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LEADERSHIP AND SECURE BASE

A **Thesis** submitted in partial fulfillment of the
requirements for the degree of
Master of Science

By

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M.A., Saint Mary's University of Minnesota, 2018
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2023

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WRIGHT STATE UNIVERSITY

COLLEGE OF GRADUATE PROGRAMS & HONORS STUDIES

AUGUST, 29, 2022

I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY Bincy Davis ENTITLED Leadership and Secure base BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF Master of Science.

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Abstract

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Research on Attachment theory has established the need for secure base in adulthood (e.g., Hazan & Shaver, 1990). However, few researchers have explored the importance of secure base in a work setting. The purpose of my study was to examine the relevance of secure base in the leadership process. Results from pilot research showed that 13 leader behaviors were positively associated with secure base. Confirmatory factor analyses revealed that 5 factors underlay these 13 leader behaviors. Results from structural equation modeling provided support for a secure base model of leader behaviors in Study 1 ($N = 272$ US participants) and Study 2 ($N = 88$ Indian participants). Secure base was positively related to employees' psychological safety, and in turn, engagement, job performance, job satisfaction, and perception of leader efficiency.

Keywords: Secure base, leadership, psychological safety

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Leadership and Secure Base

Leadership affects various aspects of organizational performance (e.g., Bass, 1997; Bass & Avolio, 1994; Judge & Piccolo, 2004), including employee performance (e.g., Judge & Piccolo, 2004; Piccolo & Colquitt, 2006), employee engagement (e.g., Kahn, 1990), and job satisfaction (e.g., Tepret & Tuna, 2015). Leadership matters. Further, the modern workplace expects leadership to be competent to manage a multicultural workforce and implement increasingly competitive business strategies. Thus, researchers have integrated theories from various domains to understand leadership and leadership outcomes (Yukl, 2006), and Attachment theory (Bowlby, 1969) from developmental psychology is one such theory. Attachment theory states that when one's primary attachment figure becomes a secure base (Ainsworth & Bell, 1970), one experiences safety and exploration support. A secure base is what one becomes in the other's mind when the other's perception of one is associated with safety and growth (Bowlby, 1980). In organizations, a leader is a primary attachment figure (Popper & Mayseless, 2003). Researchers have found that the perception of a leader as a secure base had a positive relationship with employees' proactive work behavior (Wu & Parker, 2017) and professional efficacy (Molero et al., 2019) and a negative relationship with burnout (Molero et al., 2019). Despite the benefits of secure base, few studies (e.g., Coombe, 2010; Wu & Parker, 2017, for exceptions) have attempted to study secure base in the context of leadership. Thus, the purpose of my study is two-fold: (a) identify leader behaviors that enable an employee to perceive their leader as a secure base and (b) propose and test a secure base model of leader behaviors and positive employee and leader outcomes.

Leadership: Definition and Theories

Researchers have studied leadership for decades and have defined leadership in terms of traits, behaviors, influences, interaction patterns, role relationships, and occupation of an administrative position (e.g., Avolio et al., 2009; Yukl, 2006). Despite these differences, most researchers have agreed that leadership is a process of influencing individuals to engage in behaviors conducive to achieving common organizational goals (Yukl, 2006). As an exhaustive discussion of the prominent leadership theories is beyond the scope of my thesis, I will present a summary of the major leadership theories divided into two categories: Traditional and Contemporary theories.

Traditional leadership theories originated in the 1800s and continued to evolve over a century focusing primarily on the leader and their capabilities. Developed in the 1840s, the Great Man theory is the oldest of the traditional models and held that leaders are born and not made (Spector, 2016). The Great Man theory regarded great leaders as heroes who rose to save the day in times of crisis. In the 1930s, Trait theories extended the Great Man theory and added that born leaders possessed inherent attributes that were different from those of non-leaders (Stogdill, 1948). During the 1940s and 1950s, Behavioral theories stated that leader behaviors are the best predictors of leader effectiveness (Khan et al., 2016). In the 1960s and 1970s, Contingency theories suggested that effective leadership is contingent on the successful interaction of leader traits, behaviors, tasks, people, and the situation, i.e., Situational leadership (Yukl, 2006).

Contemporary leadership theories emerged in the 1970s in response to the changing business world and focused on the relational aspect of leadership and its impact on followers. Prominent among the contemporary theories is the Transformational leadership theory. Developed in the 1970s, this theory defined leadership as an influence that inspires followers to

focus on higher-order needs such as self-actualization (Bass, 1985; Khan et al., 2016). The 1970s and 1980s also saw the emergence of Charismatic leadership, Servant leadership, and Leader-Member Exchange (LMX) theory. Charismatic leadership focused on how leaders used vision and personal examples to inspire their followers (e.g., Galvin et al., 2010) whereas Servant leadership stressed a leader's ability to serve their employees (e.g., Washington et al., 2006). Leader-Member Exchange (LMX) theory focused on multiple domains, including the leader, follower, and their dyadic relationship (Graen & Uhl-Bein, 1995). The early 2000s popularized Authentic leadership, which advocated that leaders be genuine, self-aware, and transparent in their employee interactions (Luthans & Avolio, 2003).

That leadership theories have focused on leader-follower relationships is not surprising given that many researchers have defined leadership as an interpersonal relational process (e.g., Hollander, 1964). Effective leaders understand the value of building an organizational culture based on healthy relationships and deep-rooted trusting connections. Relationship-driven leaders empower their employees, instill in them a sense of pride, and encourage them to think independently (Komives et al., 2006). Moreover, when leaders establish sound relationships, followers form an emotional connection with their leaders, take risks, make progress, and effect change (Popper & Mayseless, 2003).

Attachment theory provides a unique perspective to understand leader-follower relational dynamics because leader-follower relationships are analogous to parent-child dynamics in many respects (e.g., Popper & Mayseless, 2003). Parental responsibility is primarily about developing children's skills and assuring them of parental support should there be a need for it. This imagery is apt for leaders as they help employees perform tasks that help them learn and grow. Leaders must create trusting relationships with those dependent on them, have an interest in their

followers' development, and show confidence in their followers' abilities. Also, leaders must provide their followers with the resources they need to overcome challenges on their path to success. These are tasks not unlike those of parenting. Similar to a parent, leaders help their employees collaborate and engage in problem-solving. Thus, Attachment theory has provided a unique relational lens from which to view leader-follower relations.

