | Outcomes |
|---|---|---|---|
| Task Performance | | TM | Positive |
| In Role Performance | TM | TM | Positive |
| Extra Role Performance | | TM | Positive |
| Interpersonal Justice | | TM | Positive |
| Job Satisfaction | | TM/SM | Positive |
| Work-Life Balance | TM | | Increased |
| Well-Being | TM | | Increased |
| Emotional Exhaustion | TM | SM | Low |
| LMX Quality | TM | | High |
| Physical Health | | TM | Increased |
| Psychological Health | | TM | Increased |
| Employee Stress | SM | TM/SM | Reduced/Negative |
| Egocentric Behavior | TM | | Less |
| Work Engagement | SM | SM | Enhanced |
| Authentic Functioning | SM | SM | Strengthened |

*Note.* SM = State mindfulness; TM = Trait mindfulness

## 2.7 Leader-Member Exchange

Leader-member exchange (LMX) theory is an approach to leadership that denotes a situation where leaders develop a unique relationship with each of their subordinates (Scandura & Graen, 1984). That is, they treat their subordinates differently, where these differences lead to ranges of outcome quality of low to high performance (Scandura & Graen, 1984). The development of the LMX theory was grounded on the idea of social exchange theory, which proposes that people feel obligated to respond to some received favors (Blau, 1964). When leaders show better treatment to specific employees, the employees, in turn, are compelled to reciprocate such favors by putting more effort into work (Liden & Maslyn, 1998). However, the bone of contention in LMX theory is that how leaders treat subordinates speaks a lot about how subordinates shape their attitude and behavior towards work (Rockstuhl et al., 2012).

Among the ways in which LMX is a meaningful leadership theory is an empirical evidence related to specific organizational outcomes. Some of these outcomes are job performance (Gerstner & Day, 1997), job satisfaction, affective commitment, normative commitment, and decreased turnover intention (Dulebohn et al., 2012). Breevaart, Bakker, Demerouti, and Heuvel (2015) found among a considerable sample of Dutch police that LMX was a predictor of job performance. A meta-analysis conducted by Rockstuhl et al. (2012) also found that LMX has a relationship with different organizational outcomes, including job satisfaction, turnover intentions, organizational citizenship behavior (OCB), distributive justice, procedural justice, interactional justice, and leader trust, which cuts across many cultures. Further, Ansari, Len, and Aafaqi (2014, April) suggest in their study of employees and supervisors in northern Malaysian manufacturing organizations that LMX (both leader and member rated) contributed to positive emotions and a high level of creativity. Since LMX is a relationship theory and has been very meaningful in promoting positive work outcomes across cultures, mindfulness has also been argued to help develop interpersonal relationships (Hayes et al., 1999; Sutcliffe et al., 2016). It is anticipated that people who possess the mindfulness trait will build a better exchange and interpersonal relationship. In this sense, it is essential to understand how mindfulness and LMX are related and how this relationship transmits to work outcomes.

## 2.8 Mindfulness and Leadership

Recently, I/O psychology scholars have begun to explore the benefits of mindfulness in terms of how it affects leadership behavior (Bellis, Rowland, & Higgs, 2016; Eisenbeiss & Knippenberg, 2015; Frizzell, Hoon, & Banner, 2016; Kawakami et al., 2000; Reb et al., 2014; Verdorfer, 2016; Wasylkiw, Holton, Azar, & Cook, 2015). Although studies in this area are still

developing, the limited account of outcomes of mindfulness and its relationship with leadership cannot be underemphasized. Moreover, the literature on mindfulness has focused more on the intra-psychic influence of mindfulness than its interpersonal influence on others, which creates concern as to how the quality of a leader's awareness and attention will influence their subordinates (Bellis et al., 2016; Reb et al., 2014)

A recent study of mindfulness on interpersonal relationships investigated the influence of supervisor trait mindfulness on employees' well-being and performance (Reb et al., 2014), which consisted of two different investigations. In Study 1, Reb et al. (2014) found leader mindfulness to be significantly related to employee well-being and performance. The higher level of supervisor mindfulness brought about lower employee emotional exhaustion (Reb et al., 2014). Also, overall job ratings on performance were high based on the higher level of supervisor mindfulness (Reb et al., 2014). Further, higher leader mindfulness was associated with increased employee work-life balance (Reb et al., 2014). Finally, higher levels of supervisor mindfulness led to lower deviance behavior in employees (Reb et al., 2014). The findings of Study 2 gave positive results as well, providing more concrete evidence of the influence of mindfulness on leaders. They found a leader mindfulness to be positively related to in-role performance and enabled employees to embark on organizational citizenship behavior (Reb et al., 2014).

Eisenbeiss and Knippenberg (2015) conducted a study that linked mindfulness to ethical leadership. They were interested in investigating the conditions that could make ethical leadership positively influence followers' extra effort towards work. It was believed that individual differences affect their level of sensitivity to process moral information, which may affect how they process the information being passed by the ethical leader. They found that followers with a higher level of mindfulness and moral emotions brought about a strong

relationship with ethical leadership (Eisenbeiss & Knippenberg, 2015). Although Eisenbeiss and Knippenberg's study did not account for the influence of mindfulness on the leaders but their followers, there might be more to know about the mindfulness of leaders.

Another mindfulness study was conducted by Wasylkiw et al. (2015) to test the impact of Mindfulness Awareness Practice on health care managers in eastern Canada. The study embarked on the use of a pilot study and mindfulness was measured as a state-level construct. Wasylkiw et al. wanted to know how mindfulness meditation intervention programs increase the effectiveness of health care managers. Control and experimental groups of leaders were asked to fill in self-report questionnaires on their perceived stress and leadership effectiveness two weeks before the meditation program, and after the meditation program, while informants assessed the effectiveness of leaders before and after the program (Wasylkiw et al., 2015). Having conducted the study and compared the two groups, leaders reported an increase in their effectiveness and a decrease in stress level while the self-reported results corroborated the assessment of the informants. However, it should be noted that mindfulness in this study was not measured and conceptualized as a dispositional variable but as a state-level of consciousness. Moreover, the stress reduction impact of mindfulness is supported by claims of previous researchers on mindfulness (Luken & Sammons, 2016).

Verdorfer (2016) conducted two empirical studies on the relationship between mindfulness and several variables like humility, motivation to lead, and actual servant leadership. The first study embarked on the use of non-leader samples while the second study utilized leader samples. In the first study, Verdorfer (2016) found dispositional mindfulness to be positively related to humility and nonego-centered motivation to lead on non-leader samples, which are described as attributes of servant leadership behavior (Irving, 2010). The second study

also found leaders' dispositional mindfulness to be positively related to actual servant leadership behavior of the leader sample which corroborates the perceived leader ratings of their followers (Verdorfer, 2016). In other words, mindfulness was suggested to be a predictor of servant leadership behavior. To this event, mindfulness and leadership have been an interesting topic in OB and I-O psychology, but it is still important to extend the verification of the construct to other regions for generalizability.

## 2.9 Development of Hypotheses

### 2.9.1 Leader and Member Mindfulness and Work Outcomes

Studies on mindfulness in organizational settings have explored the roles of mindfulness in the workplace. Most of them have shown positive results, but the literature reveals that research in this area is still growing (Bishop, 2004). For example, the study of mindfulness and leadership has been limited (Reb et al., 2019), but Good et al. (2016) suggest a relationship between mindfulness and leadership. The relationship between mindfulness and outcome variables can be studied from both intrapersonal and interpersonal levels (Arendt et al., 2019; Bellis et al., 2016; Eisenbeiss & Knippenberg, 2015; Frizzell et al., 2016; Kawakami et al., 2000; Reb et al., 2019; Reb et al., 2014; Verdorfer, 2016; Wasylkiw et al., 2015). Most research streams conducted in the organizational literature have seen more effects of mindfulness on employee/subordinate outcome variables (Malinowski & Lim, 2015; Schultz et al., 2014).

Some studies on mindfulness and leadership have investigated leaders' mindfulness with certain outcomes. Few were related to intrapersonal relationships (e.g., Luken & Sammons, 2016; Verdorfer, 2016; Wasylkiw et al., 2015), whereas others were related to their subordinates' outcomes (e.g., Arendt et al., 2019; Reb et al., 2019; Reb et al., 2012; Schuh, Zheng, Xin, & Fernandez, 2019). Among the intrapersonal influence of mindfulness is the study conducted by

Wasylkiw et al. (2015), where they found state mindfulness to be meaningful for reducing the stress level of managers in the health sector. A systematic review conducted by Luken and Sammons (2016) also found mindfulness to be meaningful for reducing stress among health workers. In their review, the studies did not specify the measurement of mindfulness from either the leader or member perspective. However, their study comprised both leader and subordinate samples. The results found mindfulness to help reduce the stress level of both leaders and members (Luken & Sammons, 2016). Dispositional mindfulness has also been suggested to be a reliable predictor of servant leadership behavior among the leader and non-leader samples in Germany. Leaders with dispositional mindfulness are seen to be less egocentric in behavior towards individuals at the workplace, which is a requirement for humble leadership behavior (Verdorfer, 2016).

As regards interpersonal relationships, Reb et al. (2012) found that leader mindfulness is positively related to increased employee well-being, job performance, work-life balance, and low emotional exhaustion. Schuh et al. (2019) corroborated these results, showing leader mindfulness leads to less emotional exhaustion and better performance of subordinates. Reb et al. (2019) also conducted two studies with sequential mediation on leader mindfulness and employee performance, LMX quality, interpersonal justice, and employee stress. In Study 1, leader mindfulness was found to positively relate to LMX quality, employee in-role performance, and extra-role performance. Mediation results from Study 1 also found a direct and indirect relationship between leader mindfulness and employee in-role/extra-role performance through LMX quality. Likewise, in Study 2, leader mindfulness was found to be positively related to LMX quality, in-role performance, extra-role performance, interpersonal justice, and negatively related to employee stress. They also found that interpersonal justice was positively related to

LMX quality; employee stress was negatively related to LMX quality; and LMX quality was positively related to employee in-role and extra-role performance.

Studies on subordinate mindfulness are also growing in the literature. Subordinate mindfulness has been positively related to different outcomes, such as job satisfaction (Hülsheger et al., 2013), increased physical health, task performance, and psychological health, and negatively relation to turnover intentions (Dane, 2011; Dane & Brummel, 2013). According to the Affective Events Theory (Weiss & Cropanzano, 1996), mindfulness and job satisfaction are positively related. Events at work are major causes of employee reactions, which helps to predict their level of job satisfaction.

Moreover, employees both the leaders and members working in the service industries interact with both their colleagues and customers, and this interaction requires some level of emotional labor (Hülsheger et al., 2013). The interaction that emanates from activities at the workplace require employees to expend much emotions on the job. Expending these emotions could also lead to emotional exhaustion (Hülsheger et al., 2013). Whereas, emotional exhaustion has been found to increase work stress, burnout and reduced job satisfaction. A theory that helps to understand this situation is the Job demand and resources model (Schaufeli, Bakker, & Marisa, 2006). This theory emphasizes that there are two kinds of variables at work, that is, job demand and resources. These variables can affect work both positively and negatively. Job demands are those aspects of work that are social, psychological, physical and organizational, and poses costs to the employees in the same condition. In contrast, job resources are the social, psychological, physical and organization factors that reduces job demands, fosters personal growth and learning, and also help in achieving goals at work (Schaufeli et al., 2006).

Studies have shown that stress, emotional demand and burnout which are job demand variables lead to emotional exhaustion, reduced work engagement and job satisfaction (Schaufeli et al., 2006). Alternatively, mindfulness, which provides both personal and organizational benefits could serve as job resources. Some of the personal benefits of mindfulness are emotional regulation and life satisfaction, while the organizational benefits are increased job satisfaction, work engagement, job performance and interpersonal relationship (Mesmer-Magnus, Manapragada, Viswesvaran, & Allen, 2017). Since mindfulness has been found to reduce stress and emotional exhaustion, and emotional exhaustion leads to lower work engagement and job satisfaction. I expect that employees (leaders and members) who perceive themselves as been mindful will have higher or increased job satisfaction and work engagement than those who are not.

Further, mindfulness scholars have suggested that individuals who attend to present moment in a receptive non-judgmental way (Brown & Ryan, 2003) may better cope with different work events, thereby objectively observing those events and refraining from making a negative judgment that could make them dissatisfied with work (Weiss & Cropanzano, 1996). The Dane (2011) model of mindfulness suggests that mindfulness opens an individual's level of attentional breadth by perceiving a broad range of stimuli which makes them focused on specific goals. Dane and Brummel (2013) further argued that the level of performance achieved through mindfulness can be determined by the kind of task embarked upon and the experience of the individual performing the task. Another study showed that mindfulness strengthens personal resources of work engagement among employees (Leroy, Anseel, Dimitrova, & Sels, 2013). Furthermore, a systematic cross-level review conducted by Sutcliffe et al. (2016) suggests that there are contextual boundary conditions to which mindfulness is conducive to performance.

Further literature review (see Brown & Ryan, 2003; Leroy et al., 2013; Schuh et al., 2019) suggests that many questions remain unanswered. The relationship between leader mindfulness and intrapersonal work outcomes are yet to be investigated. Also, I did not find any information about how the leader mindfulness at the trait level could influence job satisfaction, performance, and engagement. While some studies have investigated the relationship between leader mindfulness and their interpersonal work outcomes (Reb et al., 2019; Reb et al., 2012; Schuh et al., 2019), the dearth of research in this area prompts more investigation. Further, scholars have called for more empirical evidence on mindfulness and job performance (Leroy et al., 2013), and others have called for the investigation of mindfulness in work settings (Brown & Ryan, 2003). Hence, I propose to investigate some intrapersonal (job satisfaction and work engagement) and interpersonal (job performance and LMX) correlates of mindfulness in our sample.

There has been some evidence of the interpersonal benefits of leader mindfulness (e.g., see such reviews as those of Malinowski & Lim, 2015; Reb et al., 2019; Reb et al., 2012; Schuh et al., 2019), but I am yet to see the interpersonal benefits of member/subordinate mindfulness on leader outcomes. Also, studies that investigated the interpersonal relationship between mindfulness and job performance have reported it from self-measures. Meanwhile, some researchers suggest that subordinate self-rating can lead to over-rating of self-performance compared to supervisor ratings (Heidemeier & Moser, 2009). Supervisor ratings are strongly related to job performance when considering external criteria like salary and promotion than other sources of ratings (Atkins & Wood, 2002; Beehr, Ivanitskaya, Hansen, Erofeev, & Gudanowski, 2001). To this end, I investigated the relationship between leader and member trait mindfulness and their work outcomes. I assessed how the leader and member mindfulness relate

to self-perception of job satisfaction and work engagement. Leader and member mindfulness and job performance were assessed as others-perception to eliminate response bias in performance ratings. These were done through the hypotheses stated below, and Figures 2, 3, and 4 show the models of these relationships, respectively.

*H1: Self-rated leader mindfulness is positively related to self-rated leader (a) job satisfaction, and (b) work engagement.*

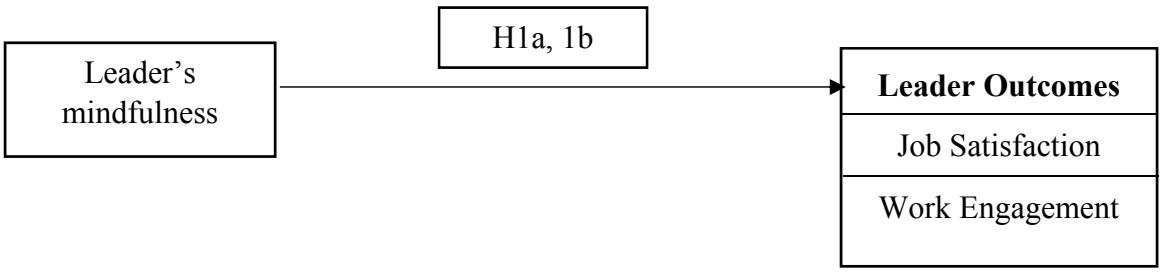



**Figure 2 - Hypothesized model of leader mindfulness and work outcomes.**

*H2: Self-rated member mindfulness is positively related to self-rated member (a) job satisfaction, and (b) work engagement.*

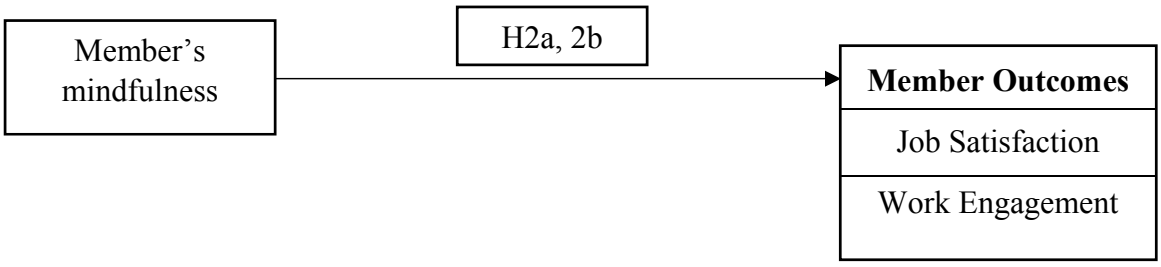



**Figure 3 - Hypothesized model of member mindfulness and work outcomes.**

*H3: Self-rated leader mindfulness is positively related to the member-rated job performance of the leader.*

*H4: Self-rated member mindfulness is positively related to the leader-rated job performance of the member.*

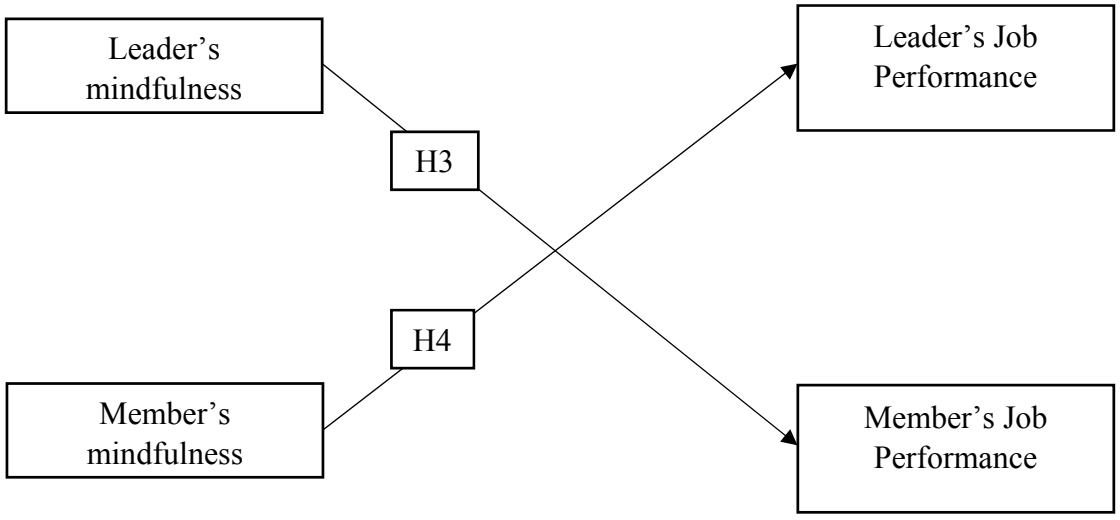



**Figure 4 - Hypothesized model of leader-member mindfulness and job performance.**

### 2.9.2 Congruence of Leader-Member Mindfulness and Work Outcomes

Congruence research has been examined in many ways in the organizational behavior literature for decades. The term has been used interchangeably with other words to mean – fit, compatibility, agreement, match, and similarity between two constructs that are conceptually similar (i.e., commensurate). A term that has a similar connotation with the study of congruence is the person-environment (PE) fit, "which is broadly defined as the compatibility between an individual and a work environment that occurs when their characteristics are well matched" (Kristof-Brown et al., 2005, p. 281). Moreover, the PE fit construct comprises of two models—the "complementary fit" and "supplementary fit" models. The complementary fit model emphasizes a situation when one party is capable of fulfilling the wants of the other (Cable & Edward, 2004). Thus, "the weaknesses or needs of the environment are offset by the strength of

the individual, and vice-versa" (Muchinsky & Monahan, 1987, p.271). Complementary fit can be further explained as a situation where an employee portrays skills that fulfill organizational desires, and when the organization can be able to provide an adequate reward to an employee. It, therefore, expresses how desires and supplies can meet each others' needs within the work environment (Cable & Edward, 2004). Likewise, the supplementary fit model emphasizes a situation when an individual embellishes similar attributes as other persons within the workplace/environment. Supplementary fit capitalizes on social environmental comparison; that is, peoples' characteristics that define the environment itself (Cable & DeRue, 2002; Muchinsky & Monahan, 1987). However, supplementary fit further implies when interpersonal similarity is established between an individual's unique characteristics and the social environment (Cable & DeRue, 2002; Cable & Edward, 2004; Muchinsky & Monahan, 1987). These two PE fit domains help us understand the kind of congruent relationship that exists when assessing the match between a person and an environmental feature. In this study, I focused on supplementary fit, looking at personal characteristics (i.e., leader and member mindfulness traits), and how this trait is related to work outcomes.

In most psychological research, congruence is used as a predictor of either employee or organizational outcomes (Edward, 1994), and research has studied the construct in different ways. For example, individuals and their job compatibility, organization compatibility, workgroup compatibility, and leader compatibility have gained attention (Kristof-Brown et al., 2005). More so, research on PE fit has revealed that the compatibility between a person's characteristics and their environment has a positive relationship with some specific work outcomes for both the employee and the organization. Such outcomes are greater job satisfaction, lower turnover, stronger job commitment, managerial success, and higher engagement in in-role

and extra-role behaviors (Ansari, Baumgartel, & Sullivan, 1982; Hoffman & Woehr, 2006; Kristof-Brown et al., 2005; Verquer, Beehr, & Wagner, 2003).

The literature shows that different types of fit could have different influences on work outcomes, adding that PE fit is related to the compatibility of more than one aspect of work (Boon & Biron, 2016). Kristof-Brown et al. (2005) revealed that most studies on PE fit have focused on a single dimension, and therefore calls for extended insight into the multiple dimensions of fit. Further, employees' work experience from entry-level to the long-term phase has been related to certain important types of PE fit, such as person-organization (PO) fit and person-job (PJ) fit (Kristof-Brown et al., 2005), and these are among the most investigated areas in the field of PE fit.

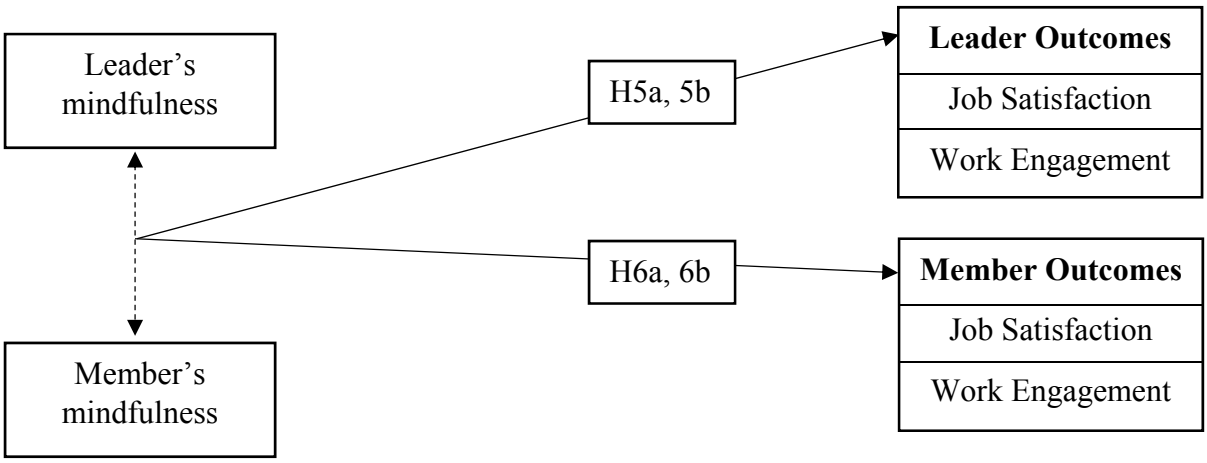
Apart from the PO fit and PJ fit, there are also different types of fit, whereby this study focuses on the leader and member compatibility/fit. Moreover, many studies on congruence/fit have been conducted on leaders and their members (e.g., Adkins & Russel, 1997; Chen, Wen, Peng, & Liu, 2016; Landy & Farr, 1980; Turban & Jones, 1988; Zhang, Wang, & Shi, 2012). Landy and Farr (1980) identified leader and member similarities as one of the factors that affect performance at work, whereas Turban and Jones (1988) found no relationship between leader and member similarity on subordinate performance. Similarly, Adkins and Russel (1997) found no relationship between leader-member work values congruence and member's job performance. But Meglino et al. (1989) revealed that values congruence between leader and member created more job satisfaction and commitment for the members.

Although most of the findings on work fit/compatibility between leader and member have focused attention on work value congruence, other issues might affect congruence relationships. One of the issues is mindfulness, which has gained attention in psychotherapy and organizational

behavior literature. Although studies on mindfulness are still growing in the field of organizational behavior, its relationships have been assessed on different work outcomes. The relationship between mindfulness and job performance has been investigated in some studies (e.g., Dane, 2011; Reb et al., 2019; Reb et al., 2012), and this was done by using single-source assessment: leader or member. There may be much to gain if more than one source is used to measure the work outcomes. This assumption can be inferred from the position of Wexley, Alexander, Greenawalt, and Couch (1980) that there is a rewarding experience when congruence perception of another's attitude are similar. This similarity in congruence perception can be related to the receiver's sensitivity and the sender's openness and consistency, which in turn leads to interpersonal satisfaction (Wexley et al., 1980). A way to fill this gap is to assess mindfulness from more than one source (i.e., leader-member) perspective. The fit/misfit between the leader and member mindfulness could either lead to an increase/decrease in the leader or member's work outcome. To this end, the hypotheses stated below lead us to the verifiability of the congruence of leader-member mindfulness and their various work outcomes, and Figure 5 models these hypothesized relationships.

*H5: The compatibility of the higher level of self-rated leader and member mindfulness is positively related to greater self-rated leader (a) job satisfaction, and (b) work engagement than the lower level of compatibility.*

*H6: The compatibility of the higher level of self-rated leader and member mindfulness is positively related to greater self-rated member (a) job satisfaction, and (b) work engagement than the lower level of compatibility.*




*Note.* Solid lines = direct relationships; dotted line = interaction.

**Figure 5 - Hypothesized model of the compatibility of leader-member mindfulness and leader-member work outcomes.**

### 2.9.3 Leader Mindfulness and Leader LMX

Several studies (e.g., Breevaart et al., 2015; Gerstner & Day, 1997; Wang, Law, Hackett, Wang, & Chen, 2005) have shown the benefits of LMX on different outcomes, and making the construct an important predictor of certain work outcomes. Mindfulness has barely been investigated along LMX. Recently, however, Reb et al. (2019) conducted a study relating to mindfulness and LMX. They found "that leader mindfulness supports high-quality LMX relationships because mindful leaders are better able to provide support and (socioemotional) resources to their employees" (p. 4). Moreover, research on LMX has found that "effective leadership processes occur when leaders and followers are able to develop mature relationships (partnerships) and thus gain access to the many benefits these relationships bring" (Graen & Uhl-Bien, 1995, p. 225).

Reb et al. (2014) argued that mindfulness may relate to improved relationship quality between leaders and their subordinates, meaning that mindful people are often able to be in a present state with others. They added that interaction between supervisors and subordinates may alert subordinates about the state of the supervisor's mindfulness, both physically and in entirety (Reb et al., 2014). In other words, the quality of the supervisor's presence (mindfulness) while interacting with subordinates communicates how they are being valued and treated in terms of respect and interpersonal justice, which in turn creates a sense of interpersonal fairness in employees (Reb et al., 2014). Reb et al. (2014) further suggested that future studies should investigate the perception of justice, supervisor support, and other important factors that may be found to bring about a favorable perception of positive relationships between leaders and their subordinates.

Furthermore, the attraction paradigm (Byrne, 1997) posits that when individuals have similar psychological characteristics, they tend to attract each other, which in turn promotes their relationship. This suggests that when similarity exists between the leader and member mindfulness, the quality of LMX might be higher than usual, and an incompatibility might as well resolve in lower LMX quality. Hence, mindfulness could bring about positive ratings of LMX by either leaders or their members, as research found LMX to enhance employee behavior. To this end, the hypothesis below seeks to respond to (Reb et al., 2019) suggestion that to understand leader-member mindfulness, both the leader and member perspective should be investigated. This will give a better understanding of whether it is the leader or member mindfulness that improves LMX quality, or compatibility of both. I thereby assessed the leader LMX in a different culture to gain a broader scope of the construct. Figure 6 shows the model of this relationship.

*H7: Leader rated mindfulness is positively related to leader rated high LMX quality.*

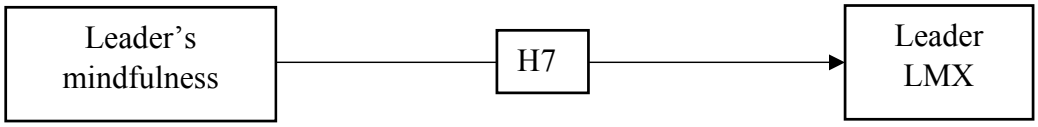



**Figure 6 - Hypothesized model of leader mindfulness and Leader LMX.**

### 2.9.4 The Mediating Role of Leader-Member Exchange

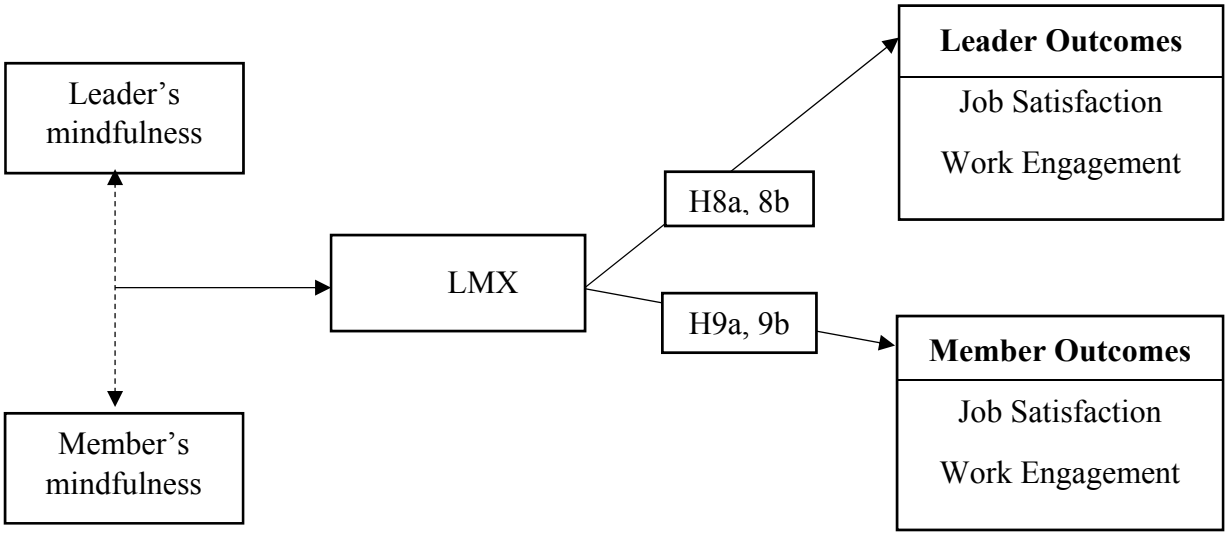
The mediating role of LMX in the relationship between leader mindfulness and work outcomes (i.e., job satisfaction, work engagement) is based on the assumption that a high-quality LMX relationship is a result of an affective bond created out of an unstated exchange expectation between leader and member (Wang et al., 2005). The quality of this exchange relationship between a leader and member is the major factor determining key outcomes, and not their behaviors or perceptions (Dulebohn et al., 2012). Social exchange theory posits that quality relationships are developed by exchanging valued resources, which need to be not just economical but also socioemotional in nature (Blau, 1964). However, LMX has been previously used in the organizational literature in different ways (see Gerstner & Day, 1997; Rockstuhl et al., 2012; Wang et al., 2005). It has been found positive in relationship with outcomes such as performance (Breevaart et al., 2015; Gerstner & Day, 1997; Wang et al., 2005), satisfaction (Gerstner & Day, 1997), work engagement (Breevaart et al., 2015), strong organizational commitment (Gerstner & Day, 1997), and OCB (Wang et al., 2005). It has been used as a predictor, mediator, and moderator variables (e.g., Gerstner & Day, 1997; Wang et al., 2005).

LMX relationship on mindfulness and other outcomes have become an issue of discussion by scholars. In the Academy of Management Proceedings, scholars have begun

discussion on LMX linked with mindfulness and work outcomes (Kudesia, 2013). The first study identifying the mediating relationship between mindfulness and LMX was conducted by Reb et al. (2019). Reb et al. (2019) suggested that when leaders are mindful, they provide socioemotional resources to their members, which in turn leads to quality LMX relationships. Their study further found LMX quality to be a major contributor to the positive relationship between mindfulness and job performance at both in-role and extra-role behaviors. Whereas Reb, Narayanan, and Ho (2015a) submitted that mindful leaders can provide greater resources to their members by being present in the moment. When these resources come in the form of support, it leads to employee high LMX perception, which develops a reciprocal attitude in them for such behaviors. More so, such reciprocal behavior is expected to lead to a greater performance at both in-role and extra-role levels (Dulebohn et al., 2012; Gerstner & Day, 1997). Researchers have submitted that the power position held by leaders serves as an important support system for their members. This social support, however, has been related to work engagement. Hence, based on the above reviews, I anticipated that leader LMX will mediate the relationship between leader-member mindfulness and work outcomes in my study. To this end, I developed the below hypotheses to investigate these assumptions and Figure 7 depict these relationships.

*H8: Leader LMX as rated by the member mediates the relationship between the congruence of leader-member mindfulness and leader's rated work outcomes of (a) job satisfaction and (b) work engagement.*

*H9: Leader LMX as rated by the member mediates the relationship between the congruence of leader-member mindfulness and member's rated work outcomes of (a) job satisfaction and (b) work engagement.*




*Note.* Solid lines = direct relationships; dotted line = interaction.