Attachment Theory

Bowlby (1982) conceptualized Attachment theory to understand infants' intense distress resulting from parental separation. He proposed that infants have an inborn desire to maintain proximity to their primary caregiver. Infant attachment behaviors such as sucking, clinging, following, crying, and smiling help accomplish this innate need. When frightened, worried, or vulnerable, infants find contact with their attachment figure comforting (Fearon & Roisman, 2017). Ainsworth (1989) and Bowlby (1969) studied relationships between young children and their primary caregivers and theorized that these early attachment experiences would continue to influence their relationship perceptions throughout their lifetime.

Ainsworth and her associates' (1978) empirical work validated and expanded Bowlby's Attachment theory tenets. Ainsworth's research had two stages. The first stage involved direct observation of mother and infant behaviors in their home during the first year of the infant's life, which provided a normative account. In contrast, the second stage consisted of the Strange Situation experiment, which identified three main behavior patterns in infants (secure, anxious, and avoidant) and provided a descriptive account of the mother-infant attachment styles (Ainsworth, 1989). In the years that followed, a vast body of research has demonstrated links between early parental sensitivity and responsiveness and attachment security (e.g., Biro et al., 2015; Mountain et al., 2017; Schoenmaker et al., 2015).

Key Concepts of Attachment Theory

Attachment Behavioral Systems (ABS), secure base, working models, and attachment styles provide a foundational understanding of Attachment theory (e.g., Mikulincer, 2019).

Below, I will summarize ABS, working models, and attachment styles briefly because they are less central to my study. Then, I will provide a detailed review of secure base because it is the primary focus of my study.

Attachment Behavioral System (ABS)

A motivational system, the ABS, evolved through natural selection to regulate proximity to an attachment figure (Bowlby, 1982). ABS activates whenever there is a threat of separation from the attachment figure. Throughout history, infants who have maintained proximity to an attachment figure via attachment behaviors have had a higher likelihood of survival (Bowlby, 1982).

Working Models

Working models are the internal processes of attachment style and are mental representations of past experiences (Simpson & Rholes, 2017). Children's experiences in the first few years of their life establish their working models, which become difficult to change with time. A young child's relationship with their attachment figure acts as a prototype for all future relationships. According to Bowlby (1982), internal working models of self and others make up the schema that informs individuals' relational behaviors throughout life.

Attachment Styles

Using his/her ABS, an infant interprets behavioral cues received from the primary attachment figure and develops attachment styles to respond to these cues. Ainsworth developed the Strange Situation experiment to observe children's attachment styles resulting from

temporary parental separation. Styles are patterns of expectations, needs, emotions, and social behaviors that result from attachment experiences. Based on the Strange Situation experiment, Ainsworth determined three attachment patterns: secure, anxious-ambivalent, and anxious-avoidant. Main and Solomon (1990) added a fourth style, disorganized, based on the observation that some infants did not meet Ainsworth's three attachment patterns.

Secure Base

The concept of a secure base is foundational to Attachment theory (Crowell et al., 2002). Attachment theory focuses on parent-child relations, namely, how the quality of the relationship between a parent and an infant can strengthen or undermine an infant's feeling of security. Similar to Freud, Bowlby recognized the importance of early childhood experiences. He posited that evolution endows humans with survival instincts that lead to attachment behaviors that allow them to use others as a secure base for safety and exploration. Infants confidently explore and take risks when they feel assured that their attachment figure is available to meet their emotional needs and respond with comfort or encouragement when necessary. Ainsworth (1967) defined secure base as the feeling of security and comfort obtained from a relationship with consistently caring and supporting parents. Based on their observational work with newborn infants and their mothers, Ainsworth and colleagues (1978) identified four dimensions of maternal behaviors instrumental in enabling mothers to become a secure base for their infants. The four maternal behavior dimensions were: acceptance-rejection, cooperation-interference, accessibility-ignoring, and sensitivity-insensitivity.

Acceptance – Rejection. This behavior results from mothers' feelings about their infant. Mothers who are unable to overcome the struggles and inconveniences associated with motherhood can come to resent their infants and reject the baby's attempts to bond. Mothers who

can overcome the struggles and inconveniences associated with motherhood find joy in their infants, are kind and warm toward their infants, and accept the baby's attempt to bond.

Cooperation – Interference. This behavior relates to the extent and frequency of the mother's interventions when she thinks her infant needs assistance. Interfering mothers override their infants' wishes or actions and dominate all of their interactions. In contrast, cooperating mothers either join their infants' play or wait for an opportune moment to gently guide their attention in a different direction.

Accessibility – Ignoring. Infants seek continuous access to their mothers for emotional and physical safety. Accessibility – ignoring relates to a mother's availability to her infant. Ignoring mothers are either unsure of how and when to respond or are aware but choose to be unavailable to their infant. Accessible mothers are always aware of the infant's whereabouts and are ready to respond and assist as needed.

Sensitivity – Insensitivity. This behavior relates to the mother's ability to detect her infant's distress signals and take the action needed to address the distress. Insensitive mothers are either unaware of their infant's needs or are unable to interpret them correctly. In contrast, sensitive mothers are highly attuned to their infant's needs and pick up even subtle mood swings.

Summary. Infants who have learned that they can trust their parents have a good foundation for forming new relationships (Bowlby, 1982). The attachment figure, usually the primary caregiver, functions as the secure base for infants. Children who receive effective caregiving feel safe and engage in exploratory behaviors whereas other children cannot do so. Children of trustworthy and reliable parents experience security that enables them to explore their surroundings carefreely. As infants grow, they become more mature, independent, display

fewer attachment behaviors, and replace their parents as primary attachment figures with other figures, such as a best friend, romantic partner, or leader (Ainsworth, 1989).

Since Bowlby's early work on the importance of childhood attachment and its influence on later relationships, adult relationship researchers have extended the concept of attachment to adulthood and work life. For example, Erozkan (2016) proposed that expectations and responses to interpersonal situations learned in early childhood relationships provide a model for relatively stable patterns of intimate relationships in adulthood. Adult attachment is built on the premise that the same motivational system that gives rise to the close emotional bond between parent-child is responsible for the bond that develops between adults and the various relationships in which they engage. Hazan and Shaver (1990) were among the first to apply Attachment theory to the workplace. They found that securely attached individuals had higher levels of overall work satisfaction and were confident that others would evaluate them positively. On the other hand, anxious individuals expected to be undervalued by coworkers, and avoidant individuals not only self-rated poorly on job performance but also expected to receive low performance ratings from coworkers.

Secure Base and Leadership

A central theme in Attachment theory is the role of support from others in promoting an individual's exploration. In an organization, a leader supports and regulates their follower's distress and thus fulfills the role of authoritative and primary caregiver. Thus, within an organizational context, a leader is an attachment figure for their employees (Mayseless & Popper, 2007). Further, research has found that employees' perception of their leader as a security provider was positively associated with positive affectivity, professional efficacy, and

satisfaction with their leader and negatively associated with negative affect, emotional exhaustion, and cynicism (Molero et al., 2019).

Secure leaders have a positive sense of self-worth and are free to work on organizational goals because they are not avoidant or preoccupied with their own security needs. Wu and Parker (2017) suggested that secure leaders augmented employees' proactive behavior by influencing employees' self-efficacy and autonomous motivation. Secure leaders have a powerful influence on proactive motivation and behavior for employees low in attachment security. Individuals low in attachment security are likely to benefit most from secure leaders because they have not had safe and reliable primary caregiver experiences in early life. This prediction derives from Attachment theory (Bowlby, 1982), which suggests that individuals will seek and rely on alternative figures to provide attachment security if they cannot obtain it from their primary caregivers. Consequently, leaders who can provide secure base support would be effective substitutes for attachment figures, and that support will increase proactive motivation and behavior for those with lower attachment security (Rahimnia & Sharifirad, 2014). Leaders with a secure attachment style are especially critical for enhancing self-efficacy for anxiously attached individuals. Secure base support constitutes reliable social care that helps strengthen these individuals' perceived self-evaluations, promoting a sense of competence and perceived capability (Wu & Parker, 2017).

Current Secure Base Models

Crowell et al. (2002) designed a Secure Base Scoring System to understand adulthood attachment behaviors better. Crowell and team (2002) interviewed 157 engaged couples and videotaped their approach to working through a topic of disagreement. This situation is assumed to present a distress situation that would require one or both partners to play a comfort role for

the other. As part of secure base support behaviors, Crowell et al. (2002) identified the following partner behaviors that enabled a partner to be a secure base for the other: (a) Interest in their partner or availability: Willingness and ability to be a good listener and encourages partner to express their thoughts, (b) Sensitivity: Awareness of partner's distress, (c) Willingness and ability to understand their problem: Correctness of partner's distress assessment, and (d) Cooperative responsiveness: Willingness to take action and help.

Schofield and Beek (2005) conducted a longitudinal study with 52 foster care children under the age of 12 in two phases and developed a secure base model for parenting foster children. In Phase I (1997-1998), the researchers collected data regarding children's birth histories and foster placements. In Phase II (2001-2002), the researchers collected data regarding children's behaviors. The researchers used the dimensions of sensitivity, acceptance, co-operation, accessibility, and family membership, based on the findings of Ainsworth and her colleagues (1971, 1978). To better cater to the foster care environment, Schofield and Beek (2005) reframed the foundational dimensions to align with the developmental needs of children as follows: (a) Promoting trust in availability: Available and accessible caregiver but not intrusive, (b) Promoting reflective function: Cooperation, (c) Promoting self-esteem: Full and unconditional acceptance, (d) Promoting autonomy: Sensitive and reflective caregiver, and (e) Promoting family membership: Belongingness.

Whereas most secure base models have assessed behavior in the context of familial (Schofield & Beek, 2005) or intimate relationships (Crowell et al., 2002), one study has considered workplace settings behaviors, specifically leader behaviors (Coombe, 2010). Coombe (2010) conducted a qualitative study and identified eight leader behaviors that enabled a leader to become a secure base for their employees. The eight behaviors were (a) Acceptance: Non-

judgmental and valuing the other as human first, (b) See potential in the other: Building a vision for the other, (c) Opportunities for risk: Encouraging risk taking for career growth, (d) Supportive and accessible anywhere anytime: Supporting and being available, (e) Listening: Helping as needed, (f) Calm: Being dependable and predictable even in difficult times, (g) Intrinsic motivation: Knowing follower needs, and (h) A positive mindset: Optimistic even in tough situations. Subsequent Exploratory Factor Analysis (EFA) produced three factors, safety, exploration, and positive dealing. Coombe (2010) described his safety and exploration constructs as a mix of behaviors that indicated a leader's relational interactions and his positive mindset construct as a set of behaviors that represented a leader's task orientation. Based on the EFA results, Coombe used a combination of his initial scale items and operationalized his final three leader behaviors as follows: acceptance and accessible anywhere any time defined *safety*; opportunities for risk, see potential in the other, and intrinsic motivation defined *exploration*; and listening, calm, and positive mindset items defined *positive dealing*.

Proposed Model of Antecedents and Outcomes of Secure Base

If there is a limitation to Bowlby's (1969) and Ainsworth's (1989) research, it is that although they understood that attachment behaviors evolved throughout one's lifetime, their research did not examine their predictions in adulthood or work settings. It is possible that the behaviors a parent engaged in that enabled them to become a secure base for their children might not be identical or similar enough for an adult to experience their leader as a secure base in a work environment. Based on attachment similarities in childhood and adulthood, researchers (e.g., Coombe, 2010; Crowell et al., 2002) have extended Attachment theory tenets to adult relationships, but Bowlby and Ainsworth developed Attachment theory to understand infant attachments.

If an infant's perception of their primary attachment figure is that of a secure base, the infant experiences safety and exploration. In organizations, if a leader acts as the primary attachment figure, and if an employee perceives their leader as a secure base, then an employee might experience positive outcomes. If this occurs, then it is in the interest of organizations, leaders, and employees to have leaders engage in secure base behaviors.