**Figure 7 - Hypothesized model of the mediating role of Leader LMX on congruence of leader-member mindfulness and work outcomes.**

# CHAPTER 3: METHODOLOGY

This study was conducted by employing a quantitative approach, and cross-sectional data were collected from the South-West region of Nigeria. Collecting data in Nigeria enabled me to understand mindfulness, LMX, and work outcomes in the Sub-Saharan region. Data were collected from both leaders and members using a paper-and-pencil survey. The paper-and-pencil survey enabled participants to access the questionnaire without any technical requirements.

## 3.1 Research Site

Data were collected from both educational and financial institutions in Nigeria. Specifically, I targeted universities and banks in the south-west region of the country. Tables 4 and 5 show the description of the leader and member sample profiles. The rationale for collecting data from Nigeria supports my study objective. I wanted to understand the role of mindfulness and LMX in the Sub-Saharan culture and thereby increase the generalizability of mindfulness research findings. Researchers of mindfulness have also called for more research on the construct since it is still in its development stage, thereby looking into areas that have not gained much empirical rigor in the organizational literature (Hülsheger et al., 2013)**.** For example, two settings that are underrepresented in mindfulness research are higher education and financial institutions. While some research in educational settings has used mindfulness meditation to help children with learning disabilities (Beauchemin, Hutchins, & Patterson, 2008; Flook et al., 2010), these studies have not examined organizational outcomes of mindfulness at the trait level in such settings.

Moreover, mindfulness in the financial industry has become an issue of discussion, but empirical rigor is yet to support its organizational benefits in such areas (e.g., Thomas, Kristin, & Victoria, 2015). Organizational outcomes attached to employees in the financial sector are yet

to receive research consideration. However, the educational and financial institutions are of interest in this study. Collecting data from them enabled me to understand the construct and contribute to that population's body of knowledge. It also helps organizational leaders utilize the benefits of mindfulness in those industries.

### 3.2 Sample

Study participants were full-time employees (members) and their immediate leaders working in southwest Nigeria's educational and financial institutions. Questionnaires were distributed to 400 individuals, and 76.5% (306) were returned. There were 58 supervisors and 210 subordinates' respondents. The most prevalent age range for the leaders was between 32 and 38 years (39.7%). Male leaders constituted a higher number with a 62.1% response rate. Most of the leaders also had a bachelor's degree (34.5%), and their work tenure was between 4 to 5 years (32.8%). Most came from the middle-level management position (56.9%) and were in the academic industry (51.7%). Table 4 presents the details of their demographic information.

Among the member sample, there were higher numbers of female members with a 53.8% response rate. Their highest age range was between 25 and 31 years (35.2%). Most of the female members also had a bachelor's degree (39%), and their work tenure was between 2 and 3 years (33.8%). They were from middle-level management (56.7%) and in the academic industry (55.7%). Table 5 also presents the details of their demographic information.

Further, researchers have suggested that the criteria approved for publication in top-tier journals in the field of human resource management (HRM) and General Management should be above 50%, and this term was met (Mellahi & Harris, 2016). The suggested sample size of 400 is appropriate for performing inferential statistics, such as multiple regression, polynomial

regression, and structural equation modeling (SEM). It would yield an adequate statistical power (Preacher & Coffman, 2006).

**Table 4 - Summary of Leader Demographics**

| Variables | Number | Percentage | Cumulative (%) |
|---|---|---|---|
| **Age** | | | |
| 18-24 | 5 | 8.62 | 8.62 |
| 25-31 | 15 | 25.86 | 34.48 |
| 32-38 | 23 | 39.66 | 74.14 |
| 39-45 | 7 | 12.07 | 86.21 |
| 46 above | 8 | 13.79 | 100.00 |
| **Gender** | | | |
| Male | 36 | 62.07 | 62.07 |
| Female | 22 | 37.93 | 100.00 |
| **Education** | | | |
| High School | 1 | 1.72 | 1.72 |
| Some Certificates | 2 | 3.45 | 5.17 |
| College | 5 | 8.62 | 13.79 |
| Bachelors | 20 | 34.48 | 48.27 |
| Masters | 19 | 32.76 | 81.03 |
| Ph.D. | 11 | 18.97 | 100.00 |
| **Tenure** | | | |
| 6m- 1year | 8 | 13.79 | 13.79 |
| 2-3 years | 14 | 24.14 | 37.93 |
| 4-5 years | 19 | 32.76 | 70.69 |
| 6-7 years | 2 | 3.45 | 74.14 |
| 8-9 years | 10 | 17.24 | 91.38 |
| 10 above | 5 | 8.62 | 100.00 |
| **Position** | | | |
| Junior Staff | 10 | 17.24 | 17.24 |
| Middle Staff | 33 | 56.90 | 74.14 |
| Senior Staff | 15 | 25.86 | 100.00 |
| **Industry** | | | |
| Academic | 30 | 51.72 | 51.72 |
| Finance | 28 | 48.28 | 100.00 |

**Table 5 - Summary of Member Demographics**

| Variables | Number | Percentage | Cumulative (%) |
|---|---|---|---|
| **Age** | | | |
| 18-24 | 61 | 29.04 | 29.04 |
| 25-31 | 74 | 35.24 | 64.28 |
| 32-38 | 37 | 17.62 | 81.90 |
| 39-45 | 22 | 10.48 | 92.38 |
| 46 above | 16 | 7.62 | 100.00 |
| | | | |
| **Gender** | | | |
| Male | 97 | 46.19 | 46.19 |
| Female | 113 | 53.81 | 100.00 |
| | | | |
| **Education** | | | |
| High School | 12 | 5.71 | 5.71 |
| Some Certificates | 17 | 8.10 | 13.81 |
| College | 28 | 13.33 | 27.14 |
| Bachelors | 82 | 39.05 | 66.19 |
| Masters | 49 | 23.33 | 89.52 |
| Ph.D. | 22 | 10.48 | 100.00 |
| | | | |
| **Tenure** | | | |
| 6m- 1year | 46 | 21.91 | 21.91 |
| 2-3 years | 71 | 33.81 | 55.72 |
| 4-5 years | 39 | 18.57 | 74.29 |
| 6-7 years | 24 | 11.43 | 85.72 |
| 8-9 years | 18 | 8.57 | 94.29 |
| 10 above | 12 | 5.71 | 100.00 |
| | | | |
| **Position** | | | |
| Junior Staff | 67 | 31.90 | 31.90 |
| Middle Staff | 119 | 56.67 | 88.57 |
| Senior Staff | 24 | 11.43 | 100.00 |
| | | | |
| **Industry** | | | |
| Academic | 117 | 55.71 | 55.71 |
| Finance | 93 | 44.29 | 100.00 |

In the returned surveys, there were issues of missing data. Du and Wang (2016) argue that missing data could question the results of dyadic data analysis. However, I followed the recommendation of researchers on handling missing data. From the 306 returned surveys, 17

supervisor responses were deleted entirely from the analysis. This was because I could not pair them into dyadic groups at the deadline for data collection. However, the subordinates in these 17 supervisors category did not return their surveys after six months, making the supervisors responses unmatchable. Also, I completely deleted 21 additional responses because participants failed to respond to some surveys' constructs. Lastly, there were 14 responses with values missing at random. I replaced these values with their series mean in SPSS. However, the total number of useable questionnaires were 268. These include 58 leaders and 210 members' responses. With this number, I was able to pair 210 members to their various leaders, which gave me 210 dyadic groups that I analyzed.

The inclusion criteria for participation in the study were as follows: participants were leaders and members in an educational/financial institution and have worked together for at least six months. Although researchers have suggested that a dyadic relationship between leader and member develops within a few weeks (Liden & Maslyn, 1998), setting the minimum dyadic tenure to six months helped me ensure participation from those who have built a more substantial relationship while working together.

### 3.3 Procedure

I utilized the convenience sampling method to select study participants. As a non-probabilistic method, convenience sampling allows researchers to recruit people who are physically and timely available for participation in a research study (Zikmund, 2013). This sampling technique was relevant for this study because it enabled me to identify and recruit easily accessible and willing participants.

Before recruitment, I soughted permission and discussed the study's purpose with the organization's heads and managers. I asked them to solicit the interest of their employees for

participation. Those who showed interest were encouraged to seek their fellow workers' interests (either a leader or member within their workgroup). I gave a self-administered questionnaire consisting of the consent form, study purpose, and instructions on how to complete the survey to respondents. I assured them that their participation in the study was only voluntary and appreciated and that all data collected were confidential and anonymous.

The data collection included leaders and their immediate workgroup members. In the questionnaires given to leaders, some items pertained to their perceptions of their members. The members also had items in their questionnaires that pertained to their perception of their leader. I generated identification numbers (IDs) for each leader and their member. I wrote these IDs on the questionnaires for identification and pairing of group responses. However, leader questionnaires had sections about their self-perception and other perception. They had more pages of other perceptions that accounted for the number of members in their group. Members also had questionnaires of their self-perception and a single number of other perceptions since they had only one leader in their group. Both leader and member questionnaires had three sections. Section A measured leader/members' self-perception on different items; Section B measured leader/members' perception of the items, and section C consisted of demographic information. I generated identification numbers for each group for matching them into dyads (e.g., L1, L2, L3, L…n for leaders in a specific dyad) and (e.g., S1 a, b, c; S2 a, b, c; S3 a, b, c; S…n for members in a specific dyad).

Each leader and member of the dyad group was assigned an ID number. I expected the leaders to identify the members in their workgroups and assign numbers to them. I assigned these ID numbers to remember the member they were assigned to when responding to items about them. Further, I wrote the same ID numbers assigned by leaders to specific members on the

corresponding member's questionnaires' demographic section. The researcher personally distributed the member questionnaires and was able to identify them with the help of the leader. Members were given the ID number of their leaders and asked to indicate it in the section where they responded to items related to them. Envelopes were also given to each participant to enclose the questionnaires after filling them. This procedure enabled me to properly match responses into dyadic groups, avoid mistakes in data imputation, and ensure each participant's confidentiality and anonymity. I recruited participants through an incentive process. Participants were paid $2 each for call airtime credit and some were given cash at an appropriate exchange rate: Canadian Dollar to Nigerian Naira. I gave one reminder ev ery week to participants to notify them about the survey's deadline to ensure an effective and efficient response. I collected all data for six months.

## 3.4 Measures

The survey questionnaires had eight measurement instruments, including demographic measures. These include the Mindful Attention and Awareness Scale (MAAS), Leader-Member Exchange Multi-Dimensional Measure (LMX-MDM), Utrecht Work Engagement Scale (UWES), Minnesota Job Satisfaction Questionnaire (MSQ), Job Performance Scale (JPS), Social Desirability Scale (SDS), and Positive Affect Negative Affect Schedule (PANAS). These instruments have different anchors and scale points. I deliberately did this to reduce response biases in the survey questionnaire (Podsakoff, MacKenzie, Lee, & Podsakoff, 2012). A summary of both leader and member measures can be seen in Tables 3 and 4, respectively.

### 3.4.1 Mindfulness

The MAAS was developed and validated by Brown and Ryan (2003) and revalidated by Carlson and Brown (2005); I used it to collect data on leaders' and members' mindfulness. The

scale was designed to measure mindfulness's significant features: a receptive state of mind, sensitivity to present occurrence, and observation of what is taking place (Brown & Ryan, 2003). The rationale behind using the MAAS measure was that it has been used across many studies and has good psychometric properties (Brown & Ryan, 2003). The MAAS is a unidimensional scale with 15 items. Sample items include "I could be experiencing some emotion and not be conscious of it until sometime later," and "I find myself doing things without paying attention." The responses to the statements were measured on a 6-point scale (1 = *almost always*; 6 = *almost never*), and the scale had adequate internal consistency (Cronbach's alphas) reliability of .80 to .90 across studies that utilized it (Brown & Ryan, 2003). The scale score was computed by calculating the average of all items. Higher scores signify higher levels of dispositional mindfulness. In this study, the MAAS scale was rated by both leaders and members on the self-perception of their mindfulness. Higher scores signify higher levels of dispositional mindfulness. In this study, the MAAS scale was rated by both leaders and members on the self-perception of their mindfulness.

### 3.4.2 Leader-Member Exchange

I used the LMX-MDM scale to measure leader LMX. The scale is multidimensional and was developed by Liden and Maslyn (1998). The scale consists of 12 items with four dimensions which are Affect (3), Loyalty (3), Contribution (3), and Professional Respect (3). Affect is defined as "the mutual affection members of the dyad have for each other based primarily on interpersonal attraction, rather than work or professional values." Loyalty is the "expression of public support for the goals and the personal character of the other member of the LMX dyad." Contribution is defined as the "perception of the current level of work-oriented activity each member puts forth toward the mutual goals (explicit or implicit) of the dyad." Professional

Respect is the "perception of the degree to which each member of the dyad has built a reputation, within and/or outside the organization, of excelling at his or her line of work" (Liden & Maslyn, 1998, p. 50).

This scale was chosen above all other LMX scales because of its broader domain coverage, and its ability to identify the member's assessment of the relational character of the leader (Wang et al., 2005). Sample items include: "1 like my supervisor very much as a person (affect);" "My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question (loyalty);" "I do work for my supervisor that goes beyond what is specified in my job description (contribution);" and "I admire my supervisor's professional skills (professional respect)." The internal consistency (coefficients alpha) for organizational employee samples for affect, loyalty, contribution, and professional respect were .90, .74, .57, and .89, respectively (Liden & Maslyn, 1998). The response to the scale was indicated on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*). In this study, the LMX-MDM measure was used as an overall measure of LMX and was rated by the subordinate. This is because the construct is often conceptualized in broad terms as a "high-order construct (not as a multidimensional construct), which is captured by the composite total score on the LMX-MDM" (Joseph, Newman, & Sin, 2011, p. 123).

### 3.4.3 Job Satisfaction

Leader and member job satisfaction were measured using the Minnesota Job Satisfaction Questionnaire (MSQ). The MSQ was developed by Weiss, Dawis, England, and Lofquist (1967) and is a self-report measure of job satisfaction which can be used to measure the job satisfaction of employees in different occupations. The original version of MSQ consists of 100 items with 20 subscales embedded in it, which measures general job satisfaction (Weiss et al., 1967). The

short version of the questionnaire consists of 20 items, representing each of the 20 subscales (Martins & Proença, 2012). Sample items of the MSQ include "The chance to do something that makes use of my abilities" and "The way my co-workers get along with each other." These items are rated on a 5-point Likert scale, ranging from (1 = *very dissatisfied*; 5 = *very satisfied*). The instrument's internal consistency ranges from .84 to .91 for intrinsic features and from .77 to .82 for extrinsic features (Weiss et al., 1967). In this study, leaders and members utilized the MSQ scale to rate their job satisfaction.

### 3.4.4 Job Performance

Leader and member job performance were measured using a job performance scale developed by Williams and Anderson (1991). The scale was designed to encompass three classes of employee behaviors, namely in-role behavior (IRB—7 items), organizational citizenship behavior to the individual (OCBI—7 items), and organizational citizenship behavior to the organization (OCBO—7 items). The 21 items of the scale have some items that were reverse worded. Among the three subscales, I chose only the scale measuring in-role behavior because the present study does not intend to investigate citizenship behaviors. Sample items include, "My subordinate/supervisor adequately completes assigned duties," and "My subordinate/supervisor meets formal performance requirements on the job (IRB)." Participants rated these items on a 7-point scale ranging from (1 = *not at all*; 7 = *always*). The IRB had a reliability of .90 (Williams & Anderson, 1991). In this study, I used the scale to measure the job performance of leaders and members. Leaders rated their members' job performance and vice versa.

### 3.4.5 Work Engagement

Work engagement was measured using the Utrecht Work Engagement Scale (UWES). UWES-9 was developed by Schaufeli et al. (2006). The scale had been found to be reliable and

valid and contains three dimensions of engagement-- that is, vigor (VI – 3 items), dedication (DE – 3 items), and absorption (AB – 3 items). Sample items include "at my work, I feel bursting with energy (VI)," "I am enthusiastic about my job (DE)," and "I feel happy when I am working intensely (AB)." The UWES- 9 assessment results yielded a coefficient alpha of between .85 and .92 across all ten countries where it was developed (Schaufeli et al., 2006). Responses to the scale were measured on a 7- point scale ranging from (0 = *never*; 6 = *always*). However, in this study, the scale was used to measure both leader and member work engagement. I also used the scale as an overall measure of work engagement.

### 3.4.6 Demographics and Control Variables

Different demographic characteristics (e.g., age, gender, education, and work tenure) have been considered essential psychological research issues (Zedeck & Cascio, 1884) The impact of demographic properties has been assessed on different outcomes, such as satisfaction, performance, and leadership (Steckler & Rosenthal, 1985). Moreover, studies on dyadic relationships have found specific demographic characteristics like gender similarity to be a significant predictor of a subordinate's performance (Tsui & O'Reilly, 1989). Also, dyadic tenure between supervisors and subordinates could affect results. However, demographic variables such as gender, age, level of education, and dyadic tenure of respondents are used as independent variables in research. Not controlling for them might influence the dependent variables and affect results. Hence, since the study is not particularly interested in the relationship between demographic variables, it is crucial to control those critical when conducting data analysis.

Since I used some self-reported measures in the study, it is also essential to control for issues that are related to self-representation, which is related to common method variance (CMV). Most behavioral science research is concerned with CMV, attributed to the variances in

measurement method in a study, not the construct of interest (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). CMV occurs when some constructs are measured using the same method, which could either inflate or deflate the result of analysis from two variables, thereby threatening the internal validity of conclusions made from such a measured construct (Podsakoff et al., 2012).

To reduce the existence of CMV, the social desirability scale (Crowne & Marlowe, 1960) and positive affect negative affect schedule (PANAS) (Thompson, 2007) were used to check for the respondent tendency to over-report positive features and under-report negative features (Nederhof, 1985). The social desirability scale was developed by Crowne and Marlowe (1960), and a shortened version selected for the study was developed by Reynolds (1982). The scale consists of 13 items that measure personal attitudes and traits. Sample items include "It is sometimes hard for me to go on with my work if I am not encouraged," and "I sometimes feel resentful when I don't get my way." I measured the scale on a 7-point scale (1 = *never*; 7 = *always*). The internal consistency for the scale (coefficients alpha) was .76 (Reynolds, 1982).

PANAS consists of 10 items, and some sample questions are— "indicate the frequency with which you feel right now, determined and ashamed." The scale is measured on a 7-point scale (1 = *never*; 7 = *always*). The internal consistency estimates for the scale (coefficients alpha) range from .73 to .78 for negative affect and .72 to .76 for positive affect (Thompson, 2007).

**Table 6 - Summary of Leader-rated Measures**

| *Variables* | *Author(s)* | *No. of Items* | *Cronbach's Alpha* | *Scale Anchors* |
|---|---|---|---|---|
| MAAS | Brown and Ryan (2003); Carlson and Brown (2005) | 15 | .80 to .90 | 1 = almost always; 6 = almost never |
| MJSS | Weiss et al. (1967) | 20 | .84 to .91 | 1 = very dissatisfied; 5 = very satisfied |
| JPS | Williams and Anderson (1991) | 7 | .90 | 1 = not at all; 7 = always |
| UWES | Schaufeli et al. (2006) | 9 | .85 to .92 | 0 = never; 6 = always |
| SDS | Reynolds (1982) | 13 | .76 | 1 = strongly disagree; 7 = strongly agree |
| PANAS | Thompson (2007) | 10 | .73 to .78 | 1 = never; 7 = always |
| Demographics | -- | 8 | -- | -- |
| Total | -- | 82 | -- | -- |

*Note.* MAAS = Mindful attention awareness scale; MJSS = Minnesota job satisfaction scale; JPS = Job performance scale; UWES = Utrecht work engagement scale; SDS = Social desirability scale; PANAS = Positive affect and negative affect schedule

**Table 7 - Summary of Member-rated Measures**

| *Variables* | *Author(s)* | *No. of Items* | *Cronbach's Alpha* | *Scale Anchors* |
|---|---|---|---|---|
| MAAS | Brown and Ryan (2003); Carlson and Brown (2005) | 15 | .80 to .90 | 1 = almost always; 6 = almost never |
| LMX-MDM | Liden and Maslyn (1998) | 12 | .90, .74, .57. and .89 | 1 = strongly disagree; 7 = strongly agree |
| MJSS | Weiss et al. (1967) | 20 | .84 to .91 | 1 = very dissatisfied; 5 = very satisfied |
| JPS | Williams and Anderson (1991) | 7 | .90 | 1 = not at all; 7 = always |
| UWES | Schaufeli et al. (2006) | 9 | .85 to .92 | 0 = never; 6 = always |
| SDS | Reynolds (1982) | 13 | .76 | 1 = strongly disagree; 7 = strongly agree |
| PANAS | Thompson (2007) | 10 | .73 to .78 | 1 = never; 7 = always |
| Demographics | -- | 8 | -- | -- |
| Total | -- | 94 | -- | -- |

*Note.* MAAS = Mindful attention awareness scale; LMX = Leader-member exchange; MDM = Multi dimensional measure; MJSS = Minnesota job satisfaction scale; JPS = Job performance scale; UWES = Utrecht work engagement scale; SDS = Social desirability scale; PANAS = Positive affect and negative affect schedule.

## 3.5 Statistical Analyses

I conducted the statistical analysis in three stages, namely— (a) descriptive statistics, (b) measurement model analysis, and (c) hypothesis testing.

The first stage of the statistical analysis was the description of data. I used various descriptive statistics to have a feel for the data. Further, I used frequencies and percentages to describe demographic characteristics and responses to the questionnaire items. The means and standard deviations were also used to calculate the average score and variability in the measurement scales.

In the second stage, I conducted a measurement model analysis of the data collected for the study. Anderson and Gerbing (1988) had suggested a two-step model analysis. The first step is the measurement model, and the second is the structural model. In the measurement model, a series of factor analyses were conducted to ascertain the scales' distinctiveness and dimensionality. The structural model was used to ascertain how each scale was related to each other and determine the model's best fit-indices. Cronbach's coefficient alpha was used to assess the measures' psychometric properties, such as internal consistency reliability. I conducted all measurement model analyses through SEM.

The final stage of the statistical analysis was hypothesis testing. I used inferential statistics to test all hypotheses. Polynomial regression with response surface analysis was used to analyze the results of hypotheses 1 to 9. I approached the polynomial regression analysis through hierarchical regression steps to test for linear, non-linear, and mediation effects. Finally, I used IBM SPSS 26.0/Amos 22 to conduct all the analyses.

# CHAPTER 4: DATA ANALYSIS AND RESULTS

## 4.1 Measurement Model Analyses

In the measurement model analysis, construct validity and scale reliability were conducted for leader and member measures separately. I used five measures to assess the measurement model fit: Chi-squared statistics divided by their degrees of freedom ($\chi^2/df$), the goodness-of-fit index (GFI), comparative fit index (CFI), incremental fit index (IFI), and the root mean square error of approximation (RMSEA). Hair, Black, Babin, Anderson, and Tatham (2006) suggested cut-offs for acceptable fit indices which are as follows: GFI = .90, CFI = .90, IFI = .90, RMSEA = .10. It should be noted that all measures for both leaders and members were assessed on commensurate scales with the exemption of LMX. Hence, I selected a similar number of items and content dimensions from the original scales for both the leaders and members to ensure that they fit each other's perspectives. Below are the results for the leader and member measurement and structural model analysis.

## 4.2 Construct Validity and Scale Reliability for the Leader Measures

### *Leader Mindfulness (self-rated)*

One CFA was conducted to assess the model fit of the leader MAAS measure. In the CFA, a single-factor model was tested based on theory. I selected 11 items out of the 15 MAAS items to make it commensurate with the member MAAS scale. Results revealed a sufficient model fit for the leader MAAS scale and a reliability coefficient of .69 was achieved. The results of the CFA are presented in Table 8, and the CFA path diagram is shown in Appendix C1.

***Leader LMX (member-rated)***

Two CFAs were conducted to assess the model fit of the leader LMX measure based on theory. In the CFA, a single-factor and four-factor model were tested. All 12 LMX items were loaded on both models. Results revealed that the single-factor model has a better model fit than the four-factor model. The single-factor model has an adequate reliability of .93, while the four-factor model has reliabilities of: Loyalty = .73; Affect = .79; Contribution = .78; Professional Respect = .81. The results of the CFA are presented in Table 8, and the CFA path diagrams are shown in Appendices C2 and C3.

***Leader Job Satisfaction (self-rated)***

One CFA was also conducted to assess the model fit of the leader job satisfaction measure. In the CFA, a single-factor model was tested. I selected 10 of the 20 MSQ items to make a commensurate measure for the leader and member. Results revealed a sufficient model fit for the leader MSQ scale and a reliability coefficient of .82 was achieved. The CFA results are presented in Table 8, and the CFA path diagram is shown in Appendix C4.

***Leader Work Engagement (self-rated)***

Two CFAs were conducted to assess the model fit of the leader UWES measure. In the CFAs, unidimensional and multidimensional models were tested. I selected eight out of the nine UWES items to make a commensurate measure with the member UWES scale for the unidimensional model, while all nine items were used in the multidimensional model. Results revealed that the unidimensional model has a better fit than the multidimensional model. More so, the unidimensional model has a reliability coefficient of .85, and the multidimensional model has reliabilities of: Vigor = .66; Dedication = .77; Absorption = .38. The results of the CFA are presented in Table 8, and the CFA path diagrams are shown in Appendices C5 and C6.

***Leader Job Performance (member-rated)***

One CFA was conducted to assess the model fit of the leader job performance measure. In the CFA, a single-factor model was tested based on theory, and all seven items of JPS was selected. The result further revealed a sufficient model fit for the scale and a reliability coefficient of .65 was achieved. The results of the CFA are presented in Table 8, and the CFA path diagram is shown in Appendix C7.

***Leader Social Desirability (self-rated)***

One CFA was conducted to assess the model fit of the leader SDS measure. In the CFA, a single-factor model was tested based on theory. I selected 8 of the 13 SDS items to make it commensurate with the member measure. Results revealed a sufficient model fit for the scale and a reliability coefficient of .74 was achieved. The results of the CFA are presented in Table 8, and the CFA path diagram is shown in Appendix C8.

***Leader PANAS (self-rated)***

One CFA was conducted to assess the model fit of the leader PANAS measure. In the CFA, a two-factor model was tested based on theory. I chose four items each for both the positive affect and negative affect measure to make a commensurate scale with the member measure. Results revealed a sufficient model fit for the two-factor model and reliability coefficient of .83 and .68 were achieved for the positive affect and negative affect measure, respectively. The results of the CFA are presented in Table 8, and the CFA path diagram is shown in Appendix C9.

**Table 8 - CFA Results of all the Leader Measures**

| Variables | $\chi^2$ | *df* | GFI | CFI | IFI | RMSEA |
|---|---|---|---|---|---|---|
| **LMAAS** | 99.77** | 37 | .93 | .97 | .97 | .09 |
| **LLMX-1** | 146.87** | 49 | .90 | .94 | .94 | .10 |
| **LLMX-4** | 247.48** | 48 | .84 | .70 | .71 | .14 |
| **LJS** | 72.29** | 29 | .94 | .93 | .93 | .09 |
| **LWE-1** | 60.32** | 16 | .94 | .93 | .93 | .12 |
| **LWE-3** | 199.50** | 24 | .83 | .76 | .76 | .19 |
| **JPS-M** | 40.42** | 12 | .95 | .95 | .95 | .11 |
| **LSD** | 46.47** | 13 | .95 | .94 | .95 | .11 |
| **LPANAS** | 57.17** | 18 | .94 | .93 | .93 | .10 |

*Note.* $N$ = 58; All $\chi^2$ are significant at < .01; LMAAS = Mindful attention awareness scale rated by leader; LLMX-1 = Single-factor model of leader-member exchange of the leader rated by the member; LLMX-4 = Four-factor model of leader-member exchange of the leader rated by the member; LJS = Job satisfaction rated by leader; LJP = Job performance rated by member; LWE-1 = Single-factor model of work engagement rated by leader; LWE-4 = Three-factor model of work engagement rated by leader; LSD = Social desirability rated by leader; LPANAS = Positive and negative affect schedule rated by leader.

## 4.3 Leader CFA Model

The construct validity was conducted for all five leader measurement scales. A series of five CFAs were conducted to assess the discriminant validity of the constructs. Each of the four alternative models was compared with the hypothesized five-factor model, which consisted of all five different constructs. The three-factor model consisted of leader mindfulness, leader LMX, and a combination of leader job satisfaction, leader work engagement, and leader job performance measures. The two-factor model consisted of leader mindfulness and a combination of leader LMX, leader job satisfaction, leader work engagement, and leader job performance measures. The second two-factor model consisted of leader LMX and a combination of leader mindfulness, leader job satisfaction, leader work engagement, and leader job performance measures. The single-factor model consisted of a combination of all the five constructs (leader mindfulness, leader LMX, leader job satisfaction, leader work engagement, and leader job performance). We utilized the item parceling approach to analyze all CFA models because of the number of items in all measurement scales. The item parceling approach helps facilitate the

analysis of a larger number of factors and their model estimation (Meade & Kroustalis, 2006). I first analyzed a five-factor model; three items were randomly selected from the five measurement scales (i.e., three items of MAAS; three items of LMX; three items of JSS; three items of WES, and three items of JPS). The three items from each measurement scale represent a factor for that scale and all models were co-varied to create a five-factor model. Next, I analyzed a three-factor model by using the same three items used in the five-factor model. Three items were selected for leader mindfulness, three items for leader LMX, and three items each for leader job satisfaction, work engagement and job performance. Then I analyzed a two-factor model where I selected three leader mindfulness items (same as previous models for factor one) and three items each from the other four measurement scales for factor two. I further analyzed a fourth CFA, which was also a two-factor model. I selected three items from the leader LMX scale for factor one, and three items each from the remaining four scales for factor two. Lastly, I analyzed a single-factor model and selected three items each from all measurement scales.

As shown in Table 9, results from all five CFA models suggest that the hypothesized five-factor model has a better model fit ($\chi^2 = 206.42$, $df = 80$, $p < .01$, GFI = .89, CFI = .93, IFI = .93, and RMSEA = .09). Although the GFI for the model was lower than .90, which is the benchmark for a satisfactory fit (Hair et al., 2006), I concluded that the hypothesized model is the best because of its lower $\chi^2$ and *df* values compared to other alternative models. However, items selected for all CFA models for the leader measurement scales were commensurate to the member measurement scales (see Table 9 and Appendices C10, C11, C12, C13, and C14 for details).

**Table 9 - CFA Results of all the Leader Model**

| Model | $\chi^2$ | *df* | $\chi^2$/*df* | GFI | CFI | IFI | RMSEA |
|---|---|---|---|---|---|---|---|
| **Hypothesized Model A** | 206.42** | 80 | --- | .89 | .93 | .93 | .09 |
| **Model B** | 324.69** | 87 | 118.27/7 | .84 | .87 | .88 | .11 |
| **Model C** | 514.49** | 89 | 308.07/9 | .75 | .77 | .78 | .15 |
| **Model D** | 1520.39** | 89 | 1313.97/9 | .75 | .24 | .24 | .28 |
| **Model E** | 1518.36** | 89 | 1311.94/9 | .75 | .24 | .25 | .28 |

*Note.* $N = 58$; All $\chi^2$ are significant at < .01; Model A = Hypothesized five-factor model (leader mindfulness, leader job satisfaction, leader work engagement, leader job performance and leader LMX); Model B = Three-factor model (leader mindfulness, leader LMX and a combination of leader job satisfaction/leader work engagement/leader job performance); Model C = Two-factor model (leader mindfulness and a combination of leader LMX/leader job satisfaction/leader work engagement/leader job performance); Model D = Two-factor model (leader LMX and a combination of leader mindfulness/leader job satisfaction/leader work engagement/leader job performance); Model E = Single factor model (All combination of leader mindfulness/leader LMX/leader job satisfaction/leader work engagement/leader job performance).

## 4.4 Construct Validity and Scale Reliability for the Member Measures

### *Member Mindfulness (self-rated)*

One CFA was conducted to assess the model fit of the member MAAS measure. In the CFA, a single-factor model was tested based on theory. I selected 11 out of 15 MAAS items that are commensurate with the leaders' MAAS items. Results revealed a sufficient model fit for the scale and a reliability coefficient of .86 was achieved. The results of the CFA are presented in Table 10, and the CFA path diagram is shown in Appendix D1.

### *Member Job Satisfaction (self-rated)*

One CFA was conducted to assess the model fit of the member MSQ measure. In the CFA, a single-factor model was tested. I selected 10 items out of the 20 MSQ items to make it commensurate with the leader MAAS. Results revealed a sufficient model fit for the scale and a reliability coefficient of .81 was achieved. The results of the CFA are presented in Table 10, and the CFA path diagram is shown in Appendix D2.

***Member Work Engagement (self-rated)***

Two CFAs were conducted to assess the model fit of the member UWES measure. In the CFAs, both single-factor and three-factor models were tested. I selected 8 out of the 9 UWES items for the single-factor model, and all 9 items were used for the three-factor model. Results revealed that the single-factor model has a better fit than the three-factor model. The single-factor model has a reliability coefficient of .86, while the three-factor model has reliabilities of: Vigor = .70; Dedication = .75; and Absorption = .47. The results of the CFAs are presented in Table 10, and the CFA path diagrams are shown in Appendices D3 and D4.

***Member Job Performance (Leader-rated)***

One CFA was conducted to assess the model fit of the member JPS measure. In the CFA, a single-factor model was tested with all 7 JPS items. Results revealed a sufficient model fit for the scale and a reliability coefficient of .61 was achieved. The results of the CFA are presented in Table 10, and the CFA path diagram is shown in Appendix D5.

***Member Social Desirability (self-rated)***

One CFA was conducted to assess the model fit of the member SDS measure. In the CFA, a single-factor model was tested based on theory, and 8 out of the 13 SDS items were selected. Results revealed a sufficient model fit for the scale and a reliability coefficient of .80 was achieved. The results of the CFA are presented in Table 10, and the CFA path diagram is shown in Appendix D6.

***Member PANAS (self-rated)***

One CFA was conducted to assess the model fit of the member PANAS measure. In the CFA, a two-factor model was tested based on theory. I selected 8 out of the 10 items, which

entails 4 positive affect and 4 negative affect items. Results revealed a sufficient model fit for the scale and reliability coefficient of .77 and .64 for positive affect and negative affect were achieved, respectively . The results of the CFA are presented in Table 10, and the CFA path diagram is shown in Appendix D7.

**Table 10 - CFA Results of all the Member Measures**

| | $\chi^2$ | *df* | GFI | CFI | IFI | RMSEA |
|---|---|---|---|---|---|---|
| **MMAAS** | 93.36** | 41 | .93 | .93 | .93 | .08 |
| **MJS** | 70.11** | 34 | .93 | .92 | .92 | .07 |
| **MWE-1F** | 45.32** | 18 | .95 | .96 | .96 | .09 |
| **MWE-3F** | 81.83** | 24 | .92 | .91 | .91 | .11 |
| **MJP** | 82.25* | 12 | .91 | .89 | .89 | .17 |
| **MSD** | 47.70** | 17 | .95 | .95 | .95 | .09 |
| **MPANAS** | 53.51** | 19 | .94 | .90 | .90 | .09 |

*Note*. $N = 210$; MMAAS = Mindful attention awareness scale rated by member; MJS = Job satisfaction rated by member; MWE-1F = Single-factor model of work engagement rated by member; MWE- 3F = Three-factor model of work engagement rated by member; MJP = Job performance rated by leader; MSD = Social desirability scale measured by member; MPANAS = Positive and negative affect schedule measured by member.

*$p < .05$; **$p < .01$.

## 4.5 Member CFA Model

Similar to the leader measures, we conducted construct validity for all five member measurement scales. A series of five CFAs were also conducted to assess the discriminant validity of the constructs. Each of the four alternative models was compared with the hypothesized five-factor model. The five-factor hypothesized model consisted of five different constructs. The three-factor model consisted of member mindfulness, leader LMX and a combination of member job satisfaction, member work engagement, and member job performance measures. The two-factor model consisted of member mindfulness and a combination of leader LMX, member job satisfaction, member work engagement, and member job performance measures. The second two-factor model consisted of leader LMX and a

combination of member mindfulness, member job satisfaction, member work engagement, and member job performance measures. The single-factor model consisted of combining of all five constructs (member mindfulness, leader LMX, member job satisfaction, member work engagement, and member job performance).

Based on the number of items in all measurement scales, the item parceling approach was used to analyze all CFA models (Meade & Kroustalis, 2006). I first analyzed a 5-factor model, where three items were randomly selected from the five measurement scales. Three items of member mindfulness; three items of leader LMX; three items of member job satisfaction, three items of member work engagement, and three items of member job performance). These three items from each measurement scale represent a factor for that scale, and all models were co-varied to create a five-factor model. In the second CFA, a three-factor model was tested. The same three items used in the five-factor model was selected for member mindfulness, three items for leader LMX, and three items each for all outcome variables (member job satisfaction, work engagement, and job performance). The third CFA was a two-factor model. I used the same three member mindfulness items for factor one and three items each from the other four measurement scales for factor two. For the fourth CFA, a two-factor model, I used three items from the leader LMX scale as factor one and three items each from other measures as factor two. The final CFA analysis was a single-factor model. Three items, each from all measurement scales, were selected for the model.

As shown in Table 11, results from all five CFA models suggest that the hypothesized five-factor model has the best model fit amidst all other alternative CFA models ($\chi 2$ = 131.05, $df$ = 80, $p < .01$, GFI = .92, CFI = .94, IFI = .94, RMSEA = .06). The hypothesized model also had lower $\chi 2$ and $df$ values compared to other models. It should be noted that items

selected in all CFA models for the member measurement scales were similar to the leader measurement scales to create a commensurate measure for the study (see Table 11 and Appendices D8, D9, D10, D11, and D12 for details).

**Table 11 - CFA Results of all the Member Model**

| Model | $\chi^2$ | *df* | $\chi^2/df$ | GFI | CFI | IFI | RMSEA |
|---|---|---|---|---|---|---|---|
| **Hypothesized Model A** | 131.05** | 80 | --- | .92 | .94 | .94 | .06 |
| **Model B** | 208.84** | 87 | 77.79/7 | .88 | .87 | .87 | .08 |
| **Model C** | 265.84** | 89 | 134.79/9 | .85 | .81 | .81 | .10 |
| **Model D** | 217.93** | 89 | 86.88/9 | .87 | .86 | .86 | .08 |
| **Model E** | 272.85** | 90 | 141.80/10 | .85 | .80 | .80 | .10 |

*Note.* $N = 210$; All $\chi^2$ are significant at < .01; Model A = Hypothesized five-factor model (member mindfulness, member job satisfaction, member work engagement, member job performance, and leader LMX); Model B = Three-factor model (member mindfulness, leader LMX, and a combination of member job satisfaction/member work engagement/member job performance); Model C = Two-factor model (member mindfulness and a combination of leader LMX/member job satisfaction/member work engagement/member job performance); Model D = Two-factor model (leader LMX and a combination of member mindfulness/member job satisfaction/member work engagement/member job performance); Model E = Single-factor model (All combination of member mindfulness/leader LMX/member job satisfaction/member work engagement/member job performance).

Construct validity was further examined by estimating the factor loadings, value of average variance extracted (AVE), and composite reliability (CR) for the leader and member constructs. Results revealed factor loading greater than .40 for both the leaders and members. For the leader constructs, only leader work engagement and job performance have an AVE value above .40. More so, for the member constructs, all variables have AVE values above .40 except for the member job satisfaction. The composite reliability for the leader and member constructs were higher than .70. These results for the leaders and members are presented in Tables 12 and 13, respectively.

**Table 12 - Leader Constucts Factor Loadings, Average Variance Extracted and Composite Reliability**

| Constructs | Items | Factor Loadings | AVEs | CRs |
|---|---|---|---|---|
| Leader Mindfulness | MAAS 1 | .60 | .32 | .83 |
| | MAAS 2 | .43 | | |
| | MAAS 3 | .62 | | |
| | MAAS 5 | .44 | | |
| | MAAS 6 | .78 | | |
| | MAAS 7 | .59 | | |
| | MAAS 8 | .42 | | |
| | MAAS 9 | .69 | | |
| | MAAS 11 | .58 | | |
| | MAAS 14 | .45 | | |
| | MAAS 15 | .45 | | |
| Leader Job Satisfaction | SAT 1 | .70 | .36 | .85 |
| | SAT 3 | .64 | | |
| | SAT 5 | .56 | | |
| | SAT 6 | .59 | | |
| | SAT 10 | .64 | | |
| | SAT 11 | .63 | | |
| | SAT 13 | .41 | | |
| | SAT 17 | .68 | | |
| | SAT 18 | .47 | | |
| | SAT 20 | .64 | | |
| Leader Work Engagement | VI 1 | .61 | .49 | .89 |
| | VI 2 | .81 | | |
| | VI 3 | .68 | | |
| | DE 1 | .74 | | |
| | DE 2 | .70 | | |
| | DE 3 | .75 | | |
| | AB 1 | .69 | | |
| | AB 2 | .60 | | |
| Leader Job performance | IRB 1 | .79 | .46 | .85 |
| | IRB 2 | .85 | | |
| | IRB 3 | .81 | | |
| | IRB 4 | .70 | | |
| | IRB 5 | .58 | | |
| | IRB 6 | .44 | | |
| | IRB 7 | .44 | | |

| | | | | |
|---|---|---|---|---|
| | LLMX - L1 | .45 | | |
| | LLMX - A1 | .61 | | |
| | LLMX - A2 | .67 | | |
| | LLMX - PR1 | .77 | | |
| | LLMX - L2 | .52 | | |
| Leader LMX | LLMX - C1 | .66 | .29 | .84 |
| | LLMX - L3 | .52 | | |
| | LLMX - A3 | .62 | | |
| | LLMX - C2 | .50 | | |
| | LLMX - C3 | .47 | | |
| | LLMX - PR2 | .44 | | |
| | LLMX - PR3 | .43 | | |

*Note.* AVE = Average variance extracted; CR = Composite reliability

**Table 13 - Member Constucts Factor Loadings, Average Variance Expected and Composite Reliability**

| Constructs | Items | Factor Loadings | AVEs | CRs |
|---|---|---|---|---|
| | MAAS 1 | .68 | | |
| | MAAS 2 | .69 | | |
| | MAAS 3 | .72 | | |
| | MAAS 5 | .59 | | |
| | MAAS 6 | .70 | | |
| Member Mindfulness | MAAS 7 | .61 | .42 | .89 |
| | MAAS 8 | .70 | | |
| | MAAS 9 | .56 | | |
| | MAAS 11 | .57 | | |
| | MAAS 14 | .70 | | |
| | MAAS 15 | .56 | | |
| | SAT 1 | .61 | | |
| | SAT 3 | .56 | | |
| | SAT 5 | .59 | | |
| | SAT 6 | .61 | | |
| | SAT 10 | .61 | .34 | .84 |
| Member Job Satisfaction | SAT 11 | .62 | | |
| | SAT 13 | .50 | | |
| | SAT 17 | .56 | | |
| | SAT 18 | .60 | | |
| | SAT 20 | .59 | | |

| | | | | |
|---|---|---|---|---|
| | VI 1 | .64 | | |
| | VI 2 | .72 | | |
| | VI 3 | .76 | | |
| | DE 1 | .72 | | |
| Member Work Engagement | DE 2 | .80 | .51 | .89 |
| | DE 3 | .76 | | |
| | AB 1 | .70 | | |
| | AB 2 | .61 | | |
| | IRB 1 | .80 | | |
| | IRB 2 | .78 | | |
| | IRB 3 | .83 | | |
| Member Job performance | IRB 4 | .81 | .48 | .86 |
| | IRB 5 | .59 | | |
| | IRB 6 | .48 | | |
| | IRB 7 | .46 | | |

*Note.* AVE = Average variance extracted; CR = Composite reliability

### 4.6 Evidence against Common Method Bias

Common method bias (CMB) is a problem encountered in most survey research, and this study is no exception. To reduce the existence of CMB, I took both procedural and statistical approaches to mitigate this issue. Some statistical analyses were conducted to confirm the existence of CMB in the study.

First, while designing the study, I ensured all participants' confidentiality by encouraging them to respond to the surveys privately. I also provided them with envelopes to enclose and seal their responses. I further addressed the issue of response patterns. For instance, most constructs were measured on different scale anchors with an explanation of its descriptions (i.e., 5-point, 6-point, and 7-point) (Podsakoff et al., 2003) to eliminate any form of consistency or patterned responses from the respondents along with asking demographic questions at the end of the survey. Further, constructs that measure performance and exchange relationships were used as other ratings (i.e., leader LMX was rated by the members; leader and member job performance

were rated as other ratings). I controlled for constructs that measure social desirability and respondents' mood (i.e., positive and negative affect schedule; PANAS) in the analysis as well. Controlling for these two variables in my analysis did not have any adverse effect on the results' significance, meaning there is no evidence of common method variance. Most importantly, hypothesizing a congruence effect in the study helped me eliminate any form of bias attributable to a single source assessment of the relationships hypothesized.

Second, I conducted Harman's Single-factor test, one of the most used diagnostic tests of common method variance in organizational research. Harman's Single-factor test uses an unrotated factor solution in EFA to identify a single factor's emergence and if a single factor accounts for a higher amount of covariance among all other factors. After conducting the test separately for leader and member constructs, results revealed a single factor that accounted for a total variance of 15.98 and 26.32, respectively, for the leader and member measures. Since the amount of variance identified in the study is less than 50 percent of the matrix's total variance, I concluded that there is no serious threat to common method variance in the study.

## 4.7 Hypothesis Testing

In Tables 14 and 15, I present the means, standard deviations, intercorrelations, and coefficients alpha for the leader and member measurement scales, respectively. Table 16 also shows the agreement groups between the leader and member mindfulness, and Table 17 shows the summary of findings.

For the leader measures, results show that leader mindfulness was positively correlated with job satisfaction ($r = .68$, $p < .01$), work engagement ($r = .38$, $p < .01$), and member-rated job performance of the leader ($r = .14$, $p < .05$). Leader work engagement was also positively correlated with job satisfaction ($r = .69$, $p < .01$).

For member measures, member mindfulness was positively correlated with job satisfaction ($r = .62$, $p < .01$), work engagement ($r = .61$, $p < .01$), leader-rated job performance of the member ($r = .60$, $p < .01$), and member-rated LMX of the leader ($r = .58$, $p < .01$). Likewise, member job satisfaction was positively correlated with work engagement ($r = .56$, $p < .01$), leader-rated job performance of the member ($r = .56$, $p < .01$), and member-rated LMX of the leader ($r = .55$, $p < .01$). Furthermore, work engagement was positively correlated with leader-rated job performance ($r = .49$, $p < .01$) and member-rated LMX of the leader ($r = .57$, $p < .01$), and lastly, leader-rated job performance of the member was positively related with member-rated LMX of the leader ($r = .62$, $p < .01$).

The summary of results for all hypotheses testing are presented in Tables 18 to 24. Figure 8 also shows the path modeling results for our hypotheses testing. For clarity purposes, I did not include the control variables in the model.

**Table 14 - Descriptive Statistics, Coefficients Alpha, and Intercorrelations of the Leader Measures**

| Variables | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Gender | .37 | .48 | **SIM** | | | | | | | | | | | |
| 2. Age | 2.98 | 1.16 | -.34** | **SIM** | | | | | | | | | | |
| 3. Education | 4.54 | 1.08 | -.26** | .46** | **SIM** | | | | | | | | | |
| 4. Tenure | 3.18 | 1.50 | -.33** | .75** | .39** | **SIM** | | | | | | | | |
| 5. LSD | 3.42 | .98 | -.13 | .21** | -.16* | .15* | **.74** | | | | | | | |
| 6. LPA | 5.36 | 1.36 | .12 | .03 | .36** | .04 | .01 | **.83** | | | | | | |
| 7. LNA | 3.49 | 1.25 | -.04 | .31** | -.04 | .18** | .22** | -.38** | **.68** | | | | | |
| 8. LMAAS | 4.27 | .67 | .10 | .10 | .18* | .29** | -.54** | .06 | .08 | **.69** | | | | |
| 9. LJSS | 3.80 | .59 | .01 | .20** | .38** | .34** | -.28** | .35** | .03 | .68** | **.82** | | | |
| 10. LWES | 4.43 | .94 | -.13 | .14* | .37** | .32** | -.14* | .44** | .06 | .38** | .69** | **.85** | | |
| 11. LJPS | 5.16 | .97 | -.08 | -.03 | .07 | .01 | -.10 | .17* | .01 | .14* | .05 | .03 | **.85** | |
| 12. LMX-L | 4.72 | 1.26 | -.03 | -.04 | .03 | .03 | -.21** | -.06 | -.17* | .13 | .05 | .03 | -.03 | **.93** |

*Note. N* = 58; Diagonal entries in bold are the coefficients alpha; LSD = Social desirability rated by leader; LPA = Positive affect rated by leader; LNA = Negative affect rated by leader; LMAAS = Mindful attention awareness scale rated by leader; LJSS = Job satisfaction scale rated by leader; LWES = Work engagement scale rated by leader; LJPS = Leader Job performance scale rated by the member; LMX-L = Leader-member exchange of the leader rated by the member; SIM = Single-item measure.

*$p < .05$; **$p < .01$.

**1**

[1] Gender was coded as- 0 = Male and 1 = Female
Age was coded as- 1 = 18-24 years, 2 = 25-31 years, 3 = 32-38 years, 4 = 39-45 years, 5 = 46 years and above
Education was coded as- 1 = High school, 2 = Some certificates, 3 = College, 4 = Bachelors, 5 = Masters and 6 = PhD
Tenure was coded as- 1 = 6 months -1 year, 2 = 2-3 years, 3 = 4-5 years, 4 = 6-7 years, 5 = 8-9 years, 6 = 10 years and above

**Table 15 - Descriptive Statistics, Coefficients Alpha, and Intercorrelations of Member Measures**

| Variables | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Gender | .54 | .50 | **SIM** | | | | | | | | | | | |
| 2. Age | 2.32 | 1.21 | -.16* | **SIM** | | | | | | | | | | |
| 3. Education | 3.98 | 1.28 | -.04 | .53** | **SIM** | | | | | | | | | |
| 4. Tenure | 2.68 | 1.45 | .02 | .65** | .55** | **SIM** | | | | | | | | |
| 5. MSD | 4.31 | 1.10 | .07 | .18* | .27** | .24** | **.80** | | | | | | | |
| 6. MPA | 4.86 | 1.36 | .13 | -.04 | .07 | -.00 | .32** | **.77** | | | | | | |
| 7. MNA | 3.87 | 1.22 | -.07 | .20** | .13 | .16* | .05 | -.11 | **.64** | | | | | |
| 8. MMAAS | 3.66 | .91 | .17* | .10 | .12 | .20** | .44** | .45** | -.22** | **.86** | | | | |
| 9. MJSS | 3.45 | .66 | .16* | .06 | .20** | .08 | .47** | .60** | -.07 | .62** | **.81** | | | |
| 10. MWES | 3.77 | 1.13 | .13 | .12 | .24** | .25** | .45** | .52** | -.11 | .61** | .56** | **.86** | | |
| 11. MJPS | 4.37 | 1.01 | .19** | -.00 | .08 | .10 | .32** | .53** | -.01 | .60** | .56** | .49** | **.57** | |
| 12. LMX-L | 4.72 | 1.26 | .19** | .07 | .11 | .12 | .48** | .58** | -.09 | .58** | .55** | .57** | .62** | **.93** |

*Note. N* = 210; Diagonal entries in bold are the coefficients alpha; MSD = Social desirability rated by member; MPA = Positive affect rated by member; MNA = Negative affect rated by member; MMAAS = Mindful attention awareness scale rated by member; MJSS = Job satisfaction scale rated by member; MWES = Work engagement rated by member; MJPS = Member Job performance scale rated by the leader; LMX-L = Leader-member exchange of the leader rated by members; SIM = Single-item measure.

**p < .05; **p < .01.*

[2]

[2] Gender was coded as- 0 = Male and 1 = Female
Age was coded as- 1 = 18-24 years, 2 = 25-31 years, 3 = 32-38 years, 4 = 39-45 years, 5 = 46 years and above
Education was coded as- 1 = High school, 2 = Some certificates, 3 = College, 4 = Bachelors, 5 = Masters and, 6 = PhD
Tenure was coded as- 1 = 6 months -1 year, 2 = 2-3 years, 3 = 4-5 years, 4 = 6-7 years, 5 = 8-9 years, 6 = 10 years and above

### 4.7.1 Analytic Strategy: Polynomial Regression and Response Surface Analysis

In this study, I used polynomial regression to test our hypotheses. I then use the response surface methodology to plot a three-dimensional (3D) graph to visually represent our predictor variables' combined effects and its outcomes (Shanock, Baran, Gentry, Pattison, & Heggestad, 2010). Edwards and Parry (1993) were the earliest researchers emphasizing utilizing polynomial regression and response surface methodology because of the difficulty in interpreting the coefficient from quadratic equations from the polynomial regression results.

In conducting a polynomial regression analysis, several steps must be taken (see Shanock et al., 2010 for details). Here, I first ensured that my two predictor variables (member and leader mindfulness) were measured on commensurate scales and content dimensions. Then I centered my predictor variables around the midpoint of their scales to reduce the presence of multicollinearity and assist with the interpretation of results (Edward, 1994). Results of the Variance Inflation Factor (VIF) showed low collinearity between the independent variables and other variables (i.e., VIF was less than 5). Next, I assessed the occurrence of discrepancies from my predictor variables by creating three different agreement groups where discrepancy can occur, and to check for the variability of at least ten percent in those groups, which was satisfied (Shanock et al., 2010); see Table 14 for details.

**Table 16 - Frequencies of MMAAS Over, Under, or In-agreement with LMAAS**

| Agreement groups | No. of Individuals | Percentages |
|---|---|---|
| MMAAS more than LMAAS | 80 | 38.1 |
| In-agreement | 60 | 28.6 |
| MMAAS less than LMAAS | 70 | 33.3 |

*Note*. N = 210; MMAAS = Member mindful attention awareness scale; LMAAS = Leader mindful attention awareness scale.

In conducting the polynomial regression analysis, I used the equation below to understand the approach. In the equation, *Z* represents the outcome variables (i.e., Job Satisfaction and Work Engagement), *X* represents Member Mindfulness, and *Y* represents Leader Mindfulness, which are both independent variables. The intercept is *b0*; *b1* and *b2* are the coefficient of *X* and *Y*, respectively; *b3* and *b5* represent the coefficient of *X2* and *Y2*, respectively, which are the quadratic effects; *b4* is the coefficient of the interaction effects, and *e* is the residual value.

$$Eq\ 1.\ Z = b_0 + b_1X + b_2Y + b_3X^2 + b_4XY + b_5Y^2 + e$$

The polynomial regression equation enabled me to analyze the linear effects of member and leader mindfulness (*X* and *Y*) and their non-linear effects (*XY*, *X2*, and *Y2*) on the outcome variables. I conducted my analysis in three steps. First, I conducted a hierarchical multiple regression by regressing the outcome variables on control variables in the first step (Model 1). Then I added the main effects, member mindfulness, and leader mindfulness in the second step (Model 2), and the cross-product of member and leader mindfulness and their squared terms in the third step (Model 3). After adding the non-linear terms into the regression model (Model 3), if the *R2* (variance explained) increases significantly, and the quadratic term's coefficient is significant, a non-linear effect is satisfied, and response surface test would be calculated.

Based on the difficulty posed by the interpretation of the polynomial regression results (Stimson, Carmines, & Zeller, 1978), I used the regression coefficients from my polynomial results to calculate the surface test and generate a response surface pattern by plotting a 3D graph (Edwards & Harrison, 1993). However, the response surface pattern helps with straightforward interpretation and visualization of polynomial regression results, showing the congruence/incongruence relationships. I further assessed the slopes and curvatures of our two

critical lines of interest (i.e., congruence and incongruence line; *a1* to *a4*). The congruence line is where ($X = Y$), its slope and curvature represent our *a1* and *a2,* respectively; while the incongruence line is where ($X = -Y$) and its slope and curvature are represented by *a3* and *a4*, respectively (Edwards & Parry, 1993).

**Hypotheses 1a and 1b**

In hypotheses 1a and 1b, I predicted that leader-rated mindfulness would be positively related to the leader-rated work outcomes (i.e., job satisfaction and work engagement). I controlled for gender, age, education, dyadic tenure, social desirability, positive affect, and negative affect in Model 1 of the hierarchical multiple regression and added my linear effect in Model 2. The results suggested that the leader-rated job satisfaction and work engagement were positively related to the leader-rated mindfulness (.62, $p < .01$; .20, $p < .05$), respectively. Hence, there is a positive relationship between leader mindfulness, job satisfaction, and work engagement. Hypotheses 1a and 1b are therefore supported. See Model 2 and 5, respectively, in Table 18 for results.

**Hypotheses 2a and 2b**

In hypotheses 2a and 2b, I also predicted that the member-rated mindfulness would be positively related to the member-rated work outcomes (i.e., job satisfaction and work engagement). I further controlled for gender, age, education, dyadic tenure, social desirability, positive affect, and negative affect in Model 1 and added the linear effect in Model 2. The hierarchical multiple regression results suggested that both the members-rated job satisfaction and work engagement were positively related to the member-rated mindfulness, respectively

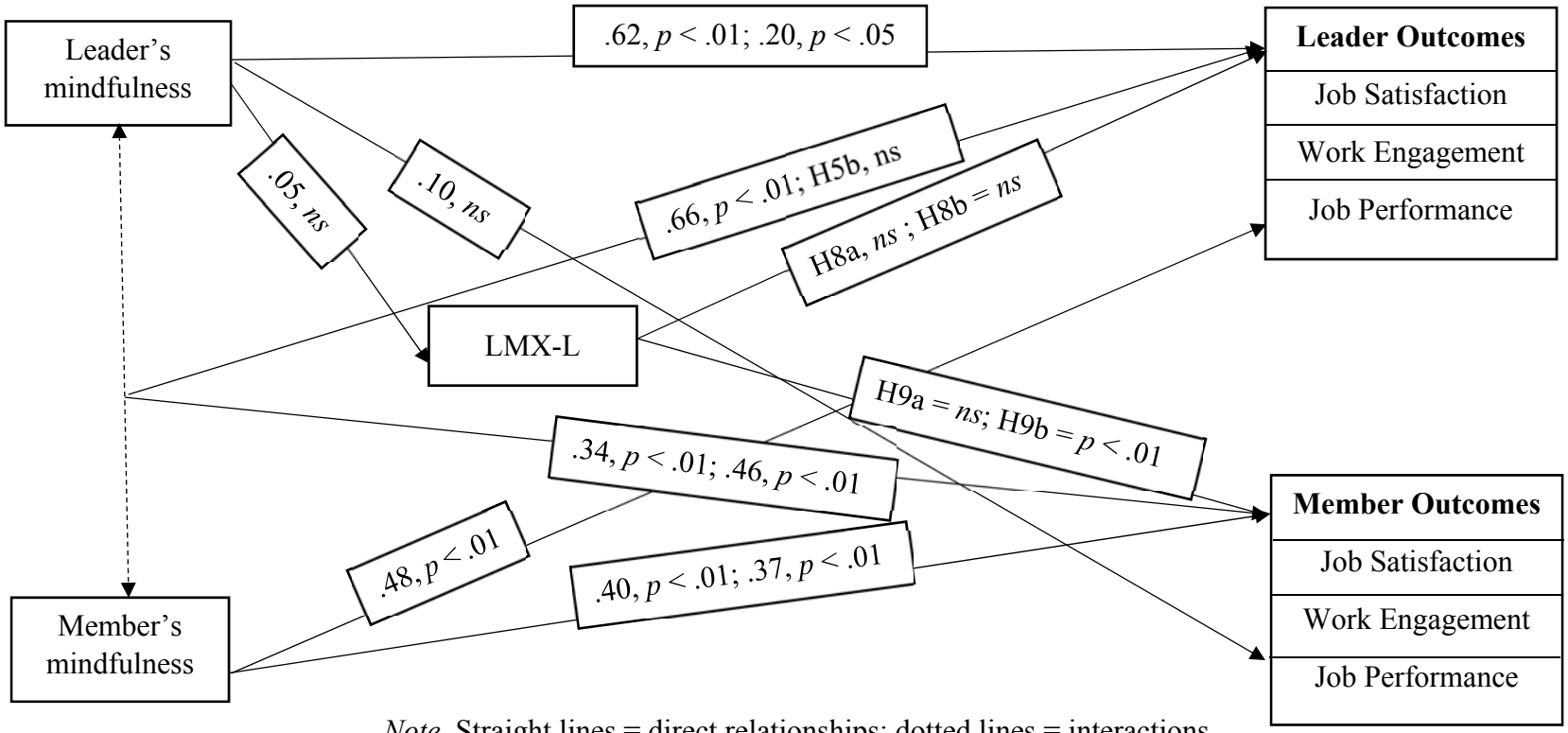
(.40, $p < .01$; .37, $p < .01$). Hypotheses 2a and 2b were also supported. The results are shown in Models 2 and 5, respectively, in Table 19.

**Hypothesis 3**

In hypothesis 3, I further anticipated that the leader-rated mindfulness would be positively related to the leader's member-rated job performance. After controlling for gender, age education, dyadic tenure, social desirability, positive affect, and negative affect, the regression results suggested that the member-rated job performance of the leader was not significantly related to the leader-rated mindfulness (.10, *ns*). Hence, the result of hypothesis 3 was not supported. The result is presented in Model 5 in Table 20.

**Hypothesis 4**

In hypothesis 4, I anticipated that the member-rated mindfulness would be positively related to member-rated job performance. After controlling for gender, age, education, dyadic tenure, social desirability, positive affect, and negative affect, the regression results suggested that the leader-rated job performance of the member was significant and positively related to the member-rated mindfulness (.48, $p < .01$). The result of this hypothesis was therefore supported, as seen in Model 7 in Table 21.




*Note.* Straight lines = direct relationships; dotted lines = interactions.

**Figure 8 - New model of leader-member congruence in mindfulness, leader LMX, and work outcome.**

**Table 17 - Summary of Findings for Hypotheses Testing**

| S/N | Predictors | Mediators | Outcomes | Results |
|---|---|---|---|---|
| 1a. | Leader Mindfulness | N/A | Leader Job Satisfaction (SR) | Positive |
| 1b. | Leader Mindfulness | N/A | Leader Work Engagement (SR) | Positive |
| 2a. | Member Mindfulness | N/A | Member Job Satisfaction (SR) | Positive |
| 2b. | Member Mindfulness | N/A | Member Work Engagement (SR) | Positive |
| 3. | Leader Mindfulness | N/A | Leader Job Performance (MR) | N/S |
| 4. | Member Mindfulness | N/A | Member Job Performance (LR) | Positive |
| 5a. | Leader-Member Mindfulness | N/A | Leader Job Satisfaction (LR) | Positive |
| 5b. | Leader-Member Mindfulness | N/A | Leader Work Engagement (LR) | N/S |
| 6a. | Leader-Member Mindfulness | N/A | Member Job Satisfaction (MR) | Positive |
| 6b. | Leader-Member Mindfulness | N/A | Member Work Engagement (MR) | Positive |
| 7. | Leader Mindfulness | N/A | LMX-L (MR) | N/S |
| 8a. | Leader-Member Mindfulness | LMX-L | Job Satisfaction (LR) | N/S |
| 8b. | Leader-Member Mindfulness | LMX-L | Work Engagement (LR) | N/S |
| 9a. | Leader-Member Mindfulness | LMX-L | Job Satisfaction (MR) | N/S |
| 9b. | Leader-Member Mindfulness | LMX-L | Work Engagement (MR) | Positive |

*Note.* LMX-L = Leader-member exchange of the leader rated by member; SR = Self-rated; MR = Member-rated; LR = Leader-rated; N/S = Non-significant; N/A = Not applicable

**Table 18 - Leader-Member Mindfulness Congruence, Leader Job Satisfaction and Work Engagement**

| Variables | LJS Model 1 *B* | LJS Model 2 *B* | LJS Model 3 *B* | LWE Model 4 *B* | LWE Model 5 *B* | LWE Model 6 *B* |
|---|---|---|---|---|---|---|
| *Control* | | | | | | |
| Leader Gender | .07 | .01 | .00 | -.16* | -.18** | -.20** |
| Leader Age | -.20* | -.09 | -.11 | -.42** | -.38** | -.47** |
| Leader Education | .14 | .19** | .19** | .13 | .15* | .14* |
| Leader Tenure | .46** | .11 | .10 | .48** | .35** | .32** |
| Leader Social Desirability | -.33** | .10 | .12 | -.21** | -.04 | .03 |
| Leader Positive Affect | .37** | .29** | .32** | .54** | .53** | .63** |
| Leader Negative Affect | .24** | .10 | .08 | .36** | .33** | .24** |
| *Independent* | | | | | | |
| MMAAS ($b_1$) | | .11* | .11* | | .13* | .11* |
| LMAAS ($b_2$) | | .62** | .67** | | .20* | .43** |
| MMAAS$^2$ ($b_3$) | | | .00 | | | .06 |
| MMAAS x LMAAS ($b_4$) | | | .02 | | | .06 |
| LMAAS$^2$ ($b_5$) | | | .09 | | | .37** |
| $R^2$ | .40** | .61** | .62** | .45** | .49** | .58** |
| $\Delta R^2$ | | .21** | .01** | | .04** | .09** |
| $\Delta F$ | 19.46** | 53.71** | .83 | 23.80** | 7.22** | 13.50** |
| *Surface Tests* | | | | | | |
| Congruence (x =y) | | | | | | |
| Slope along x = y, b1 + b2 ($a_1$) | | | .66** | | | .72** |
| Curvature on x = y, b3 + b4 + b5 ($a_2$) | | | .11 | | | .77** |
| Incongruence (x = -y) | | | | | | |
| Slope along x = -y, b1 - b2 ($a_3$) | | | -.52** | | | -.49** |
| Curvature on x = -y, b3 - b4 + b5 ($a_4$) | | | .07 | | | .57** |

*Note.* $N = 58$; $B$ = Standardized coefficient; MMAAS = Member mindful attention awareness scale; LMAAS = Leader mindful attention awareness scale; LJS = Job satisfaction rated by leader; LWE = Work engagement rated by leader.
*$p < .05$; **$p < .01$.