Building on Bowlby's (1969) Attachment theory and Ainsworth et al.s' (1971) maternal secure base behaviors, I defined leader secure base behaviors as a set of individual leader behaviors that enable an employee to perceive their leader as a consistent and reliable source of safety, security, and encouragement. Ainsworth and colleagues' (1971, 1978) identified four maternal behaviors instrumental in enabling mothers to become a secure base for their infants. The four dimensions of maternal behaviors were: acceptance-rejection, cooperation-interference, accessibility-ignoring, and sensitivity-insensitivity. Because the focus of my thesis is identifying behaviors that potentially increase leader effectiveness, I focused on the positive end of each dimension, acceptance, cooperation, accessibility, and sensitivity. To these four dimensions, I have added a fifth dimension, i.e., advocacy. In addition to supporting and encouraging employees, leaders need to advocate for their employees. Although parents need to advocate for their children in some contexts, e.g., access to medical care or educational assistance in school settings, prior research on child Attachment theory has not focused on advocacy.

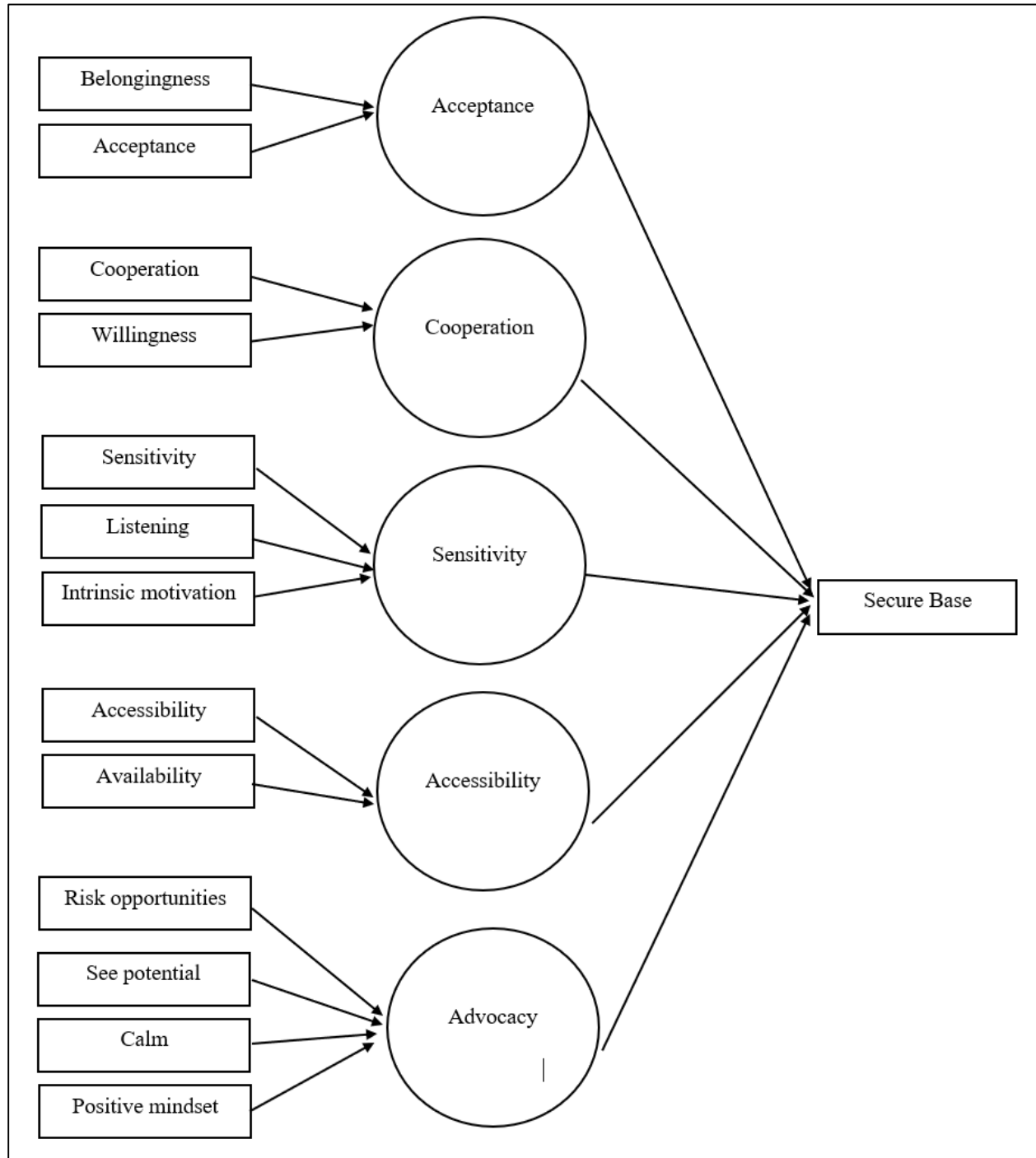
However, in a work setting, advocacy is critical to employees perceiving their leader as a secure base. Researchers have identified identity and success as key developmental milestones in adulthood (e.g., Scales et al., 2015), and work is a fairly common path to achieving both of these markers. In organizations, leaders represent both expertise and authority. When leaders advocate for their employees, executive decision-makers have the information they need to make

decisions that positively affect employee careers. However, if leaders do not advocate for their employees, they are less likely to receive needed recognition and growth opportunities.

Employee advocacy is a means by which leaders can showcase employee talents to senior leadership and other stakeholders, providing employees with the access they would not otherwise have. An effective leader has their employees' best interests and makes it known to employees that they "have their back".

Ainsworth et al.'s (1978) maternal behaviors have informed secure base research across domains and resulted in researchers identifying various behaviors as pre-requisites for a secure base. Three research studies (Coombe, 2010; Crowell et al., 2002; Schofield & Beek, 2005) have identified 13 behaviors. In my study, I propose that these 13 secure base model behaviors will coalesce with Ainsworth et al.'s four dimensions and my fifth dimension, as shown in Figure 1.