**Table 19 - Leader-Member Mindfulness Congruence, Member Job Satisfaction and Work Engagement**

| Variables | | MJS | | | MWE | |
|---|---|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 | Model 6 |
| | *B* | *B* | *B* | *B* | *B* | *B* |
| *Control* | | | | | | |
| Member Gender | .09 | .05 | .06 | .05 | .01 | .00 |
| Member Age | .04 | .02 | .02 | -.05 | -.07 | -.08 |
| Member Education | .12 | .15* | .15* | .08 | .10 | .12 |
| Member Tenure | -.08 | -.15* | -.14* | .20* | .13 | .13 |
| Member Social Desirability | .29** | .16** | .18** | .27** | .15* | .15* |
| Member Positive Affect | .48** | .35** | .35** | .41** | .29** | .29** |
| Member Negative Affect | -.04 | .05 | .03 | -.10 | -.02 | -.02 |
| *Independent* | | | | | | |
| MMAAS ($b_1$) | | .40** | .40** | | .37** | .37** |
| LMAAS ($b_2$) | | .00 | .05 | | .04 | .00 |
| MMAAS$^2$ ($b_3$) | | | -.06 | | | -.01 |
| MMAAS x LMAAS ($b_4$) | | | .06 | | | -.02 |
| LMAAS$^2$ ($b_5$) | | | .06 | | | -.08 |
| $R^2$ | .46** | .56** | .57** | .41** | .50** | .51** |
| $\Delta R^2$ | | .10** | .01** | | .09** | .01** |
| $\Delta F$ | 24.33** | 23.35** | 1.34 | 20.02** | 18.32** | .78 |
| *Surface Tests* | | | | | | |
| Congruence (x =y) | | | | | | |

| | | |
|---|---|---|
| Slope along x = y, b1 + b2 ($a_1$) | .34** | .46** |
| Curvature on x = y, b3 + b4 + b5 ($a_2$) | .10 | -.21 |
| Incongruence (x = -y) | | |
| Slope along x = -y, b1 - b2 ($a_3$) | .25** | .46** |
| Curvature on x = -y b3-b4+b5 ($a_4$) | -.04 | -.15 |

*Note.* $N$ = 210; $B$ = Standardized coefficient; MMAAS = Member mindful attention awareness scale; LMAAS = Leader mindful attention awareness scale; MJS = Job satisfaction rated by member; MWE = Work engagement rated by member.
*$p$ < .05; **$p$ < .01

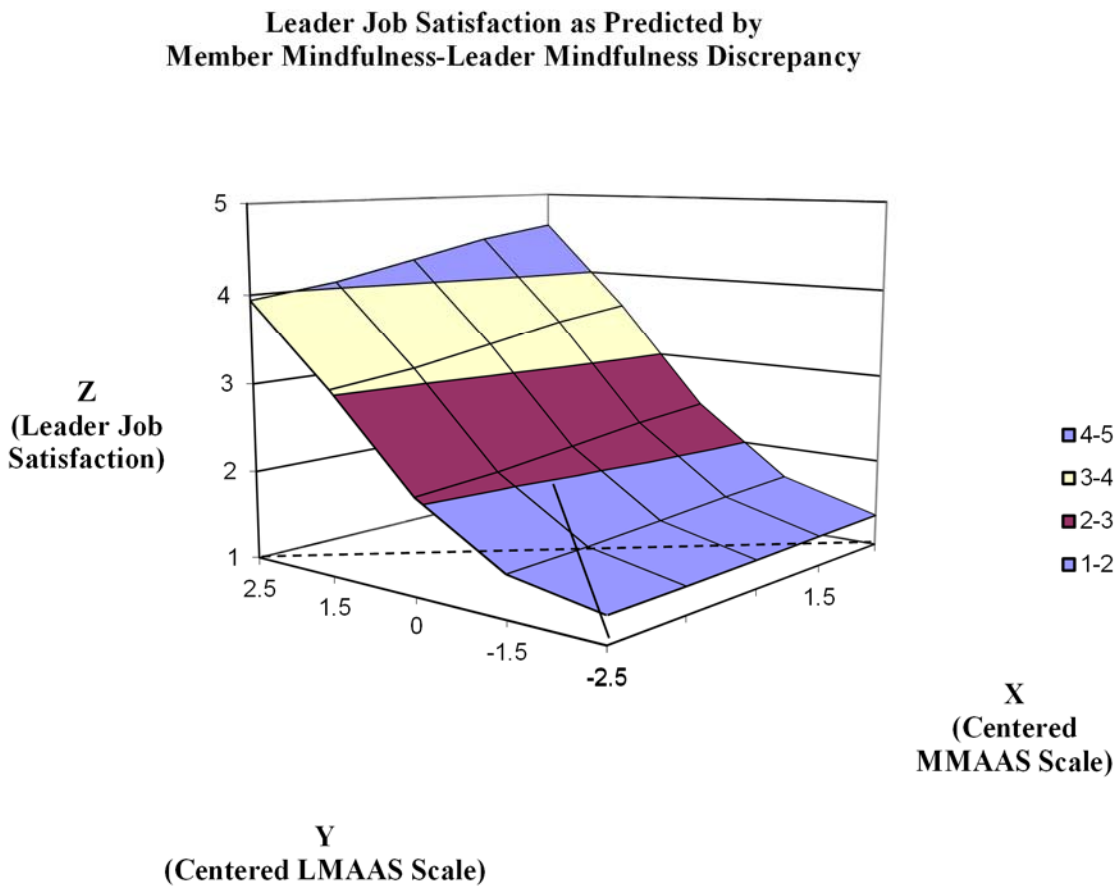



**Figure 9 - Leader Job Satisfaction as Predicted by Member Mindfulness-Leader Mindfulness Discrepancy**

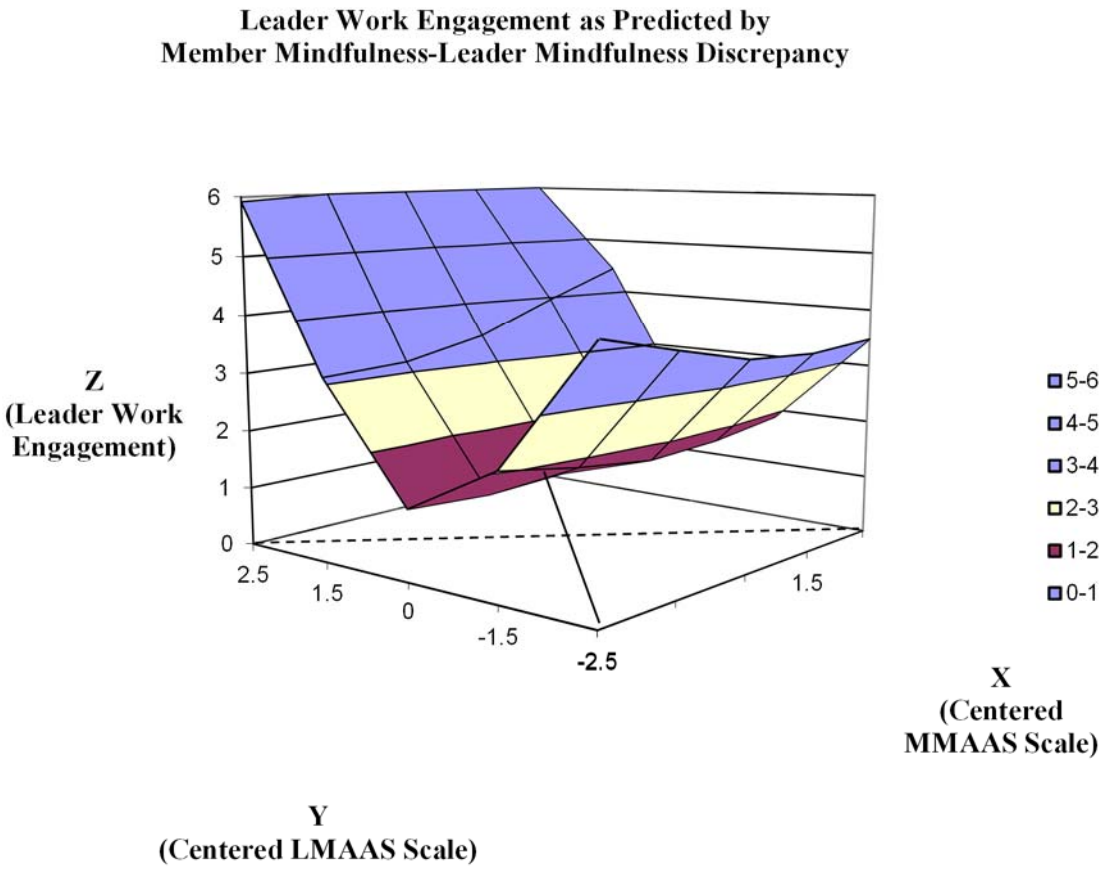



**Figure 10 - Leader Work Engagement as Predicted by Member Mindfulness-Leader Mindfulness Discrepancy**

**Table 20 - Leader Mindfulness and Leader Job Performance**

| Variables | Model 1 *B* | LJP Model 2 *B* |
|---|---|---|
| *Control* | | |
| Leader Gender | -.16* | -.17* |
| Leader Age | -.15 | -.13 |
| Leader Education | -.05 | -.03 |
| Leader Tenure | .06 | .01 |
| Leader Social Desirability | -.15* | -.09 |
| Leader Positive Affect | .27** | .26** |
| Leader Negative Affect | .17* | .15 |
| *Independent* | | |
| Leader Mindfulness | | .10 |
| $R^2$ | .08* | .08 |
| $\Delta R^2$ | | .01 |
| $\Delta F$ | 2.45* | 1.00 |

*Note.* $N = 58$; $B$ = Standardized coefficient; LJP = Leader job performance rated the by member.
*$p < .05$; **$p < .01$

**Table 21 - Member Mindfulness and Member Job Performance**

| Variables | Model 1 *B* | MJP Model 2 *B* |
|---|---|---|
| *Control* | | |
| Member Gender | .11 | .06 |
| Member Age | -.06 | -.09 |
| Member Education | -.02 | .01 |
| Member Tenure | .12 | .04 |
| Member Social Desirability | .15* | -.00 |
| Member Positive Affect | .48** | .33** |
| Member Negative Affect | .04 | .14* |
| *Independent* | | |
| Member Mindfulness | | .48** |
| $R^2$ | .33** | .48** |
| $\Delta R^2$ | | .15** |
| $\Delta F$ | 14.29** | 56.09** |

*Note.* $N = 210$; $B$ = Standardized coefficient; MJP = Member job performance rated by the leader.
*$p < .05$; **$p < .01$

**Hypotheses 5a and 5b**

In hypotheses 5a and 5b, I anticipated that higher congruence of leader-member mindfulness is positively related to a higher level of leader-rated work outcomes (i.e., job satisfaction and work engagement), respectively. In the hierarchical multiple regression results, after controlling for gender, age, education, dyadic tenure, social desirability, positive affect, and negative affect in Model 1. Then added the linear terms in Model 2 and the second-order polynomial term in Model 3. However, for this hypothesis to be supported, I anticipate a significant positive slope along the congruence line, where X = Y (b1 + b2), and a nonsignificant curvature, where X = -Y (b1 + b2 + b3). Result revealed a significant positive slop along the congruence line (.66, $p < .01$) and a nonsignificant curvature (.11, ns). In Figure 9, the lowest level of job satisfaction was in front of the graph on our congruence line, which increases in the back where job satisfaction is at the highest level. This result indicates that the more the leader and member mindfulness agree, the leader's job satisfaction also increases. Hence, hypothesis 5a was supported. Table 20 shows the result of this relationship.

In hypothesis 5b, after regressing work engagement on the control variables Model 4, added the linear terms Model 5, and the second-order polynomial term Model 6, I found the congruence line slope and the curvature significant and positive (.72, $p < .01$; .77, $p < .01$), respectively. Since I only hypothesized a linear additive on the congruence line, which is indicated by a significant positive slope and nonsignificant curvature. Hence, I conclude that hypothesis 5b is not supported. Figure 10 depicts this relationship's result.

**Hypotheses 6a and 6b**

In hypotheses 6a and 6b, I predicted that the compatibility of a higher level of leader-member mindfulness would be positively related to a higher level of member-rated work outcomes (i.e., job satisfaction and work engagement). I regressed for gender, age, education, dyadic tenure, social desirability, positive affect, and negative affect in Model 1. Then added the linear term in Model 2 and the second-order polynomial term in Model 3. The results of hierarchical multiple regression supported the hypotheses. There was a significant positive slope along the line of congruence for member job satisfaction and work engagement (.34, $p < .01$; .46, $p < .01$), and a nonsignificant curvature along the line of congruence (.10, ns; -.21, ns), respectively. These results show that as the leader and member mindfulness agree, the members' job satisfaction and work engagement also increases. Table 21 presents these results, and Figures 11 and 12 depict these relationships.

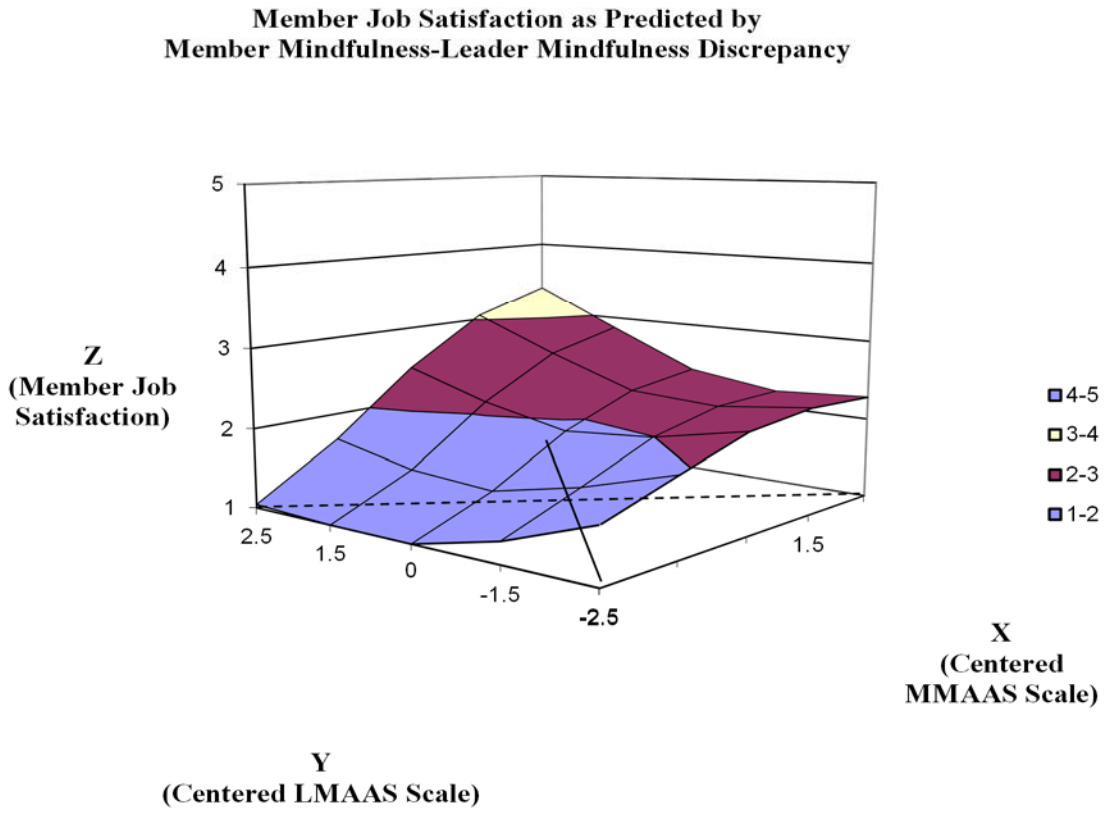



**Figure 11 - Member Job Satisfaction as Predicted by Member Mindfulness-Leader Mindfulness Discrepancy**

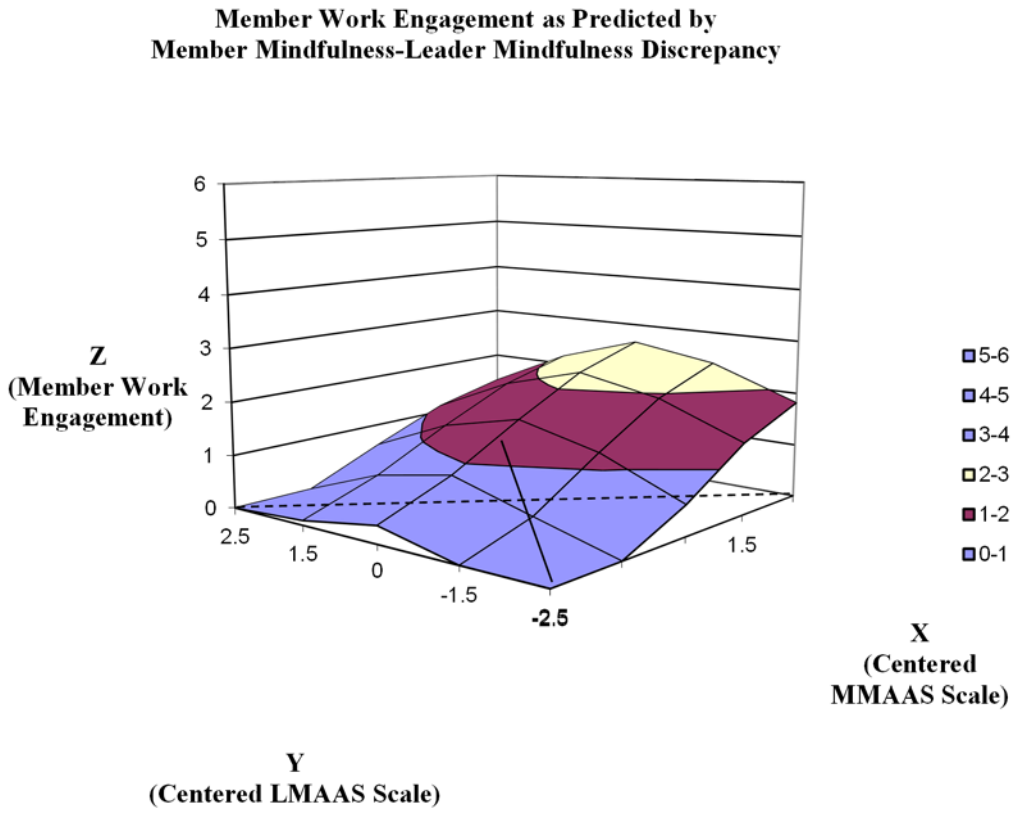



**Figure 12 - Member Job Work Engagement as Predicted by Member Mindfulness-Leader Mindfulness Discrepancy**

## Hypothesis 7

In hypothesis 7, I predicted that leader-rated mindfulness would be positively related to the member-rated LMX of the leader. Having controlled for gender, age, education, dyadic tenure, social desirability, positive affect, and negative affect in Model 1 and adding leader mindfulness in Model 2. The hierarchical regression result suggested that the member-rated LMX of the leader was not significantly related to leader-rated mindfulness (.05, *ns*). The result of this hypothesis was, therefore, not supported and presented in Table 22.

**Table 22 - Leader Mindfulness and Leader LMX**

| Variables | LMX-L Model 1 *B* | LMX-L Model 2 *B* |
|---|---|---|
| *Control* | | |
| Leader Gender | -.02 | -.02 |
| Leader Age | -.03 | -.02 |
| Leader Education | .02 | .02 |
| Leader Tenure | .11 | .08 |
| Leader Social Desirability | -.18* | -.15 |
| Leader Positive Affect | -.15 | -.16 |
| Leader Negative Affect | -.20* | -.21* |
| *Independent* | | |
| Leader Mindfulness | | .05 |
| $R^2$ | .09* | .09 |
| $\Delta R^2$ | | .00 |
| $\Delta F$ | 2.77* | .29 |

*Note.* $N = 58$ for leaders; $N = 210$ for Members; *B* = Standardized coefficient; LMX-L = Leader-member exchange of the leader rated by member.
*$p < .05$; **$p < .01$

### 4.7.2 The Mediation effect of Leader LMX on the Congruence of Leader-Member Mindfulness and Work Outcomes

To test the mediation results, I followed the Baron and Kenny (1986) approach to mediation analysis. The conditions for establishing a mediation are as follow: (a) the independent variable must affect the mediator variable, (b) the independent variable must also affect the dependent variable, and (c) the mediator variable must be related to the dependent variable. When all these three conditions hold as predicted, there will be a reduced effect of the independent variable on the dependent variable in the third stage. This reduced effect depicts the existence of partial mediation (Baron & Kenny, 1986).

However, in this study, to establish a mediation effect of leader LMX on the relationship between leader-member mindfulness congruence and the leader and member work outcomes, I

must establish the following relationships: (a) there must be a relationship between leader-member mindfulness congruence and leader LMX (mediator), (b) there must also be a relationship between leader-member mindfulness congruence and work outcomes, and finally, (c) leader LMX (mediator) must be related to work outcomes.

**Hypothesis 8a, 8b**

In hypotheses 8a and 8b, I anticipated that member-rated LMX of the leader would mediate the relationship between leader-member mindfulness congruence and leader-rated work outcomes (i.e., job satisfaction and work engagement). After adding the control variable, I established that leader-member mindfulness congruence was related to leader LMX (mediator). This relationship was evident with a significant slope and a nonsignificant curvature along our congruence line (.71, $p < .01$; .07, ns), respectively. I also found that leader-member mindfulness congruence has a linear relationship with job satisfaction (.66, $p < .01$; .11, ns) and a non-linear relationship with work engagement (.71, $p < .01$; .77, $p < .01$). Nevertheless, I could not establish that leader LMX was related to job satisfaction and work engagement (-.07, *ns*; -.03, *ns.*). Hence, a mediation effect of leader LMX on leader-member mindfulness congruence and leader work outcomes was not possible. Table 23 presents the results of leader-member mindfulness congruence to leader LMX and leader LMX to the leader outcome variables.

**Hypotheses 9a and 9b**

In hypotheses 9a and 9b, I anticipated that leader LMX would mediate the relationship between the congruence of leader-member mindfulness and member-rated work outcomes (i.e., job satisfaction and work engagement). After adding the control variables, I established that leader-member mindfulness congruence was related to leader LMX (.71, $p < .01$). Leader-

member mindfulness congruence was also related to member work outcome of job satisfaction and work engagement (.66, $p < .01$; .72, $p < .01$), respectively. Finally, leader LMX was not related to member job satisfaction (.06, *ns*.) but was related to member work engagement (.18, $p < .05$). Hence, hypothesis 9a was not significant, but the hypothesis 9b was significant. There was a partial mediation effect of leader LMX on leader-member mindfulness congruence such that its effect to work engagement reduced from (.46, $p < .01$) to (.41, $p < .01$) after adding the mediator. Table 24 present the results of our congruence to LMX and leader LMX to member outcome variables.

**Table 23 - Leader-Member Mindfulness Congruence, Leader LMX and Leader Work Outcomes**

| | LMX-L Model 1 *B* | Model 2 *B* | LJS Model 3 *B* | Model 4 *B* | LWE Model 5 *B* |
|---|---|---|---|---|---|
| *Control* | | | | | |
| Leader Gender | -.03 | .00 | -.00 | -.20** | -.20** |
| Leader Age | .02 | -.11 | -.11 | -47** | -.47** |
| Leader Education | .08 | .19** | .19** | .14* | .14* |
| Leader Tenure | .00 | .10 | .10 | .32** | .32** |
| Leader Social Desirability | .01 | .12 | .12 | .03 | .03 |
| Leader Positive Affect | -.09 | .32** | .31** | .63** | .62** |
| Leader Negative Affect | -.13 | .08 | .07 | .24** | .23** |
| *Independent* | | | | | |
| MMAAS ($b_1$) | .55** | .11* | .15* | .11* | .13* |
| LMAAS ($b_2$) | -.03 | .67** | .67** | .43** | .43** |
| $MMAAS^2$ ($b_3$) | .06 | .00 | .01 | .06 | .06 |
| MMAAS x LMAAS ($b_4$) | .03 | .02 | .03 | .06 | .06 |
| $LMAAS^2$ ($b_5$) | -.03 | .09 | .08 | .37** | .37** |
| Leader LMX | -- | -- | -.07 | -- | -.03 |
| $R^2$ | .36** | .62** | .62** | .58** | .58** |
| $\Delta R^2$ | -- | -- | .00 | -- | .00 |
| $\Delta F$ | -- | | 1.61 | 22.30** | .34 |
| *Surface Tests* | | | | | |
| Congruence (x =y) | | | | | |
| Slope along x = y, b1 + b2 ($a_1$) | .71** | | -- | | -- |
| Curvature on x = y, b3 + b4 + b5 ($a_2$) | .07 | | -- | | -- |
| Incongruence (x = -y) | | | | | |
| Slope along x = -y, b1 - b2 ($a_3$) | .81** | | -- | | -- |
| Curvature on x = -y, b3 - b4 + b5 ($a_4$) | -.05 | | -- | | -- |

*Note.* $N = 58$ for leaders; $N = 210$ for members; $B$ = Standardized coefficient; MMAAS = Member mindful attention awareness scale; LMAAS = Leader mindful attention awareness scale; LMX-L = Leader-member exchange of the leader rated by member; LJS = Leader job satisfaction; LWE = Leader work engagement.
*$p < .05$; **$p < .01$

**Table 24 - Leader-Member Mindfulness Congruence, Leader LMX and Member Work Outcomes**

| | LMX-L | | MJS | | MWE |
|---|---|---|---|---|---|
| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
| | *B* | *B* | *B* | *B* | *B* |
| *Control* | | | | | |
| Leader Gender | -.03 | .06 | .05 | .00 | -.01 |
| Leader Age | .02 | .02 | .02 | -.08 | -.08 |
| Leader Education | .08 | .15* | .15* | .12 | .12 |
| Leader Tenure | .00 | -.14* | -.14* | .13 | .13 |
| Leader Social Desirability | .01 | .18** | .16* | .15* | .11 |
| Leader Positive Affect | -.09 | .35** | .33** | .29** | .23** |
| Leader Negative Affect | -.13 | .03 | .03 | -.02 | -.02 |
| *Independent* | | | | | |
| MMAAS ($b_1$) | .55** | .40** | .38** | .37** | .31 |
| LMAAS ($b_2$) | -.03 | .05 | .05 | .00 | .01 |
| $MMAAS^2$ ($b_3$) | .06 | -.06 | -.06 | -.01 | -01 |
| MMAAS x LMAAS ($b_4$) | .03 | .06 | .06 | -.02 | -.02 |
| $LMAAS^2$ ($b_5$) | -.03 | .06 | .06 | -.08 | -.07 |
| Leader LMX | -- | -- | .06 | -- | .18* |
| $R^2$ | .36** | .57** | .57** | .51** | .52** |
| $\Delta R^2$ | -- | -- | .00 | -- | .02** |
| $\Delta F$ | -- | 21.67** | .89 | 16.87** | 6.62* |

| | | | |
|---|---|---|---|
| *Surface Tests* | | | |
| Congruence (x =y) | | | |
| Slope along x = y, b1 + b2 ($a_1$) | .71** | -- | .41** |
| Curvature on x = y, b3 + b4 + b5 ($a_2$) | .07 | -- | -.19 |
| Incongruence (x = -y) | | | |
| Slope along x = -y, b1 - b2 ($a_3$) | .81** | -- | .37* |
| Curvature on x = -y, b3 - b4 + b5 ($a_4$) | -.05 | -- | -.12 |

*Note.* $N$ = 58 for leaders; $N$ = 210 for members; $B$ = Standardized coefficient; MMAAS = Member mindful attention awareness scale; LMAAS = Leader mindful attention awareness scale; LMX-L = Leader-member exchange of the leader rated by member; MJS = Member job satisfaction; MWE = Member work engagement.
*$p$ < .05; **$p$ < .01

# CHAPTER 5: DISCUSSION OF FINDINGS

Despite the increase in mindfulness research in different areas of psychotherapy and organizational science literature (e.g., Bishop, 2004; Brown & Ryan, 2003; Chiesa & Serretti, 2009; Dane, 2011; Dane & Brummel, 2013; Kabat-Zinn, 2005; Mesmer-Magnus et al., 2017), researchers are yet to investigate the congruence/incongruence effect of leader-member trait mindfulness. Most studies in these areas have focused on assessing the effect of trait mindfulness on self-rated outcome variables (e.g., Eisenbeiss & Knippenberg, 2015; Hülsheger et al., 2013; Reb et al., 2015a; Zhang, Ding, Li, & Wu, 2013; Zhang et al., 2014). At the same time few have assessed state mindfulness and job performance from other ratings (e.g., Dane & Brummel, 2013; Reb et al., 2015a). Researchers have not investigated how leader trait mindfulness affects their job satisfaction and work engagement. I do not know how member trait mindfulness affects the leader-rated job performance of the member. In this study, I proposed an assessment of leader-rated mindfulness on the leader's member-rated job performance and vice versa.

Findings from this study show different benefits of mindfulness for leaders and members. First, the study revealed that leader mindfulness is positively related to leader job satisfaction and work engagement. This result contributes to the gap in the mindfulness literature, where there is no information regarding how leader mindfulness predicts their job satisfaction and work engagement. Second, this study concurs with previous research on the effect of member mindfulness. I found member mindfulness to be positively related to job satisfaction and work engagement. The relationship between mindfulness for leaders and members and their job satisfaction is supported by the Affective Event Theory (Weiss & Cropanzano, 1996) that mindfulness is related to job satisfaction. Result is also consistent with the study conducted by Hülsheger et al. (2013) that there is a relationship between member mindfulness and job

satisfaction. Regarding member work engagement, the study supported a relationship between member mindfulness and their work engagement. Therefore, mindfulness strengthens the resources for increasing engagement among employees at work (Leroy et al., 2013). It also shows the universal benefits of mindfulness documented in the literature beyond the Eastern and Western cultures and the African culture, specifically in the Sub-Saharan.

Findings further revealed that member-rated mindfulness was positively related to the leader ratings of member job performance. When members are mindful, they tend to focus more on the task ahead of them than being distracted by other unnecessary activities occurring in their environment. In terms of leader mindfulness and member ratings of leader job performance, the study result was nonsignificant, and therefore, the data did not provide credible evidence to support this proposition. Variations may influence this inconclusive result in the type of industry selected for the study or the task leaders face. Some work environments pose considerable challenges to leaders in Sub-Saharan culture and engage them with work overloads and complexities beyond their capabilities. Coping with this complexity may require more than a mindfulness trait and may influence how subordinates perceive their work effectiveness. Also, mindfulness may not be a significant factor in enhancing leaders' performance. Other variables apart from mindfulness might have a more significant impact on the leader's performance in such context and culture. Dane and Brummel (2013) have suggested limitations of mindfulness in improving job performance. They posited that job type and experience could influence how mindfulness aids job performance. This situation may be attributable to the result found for the leader sample in Nigeria.

Congruence research in management based investigations through dyadic response has also been considered a more convincing way to show an authentic result of variable relationships

(e.g., Adkins & Russel, 1997; Zhang et al., 2012). In the mindfulness literature, I do not know how congruence/incongruence in leaders and their members' perceptions can benefit specific work outcomes. This study contributes to the mindfulness and organization literature by introducing a congruence effect into a mindfulness model. Moreover, results show support for leader-member mindfulness's congruence effect on the leader and member work outcomes of job satisfaction and work engagement. This result presents strong evidence that mindfulness matters in both work and personal life.

I also predicted a linear relationship between leader mindfulness and leader LMX, and this relationship was not significant. Like I have previous found that leader mindfulness does not predict leader job performance. Their mindfulness did not predict exchange relationships between them and their members. Leaders might be performing responsibilities that mindfulness alone can not sustain. However, further analysis revealed that leader and member mindfulness congruence developed a strong leader LMX quality. This result shows that mindfulness is essential for both the leaders and their members to build strong exchange relationships.

Further, since I found that leader and member mindfulness congruence resulted in a strong leader LMX quality, I anticipated that leader LMX partially mediates the relationship between mindfulness congruence and leader and member work outcomes. Results also revealed that leader LMX only partially mediates the relationship between mindfulness congruence and leader work engagement, while others were not significant. A nonsignificant result of leader mindfulness to leader LMX and the mediating effect of leader LMX to other work outcomes undermines the relevance of social exchange theory in which LMX is grounded. This result does not mean that the social exchange theory is not relevant in the African contexts. It might manifest differently from other cultures in the East and West or may manifest strongly in specific

work types or work outcomes than others. Also, a meta-analysis of LMX in 23 countries have shown that the relationship between LMX and work outcomes like job satisfaction, leader trust, turnover intentions, and organizational citizenship behavior have more potent effects in individualistic societies (e.g., Western cultures) than the collectivist societies (e.g., Asian and African cultures) (Rockstuhl et al., 2012). Hence, it is reasonable to find leader LMX nonsignificant in certain work types, work outcomes, or cultures. Based on this evidence, I conclude that leader LMX is poor in collectivist/horizontal cultures since Nigeria belongs to a collectivist society.

### 5.1. Theoretical Implications

This study provides several theoretical implications through its findings. First, I integrated dyadic congruence and leader LMX quality through the person-environment fit and social exchange theory framework into the mindfulness research. Researchers have examined mindfulness from the member perspective independently on various work outcomes, such as job satisfaction, work engagement, emotional absorption, and abusive supervision (Burton & Barber, 2019). Nevertheless, few studies have assessed the impact of state-level mindfulness on subordinates' job performance (Dane & Brummel, 2013). No study has investigated how leader-member mindfulness congruence affects work outcomes or exchange relationships. Therefore, this study serve as a pioneer for exploring how the congruence/incongruence effect of leader and member trait mindfulness jointly affects work outcomes in an African context.

Second, this study contributes to an increase in findings' generalizability by showing the benefits of mindfulness and LMX in a different cultural context. Mindfulness and LMX research is famous within the Eastern and Western culture, but I tested this construct in Sub-Saharan African culture. Mindfulness still serves as a predictor of specific work outcomes in this culture.

I also found support for the person-environment fit theory about the relevance of congruence in proving strong evidence to specific outcome relationships.

Third, in the mindfulness literature, there is a gap in how member mindfulness relates to member job performance as rated by the leader. I examined this area by assessing leader and member trait mindfulness on job performance from other-ratings. The relationship between mindfulness and job performance was assessed through other-ratings of job performance (i.e., leaders rated members' job performance, and members rated leaders' job performance). This approach was crucial to eliminate errors in measurement from a single source, attributable to common method variance in psychological constructs (Podsakoff et al., 2003).

Fourth, research on mindfulness has not assessed its organizational benefits in most educational and financial institutions. This study supports mindfulness as a meaningful tool for employees (both leaders and members) in those areas. Mindfulness can help to improve the satisfaction and engagement of both bank and university employees. It also identified that it could help improve the performance of subordinate employees in those industries.

Fifth, this study not only showed support for a positive relationship between leader-rated mindfulness and their work outcomes of job satisfaction and work engagement. Member rated mindfulness also contributed to leader self-rated job satisfaction. Member mindfulness had a positive relationship with member job satisfaction and work engagement (self-rated), along with leader LMX (member-rated) and member job performance (leader-rated).

Further, the relationship between leader mindfulness and leader LMX (member-rated) was not significant. More so, leader LMX did not have a mediating effect on mindfulness congruence and leader job satisfaction and work engagement, and member job satisfaction. Nevertheless, it mediated the relationship between mindfulness congruence and member work

engagement. In summary, this study contributes to the mindfulness literature by showing both its intrapersonal and interpersonal benefits of mindfulness at the workplace, specifically in a different cultural context. Mindfulness also has a connection with the job demands-resources theory. Since most of the activities employees embark on require some demands, a lack of resource could hinder those activities' achievement. However, mindfulness could serve as a resource that will aid the achievement of those organizational activities. This will then lead to positive work outcomes.

### 5.2. Practical Implications

Mindfulness at both the state and trait levels is beneficial to personal and work lives (Mesmer-Magnus, et al., 2017). This study shows support for the benefits of mindfulness at the workplace. Many studies in this area show its impact on either leader or member work outcomes. I found support for mindfulness's benefits for the leaders and their members alike within an organizational context.

Consistent with previous researchers findings, member mindfulness is positively related to members' in-role performance (Reb et al., 2019). Highly mindful leaders reported an increased level of job satisfaction and work engagement. Members also reported being satisfied with their job and highly engaged with their work. I found that when members are highly mindful, they tend to perform their job better than usual. The result of their job performance will, in turn, influence their leader's feeling of satisfaction with their job and enable them to be more engaged at work.