Figure 1. *Proposed Latent Factor Structure of Leader Secure Base Behaviors*



Factor 1: Acceptance

Acceptance is one of the behaviors that help with the perception of a secure base (e.g., Ainsworth, 1978; Coombe, 2010; Schofield & Beek, 2005). When a parental attachment figure

provides unconditional acceptance, they convey to their child that they are loveable, instill a sense of self-worth, and create a sense of belongingness (Schofield & Beek, 2005). A need to belong is a fundamental human emotion (Baumeister & Leary, 1995). Thus, even though individuals value their distinctiveness, individuals seek connectedness with others. Researchers have associated a lack of belongingness with stress, anxiety, and low self-esteem (e.g., Mohamed et al., 2014), and Schofield and Beek (2005) have identified it as one of the secure base behaviors. An effective leader is aware that various personality types make up a work environment, potentially resulting in conflicts, and hence creates a culture of belongingness in which everyone can thrive. The feeling of exclusion is a negative experience that causes employees to suppress their uniqueness so as to fit in, leading to unwanted stress and non-performance. Acceptance is a willingness to embrace differences despite a lack of social support (Sarason et al., 1990). In organizations, leader acceptance creates a welcoming environment and helps employees fit in. For a healthy and safe work environment, leaders must accept their employees despite their differences and value them for their distinctiveness. As with foster children who have come to believe they are unlovable and deserving of punishment (Schofield & Beek, 2005), acceptance is especially important for employees who have traditionally met with rejection or disapproval. Lack of acceptance makes employees take fewer risks and pull back from work whereas a culture of acceptance enables employees to overcome challenges and contribute to increased performance. According to Maslow (1943), the need for belongingness is a human's need to find acceptance, recognition, and appreciation. When employees feel accepted, they can be their authentic selves because everyone wants to be valued and accepted for who they are, and an effective leader is aware of this need.

Hypothesis 1a: Leader behaviors of belongingness and acceptance will load onto a single latent factor, acceptance.

Factor 2: Cooperation

Cooperation is another secure base behavior (Ainsworth, 1978; Schofield & Beek, 2005) and is a positive reciprocal exchange between members of a dyadic relationship (Coyle & Foti, 2015). A child's trust in their caregiver's availability to provide protection and comfort when needed enables the child to have a cooperative orientation with the caregiver. Evidence has supported a secure base role in a child's willing cooperation with their caregiver (Ainsworth, 1978). Having established a secure base, the child progresses toward a positive orientation toward parental goals and acceptance of family values. An effective leader sees themselves as a facilitator of organizational goals and shares both responsibilities and rewards. Cooperative leaders listen to their employees and take in critical feedback with minimal defensiveness, which creates a safe work environment in which employees feel encouraged to voice their opinions and experiences. In addition to cooperation, Crowell et al. (2002) identified a willingness to help and follow-through behaviors as pre-requisites for secure base perception. Willingness to help and take action involves understanding another's problems and empathizing with them. Along with cooperating, efficient leaders have a willingness to help and take practical steps towards addressing problems. Such leaders create a collaborative environment in which everyone is valued and motivated to do their best. These leaders know how to mentor and build developmental experiences into their employees' existing job roles, thereby enabling growth and preparing them for higher positions. When leaders are cooperative and invested in their employees, they are more engaged and collaborative in their work environment.

Hypothesis 1b: Leader behaviors of willingness to help and cooperation will load onto a single latent factor, cooperation.

Factor 3: Sensitivity

Sensitivity is another behavior contributing to creating a secure base (Ainsworth, 1978; Feeney, 2004; Schofield & Beek, 2005). Sensitivity involves listening, being attentive, and showing support and empathy for others. Sensitive leaders lead with compassion, which fosters trust in their followers. Such leaders know that their team is their best resource, and showing genuine concern for their well-being leads to building trust. Employees feel safe and turn to their leaders when in need, which allows for an engaged work environment reducing turnover (Kundu & Lata, 2017). Sensitivity enables effective leaders to pick up on employee needs and their feelings of anxiety and stress and help address them before they hamper employee performance. Consequently, listening and intrinsic motivation are behaviors Coombe (2010) identified as needed for a secure base. Employees want their leaders to hear their concerns and respect them. Listening transmits that kind of respect and builds trust whereas being aware of employees' internal motivators leads to a highly engaged and committed workforce. Sensitive leaders realize the need for timely affirmation and reach out to their employees to express their gratitude and appreciation. Leader sensitivity helps organizations achieve their goals and creates a sense of fulfillment in their employees. They use this awareness to establish creative workspaces in which employees feel empowered to do their best.

Hypothesis 1c: Leader behaviors of listening, sensitivity, and intrinsic motivation will load onto a single latent factor, sensitivity.

Factor 4: Accessibility

Ainsworth (1978) stated that infants seek continuous access to their mothers for emotional and physical safety. Consistently available parents are key to establishing a secure base perception in children. Researchers have identified accessibility and availability as behaviors essential to secure base (e.g., Ainsworth, 1978; Coombe 2010; Crowell et al., 2002; Schofield & Beek, 2005). Leaders demonstrate availability when they make time for their employees and accessibility when they provide access and attention to their employees. An effective leader knows that they are a resource for their employees and that employees need their leaders to be available in general and not just in times of crisis. Being available requires leaders to make a conscious effort to manage their schedules. When a leader is available, employees are more likely to report problems and proactively reach out to find appropriate solutions.

Accessibility behavior requires leaders to break down perceived barriers and maintain open communication. Leader accessibility shows employees that their leaders are there to help them succeed, are open to employee suggestions, and will give them a patient and fair hearing. Effective leaders make sure they are available and accessible to their employees because it sends them the message that their leaders respect and value their knowledge and skills. Such behavior improves leader-follower working relations, improves the overall work environment, and makes everyone more productive. Being available and accessible to employees helps foster a safe environment in which employees know they can ask for support when needed and that their leaders will take their needs seriously.

Hypothesis 1d: Leader behaviors of availability and sense of accessibility and availability will load onto a single latent factor, accessibility.

Factor 5: Advocacy

Coombe (2010) identified maintaining a calm demeanor, projecting a positive mindset, identifying employee potential, providing support, and creating growth opportunities for employees as leader behaviors needed for employee secure base perception. I believe a common theme of employee advocacy connects the behaviors mentioned above, so I propose employee advocacy as the fifth secure base dimension. Leaders are the voice of their employees to upper management. Effective leaders know their employees well enough and represent them accurately and fairly within the company. Employee advocacy is an employee's perception of the extent of organizational support and employee value (Eisenberger et al., 1986). Because a leader is an organizational representative, employees attribute organizational support to the leader rather than just to the organization. Hence, employee advocacy is about a leader genuinely caring for their employees.

When leaders create a culture of advocacy, employees know that their leader has their back. Employee advocacy builds trust and leads to better-engaged employees who feel valued and appreciated. Effective leaders advocate for their employees' future by developing their skills and looking for growth opportunities. Moreover, when employees see their leaders promoting their work and worth to the organization, they feel valued and confident in their profession. Such employees take risks without fear of failure because they know that they have someone in their corner to support them. Effective leaders show grace under pressure and help others remain level-headed when emotions are at risk of rising. Such leaders stay calm and direct focus away from fear to the task at hand. Also, a positive mindset helps leaders see beyond immediate problems and helps their team be productive. Researchers have found positive effects of leader optimism on subordinate outcomes such as job performance, engagement, and trust (e.g., Avey et

al., 2011). A potential explanation could be that when employees get stuck or face obstacles in pursuit of their goals, an optimistic leader can help find potential solutions creating an environment of support and safety. In turn, leader support enables employees to trust their leaders and work more diligently towards achieving their goals. Employee advocacy increases self-confidence and their ability to perform at optimum performance levels necessary to increase their success and their team's success. Being an employee advocate means becoming a leader who is a safety net for their employees.

Hypothesis 1e: Leader behaviors of risk and opportunity, potential, calm, and positive mindset will load onto a single latent factor, advocacy.

Summary

The five dimensions: acceptance, cooperation, sensitivity, accessibility, and advocacy will enable an employee to perceive their leader as a secure base (Figure 1). All of these leader behaviors help instill a feeling of safety and growth in employees, both of which are outcomes of a secure base. In addition to engaging in the above identified behaviors, leaders would need to ensure that they consistently and reliably exhibit these behaviors, as the key to becoming a secure base is in providing consistent and reliable safety and encouragement. Based on the above discussion, I proposed that the five latent factor structure underlying the various leader behaviors together would enable an employee to perceive their leader as a secure base (Figure 1).

Outcomes of Leader as a Secure Base

A secure base leads to safety and exploration, and in an organizational context, a leader as an attachment figure can become a secure base for their employees (Molero, 2019). Exploration leads to learning and growth, and for adults, work is an essential source of development. Research has equated work in adulthood with Bowlby's exploration in infancy

(Hazan & Shaver, 1990). Subsequently, networking, taking the initiative, and taking risks are examples of adult exploratory behaviors in a work environment. Such behaviors result in knowledge acquisition and growth, resulting in a productive employee for an organization. One would expect to observe the effects of secure base leadership on various employee outcomes, including psychological safety, employee engagement, employee performance, employee job satisfaction, and leader effectiveness.

Psychological Safety

Attachment theory has stated that a secure base provides safety and encourages exploration (Bowlby, 1988). Without safety, an infant is unwilling to explore their surroundings. In adults, psychological safety is a greater need than physical safety because, unlike infants, adults can take care of themselves. Psychological safety is a belief that an environment, such as a workplace, is safe for risk-taking (Edmondson, 1999; Kahn, 1990). This feeling of safety encourages employees to take a more active role at work, learn, and contribute to organizational success. Kahn (1990) identified leadership as one of the antecedents of psychological safety. When leaders accept mistakes and use them as learning moments, employees feel confident to take the initiative and not fear setbacks (Edmondson & Lei, 2014). In essence, when a leader becomes a secure base for their employees, employees do not fear ridicule nor worry about repercussions and use their creativity to innovate. A positive relationship with leaders conveys critical information to employees concerning support, resilience, consistency, trust, and competence (Kahn, 1990). Employees who perceive their leaders as providing a secure base handle conflicts effectively and trust their leaders to arrive at a fair judgment. A secure base helps one cope with workplace threats such as bullying, abuse, and discrimination. Failure of the

leader to provide a secure base keeps followers preoccupied with safety needs and makes them less likely to take appropriate risks to grow.

Employee Engagement

Employee engagement is important for the success of organizations (Gyensare et al., 2016). Work engagement is a state in which an employee experiences consistent dedication, absorption, and resilience (e.g., Schaufeli et al., 2002). Engaged employees are invested emotionally in the organization, are committed to their work, and are less likely to leave. Kahn (1990) identified psychological safety as a necessary condition for employee engagement. Employees who are engaged are far more productive than those who are not. If employees do not feel safe and supported, they are less able to do their jobs. Such employees are preoccupied with potential threats and barriers to their well-being, and their work often suffers. Employees use their relationship with their leader as a secure base for support, comfort, growth, and exploration (Molero et al., 2019). When leaders create an environment that fosters group cohesiveness, each employee's potential to learn, grow and thrive increases. Leaders who focus on a relational culture benefit from a more sustainable and healthy work environment. As the quality of connections increases in the work culture, so do the levels of employee engagement.