An important implication of these outcomes is that organizations can benefit from mindfulness in recruitment, placement, and training strategies. Mindfulness assessment can be conducted on new employees at the lower or upper levels within the organization. Doing this will

enable HR managers to understand their mindfulness level, assess their training needs, and utilize its benefits since mindfulness is deemed essential for improving job satisfaction and work engagement. Practices to improve mindfulness, such as mindfulness meditation, can also be introduced into the organization to increase botth the leaders and their members (Brown & Ryan, 2003). Hence, mindfulness helps to redirect attention to what is most important in the organization. It also enables both the leaders and members to understand each other and develope intrapersonal and interpersonal consciousness.

### 5.3. Potential Limitations

This study is associated with some limitations, just like every other study. First, I collected data from employees in Nigeria. Most research on LMX and mindfulness are famous within the Eastern and Western cultures. Although I assessed the reliability and construct validity of my measures, the unfamiliarity of such constructs in the Sub-Saharan cultures could still pose some threats in response to some of our study variables. Moreover, mindfulness and LMX may be conceptualized differently in the West African culture and still need to be understood. Hence, this study results alone cannot give an ultimate conclusion on our theorizing in the Sub-Saharan culture. Exploratory studies can be conducted in this environment to understand the conceptualization of mindfulness and LMX better.

A second limitation of this study is time constraints. We collected cross-sectional data based on the timing for the completion of the study. Dyadic data can be very challenging to collect, and as a result, collecting longitudinal dyadic data will take ample time to achieve, thereby affecting the completion time for the study. More so, I am aware that the convenience sampling technique can be biased in representing our actual study population. Such non-

probabilistic sampling is related to the challenges encountered in collecting dyadic data, thereby enabling the efficient recruitment of study participants.

I also admit that I did not use an experimental design in the study. Therefore, I cannot conclude that there is a causal relationship between the independent and dependent variables.

### 5.4. Suggestions for Further Research

In this study, I integrated a congruence model into the mindfulness construct to enable me to give an additional explanation into the mindfulness construct. I also tested for the mediating effect of member-rated LMX of the leader in the study. However, most of my hypothesizing of the mediating effect of leader LMX on mindfulness congruence and work outcomes in the integrated model did not yield the results that I anticipated. This outcome could be related to cultural differences or samples or work settings in the Sub-Saharan African nations, where mindfulness and LMX are not well known. I further suggest that future researchers retest this model in Sub-Saharan cultures to understand these outcomes' temporal patterns. I also suggest that the congruence model of leader-member mindfulness be tested in the Eastern and Western cultures since the mindfulness literature has no evidence of such a model in those cultures.

Further, I collected data from two sources (i.e., leader and member measured their self-perceived mindfulness, job satisfaction, and work engagement; leader measured subordinates' job performance and vice versa; members rated the LMX of the leader). This result revealed that member rated LMX of the leader was not a significant mediator of leader-member mindfulness and leader work outcomes, as well as member job satisfaction. Future studies could try to integrate leader rated LMX of the member into the model or use both the leader and member LMX to get a clearer picture of LMX contribution to mindfulness and work outcomes.

Research on mindfulness has not accounted for some work-related outcomes such as presenteeism, absenteeism, and tardiness. Little is also known about how mindfulness relates to abusive supervision, employee incivility behavior, turnover intentions, organizational citizenship behaviors, to name a few. This study results also showed a nonsignificant outcome for leader mindfulness and job performance. I suggest that further research should test the relationship between leader mindfulness and leader stress and well-being in the Sub-Saharan African culture. A leader's stress may be a significant hindrance to leaders' productivity. Investigating these outcomes will help understand whether a nonsignificant relationship between leaders' mindfulness and their job performance is related to stress. It will further help to increase our knowledge of how to apply mindfulness to improve employee success, which will lead to organizational success.

Furthermore, I suggest the use of longitudinal data for subsequent studies as this could improve the chance of achieving a more substantial congruence effect between the leader and member mindfulness. Person-environment fit researchers, Spokane, Meir, and Catalano (2000) have also suggested using the correlational and experimental design in congruence studies. I suggest a laboratory setting be simulated into a work setting where specific work and personal characteristics can be assessed on outcomes, such as stress, job satisfaction, productivity, task performance, and organizational citizenship behavior, to name a few. Understanding complex interactions between people at work and at educational settings might have shifted from the traditional approach of correlational studies to the experimental paradigm (Smart, 1997).

Finally, this study examined both leader and member mindfulness at the trait level. Further studies could investigate leader-member mindfulness's congruence at the state level, specifically within the Sub-Saharan African samples. Studying mindfulness at the state level

might also be an excellent approach to applying experimental design to studying the relationship between mindfulness and work outcomes. Hence, employees or participants could be encouraged to participate in mindfulness meditation training for positive work outcomes.

## 5.5. Conclusion

Mindfulness has been found to be beneficial to our personal lives and at work. Many organizations support the benefits of mindfulness on their employees, and studies have supported this assertion. This study also gives strong support to its benefits. I tested for mindfulness from both the leader and member perspective, enabling me to see a broader scope of how mindfulness can be beneficial even in a new cultural context. Trait mindfulness is a quality to look for during recruitment and for allocating employees to work in areas where a high level of attention and concentration is needed. Mindfulness meditation programs can also be introduced and tailor-made for specific employees if their mindfulness level is known. It will enable organizations to effectively and efficiently utilize its resources. Apart from the benefit of mindfulness and our sample results, I suggest a more grounded investigation into the antecedents and consequences of mindfulness in the Sub-Saharan African cultures. Most importantly, further exploratory studies may help understand the development of LMX and mindfulness in the Sub-Saharan culture as both constructs are most familiar within the Eastern and Western cultures.

## REFERENCES


Adkins, C. L., & Russel, C. J. (1997). Supervisor-subordinate work value congruence and subordinate performance: A pilot study. *Journal of Business Psychology, 12*(2), 205-218.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411-423.

Ansari, M. A., Baumgartel, H., & Sullivan, G. (1982). The personal orientation-organizational climate fit and managerial success. *Human Relations, 35*(12), 1159-1178. doi:10.1177/001872678203501206

Ansari, M. A., Len, T. S., & Aafaqi, R. (2014, April). Leader-member exchange and employee creativity: The role of positive emotion. *Paper presented at the 29th annual meeting of the Society for Industrial & Organizational Psychology, Hilton Hawaiian Village, Honolulu, Hawaii.*

Arendt, J. F. W., Verdorfer, A. P., & Kugler, K. G. (2019). Mindfulness and leadership: Communication as a behavioral correlate of leader mindfulness and its effect on follower satisfaction. *Frontiers in Psychology, 10*(667), 1-16. doi:10.3389/fpsyg.2019.00667

Atkins, P. W. B., & Wood, R. E. (2002). Self-versus others' ratings as predictors of assessment center ratings: Validation evidence for 360 degree feedback programs. *Personnel Psychology, 55*, 871–904.

Ausserhofer, D., Schubert, M., Desmedt, M., Blegen, M. A., De Geest, S., & Schwendimann, R. (2013). The association of patient safety climate and nurse-related organizational factors with selected patient outcomes: A cross-sectional survey. *International journal of nursing studies, 50*(2), 240-252.

Baas, M., Nevicka, B., & Ten Velden, F. S. (2014). Specific mindfulness skills differentially predict creative performance. *Personality and Social Psychology Bulletin, 40*(9), 1092-1106. doi:10.1177/0146167214535813

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. doi:10.1177/1073191104268029

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Bass, B. M., & Bass, R. (2008). *The bass handbook of leadership: Theory, research, and managerial applications* (Fourth Edition ed.). New York, NY: Free Press.

Beauchemin, J., Hutchins, T. L., & Patterson, F. (2008). Mindfulness meditation may lessen anxiety, promote social skills, and improve academic performance among adolescents with learning disabilities. *Complementary Health Practice Review, 13*, 34-45.

Beehr, T. A., Ivanitskaya, L., Hansen, C. P., Erofeev, D., & Gudanowski, D. M. (2001). Evaluation of 360-degree feedback ratings: Relationships with each other and with performance and selection predictors. *Journal of Organizational Behavior, 22*(775-788).

Bellis, R., Rowland, D., & Higgs, M. J. (2016). *Is change all in the mind? A study of change leadership, leader mindfulness and change success.* Paper presented at the Academy of Management Proceedings.

Bishop, S. R. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice, 11*(3), 230-241. doi:10.1093/clipsy/bph077

Blau, P. M. (1964). *Exchange and power in social life*. New York, NY: Wiley.

Boon, C., & Biron, M. (2016). Temporal issues in person-organization fit, person-job fit and turnover: The role of leader-member exchange. *Human Relations, 69*(12), 2177-2200. doi:10.1177/0018726716636945

Breevaart, K., Bakker, A. B., Demerouti, E., & Heuvel, M. V. D. (2015). Leader-member exchange, work engagement, and job performance. *Journal of Managerial Psychology, 30*(7), 754 - 770. doi:10.1108/JMP-03-2013-0088

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. doi:10.1037/0022-3514.84.4.822

Byrne, D. (1997). An overview and underview of research and theory within the attraction paradigm. *Journal of Social and Personal Relationship, 14*(3), 417-431.

Cable, D. M., & DeRue, D. S. (2002). The convergent and discriminant validity of subjective fit perceptions. *Journal of Applied Psychology, 87*(5), 875-884. doi:10.1037//0021-9010.87.5.875

Cable, D. M., & Edward, J. R. (2004). Complementary and supplementary fit: A theoretical and empirical integration. *Journal of Applied Psychology, 89*(5), 822-834. doi:10.1037/0021-9010.89.5.822

Carlson, E. N. (2013). Overcoming the barriers to self-knowledge: Mindfulness as a path to seeing yourself as you really are. *Perspectives on Psychological Science, 8*(2), 173-186. doi:10.1177/1745691612462584

Carlson, L. E., & Brown, K. W. (2005). Validation of the mindful attention awareness scale in a cancer population. *Journal of Psychosomatic Research, 58*(1), 29-33. doi:10.1016/j.jpsychores.2004.04.366

Chen, Y., Wen, Z., Peng, J., & Liu, X. (2016). Leader-follower congruence in loneliness, LMX and turnover intention. *Journal of Managerial Psychology, 31*(4), 864-879. doi:10.1108/jmp-06-2015-0205

Chiesa, A., & Serretti, A. (2009). Mindfulness-based stress reduction for stress management in healthy people: A review and meta-analysis. *Journal of Alternative and Complementary Medicine, 15*(5), 593.

Conze, E. (1956). Buddhist meditation (ethical and religious classics of east and west): London.

Crowne, D. P., & Marlowe, D. A. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*(4), 349-354.

Crowne, D. P., & Marlowe, D. A. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*, 349-354. doi:10.1037/h0047358

Dane, E. (2011). Paying attention to mindfulness and its effects on task performance in the workplace. *Journal of Management, 37*(4), 997-1018. doi:10.1177/0149206310367948

Dane, E., & Brummel, B. J. (2013). Examining workplace mindfulness and its relations to job performance and turnover intention. *Human Relations, 67*(1), 105-128. doi:10.1177/0018726713487753

Dierynck, B., Leroy, H., Savage, G. T., & Choi, E. (2016). The role of individual and collective mindfulness in promoting occupational safety in health care. *Medical Care Research and Review, 74*(1), 79-96. doi:10.1177/1077558716629040

Drucker, P. F. (2008). *Management - Revised Edition*: HarperCollins.

Du, H., & Wang, L. (2016). The impact of the number of dyads on estimation of dyadic data analysis using multilevel modeling. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences, 12*(1), 21-31. doi:10.1027/1614-2241/a000105.

Dulebohn, J. H., Bommer, W. H., Liden, R. C., Brouer, R. L., & Ferris, G. R. (2012). A meta-analysis of antecedents and consequences of leader-member exchange: Integrating the past with an eye toward the future. *Journal of Management, 38*(6), 1715-1759. doi:10.1177/0149206311415280

Edward, J. R. (1994). The study of congruence in organizational behavior research: Critique and a proposed alternative. *Organizational Behavior and Human Decision Process, 58*, 51-100.

Edwards, J. R., & Harrison, R. V. (1993). Job demands and worker health: Three-dimensional reexamination of the relationship between person-environment fit and strain. *Journal of Applied Psychology, 78*(4), 628-648.

Edwards, J. R., & Parry, M. E. (1993). On the use of polynomial regression equations as an alternative to difference scores in organizational research. *The Academy of Management Journal, 36*(6), 1577-1613.

Eisenbeiss, S. A., & Knippenberg, D. V. (2015). On ethical leadership impact: The role of follower mindfulness and moral emotions. *Journal of Organizational Behavior, 36*(2), 182-195. doi:10.1002/job.1968

Epstein, M. (1995). *Thoughts without a thinker: Psychotherapy from a Buddhist perspective*. New York: Basic Books.

Evans, R. B. (1990). William James, "The Principles of Psychology," and Experimental Psychology. *The American journal of psychology, 103*(4), 433-447. doi:10.2307/1423317

Flook, L., Smalley, S. L., Kitil, M. J., Galla, B. M., Kaiser-Greenland, S., Locke, J., & Kasari, C. (2010). Effects of mindful awareness practices on executive functions in elementary school children. *Journal of Applied School Psychology, 26*(1), 70-95.

Frizzell, D. A., Hoon, S., & Banner, D. K. (2016). A phenomenological investigation of leader development and mindfulness meditation. *Journal of Social Change, 8*(1), 14-25. doi:10.5590/JOSC.2016.08.1.02

Gelles, D. (2012). Mindful work: How meditation is changing business from the inside out. *New York, NY: Houghton Mifflin Harcourt.*

George, J. M. (1996). Trait and state affect. In K. R. Murphy (Ed.). Individual differences and behavior in organizations (pp. 145-171): San Francisco: Jossey-Bass.

Gerstner, C. R., & Day, D. V. (1997). Meta-analytic review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology, 28*(6), 827-844. doi:10.1037/0021-9010.82.6.827

Giluk, T. L. (2009). Mindfulness, big five personality, and affect: A meta-analysis. *Personality and Individual Differences, 47*(8), 805-811.

Good, D. J., Lyddy, C. J., Glomb, T. M., Bono, J. E., Brown, K. W., Duffy, M. K., . . . Lazar, S. W. (2016). Contemplating mindfulness at work. *Journal of Management, 42*(1), 114-142. doi:10.1177/0149206315617003

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *Leadership Quarterly, 6*(2), 219-247.

Grossman, P. (2008). On measuring mindfulness in psychosomatic and psychological research. *Journal of Psychosomatic Research, 64*, 405-408.

Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits. *Journal of Psychosomatic Research, 57*(1), 35-43. doi:10.1016/s0022-3999(03)00573-7

Hair, J. F. J., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.

Hales, D. N., Kroes, J., Chen, Y., & Kang, K. W. D. (2012). The cost of mindfulness: A case study. *Journal of Business Research, 65*(4), 570-578. doi:10.1016/j.jbusres.2011.02.023

Hanh, T. N. (1976). *The miracle of mindfulness*. Boston: Beacon Press.

Hargadon, A. B., & Bechky, B. A. (2006). When collections of creatives become creative collectives: A field study of problem solving at work *Organization Science, 17*(4), 484-500.

Harvey, P. (2000). *An introduction to Buddhist ethics: Foundations, values and issues*. Cambridge, UK: University Press.

Hayes, S. C. (2004). Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. *Behavior Therapy, 35*, 639-665.

Hayes, S. C., Strosahl, K. D., & Wilson, K. G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*: Guilford Press.

Heidemeier, H., & Moser, K. (2009). Self-other agreement in job performance ratings: A meta-analytic test of a process model. *Journal of Applied Psychology, 94*(2), 353-370. doi:10.1037/0021-9010.94.2.353

Heppner, W. L., Kernis, M. H., Lakey, C. E., Campbell, W. K., Goldman, B. M., Davis, P. J., & Cascio, E. V. (2008). Mindfulness as a means of reducing aggressive behavior: Dispositional and situational evidence. *Aggressive behavior, 34*(5), 486-496.

Hoffman, B. J., & Woehr, D. J. (2006). A quantitative review of the relationship between person-organization fit and behavioral outcomes. *Journal of Vocational Behavior, 68*(3), 389-399.

Hougaard, R., Carter, J., & Coutts, G. (2016). Mindful leadership: Achieving results by managing the mind. *Leader to Leader, Executive Forum, 79*, 49-56.

Hoy, W. K., Gage, C. Q., & Tarter, C. J. (2006). School mindfulness and faculty trust: Necessary conditions for each other? *Educational Administration Quarterly, 42*(2), 236-255. doi:10.1177/0013161X04273844

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. doi:10.1037/a0031313

Hyland, P. K., Lee, R. A., & Mills, M. J. (2015). Mindfulness at work: A new approach to improving individual and organizational performance. *Industrial and Organizational Psychology, 8*(4), 576-602. doi:10.1017/iop.2015.41

Irving, J. A. (2010). Cross-cultural perspectives on servant leadership. *Servant Leadership* (pp. 118-129): Palgrave Macmillan UK.

Joseph, D. L., Newman, D. A., & Sin, H.-P. (2011). Leader–Member Exchange (LMX) Measurement: Evidence for Consensus, Construct Breadth, and Discriminant Validity (Vol. 6, pp. 89-135): Emerald Group Publishing Limited.

Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation: Theoretical considerations and preliminary results. *General Hospital Psychiatry, 4*, 33-47.

Kabat-Zinn, J. (2005). *Coming to our senses: Healing ourselves and the world through mindfulness*: Hachette UK.

Kabat-Zinn, J. (2009). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain, and illness*. New York: Delta.

Kabat-Zinn, J., Lipworth, L., & Burney, R. (1985). The clinical use of mindfulness meditation for the self-regulation of chronic pain. *Journal of Behavioral Medicine, 8*(2), 163-190. doi:10.1007/bf00845519

Kawakami, C., White, J. B., & Langer, E. J. (2000). Mindful and masculine: Freeing women leaders from the constraints of gender roles. *Journal of Social Issues, 56*(1), 49-63.

Kelly, C. (2012). O.K., Google, take a deep breath. *NewYork Times.*

Knox, G. E., Simpson, K. R., & Garite, T. J. (1999). High reliability perinatal units: An approach to the prevention of patient injury and medical malpractice claims. *Journal of Healthcare Risk Management, 19*(2), 24-32.

Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology, 58*, 281-342.

Kudesia, R. S. (2013). Mindfulness at work: Promising areas of research inquiry. *Academy of Management Proceedings*.

Landy, E. L., & Farr, J. L. (1980). Performance rating. *Psychological Bulletin, 87*, 72-107.

Langer, E. J. (1989). *Mindfulness*: Addison-Wesley/Addison Wesley Longman.

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. doi:10.1002/jclp.20326

Leroy, H., Anseel, F., Dimitrova, N. G., & Sels, L. (2013). Mindfulness, authentic functioning, and work engagement: A growth modeling approach. *Journal of Vocational Behavior, 82*(3), 238-247. doi:10.1016/j.jvb.2013.01.012

Lewis, M. W. (2000). Exploring paradox: Toward a more comprehensive guide. *Academy of management review, 25*(4), 760-776.

Liden, R. C., & Maslyn, J. M. (1998). Multidimensionality of leader-member exchange: An empirical assessment through scale development. *Journal of Management, 24*(1), 43-72.

Lopez, D. S. (2002). *The story of Buddhism: A concise guide to its history and teachings*. San Francisco: HarperSanFrancisco.

Luken, M., & Sammons, A. (2016). Systematic review of mindfulness practice for reducing job burnout. *The American Journal of Occupational Therapy, 70*(2), 1-10. doi:10.5014/ajot.2016.016956

Lynch, T. R., Bronner, L. L., & Baer, R. A. (2006). *Mindfulness-based treatment approaches: Clinician's guide to evidence base and applications* (Vol. 15). San Diego, CA, US: Elsevier Academic Press.

Ma, S. H., & Teasdale, J. D. (2004). Mindfulness-based cognitive therapy for depression: Replication and exploration of differential relapse prevention effects. *Journal of Consulting and Clinical Psychology, 72*(1), 31-40. doi:10.1037/0022-006x.72.1.31

Malinowski, P., & Lim, H. J. (2015). Mindfulness at work: Positive affect, hope, and optimism mediate the relationship between dispositional mindfulness, work engagement, and well-being. *Mindfulness, 6*(6), 1250-1262. doi:10.1007/s12671-015-0388-5

Martins, H., & Proença, T. (2012). Minnesota satisfaction questionnaire – psychometric properties and validation in a population of Portuguese hospital workers *FEP Economics and Management, 471*, 1-29.

Meade, A. W., & Kroustalis, C. M. (2006). Problems with item parceling for confirmatory factor analytic tests of measurement invariance. *Organizational Research Methods, 9*(3), 369-403. doi:10.1177/1094428105283384

Meglino, B. M., Ravlin, E. C., & Adkins, C. L. (1989). A work values approach to corporate culture: A field test of the value congruence process and Its relationship to individual outcomes. *Journal of Applied Psychology, 74*(3), 424-432.

Mellahi, K., & Harris, L. C. (2016). Response rates in business and management research: An overview of current practices and suggestions for future direction. *British Journal of Management, 27*, 426-437. doi:10.1111/1467-8551.12154

Mesmer-Magnus, J., Manapragada, A., Viswesvaran, C., & Allen, J. W. (2017). Trait mindfulness at work: A meta-analysis of the personal and professional correlates of trait mindfulness. *Human Performance, 30*(2-3), 79-98. doi:10.1080/08959285.2017.1307842

Mikulas, W. L., & Mikulas, W. L. (2011). Mindfulness: Significant Common Confusions. *Mindfulness, 2*(1), 1-7. doi:10.1007/s12671-010-0036-z

Mu, E., & Butler, B. S. (2009). The assessment of organizational mindfulness processes for the effective assimilation of IT innovations. *Journal of Decision Systems, 18*(1), 27-51.

Muchinsky, P. M., & Monahan, C. J. (1987). What is person-environment congruence? Supplementary versus complementary models of fit. *Journal of Vocational Behavior, 31*(3), 268-277. doi:10.1016/0001-8791(87)90043-1

Ndubisi, N. O. (2012). Mindfulness, reliability, pre-emptive conflict handling, customer orientation and outcomes in Malaysia's healthcare sector. *Journal of Business Research, 65*(4), 537-546. doi:10.1016/j.jbusres.2011.02.019

Nederhof, A. J. (1985). Methods of coping with social desirability bias: A review. *European Journal of Social Psychology, 15*, 263-280. doi:10.1002/ejsp.2420150303

Nyanaponika, T. (1972). *The power of mindfulness*. San Francisco: Unity Press. Nydahl.

Olafsen, A. H. (2016). The implications of need-satisfying work climates on state mindfulness in a longitudinal analysis of work outcomes. *Motivation and Emotion, 41*(1), 22-37. doi:10.1007/s11031-016-9592-4

Plante, T. G. (2010). *Contemplative practices in action: Spirituality, meditation, and health*: ABC-CLIO.

Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*, 879−903.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 63*, 539-569. doi:10.1146/annurev-psych-120710-100452.

Preacher, K. J., & Coffman, D. L. (2006). Computing power and minimum sample size for RMSEA [Computer software]. Retrieved from http://www.quantpsy.org/

Reb, J., Chaturvedi, S., Narayanan, J., & Kudesia, R. S. (2019). Leader mindfulness and employee performance: A sequential mediation model of LMX quality, interpersonal justice, and employee stress. *Journal of Business Ethics, 160*, 745-763. doi:10.1007/s10551-018-3927-x

Reb, J., Narayanan, J., & Chaturvedi, S. (2012). Leading mindfully: Two studies on the influence of supervisor trait mindfulness on employee well-being and performance. *Mindfulness, 5*(1), 36-45. doi:10.1007/s12671-012-0144-z

Reb, J., Narayanan, J., & Chaturvedi, S. (2014). Leading mindfully: Two studies of the influence of supervisor triat mindfulness on employee well-being and performance. *Mindfulness, 5*(1), 36-45. doi:10.1007/s12671-012-0144-z.

Reb, J., Narayanan, J., & Ho, Z. W. (2015a). Mindfulness at work: Antecedents and consequences of employee awareness and absent-mindedness. *Mindfulness, 6*(1), 111-122. doi:10.1007/s1267 1-013-0236-4.

Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne social desirability scale. *Journal of Clinical Psychology, 38*(1), 119-125.

Rockstuhl, T., Dulebohn, J. H., Ang, S., & Shore, L. M. (2012). Leader-member exchange (LMX) and culture: A meta-analysis of correlates of LMX across 23 countries. *Journal of Applied Psychology, 97*(6), 1097-1130. doi:10.1037/a0029978

Roemer, L., Lee, J. K., Salters-Pedneault, K., Erisman, S. M., Orsillo, S. M., & Mennin, D. S. (2009). Mindfulness and emotion regulation difficulties in generalized anxiety disorder: Preliminary evidence for independent and overlapping contributions. *Behavior Therapy, 40*(2), 142-154.

Scandura, T. A., & Graen, G. B. (1984). Moderating effects of initial leader–member exchange status on the effects of a leadership intervention. *Journal of Applied Psychology, 69*, 428-436. doi:10.1037/00219010.69.3.428

Schaufeli, W. B., Bakker, A. B., & Marisa, S. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement, 66*(4), 701-716. doi:10.1177/0013164405282471

Schuh, S. C., Zheng, M. X., Xin, K. R., & Fernandez, J. A. (2019). The interpersonal benefits of leader mindfulness: A serial mediation model linking leader mindfulness, leader procedural justice enactment, and employee exhaustion and performance. *Journal of Business Ethics, 156*, 1007–1025. doi:10.1007/s10551-017-3610-7

Schultz, P. P., Ryan, R. M., Niemiec, C. P., Legate, N., & Williams, G. C. (2014). Mindfulness, work climate, and psychological need satisfaction in employee well-being. *Mindfulness, 6*(5), 971-985. doi:10.1007/s12671-014-0338-7

Schutte, N. S., & Malouff, J. M. (2011). Emotional intelligence mediates the relationship between mindfulness and subjective well-being. *Personality and Individual Differences, 50*(7), 1116-1119. doi:10.1016/j.paid.2011.01.037

Shanock, L. R., Baran, B. E., Gentry, W. A., Pattison, S. C., & Heggestad. (2010). Polynomial regression with response surface analysis: A powerful approach for examining moderation and overcoming limitations of difference scores. *Journal of Business and Psychology, 25*(4), 543-554. doi:10.1007/sl0869-010-9183-4

Smart, J. C. (1997). Academic sub-environments and differential patterns of self-perceived growth during college: A test of Holland's theory. *Journal of College Student Development, 38*, 68-72.

Spokane, A. R., Meir, E. I., & Catalano, M. (2000). Person-environment congruence and Holland's theory: A review and reconsideration. *Journal of Vocational Behavior, 57*, 137-187. doi:10.1006/jvbe.2000.1771

Steckler, N. A., & Rosenthal, R. (1985). Sex differences in nonverbal and verbal communication with bosses, peers, and subordinates. *Journal of Applied Psychology, 70*(1), 157-163.

Stimson, J. A., Carmines, E. G., & Zeller, R. A. (1978). Interpreting polynomial regression. *Sociological Methods and Research, 6*(4), 515-524.

Sutcliffe, K. M., Vogus, T. J., & Dane, E. (2016). Mindfulness in organizations: A cross-level review. *Annual Review of Organizational Psychology and Organizational Behavior, 3*(1), 55-81. doi:10.1146/annurev-orgpsych-041015-062531

Swart, J., Winters, D., & Apsche, J. (2014). Mindfulness-based mode deactivation therapy for adolescents with behavioral problems and complex comorbidity: Concepts in a nutshell and cost-benefit analysis. *Journal of Psychology and Clinical Psychiatry, 1*(5), 1-12. doi:10.15406/jpcpy.2014.01.00031

Tanay, G., & Bernstein, A. (2013). State mindfulness scale (SMS): Development and initial validation. *Psychological Assessment, 25*(4), 1286-1299. doi:10.1037/a0034044

Teasdale, J. D., Segal, Z., & Williams, J. M. G. (1995). How does cognitive therapy prevent depressive relapse and why should attentional control (mindfulness) training help? *Behavior Research and therapy, 33*(1), 25-39.

Teasdale, J. D., Segal, Z. V., Williams, J. M. G., Ridgeway, V. A., Soulsby, J. M., & Lau, M. A. (2000). Prevention of relapse/recurrence in major depression by mindfulness-based cognitive therapy. *Journal of Consulting and Clinical Psychology, 68*(4), 615-623. doi:10.1037/0022-006x.68.4.615

Thomas, E. S., Kristin, V. R., & Victoria, M. S. (2015). Mindfulness in financial literacy. *Journal of Human Behavior in the Social Environment, 00*, 1-8. doi:10.1080/10911359.2015.1052914

Thompson, E. R. (2007). Development and validation of an internationally reliable short-form of the positive and negative affect schedule (PANAS). *Journal of Cross Cultural Psychology, 38*(2), 227-242. doi:10.1177/0022022106297301

Tsui, A. S., & O'Reilly, C. A., III. (1989). Beyond simple demographic effects: The importance of relational demography in superior-subordinate dyads. *Academy of Management Journal, 32*(2), 402-423.

Turban, D. B., & Jones, A. P. (1988). Supervisor-subordinate similarities: Types, effects, and mechanisms. *Journal of Applied Psychology, 73*(2), 228-234.

Valorinta, M. (2009). Information technology and mindfulness in organizations. *Industrial and Corporate Change, 18*(5), 963-997.

Verdorfer, A. P. (2016). Examining mindfulness and its relations to humility, motivation to lead, and actual servant leadership behaviors. *Mindfulness, 7*(4), 950-961. doi:10.1007/s12671-016-0534-8

Verquer, M. L., Beehr, T. A., & Wagner, S. H. (2003). A meta-analysis of relations between person-organization fit and work attitudes. *Journal of Vocational Behavior, 63*(3), 473-489.

Vich, M. (2015). The emerging role of mindfulness research in the workplace and its challenges. *Central European Business Review, 4*(3), 35-47.

Vogus, T. J., & Sutcliffe, K. M. (2012). Organizational mindfulness and mindful organizing: A reconciliation and path forward. *Academy of Management Learning & Education, 11*(4), 722-735. doi:10.5465/amle.2011.0002C

Walach, H., Buchheld, N., Buttenmüller, V., Kleinknecht, N., & Schmidt, S. (2006). Measuring mindfulness—the Freiburg mindfulness inventory (FMI). *Personality and Individual Differences, 40*(8), 1543-1555.

Wang, H., Law, K. S., Hackett, R. D., Wang, D., & Chen, Z. X. (2005). Leader-member exchange as a mediator of the relationship between transformational leadership and followers' performance and organizational citizenship behavior. *Academy of Management Journal, 48*(3), 420-432.

Wasylkiw, L., Holton, J., Azar, R., & Cook, W. (2015). The impact of mindfulness on leadership effectiveness in a health care setting: A pilot study. *Journal of Health Organization and Management, 29*(7), 893-911. doi:10.1108/JHOM-06-2014-0099

Weick, K. E., & Sutcliffe, K. M. (2006). Mindfulness and the quality of organizational attention. *Organization Science, 17*(4), 514-524.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2008). Organizing for high reliability: Processes of collective mindfulness. *Crisis management, 3*(1), 81-123.

Weiss, D. J., Dawis, R. V., England, G. W., & Lofquist, L. H. (1967). Manual for the Minnesota Satisfaction Questionnaire *Minnesota Studies in Vocational Rehabilitation* (Vol. 22). Minneapolis: University of Minnesota, Industrial Relations Center

Weiss, H. M., & Cropanzano, R. (1996). *Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work* (Vol. 18). London, England: JAI Press.

Wexley, K. N., Alexander, R. A., Greenawalt, J. P., & Couch, M. A. (1980). Attitudinal congruence and similarity as related to interpersonal evaluations in manager-subordinate dyads. *Academy of Management Journal, 23*(2), 320-330.

Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*(3), 601-617.

Witkiewitz, K., Marlatt, G. A., & Walker, D. (2005). Mindfulness-based relapse prevention for alcohol and substance use disorders. *Journal of Cognitive Psychotherapy: An International Quarterly, 19*(3), 211-228.

Zedeck, S., & Cascio, W. F. (1884). Psychological issues in personnel decisions. *Annual Review of Psychology, 35*, 461-518.

Zhang, J., Ding, W., Li, Y., & Wu, C. (2013). Task complexity matters: The influence of trait mindfulness on task and safety performance of nuclear power plant operators. *Personality and Individual Differences, 55*, 433-439. doi:10.1016/j.paid.2013.04.004

Zhang, Y., Waldman, D. A., Han, Y. L., & Li, X. B. (2014). Paradoxical leader behaviors in people management: Antecedents and consequences. *Academy of Management Journal, 58*(2), 538-566. doi:10.5465/amj.2012.0995

Zhang, Z., Wang, M., & Shi, J. (2012). Leader-follower congruence in proactive personality and work outcomes: The mediating role of leader-member exchange. *Academy of Management Journal, 55*(1), 111-130. doi:10.5465/amj.2009.0865

Zikmund, W. G. (2013). *Business research methods* (7th ed.). Mason, OH: South-Western.

# APPENDIX A: LEADER QUESTIONNAIRES

## LETTER OF CONSENT (SUPERVISORS)

**Title of Research:** Leader-Member Congruence in Mindfulness and Work Outcomes: The Mediating Role of Leader-Member Exchange.

You have been invited to participate in a research survey for a graduate thesis at the University of Lethbridge. The objective of this study is to investigate the similarity in supervisor-subordinate mindfulness and its relationship with leadership and work outcomes.

The survey will take about **20-minutes** to complete and contains **121 questions**. If you decide to partake in the survey, you will be **partially anonymous.** Partial anonymity is ensured because both you and your subordinate will know whom you are responding about, but any information you provide will remain **confidential**. All data results from the survey will be used in the investigation of this study and remain on a password-protected computer. Data will be destroyed after 5 years. Only the researcher and his supervisors will be able to access this information. There are no anticipated risks from participating in this study. There are also no direct benefits from participating although you may gain some insight into your own experiences and behaviors.

By completing this survey, you will be given **NGN 500** in form of call airtime credit or cash. This is a form of **appreciation** for your time and participation in the survey. To maintain your confidentiality, you are expected to seal up the questionnaire in the envelope provided to you by the researcher.

Your participation in this survey is **completely voluntary**. At any point during the survey, you may decide not to answer any question, you also have the option of withdrawing your participation in the survey by leaving the remainder of the survey blank. If you do wish to withdraw from the survey, your survey responses will not be included in the research. However, only those who participate will be given the **NGN 500** call airtime credit or cash.

The researcher intends to present the results of this study at an academic conference and/or publish the results in an academic journal. If you wish to be informed of the results of this research, you may write down the researcher's contact information, so you can be informed (Results will be available in April 2019). If you have any questions or wish to contact the researcher, you may email him at david.adebesin@uleth.ca. Questions regarding your rights as a participant in this research may be addressed to the Office of Research Ethics, University of Lethbridge (Phone: 403-329-2747 or Email: research.services@uleth.ca).

If you do choose to participate, please take your time, and answer the questions to the best of your knowledge and honesty. There are three sections within the survey each with specific instructions and particular answer options. **Please read the instructions carefully**. Thank you for considering participating in this survey. Your contribution is greatly appreciated.

**Consent to Participate**

With knowledge of the above-mentioned criteria, I agree, to participate in this study.

I agree to participate, please flip the page now and begin.

I do not wish to participate, please do not open the survey, and ask to have your survey collected.

**Section A: (Self-Perception)**

**Mindfulness:** Below is a collection of statements about your everyday experience. Using the 1 – 6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be.

| Almost Always | Very Frequently | Somewhat Frequently | Somewhat Infrequently | Very Infrequently | Almost Never |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

| S/N | ITEMS | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| 1. | I could be experiencing some emotion and not be conscious of it until sometime later. | | | | | | |
| 2. | I break or spill things because of carelessness, not paying attention, or thinking of something else. | | | | | | |
| 3. | I find it difficult to stay focused on what is happening in the present. | | | | | | |
| 4. | I tend to walk quickly to get where I am going without paying attention to what I experience along the way. | | | | | | |
| 5. | I tend not to notice feelings of physical tension or discomfort until they really grab my attention. | | | | | | |
| 6. | I forget a person's name almost as soon as I have been told for the first time. | | | | | | |
| 7. | It seems I am "running on automatic," without much awareness of what I am doing. | | | | | | |
| 8. | I rush through activities without being attentive to them. | | | | | | |
| 9. | I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there. | | | | | | |
| 10. | I do jobs or tasks automatically, without being aware of what I am doing. | | | | | | |
| 11. | I find myself listening to someone with one ear, doing something else at the same time. | | | | | | |
| 12. | I drive places on 'automatic pilot' and then wonder why I went there. | | | | | | |
| 13. | I find myself preoccupied with the future or the past. | | | | | | |
| 14. | I find myself doing things without paying attention. | | | | | | |
| 15. | I snack without being aware that I am eating. | | | | | | |

**Job Satisfaction:** The following statements are about how you feel at work. Please, indicate how satisfied you feel about your job by choosing among the scale of 1 – 5 below:

| Very Dissatisfied | Dissatisfied | Somewhat Satisfied | Satisfied | Very Satisfied |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

| S/N | ITEMS | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | Being able to keep busy all the time. | | | | | |
| 2. | The chance to work alone on the job. | | | | | |
| 3. | The chance to do different things from time to time | | | | | |
| 4. | The chance to be “somebody” in the community | | | | | |
| 5. | The way my boss handles his/her workers. | | | | | |
| 6. | The competence of my supervisor in making decisions | | | | | |
| 7. | Being able to do things that do not go against my conscience | | | | | |
| 8. | The way my job provides for steady employment. | | | | | |
| 9. | The chance to do things for other people. | | | | | |
| 10. | The chance to tell people what to do | | | | | |
| 11. | The chance to do something that makes use of my abilities. | | | | | |
| 12. | The way company policies are put into practice | | | | | |
| 13. | My pay and the amount of work I do. | | | | | |
| 14. | The chances for advancement in this job. | | | | | |
| 15. | The freedom to use my own judgment. | | | | | |
| 16. | The chance to try my own methods of doing the job. | | | | | |
| 17. | The working conditions. | | | | | |
| 18. | The way my co-workers get along with each other. | | | | | |
| 19. | The praise I get for doing a good job. | | | | | |
| 20. | The feeling of accomplishment I get from the job. | | | | | |

**Work Engagement:** The following statements are related to your feelings at work. Please, indicate on the scale of 0 – 6 how often you feel about them when at work.

| Never | Almost Never | Rarely | Sometimes | Often | Very Often | Always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

| **S/N** | **ITEMS** | **0** | **1** | **2** | **3** | **4** | **5** | **6** |
|---|---|---|---|---|---|---|---|---|
| 1 | At my work, I feel bursting with energy (VI) | | | | | | | |
| 2 | At my job, I feel strong and vigorous (VI) | | | | | | | |
| 3 | I am enthusiastic about my job (DE) | | | | | | | |
| 4 | My job inspires me (DE) | | | | | | | |
| 5 | When I get up in the morning, I feel like going to work (VI) | | | | | | | |
| 6 | I feel happy when I am working intensely (AB) | | | | | | | |
| 7 | I am proud of the work that I do (DE) | | | | | | | |
| 8 | I am immersed in my work (AB) | | | | | | | |
| 9 | I get carried away when I am working (AB) | | | | | | | |

**Social Desirability:** The following statements are about your attitudes and behaviors. Please indicate how much you agree with the following statements by choosing from the scale of 1 - 7 below:

| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| S/N | ITEMS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| 1. | It is sometimes hard for me to go on with my work if I am not encouraged. | | | | | | | |
| 2. | I sometimes feel resentful when I do not get my way. | | | | | | | |
| 3. | No matter who I am talking to, I am always a good listener. | | | | | | | |
| 4. | I am always willing to admit it when I make a mistake. | | | | | | | |
| 5. | On a few occasions, I have given up doing something because I thought too little of my ability. | | | | | | | |
| 6. | There have been times when I felt like rebelling against people in authority even though I knew they were right. | | | | | | | |
| 7. | There have been occasions when I took advantage of someone. | | | | | | | |
| 8. | I sometimes try to get even rather than forgive and forget. | | | | | | | |
| 9. | I am always courteous, even to people who are disagreeable. | | | | | | | |
| 10. | I have never been irked when people expressed ideas very different from my own. | | | | | | | |
| 11. | There have been times when I was quite jealous of the good fortune of others. | | | | | | | |
| 12. | I am sometimes irritated by people who ask favors of me | | | | | | | |
| 13. | I have never deliberately said something that hurt someone's feelings. | | | | | | | |

**PANAS:** Please read each of the following items and then pick from a scale of 1 – 7 how frequently they occur to you.

| Never | Almost Never | Seldom | Sometimes | Usually | Almost always | Always |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | Indicate the frequency with which you **feel right now.** | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| 1. | Determined | | | | | | | |
| 2. | Ashamed | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3. | Attentive | | | | | | | |
| 4. | Afraid | | | | | | | |
| 5. | Alert | | | | | | | |
| 6. | Upset | | | | | | | |
| 7. | Nervous | | | | | | | |
| 8. | Active | | | | | | | |
| 9. | Hostile | | | | | | | |
| 10. | Inspired | | | | | | | |

**Section B: Perception of others**

Please complete section B for about 3 to 5 each of your subordinates. Please assign a unique ID number for the subordinate(s) you are particularly speaking of (solely for matching purposes).

**Immediate subordinate's unique ID number: _____**

**Job Performance:** The following statements relate to your observation about a specific subordinate of yours, whose ID you have written above. Please pick from a scale of 1 - 7 how much you agree with them when you think about that specific subordinate at work.

| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| S/N | ITEMS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| | **In role Behavior of Job Performance** | | | | | | | |
| 1. | My subordinate adequately completes all assigned duties | | | | | | | |
| 2. | My subordinate fulfills responsibilities specified in his/her job description | | | | | | | |
| 3. | My subordinate performs tasks that are expected of him/her | | | | | | | |
| 4. | My subordinate meets formal performance requirements on the job | | | | | | | |
| 5. | My subordinate engages in activities that will directly affect his/her performance evaluation | | | | | | | |
| 6. | My subordinate neglects aspects of the job that he/she is obliged to perform (R) | | | | | | | |
| 7. | My subordinate fails to perform his/her essential duties (R) | | | | | | | |

**Section C: Demographic Information**

**Instruction:** Please pick the category you belong to in the sections below

Your Unique ID number: _____

Age: 18-24 ☐ 25-31 ☐ 32-38 ☐ 39-45 ☐ 46 Above ☐

Gender: Male ☐ Female ☐

Level of Education: High school ☐ Some Certificates ☐ College ☐

Bachelors ☐ Masters ☐ Ph.D. ☐ Other ☐

Years of work experience in organization: 6 months – 1 year ☐

2-3 ☐ 4-5 ☐

6-7 ☐ 8-9 ☐

10 & Above ☐

Position at Work: Junior staff ☐ Middle level staff ☐ Senior staff ☐

Type of Industry: Academic ☐ Finance ☐

## APPENDIX B: MEMBER QUESTIONNAIRES

### LETTER OF CONSENT (SUBORDINATE)

**Title of Research:** Leader-Member Congruence in Mindfulness and Work Outcomes: The Mediating Role of Leader-Member Exchange.

You have been invited to participate in a research survey for a graduate thesis at the University of Lethbridge. The objective of this study is to investigate the similarity in supervisor-subordinate mindfulness and its relationship with leadership and work outcomes.

The survey will take about **20-minutes** to complete and contains **128 questions**. If you decide to partake in the survey, you will be **partially anonymous.** Partial anonymity is ensured because both you and your supervisor will know whom you are responding about, but any information you provide will remain **confidential**. All data results from the survey will be used in the investigation of this study and remain on a password-protected computer. Data will be destroyed after 5 years. Only the researcher and his supervisors will be able to access this information. There are no anticipated risks from participating in this study. There are also no direct benefits from participating although you may gain some insight into your own experiences and behaviors.

By completing this survey, you will be given **NGN 500** in form of call airtime credit or cash. This is a form of **appreciation** for your time and participation in the survey. To maintain your confidentiality, you are expected to seal up the questionnaire in the envelope provided to you by the researcher.

Your participation in this survey is **completely voluntary**. At any point during the survey, you may decide not to answer any question, you also have the option of withdrawing your participation in the survey by leaving the remainder of the survey blank. If you do wish to withdraw from the survey, your survey responses will not be included in the research. However, only those who participate will be given the **NGN 500** call airtime credit or cash.

The researcher intends to present the results of this study at an academic conference and/or publish the results in an academic journal. If you wish to be informed of the results of this research, you may write down the researcher's contact information, so you can be informed (Results will be available April 2019). If you have any questions or wish to contact the researcher, you may email him at david.adebesin@uleth.ca. Questions regarding your rights as a participant in this research may be addressed to the Office of Research Ethics, University of Lethbridge (Phone: 403-329-2747 or Email: research.services@uleth.ca).

If you do choose to participate, please take your time, and answer the questions to the best of your knowledge and honesty. There are three sections within the survey each with specific instructions and particular answer options. **Please read the instructions carefully**. Thank you for considering participating in this survey. Your contribution is greatly appreciated.

**Consent to Participate**

With knowledge of the above-mentioned criteria, I agree, to participate in this study.

I agree to participate, please flip the page now and begin.

I do not wish to participate, please do not open the survey, and ask to have your survey collected.

**Section A: (Self-Perception)**

**Mindfulness:** Below is a collection of statements about your everyday experience. Using the 1 – 6 scale below, please indicate how frequently or infrequently you currently have each experience. Please answer according to what really reflects your experience rather than what you think your experience should be.

| Almost Always | Very Frequently | Somewhat Frequently | Somewhat Infrequently | Very Infrequently | Almost Never |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |

| S/N | ITEMS | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| 1. | I could be experiencing some emotion and not be conscious of it until sometime later. | | | | | | |
| 2. | I break or spill things because of carelessness, not paying attention, or thinking of something else. | | | | | | |
| 3. | I find it difficult to stay focused on what is happening in the present. | | | | | | |
| 4. | I tend to walk quickly to get where I am going without paying attention to what I experience along the way. | | | | | | |
| 5. | I tend not to notice feelings of physical tension or discomfort until they really grab my attention. | | | | | | |
| 6. | I forget a person's name almost as soon as I have been told for the first time. | | | | | | |
| 7. | It seems I am "running on automatic," without much awareness of what I am doing. | | | | | | |
| 8. | I rush through activities without being attentive to them. | | | | | | |
| 9. | I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there. | | | | | | |
| 10. | I do jobs or tasks automatically, without being aware of what I am doing. | | | | | | |
| 11. | I find myself listening to someone with one ear, doing something else at the same time. | | | | | | |
| 12. | I drive places on 'automatic pilot' and then wonder why I went there. | | | | | | |
| 13. | I find myself preoccupied with the future or the past. | | | | | | |
| 14. | I find myself doing things without paying attention. | | | | | | |
| 15. | I snack without being aware that I am eating. | | | | | | |

**Job Satisfaction:** The following statements are about how you feel at work. Please, indicate how satisfied you feel about your job by choosing among the scale of 1 – 5 below:

| Very Dissatisfied | Dissatisfied | Somewhat Satisfied | Satisfied | Very Satisfied |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |

| S/N | ITEMS | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1. | Being able to keep busy all the time. | | | | | |
| 2. | The chance to work alone on the job. | | | | | |
| 3. | The chance to do different things from time to time | | | | | |
| 4. | The chance to be "somebody" in the community | | | | | |
| 5. | The way my boss handles his/her workers. | | | | | |
| 6. | The competence of my supervisor in making decisions | | | | | |
| 7. | Being able to do things that do not go against my conscience | | | | | |
| 8. | The way my job provides for steady employment. | | | | | |
| 9. | The chance to do things for other people. | | | | | |
| 10. | The chance to tell people what to do | | | | | |
| 11. | The chance to do something that makes use of my abilities. | | | | | |
| 12. | The way company policies are put into practice | | | | | |
| 13. | My pay and the amount of work I do. | | | | | |
| 14. | The chances for advancement in this job. | | | | | |
| 15. | The freedom to use my own judgment. | | | | | |
| 16. | The chance to try my own methods of doing the job. | | | | | |
| 17. | The working conditions. | | | | | |
| 18. | The way my co-workers get along with each other. | | | | | |
| 19. | The praise I get for doing a good job. | | | | | |
| 20. | The feeling of accomplishment I get from the job. | | | | | |

**Work Engagement:** The following statements are related to your feelings at work. Please, indicate on a scale of 0 – 6 how often you feel about them when at work.

| Never | Almost never | Rarely | Sometimes | Often | Very Often | Always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

| S/N | ITEMS | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|
| 1 | At my work, I 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 | When I get up in the morning, I feel like going to work | | | | | | | |
| 6 | I feel happy when I am working intensely | | | | | | | |
| 7 | I am proud of the work that I do | | | | | | | |
| 8 | I am immersed in my work | | | | | | | |
| 9 | I get carried away when I am working | | | | | | | |

**LMX**

**Instruction:** The following statements are about the relationship between you and your current immediate supervisor. Please indicate the degree of your agreement or disagreement with each statement by selecting one option on the given scale of 1 – 7 below. There are no right or wrong answers.

| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| S/N | ITEMS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| 1. | My supervisor would come to my defense if I were "attacked" by others. | | | | | | | |
| 2. | I like my supervisor very much as a person. | | | | | | | |
| 3. | My supervisor is a lot of fun to work with. | | | | | | | |
| 4. | I respect my supervisor's knowledge of and competence in the job. | | | | | | | |
| 5. | My supervisor defends my work actions to a superior, even without complete knowledge of the issue in question. | | | | | | | |
| 6. | My supervisor is willing to apply extra efforts, beyond those normally required, to meet work goals. | | | | | | | |
| 7. | My supervisor would defend me to others in the organization if I made an honest mistake. | | | | | | | |
| 8. | My supervisor is the kind of person one would like to have as a friend. | | | | | | | |
| 9. | My supervisor does works that go beyond what is specified in his/her job description. | | | | | | | |
| 10. | My supervisor does not mind working hardest for his/her subordinates. | | | | | | | |
| 11. | I am impressed with my supervisor's knowledge of his/her job. | | | | | | | |
| 12. | I admire my supervisor's professional skills. | | | | | | | |

**Social Desirability:** The following statements are about your attitudes and behaviors. Please indicate how much you agree with the following statements by choosing from the scale of 1 - 7 below:

| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| S/N | ITEMS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| 1. | It is sometimes hard for me to go on with my work if I am not encouraged. | | | | | | | |
| 2. | I sometimes feel resentful when I do not get my way. | | | | | | | |
| 3. | No matter who I am talking to, I am always a good listener. | | | | | | | |
| 4. | I am always willing to admit it when I make a mistake. | | | | | | | |
| 5. | On a few occasions, I have given up doing something because I thought too little of my ability. | | | | | | | |
| 6. | There have been times when I felt like rebelling against people in authority even though I knew they were right. | | | | | | | |
| 7. | There have been occasions when I took advantage of someone. | | | | | | | |
| 8. | I sometimes try to get even rather than forgive and forget. | | | | | | | |
| 9. | I am always courteous, even to people who are disagreeable. | | | | | | | |
| 10. | I have never been irked when people expressed ideas very different from my own. | | | | | | | |
| 11. | There have been times when I was quite jealous of the good fortune of others. | | | | | | | |
| 12. | I am sometimes irritated by people who ask favors of me | | | | | | | |
| 13. | I have never deliberately said something that hurt someone's feelings. | | | | | | | |

**PANAS:** Please read each of the following items and then pick from a scale of 1 – 7 how frequently they occur to you.

| Never | Almost Never | Seldom | Sometimes | Usually | Almost always | Always |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | Indicate the frequency with which you **feel right now.** | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| 1. | Determined | | | | | | | |
| 2. | Ashamed | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3. | Attentive | | | | | | | |
| 4. | Afraid | | | | | | | |
| 5. | Alert | | | | | | | |
| 6. | Upset | | | | | | | |
| 7. | Nervous | | | | | | | |
| 8. | Active | | | | | | | |
| 9. | Hostile | | | | | | | |
| 10. | Inspired | | | | | | | |

**Section B: Perception of others**

Please complete section B for your immediate supervisor. Please write the unique ID number of your supervisor (solely for matching purposes).

**Immediate supervisor's unique ID number: _____**

**Job Performance:** The following statements relate to your observations about your immediate supervisor. Please pick from a scale of 1 - 7 how much you agree with them when you think about him/her at work.

| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree | Strongly Agree |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| S/N | ITEMS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| | **In role Behavior of Job Performance** | | | | | | | |
| 1. | My supervisor adequately completes all assigned duties | | | | | | | |
| 2. | My supervisor fulfills responsibilities specified on his/her job description | | | | | | | |
| 3. | My supervisor performs tasks that are expected of him/her | | | | | | | |
| 4. | My supervisor meets formal performance requirements on the job | | | | | | | |
| 5. | My supervisor engages in activities that will directly affect his/her performance evaluation | | | | | | | |
| 6. | My supervisor neglects aspects of the job that he/she is obliged to perform (R) | | | | | | | |
| 7. | My supervisor fails to perform his/her essential duties (R) | | | | | | | |

**Section C: Demographic Information**

**Instruction:** Please pick the category you belong to in the sections below

Your Unique ID number: _____

Age: 18-24 ☐ 25-31 ☐ 32-38 ☐ 39-45 ☐ 46 Above ☐

Gender: Male ☐ Female ☐

Level of Education: High school ☐ Some Certificates ☐ College ☐

Bachelors ☐ Masters ☐ Ph.D. ☐ Other ☐

Years of work experience in organization: 6 months – 1 year ☐

2-3 ☐ 4-5 ☐

6-7 ☐ 8-9 ☐

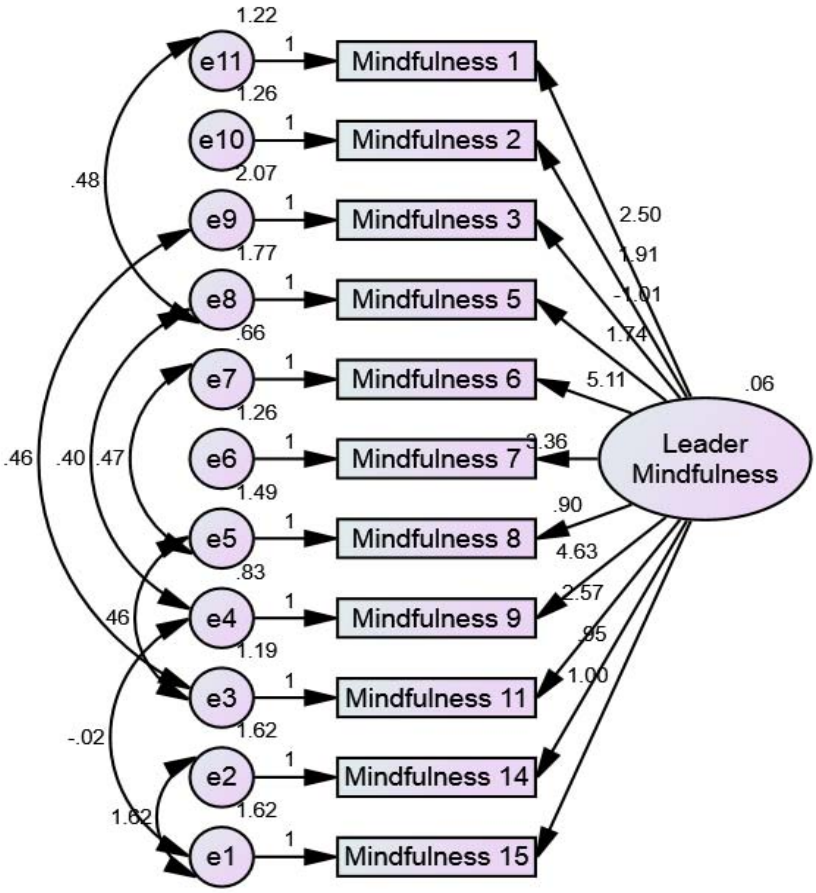
10 & Above ☐

Position at Work: Junior staff ☐ Middle level staff ☐ Senior staff ☐

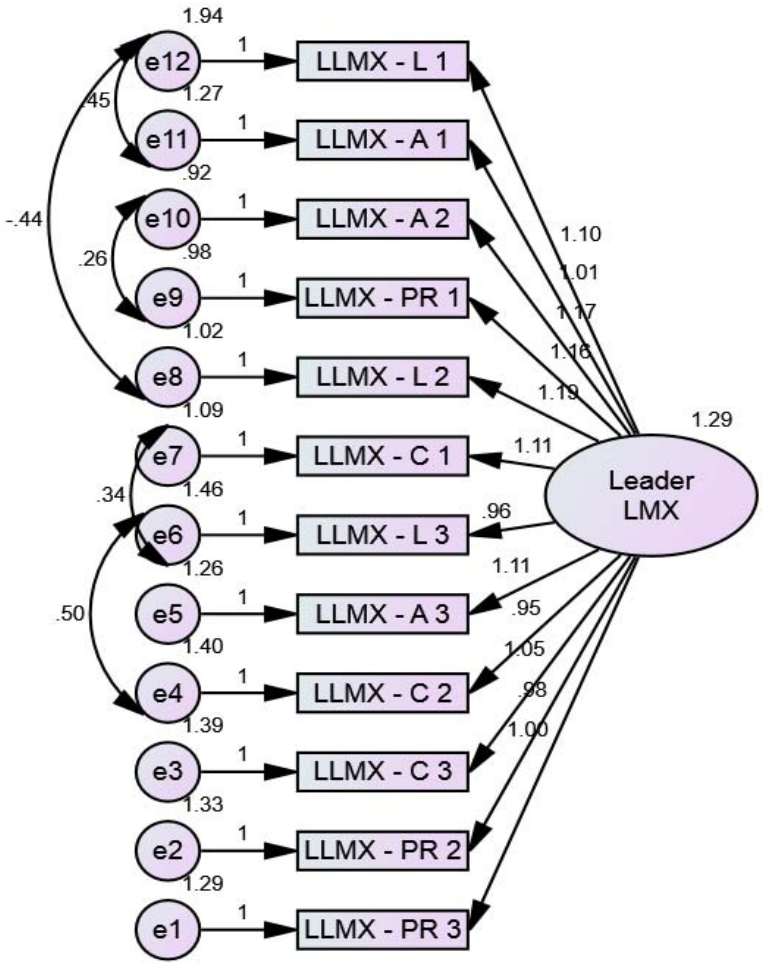
Type of Industry: Academic ☐ Finance ☐

## APPENDIX C: LEADER CFA PATH DIAGRAMS

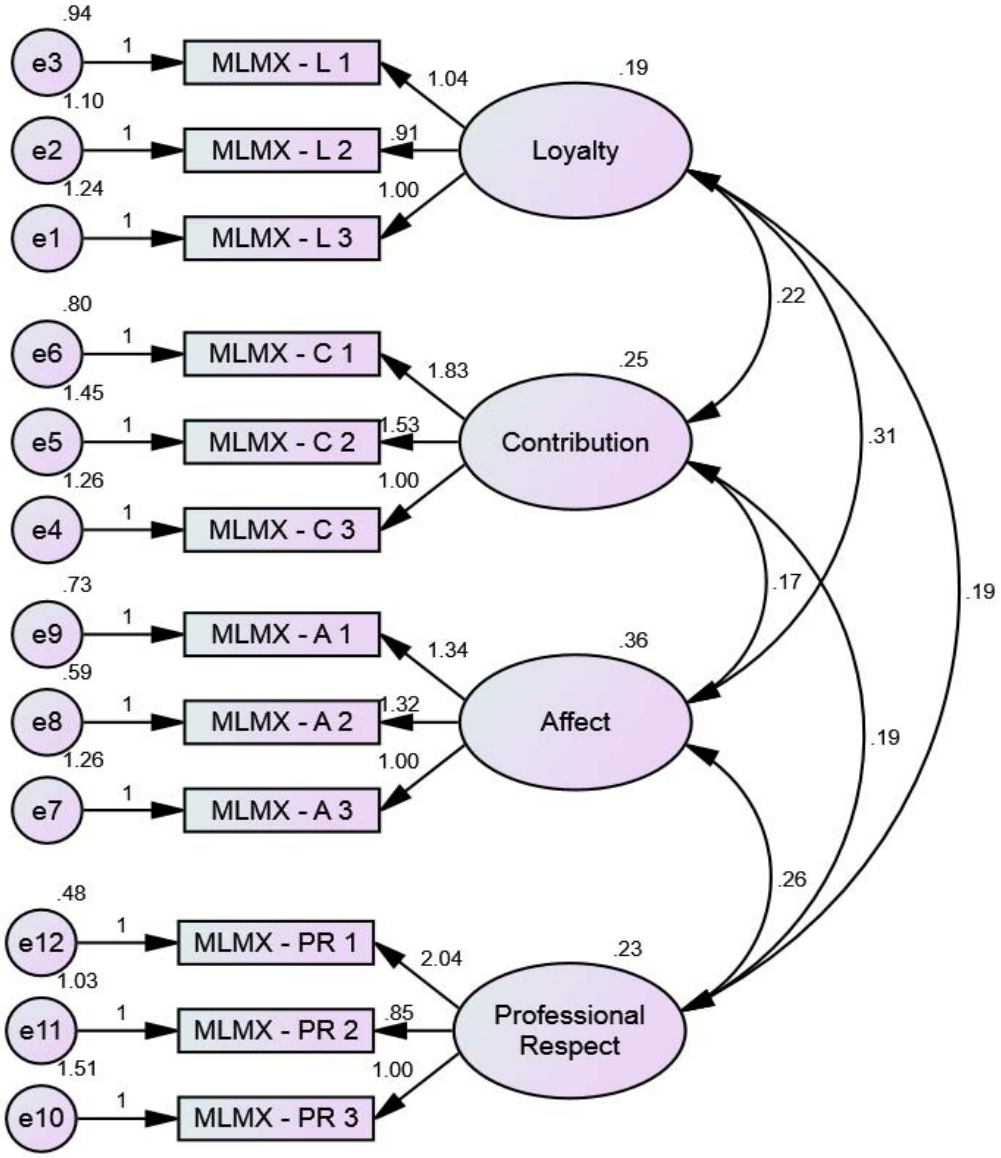
### Appendix C1: Path Diagram for Leader Mindful Attention Awareness Scale.



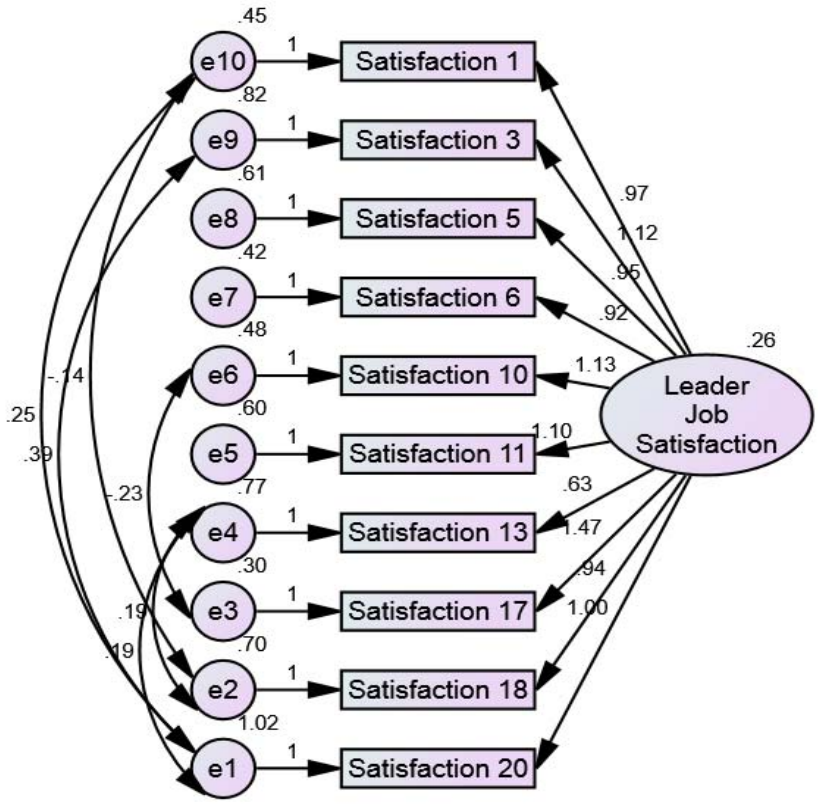
**Appendix C2: Path Diagram for Single-Factor Leader LMX Scale.**



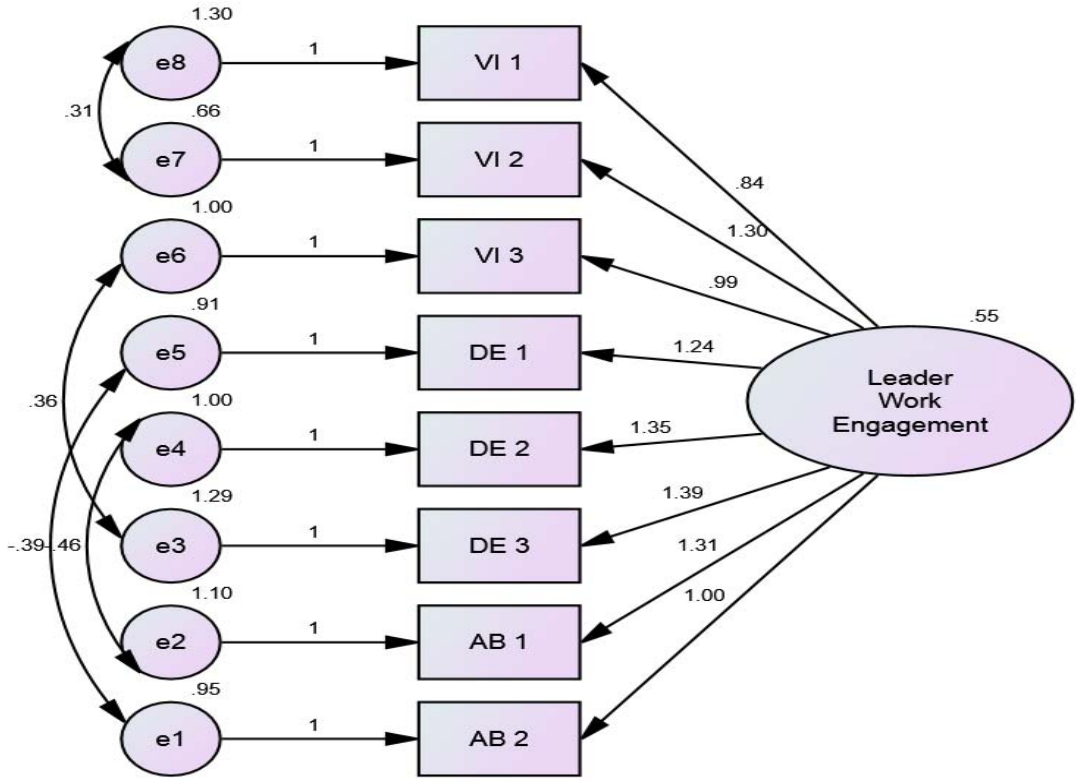
**Appendix C3: Path Diagram for Four-Factor Leader LMX Scale.**