Job Satisfaction

Support from leadership helps employees feel safe and secure at work, increasing their job satisfaction levels, which is why leader support and encouragement are key factors of employee attitude toward their job (Griffin et al., 2001). Job satisfaction is a feeling of content with one's work (Lambert & Paoline, 2008), and researchers have tended to agree that job satisfaction is a reliable indicator of how an employee feels about their job (e.g., Tepret & Tuna, 2015). A satisfied employee speaks positively about their organization, increasing its brand

value, whereas a dissatisfied employee negatively affects their organization, impacting its reputation. Researchers consistently have found a strong relationship between leader-follower relationship and job satisfaction (e.g., Fila et al., 2014; Rowold et al., 2014; Sun et al., 2016). Further, the lack of leader support or consideration may contribute to employee stress (Wilkinson & Wagner, 1993), resulting in job dissatisfaction and voluntary organizational exit (Chen & Spector, 1991). Numerous studies have found a strong negative relationship between job satisfaction and turnover (e.g., Chen et al., 2008; Kinicki et al., 2002). A secure base creates a safe space that enables employees to trust their leaders and actively engage with them. Effective leaders understand their role in their employees' job satisfaction and proactively work towards establishing an environment of safety and trust. Employees experience higher job satisfaction when they feel safe and perceive their leaders as trustworthy (Randeree & Chaudhry, 2012), and job satisfaction is one of the most prominent predictors of employee job performance (Tepret & Tuna, 2015) and reduced counterproductive work behaviors (Lambert & Paoline, 2008).

Job Performance

Effective leadership motivates and influences employees to perform at their highest levels. Leaders create a positive and safe work environment that allows creative problem-solving. Effective leaders help improve the self-worth and self-efficacy of their employees. Successful employees meet organizational goals and help build a positive brand image. Leaders guide and mentor employees, address performance issues, and increase their employees' confidence and expertise levels. Moreover, effective leaders help build a pool of effective performers, saving organizations time and money. Tsai et al. (2009) found that leadership also indirectly affected employee's affectivity in addition to directly influencing task performance. Employees who perform well on their jobs meet deadlines and exhibit pride in their work

whereas non-performers impact their own work, impede others' performance, and create a hostile work environment.

Perceived Leader Effectiveness

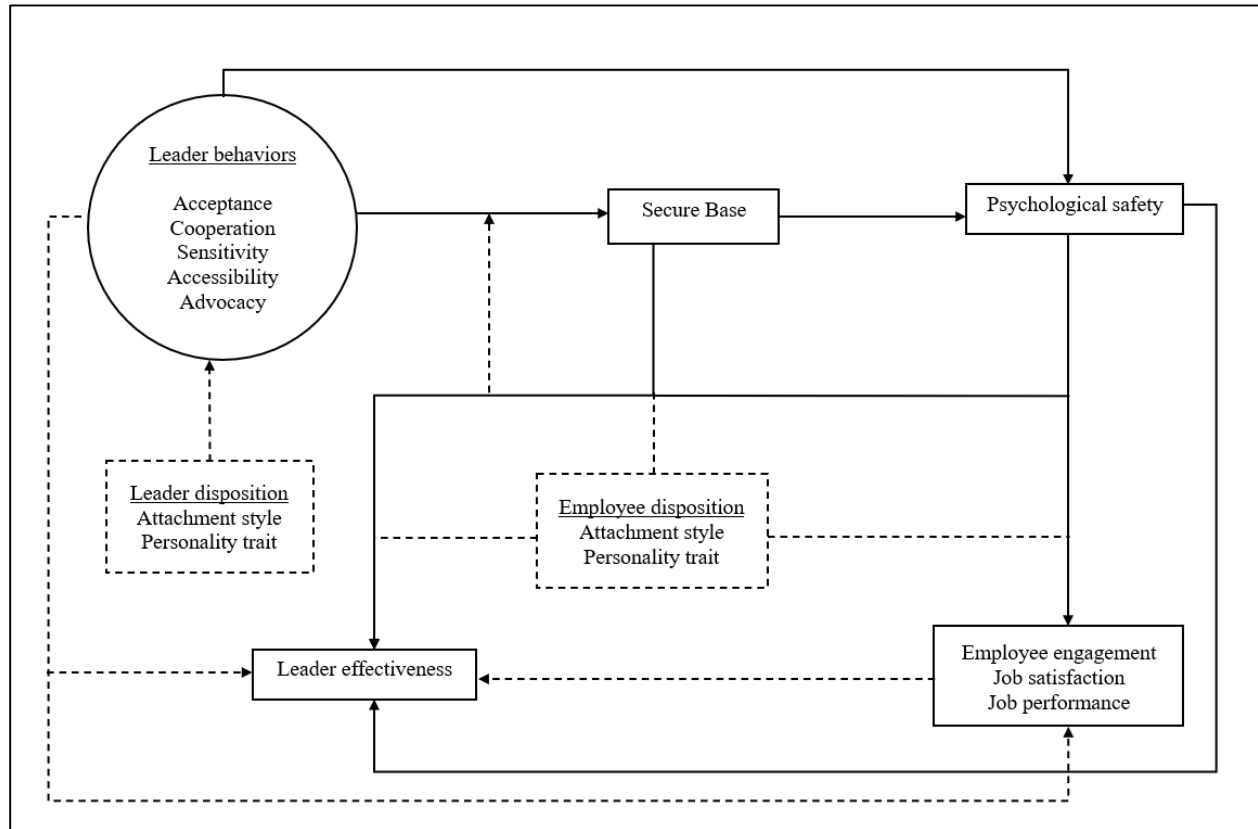
A leader's ability to empower and engage employees to achieve organizational goals is one of the antecedents of leader effectiveness (Lacerda, 2015). When employees experience safety and encouragement at work, they are engaged and willing to take risks. A secure base leads to safety and growth (Bowlby, 1982). When leaders engaged in behaviors that enabled employees' perception of a secure base, they also enhanced leader effectiveness as perceived by both the leaders' followers and the leaders' managers (Coombe, 2010).

Given that research has identified the beneficial outcomes of a leader being a secure base, the logical question is if research can help identify leader behaviors that would enable this process.

However, whether these behaviors would influence positive work outcomes through secure base is an equally important question that needs an answer. Hence, I hypothesized a model of antecedents and outcomes of leader secure base behaviors (see Figure 2) and formulated subsequent hypotheses to test specific relationships in the model. The hypothesized model illustrates how leader behaviors might predict employees' perception of a secure base, psychological safety, leader effectiveness, and other employee outcomes.

Hypothesis 2: The hypothesized conceptual model (Figure 2) describing the relationships between leader behaviors, secure base, and outcomes of secure base will produce an acceptable fit.

Figure 2. *Proposed Model of Antecedents and Outcomes of Secure Base*



Note: Dotted lines define specific model relationships that I did not test in the current study.