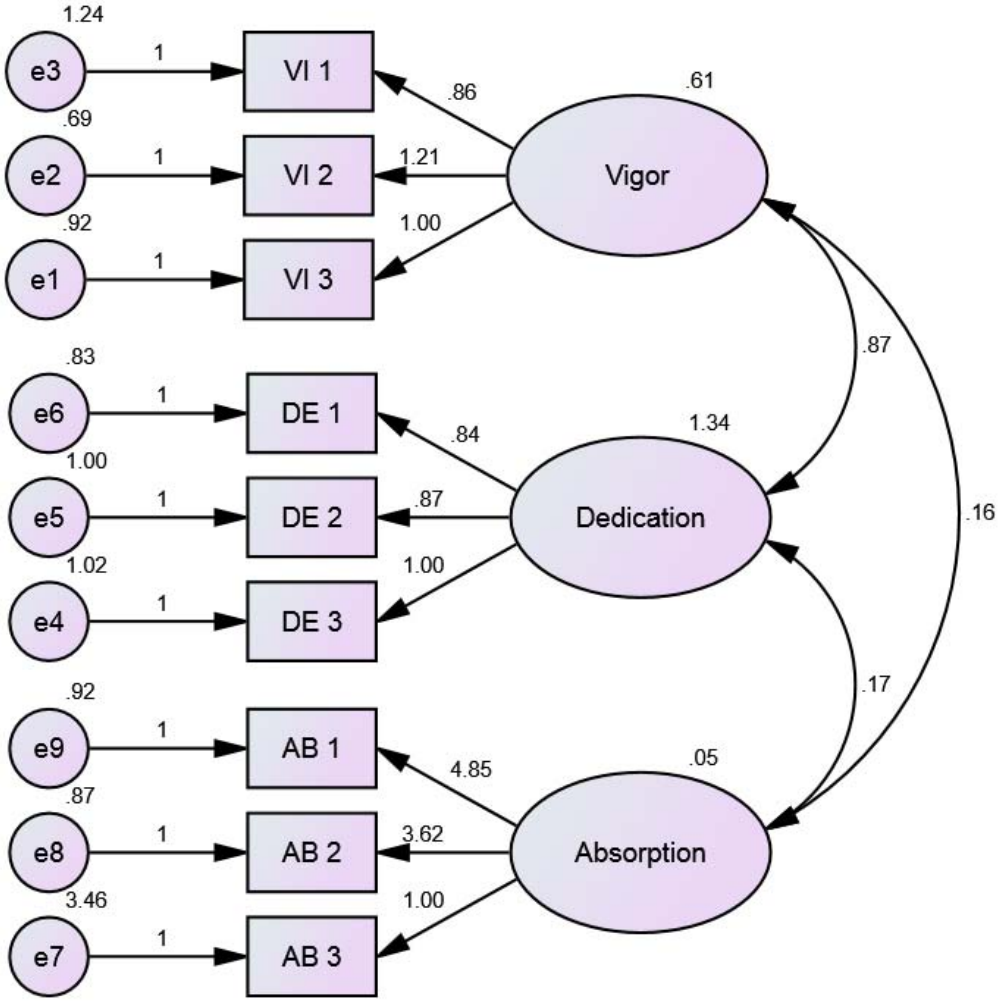
**Appendix C4: Path Diagram for Leader Job Satisfaction Scale.**



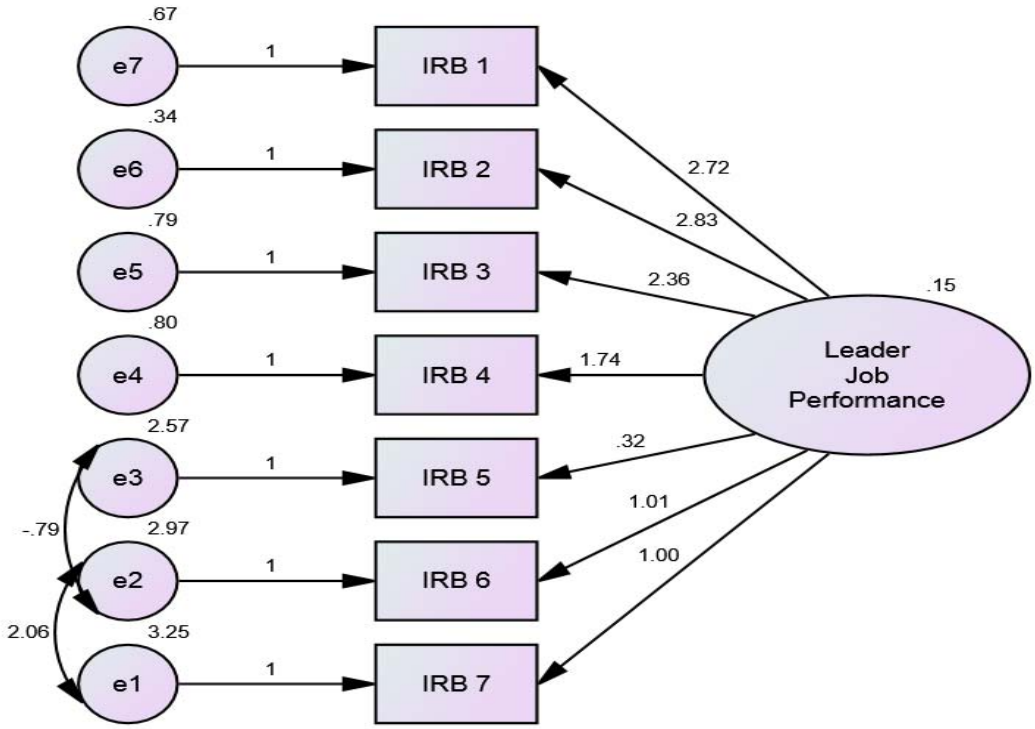
**Appendix C5: Path Diagram for Single-Factor Leader Work Engagement.**



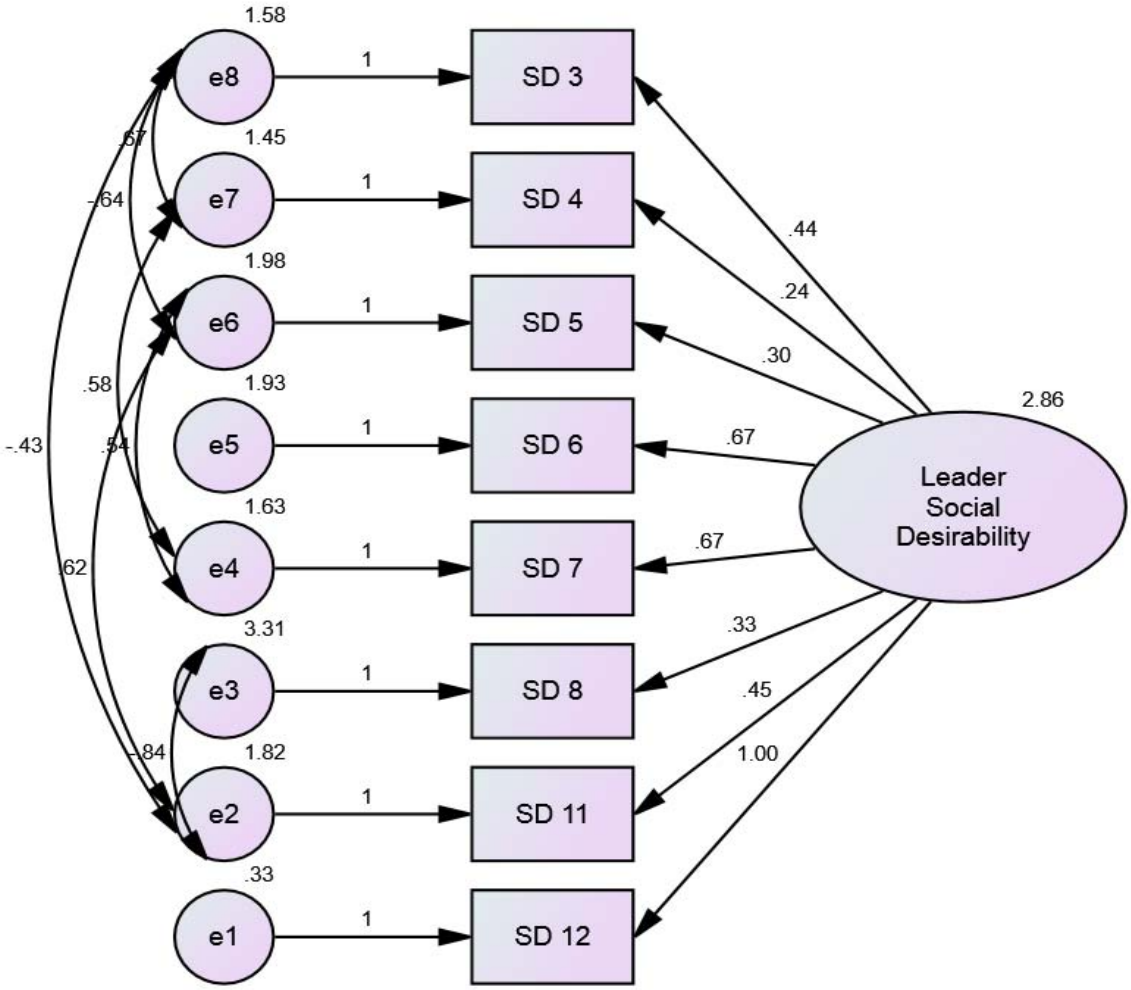
**Appendix C6: Path Diagram for Three-Factor Leader Work Engagement.**



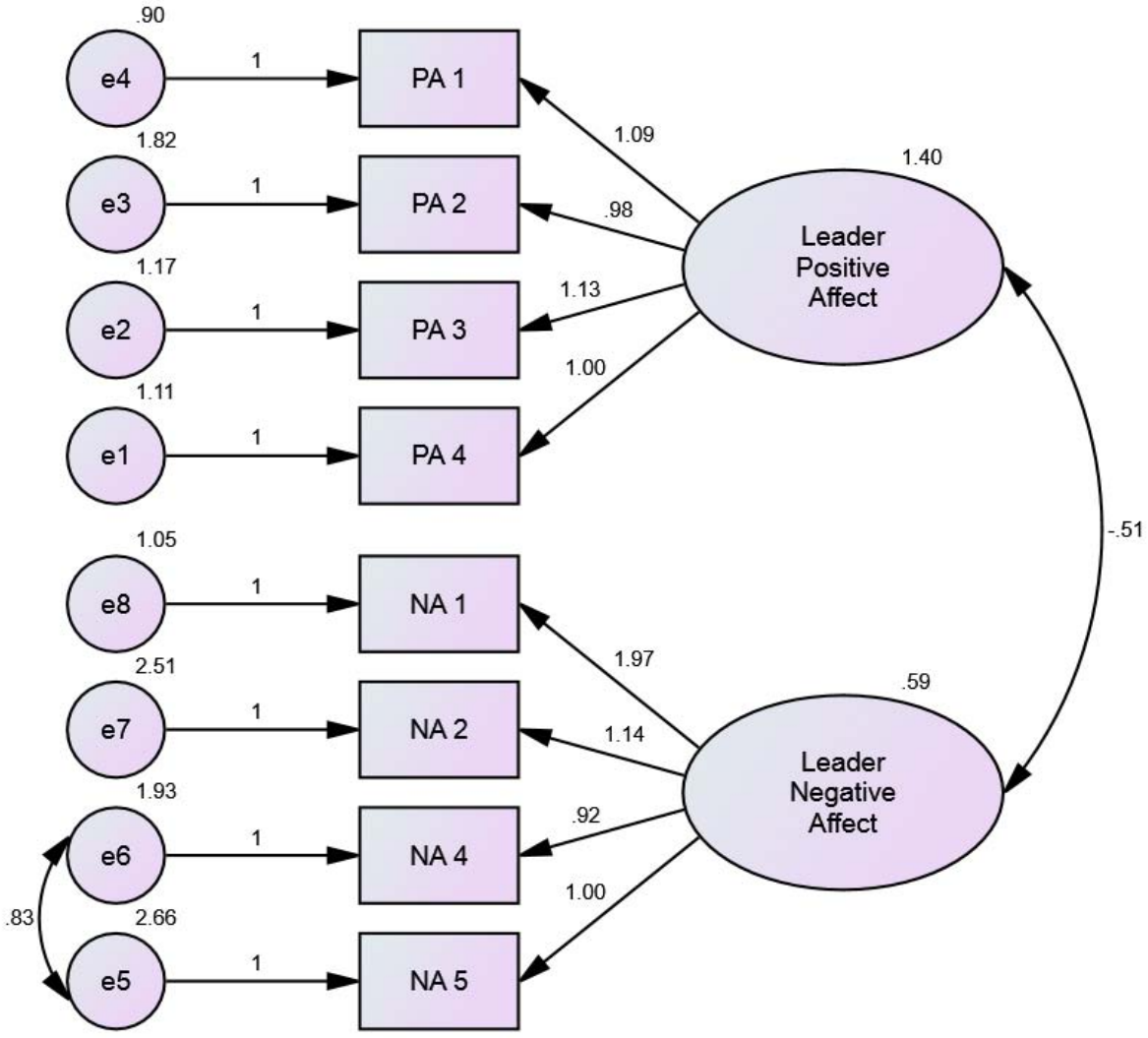
**Appendix C7: Path Diagram for Leader Job Performance Scale.**



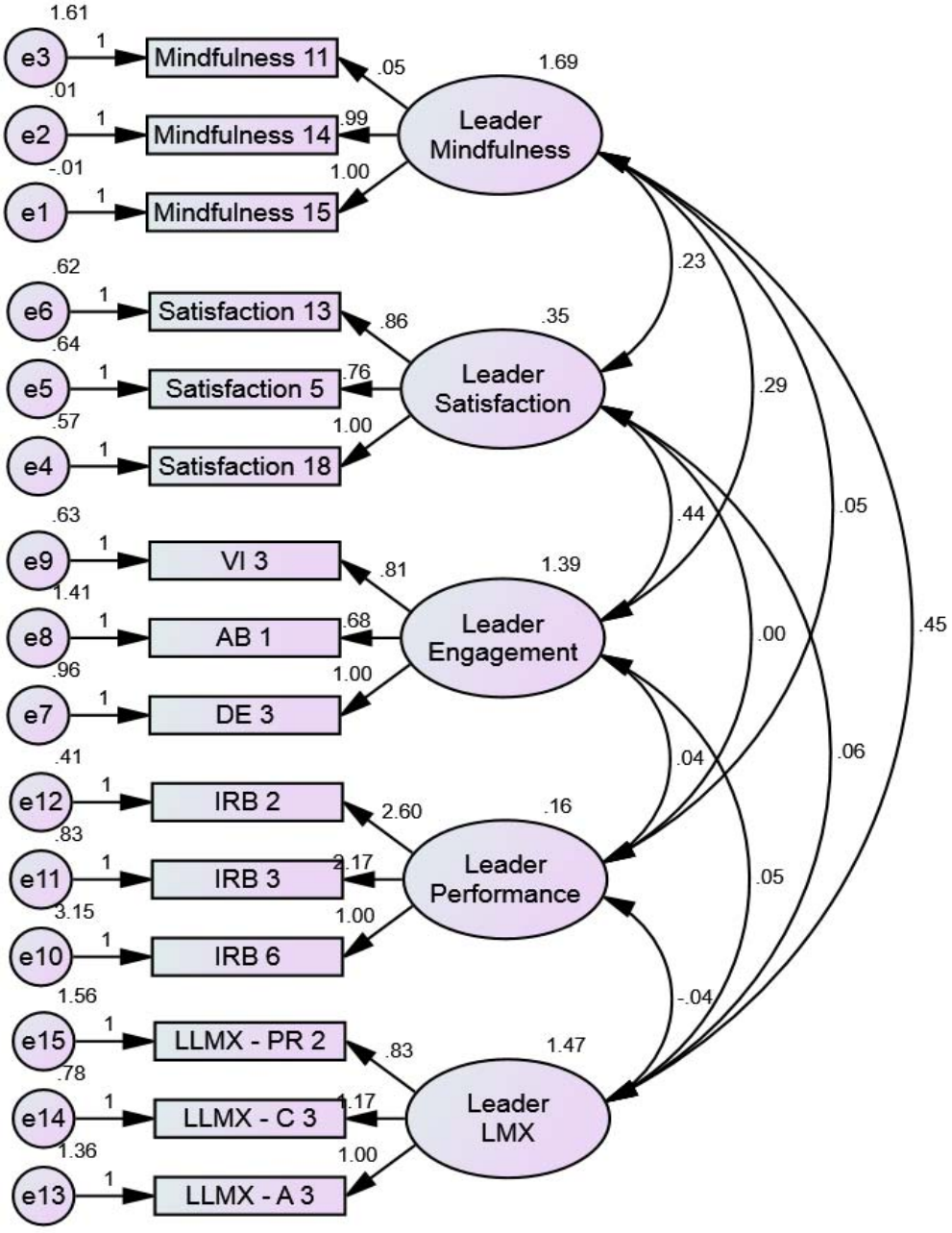
**Appendix C8: Path Diagram for Leader Social Desirability Scale.**



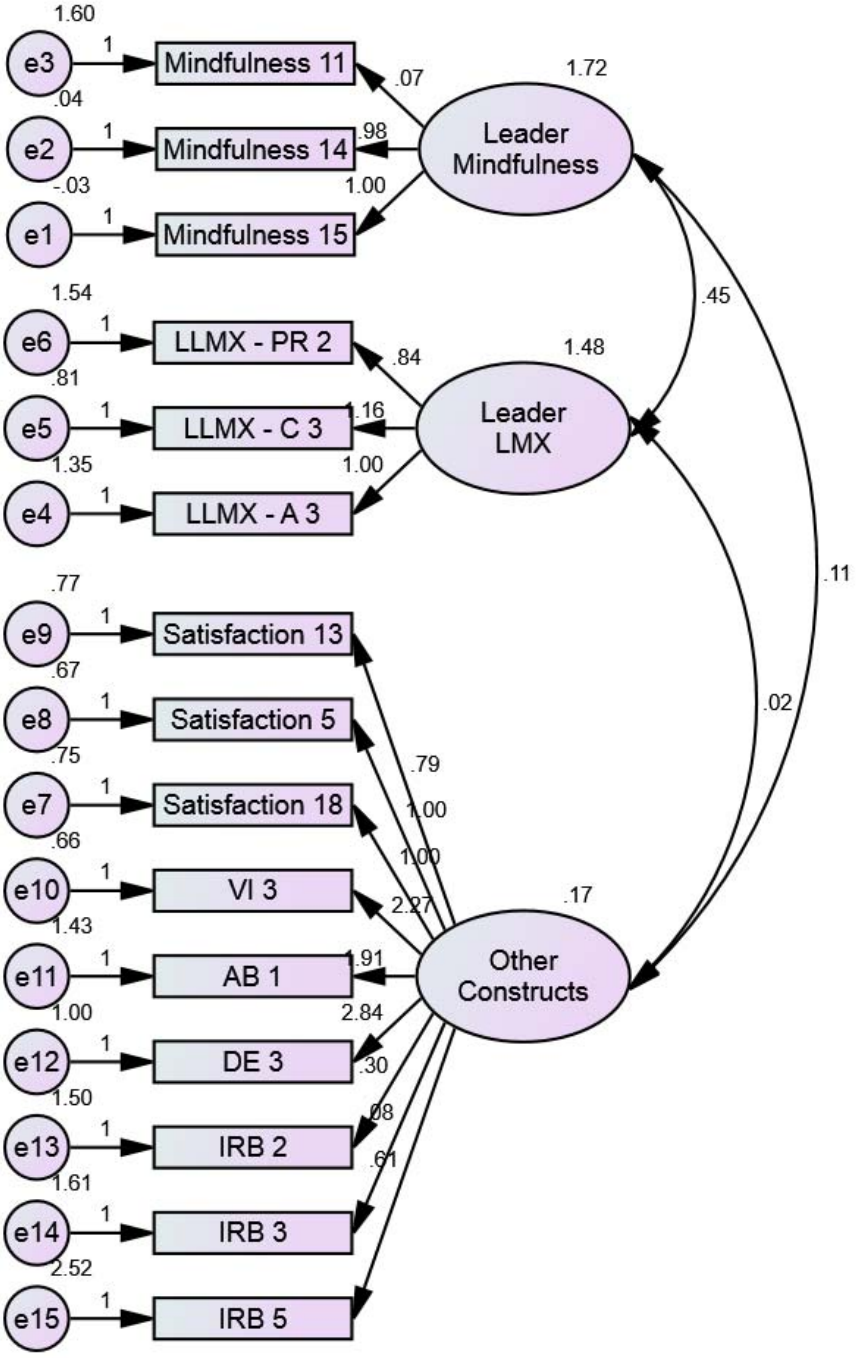
**Appendix C9: Path Diagram for Leader Positive & Negative Affect Schedule Scale.**



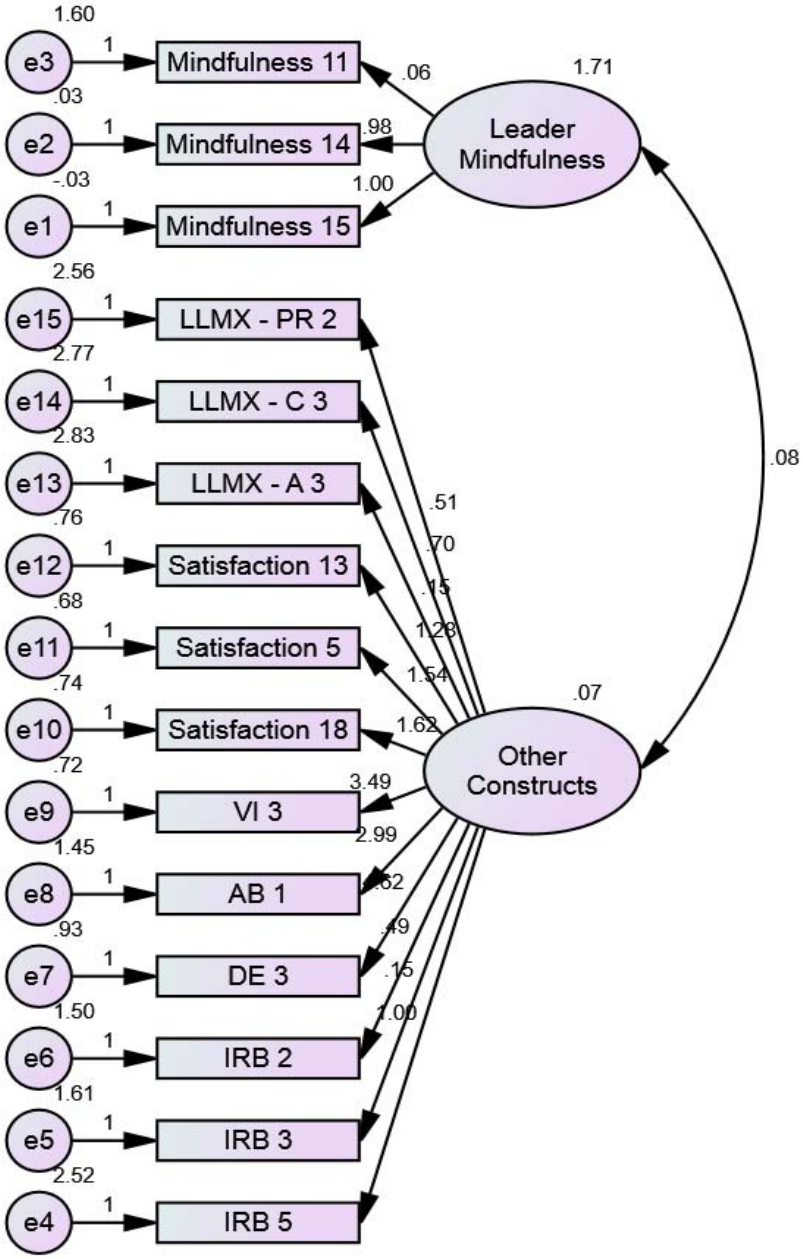
**Appendix C10: Path Diagram for Leader CFA of Five-Factor Model.**



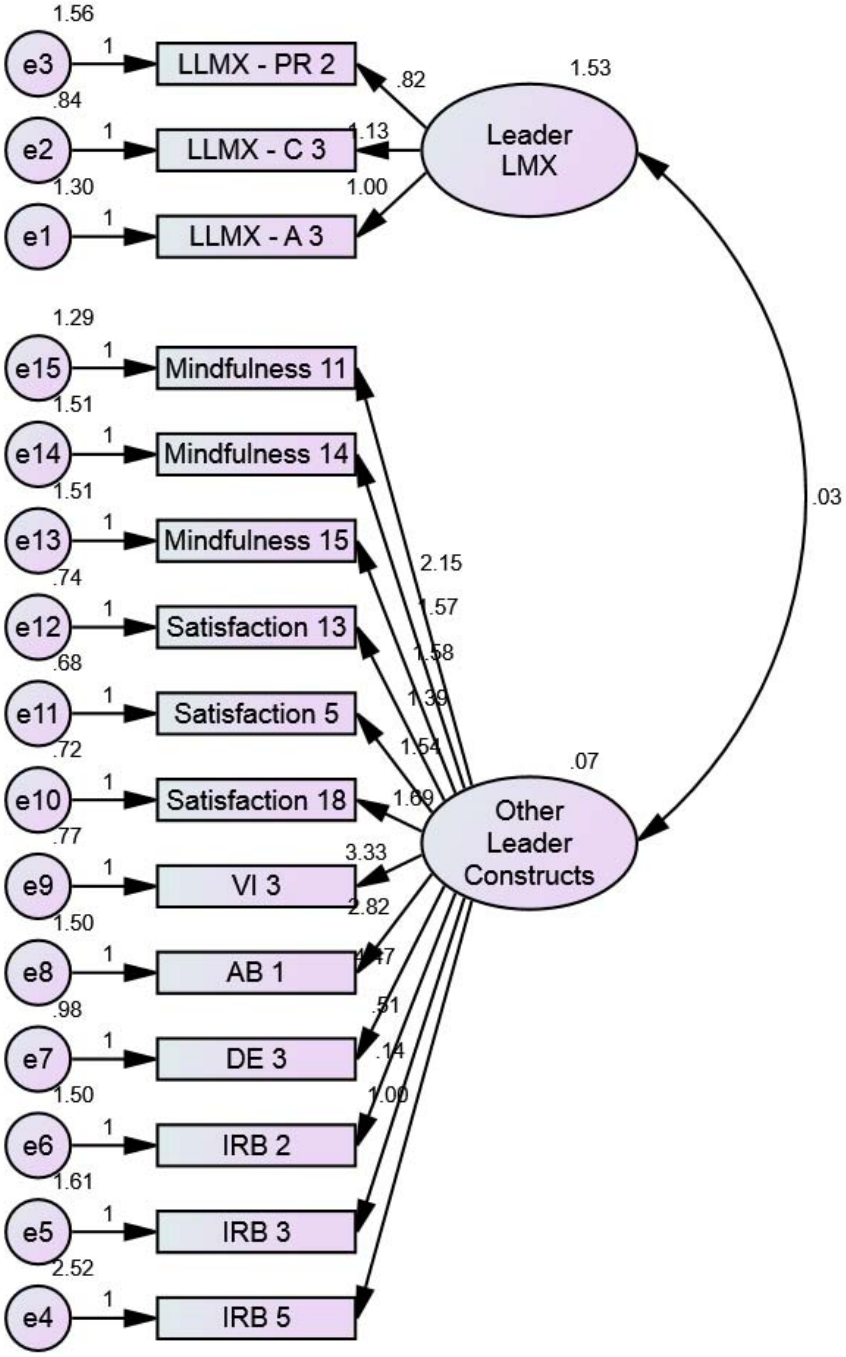
**Appendix C11: Path Diagram for Leader CFA of Three-Factor Model.**



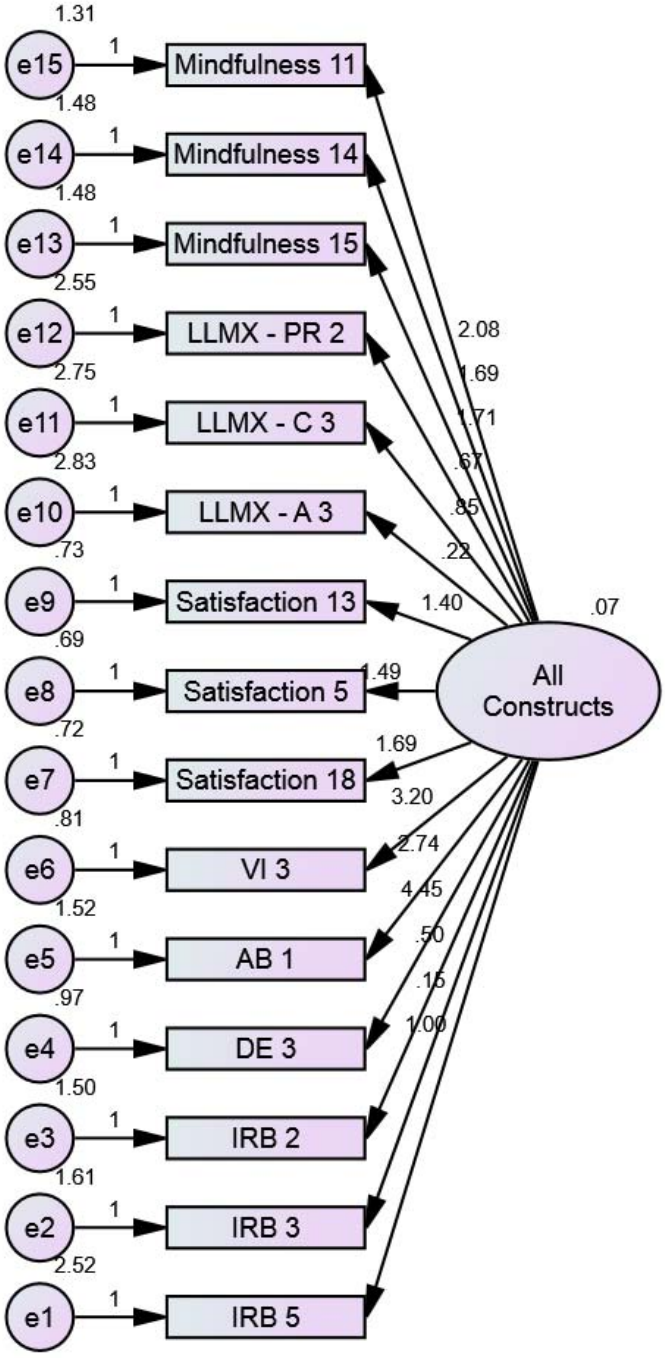
**Appendix C12: Path Diagram for Leader CFA of Two-Factor Model (MAAS and Others).**



**Appendix C13: Path Diagram for Leader CFA of Two-Factor Model (LLMX & Others).**

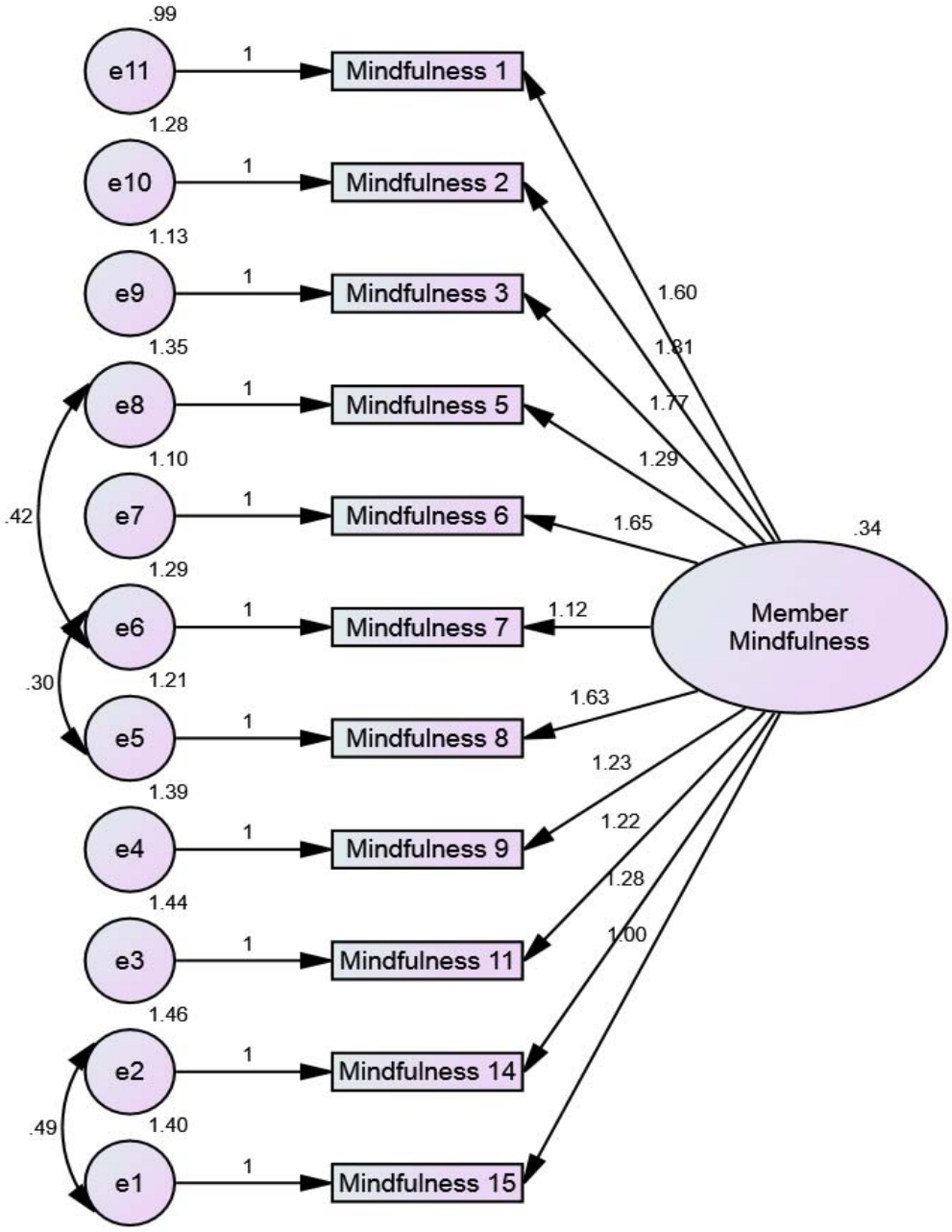


**Appendix C14: Path Diagram for Leader CFA of Single-Factor Model.**

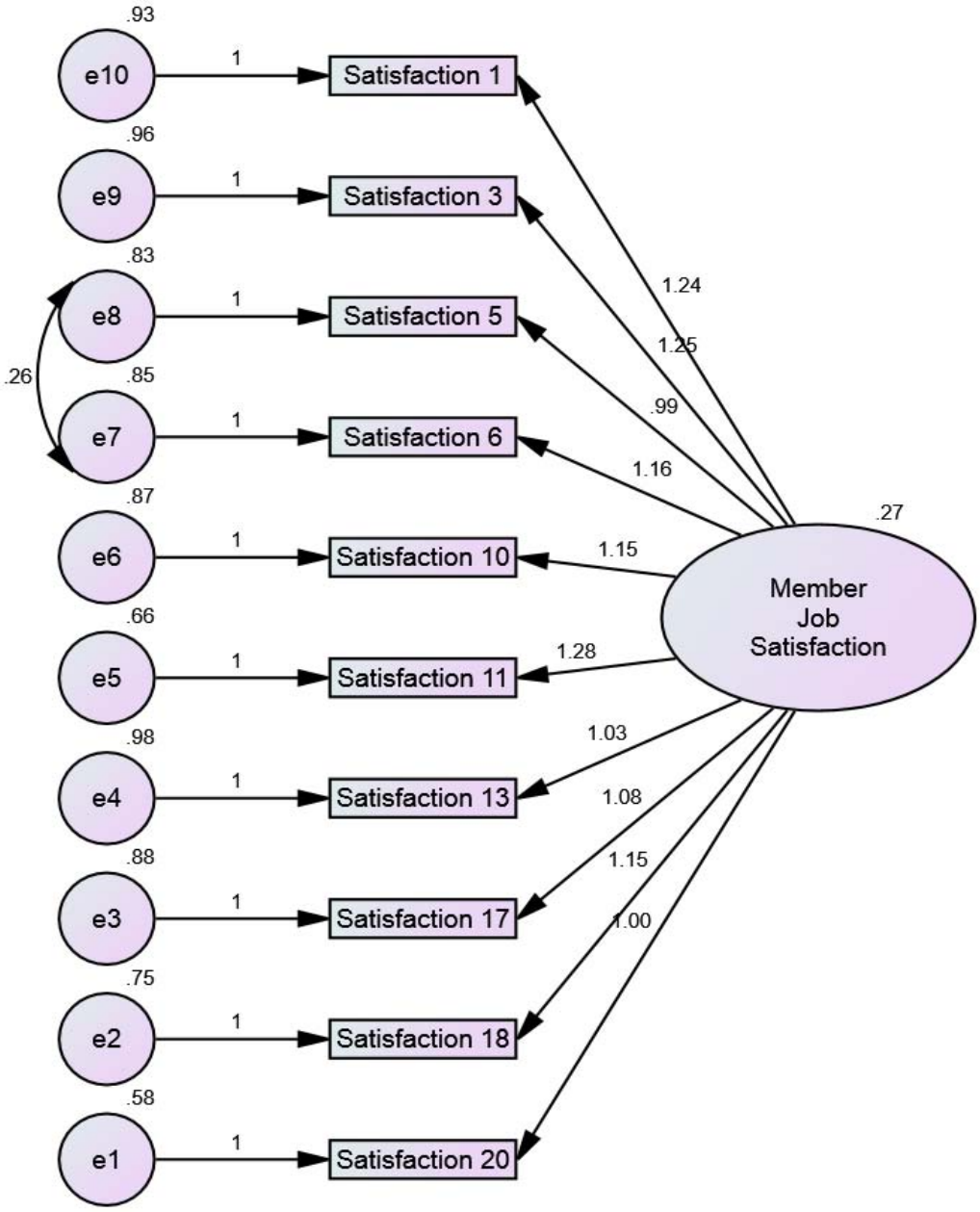


## APPENDIX D: MEMBER CFA PATH DIAGRAMS

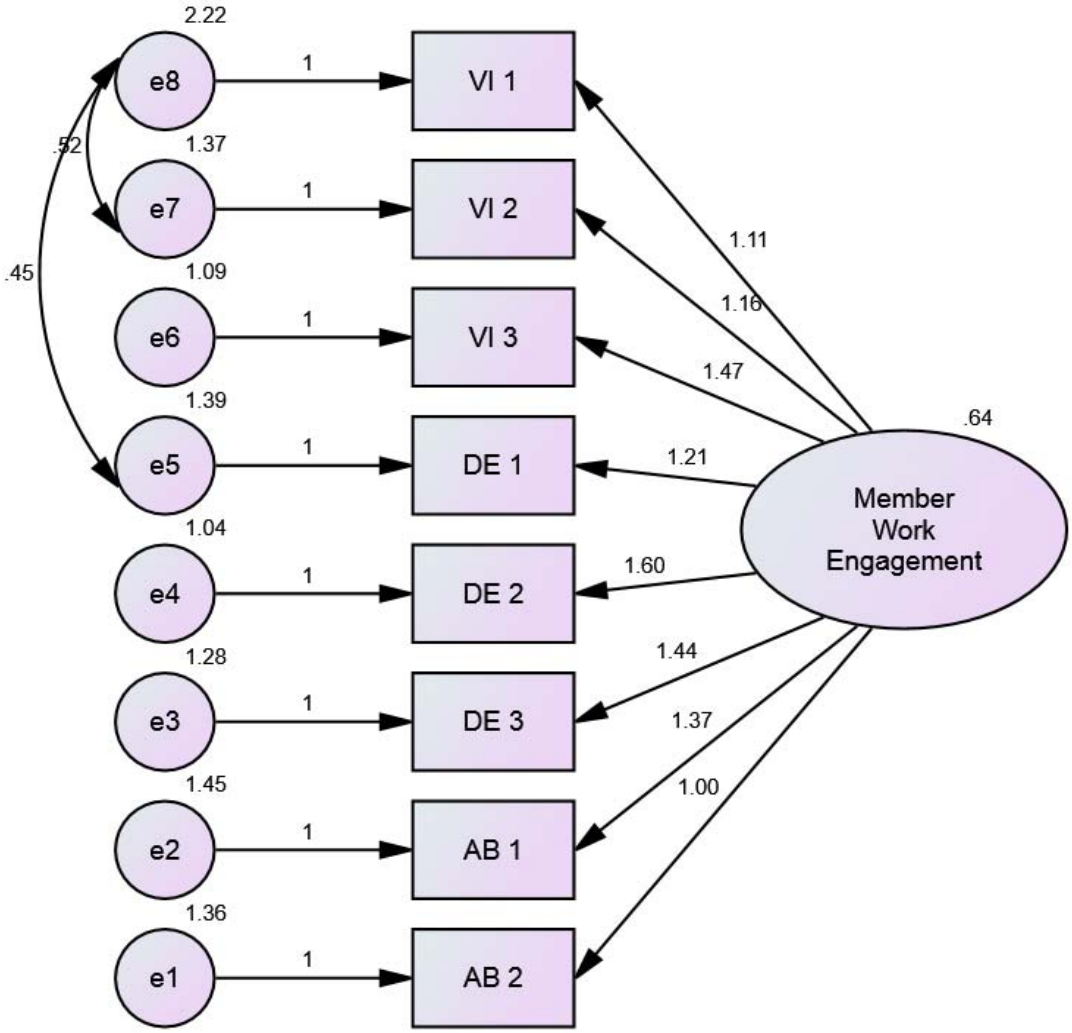
### Appendix D1: Path Diagram for Member Mindful Attention Awareness Scale.



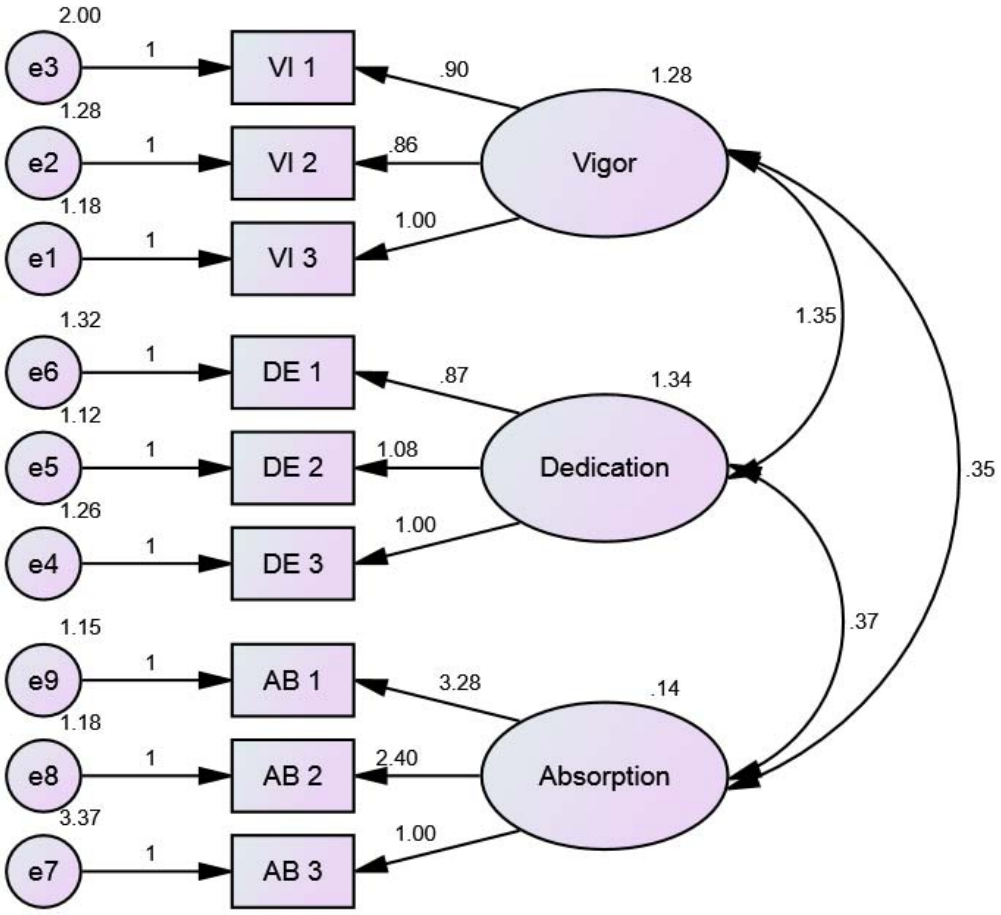
**Appendix D2: Path Diagram for Member Job Satisfaction Scale.**



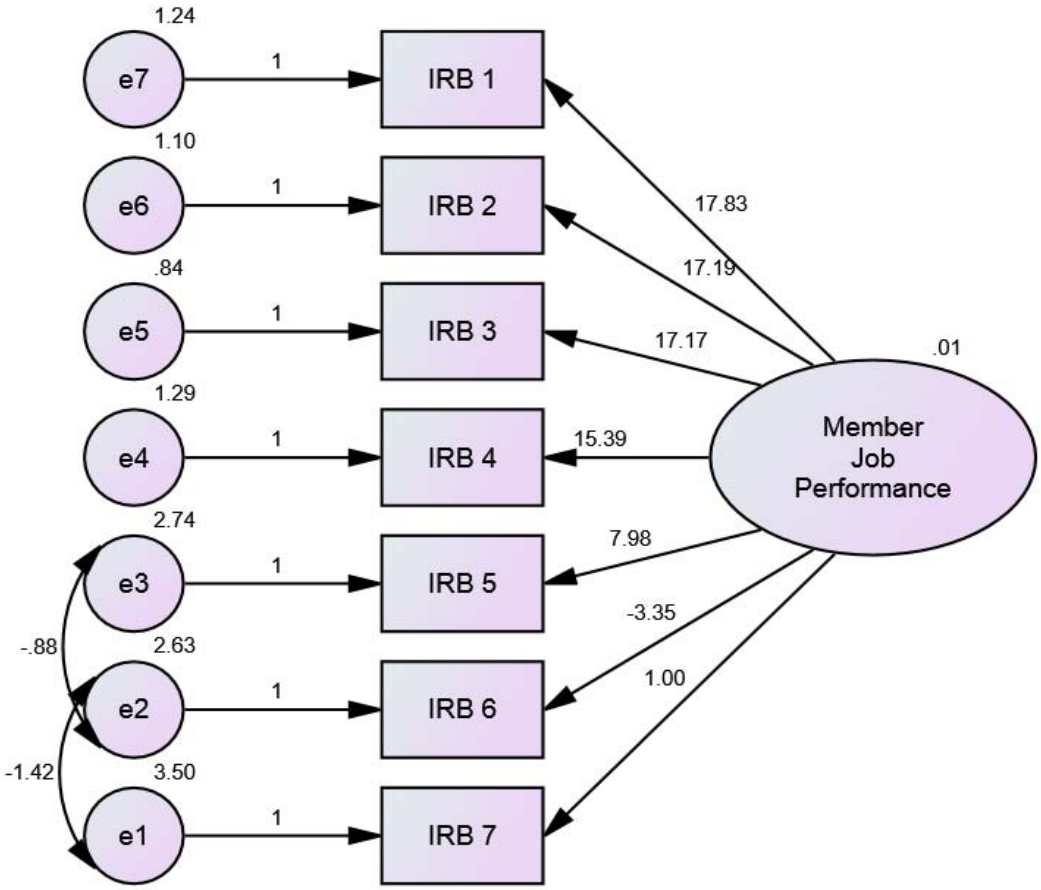
**Appendix D3: Path Diagram for Single-Factor Member Work Engagement Scale.**



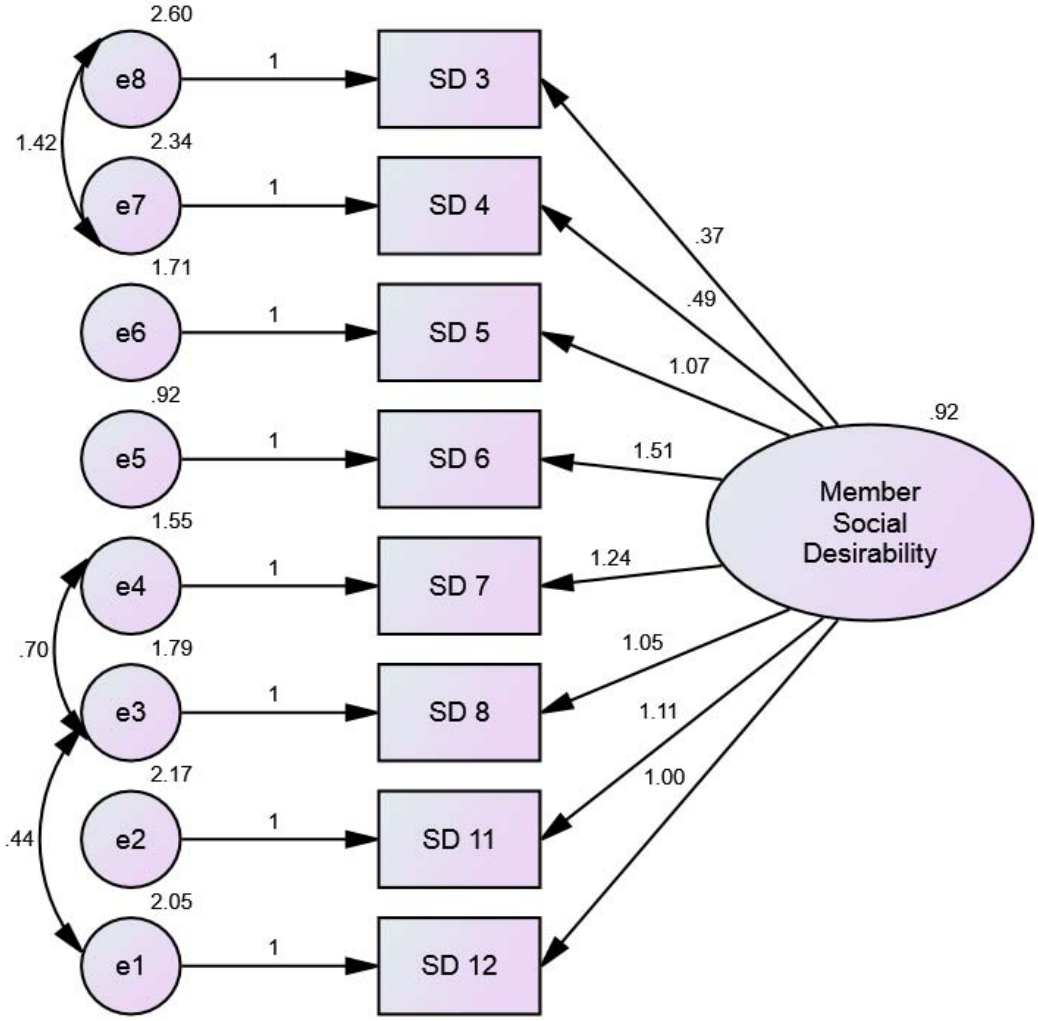
**Appendix D4: Path Diagram for Three-Factor Member Work Engagement Scale.**



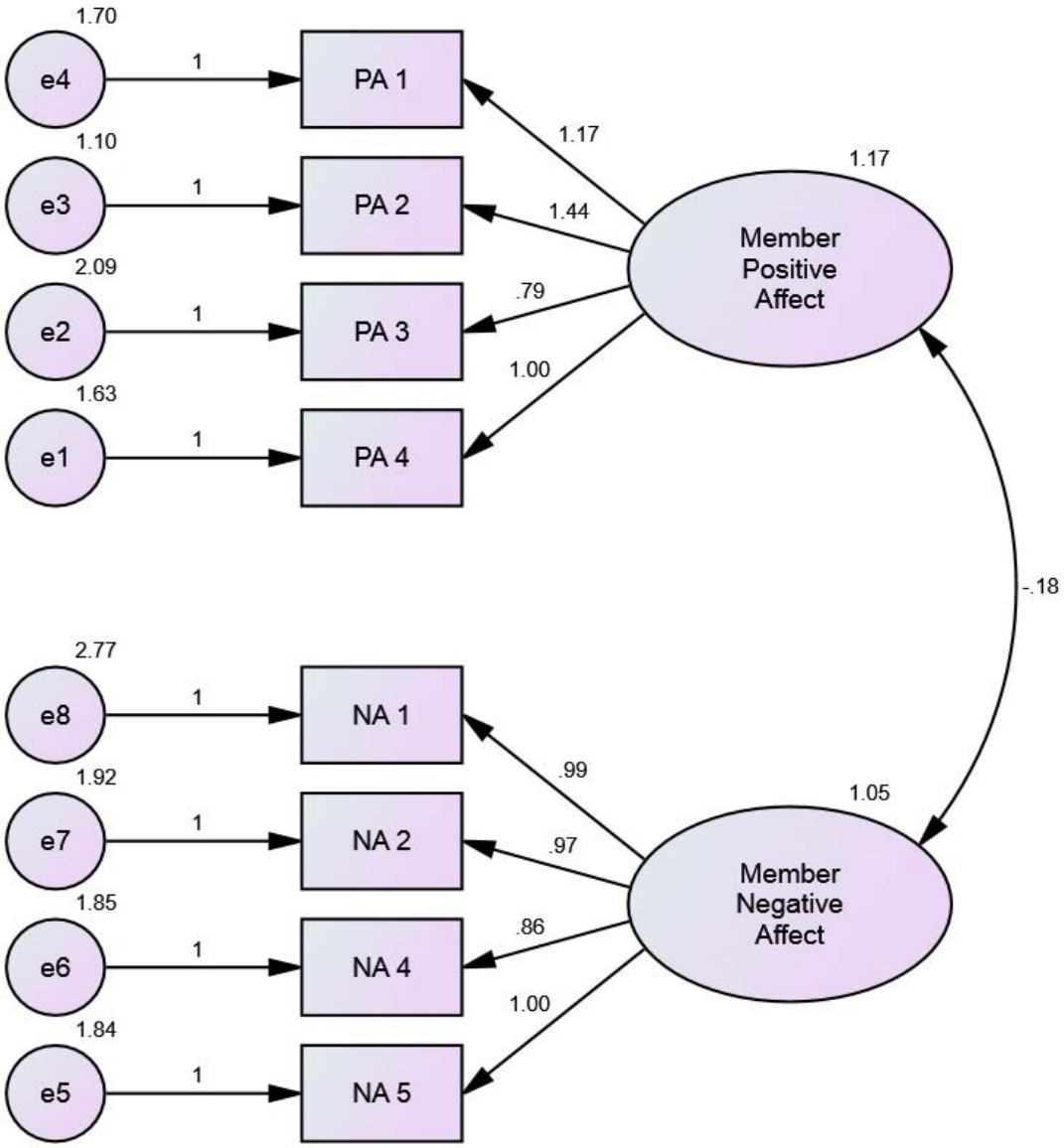
**Appendix D5: Path Diagram for Member Job Performance Scale.**



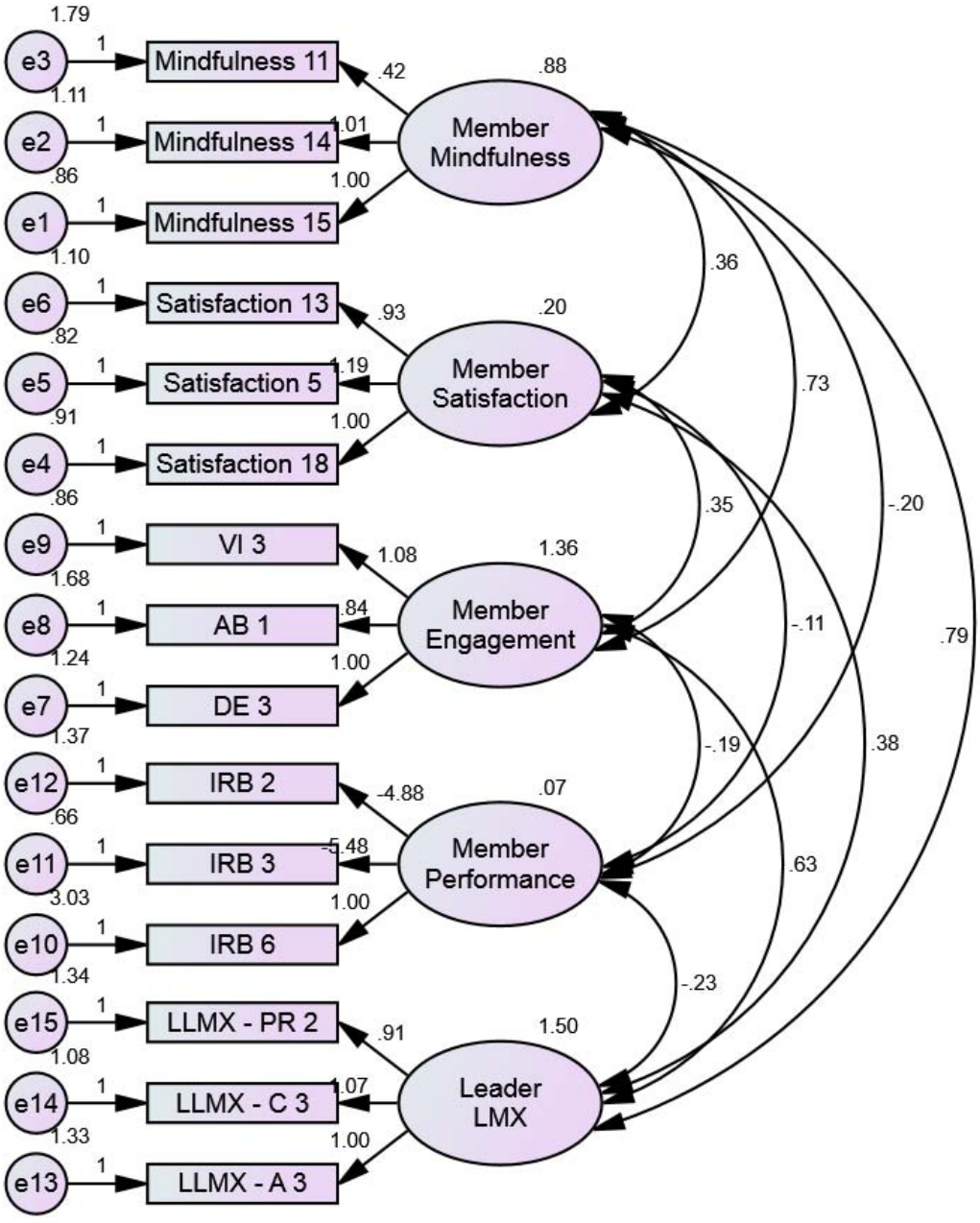
**Appendix D6: Path Diagram for Member Social Desirability Scale.**



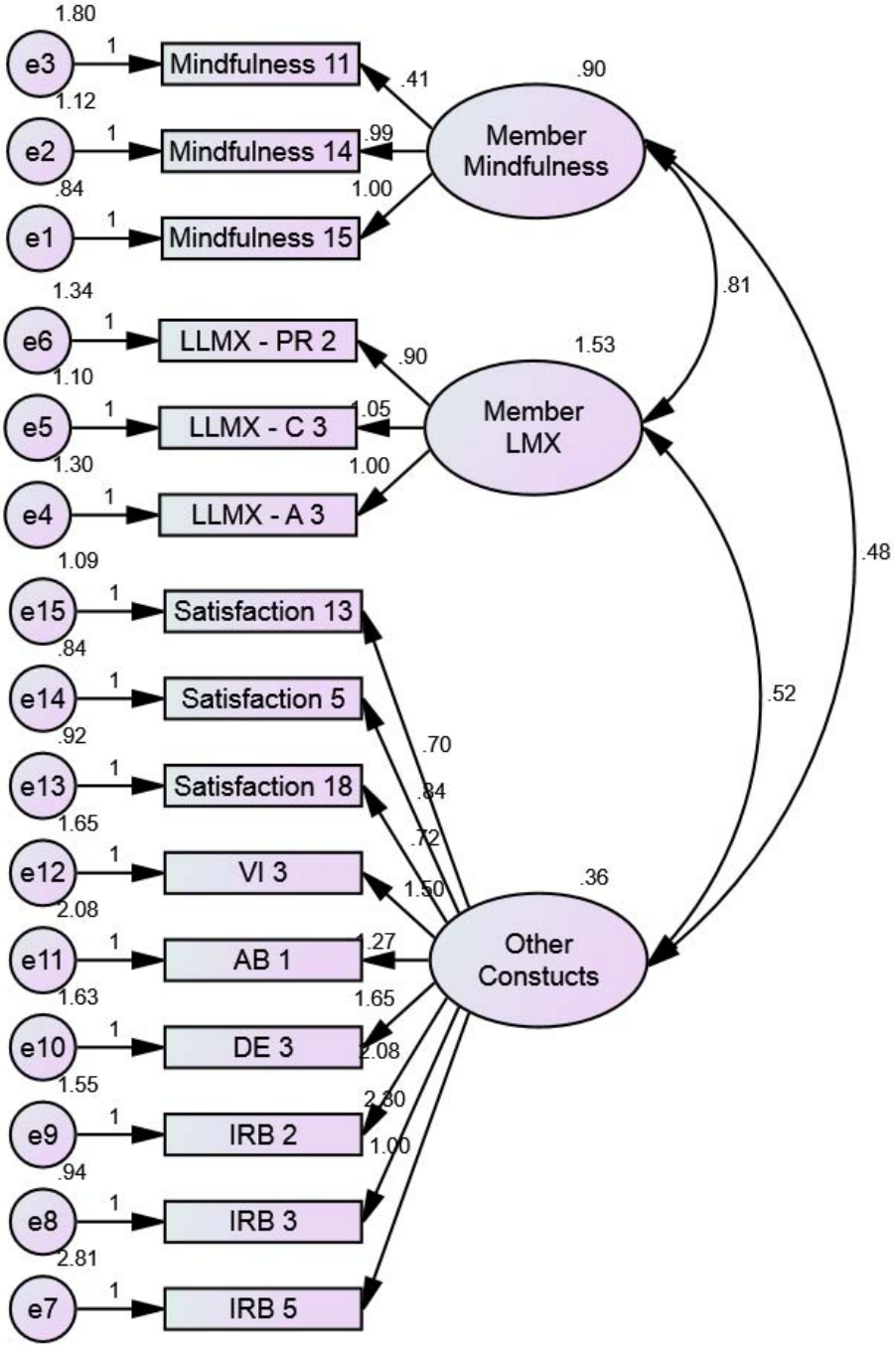
**Appendix D7: Path Diagram for Member Positive and Negative Schedule Scale.**



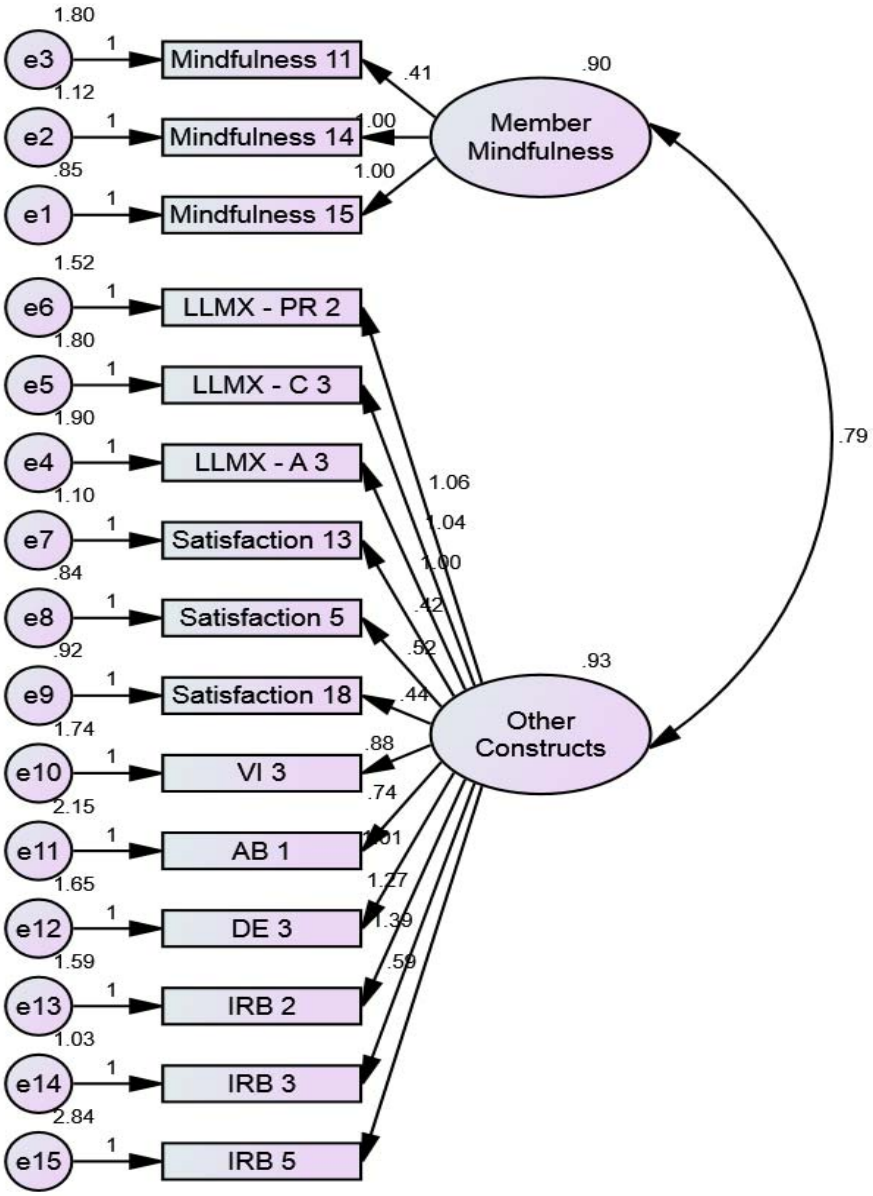
**Appendix D8: Path Diagram for Member CFA of Five-Factor Model.**



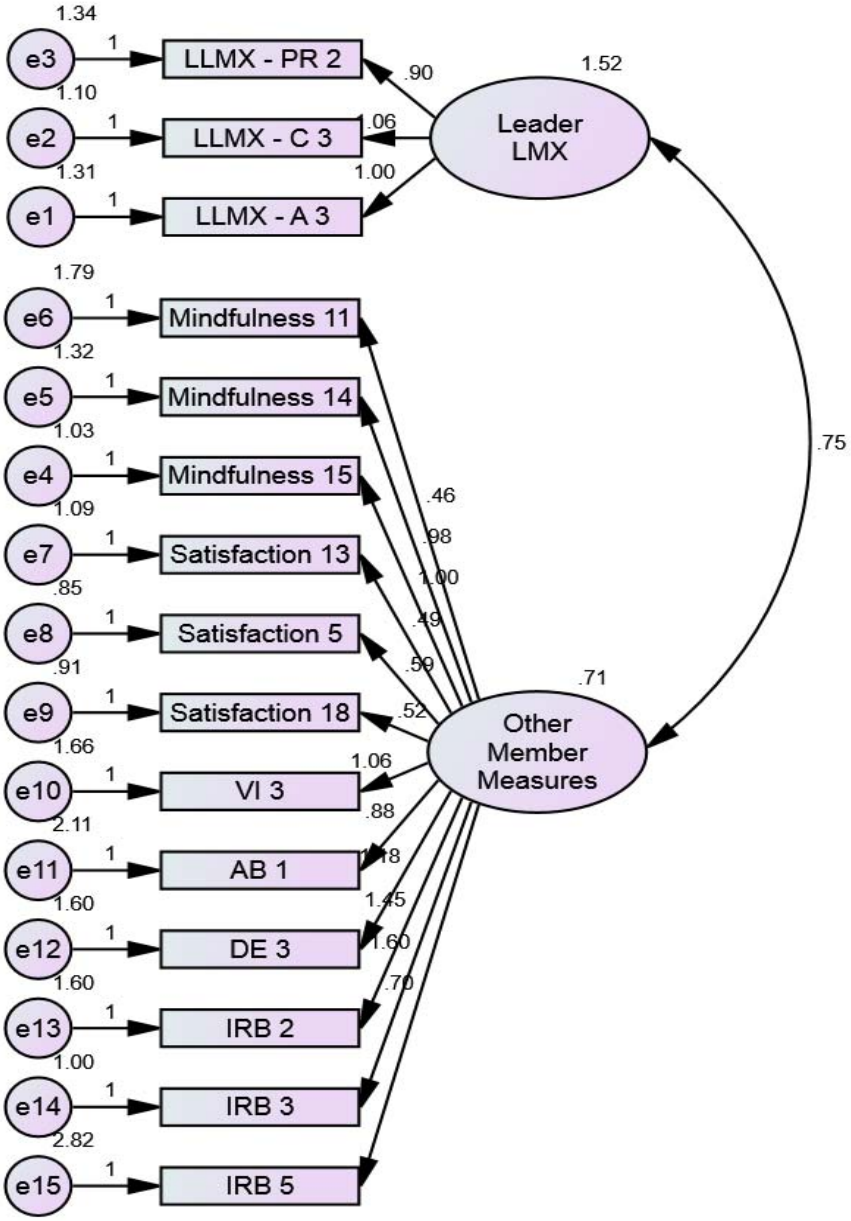
**Appendix D9: Path Diagram for Member CFA of Three-Factor Model.**



**Appendix D10: Path Diagram for Member CFA of Two-Factor Model (MAAS and Others).**



**Appendix D11: Path Diagram for Member CFA of Two-Factor Model (LLMX and Others).**



**Appendix D12: Path Diagram for Member CFA of Single-Factor Model.**