Direct Effects of Leader Behaviors on Secure Base

Each leader behavior is distinct and will have a unique effect on an employee's perception of their leader as a secure base. Secure base perception is dependent on an employee experiencing consistent and stable security, safety, and encouragement from their leader. Leader sensitivity to employee needs and concerns and acceptance of employee idiosyncrasies results in employees experiencing safety and security. Being available and supportive of employee endeavors helps employees confidently explore their work environment. Employees that know that their leader has their back are more confident, engaged, and willing to take risks at work. Thus, collectively these distinct leader behaviors will contribute to employees' perception of their leader as a secure base.

Hypothesis 3a: Acceptance will be positively related to employees' perceptions of their leaders as a secure base.

Hypothesis 3b: Cooperation will be positively related to employees' perceptions of their leaders as a secure base.

Hypothesis 3c: Sensitivity will be positively related to employees' perceptions of their leaders as a secure base.

Hypothesis 3d: Accessibility will be positively related to employees' perceptions of their leaders as a secure base.

Hypothesis 3e: Advocacy will be positively related to employees' perceptions of their leaders as a secure base.

Direct Effects of Leader Behaviors on Psychological Safety

Leaders play an important role in employees' success as they provide guidance, direction, mentorship, and set goals. Leader acceptance of employees and sensitivity to their needs shows employees that their leader values them for who they are and creates an environment of safety. Such leaders send the message that employees can depend on their leaders when a need arises. Employees experience safety and are willing to take risks at work when they know that they have their leaders' support. Thus, collectively these distinct leader behaviors will contribute to employees' psychological safety.

Hypothesis 4a: Acceptance will be positively related to employees' psychological safety.

Hypothesis 4b: Cooperation will be positively related to employees' psychological safety.

Hypothesis 4c: Sensitivity will be positively related to employees' psychological safety.

Hypothesis 4d: Accessibility will be positively related to employees' psychological

safety.

Hypothesis 4e: Advocacy will be positively related to employees' psychological safety.

Direct Effect of Secure Base on Psychological Safety

Attachment theory states that individuals have an innate need for safety. A secure base provides infants with a sense of safety and encourages exploration. In addition to psychological safety, infants also need physical safety as they are unable to take care of their own safety. However, adults are usually capable of their own physical protection and are more concerned with psychological safety. In a work environment, when leaders play the role of attachment figures and become a secure base for their employees, it is natural to experience psychological safety.

Hypothesis 5: Employees' perceptions of their leaders as a secure base will be positively related to employees' psychological safety.

Direct Effects of Secure Base on Employee Engagement, Satisfaction, and Performance

Employees are free to engage in productive work behaviors when they know that their leader has their best interests and genuinely cares for their wellbeing. In a supportive work environment, employees are willing to take risks and implement innovative ideas, often resulting in increased output. This is because, in a safe environment, employees do not need to be in a survival mode and can direct their mental capacities on the task at hand.

Hypothesis 6: Employees' perceptions of their leaders as a secure base will be positively related to employee engagement, job satisfaction, and job performance.

Direct Effect of Secure Base on Perceived Leader Effectiveness

A secure base enables employees to be confident and pursue opportunities without fear of repercussions. As a result, employee perception of their leader as a secure base is likely to

develop a high-quality relationship with their leader. Thus, one might expect that employees' perception of their leader as a secure base will be positively associated with their perception of leader effectiveness.

Hypothesis 7: Employees' perceptions of their leaders as a secure base will be positively related to their perceptions of their leader's effectiveness.

Direct Effect of Psychological Safety on Employee Engagement, Satisfaction, and Performance

When employees experience safety, they divert their efforts to the task at hand. Research has identified employee engagement, job satisfaction, and job performance as outcomes of psychological safety (Frazier et al., 2017).

Hypothesis 8: Employees' psychological safety will be positively related to their engagement, job satisfaction, and job performance.

Direct Effect of Psychological Safety on Perceived Leader Effectiveness

Leader effectiveness is a perception that employees have based on their evaluation of leader actions. Leaders play a critical role in creating an environment of safety. Thus, when employees experience psychological safety, they are likely to evaluate their leaders' effectiveness positively.

Hypothesis 9: Employees' psychological safety will be positively related to their perceptions of their leader's effectiveness.

Indirect Effects of Leader Behaviors on Psychological Safety through Secure Base

Safety is one of the outcomes of a secure base. Each leader behavior is distinct and will have a unique effect on an employee's psychological safety. As mentioned earlier, employees' perception of a leader as a secure base depends on an employee experiencing consistent and

stable security, safety, and encouragement from their leader, and leader behaviors make this perception possible.

Hypothesis 10a: Acceptance will have an indirect effect on employees' psychological safety through employee's perceptions of their leaders as a secure base.

Hypothesis 10b: Cooperation will have an indirect effect on employees' psychological safety through employees' perceptions of their leaders as a secure base.

Hypothesis 10c: Sensitivity will have an indirect effect on employees' psychological safety through employees' perceptions of their leaders as a secure base.

Hypothesis 10d: Accessibility will have an indirect effect on employees' psychological safety through employees' perceptions of their leaders as a secure base.

Hypothesis 10e: Advocacy will have an indirect effect on employees' psychological safety through employees' perceptions of their leaders as a secure base.

Indirect Effect of Secure Base on Employee Engagement, Satisfaction, and Performance through Psychological Safety

Attachment theory states that a secure base leads to safety and exploration. However, unless an employee experiences safety, they will be preoccupied with their well-being and unable to focus at work. When employees are not worried about their safety, they are free to engage in productive behaviors beneficial to an organization.

Hypothesis 11 Employees' perceptions of their leaders as a secure base will have an indirect effect on employee engagement, job satisfaction, and job performance through employees' psychological safety.

Indirect Effect of Secure Base on Perceived Leader Effectiveness through Psychological Safety

A secure base enables employees to be confident and pursue opportunities without fear of repercussions, i.e., to experience psychological safety. Further, when employees experience psychological safety, they are likely to have a positive view of their leaders. Thus, one might expect that employees' perception of their leader as a secure base will indirectly affect perceived leader effectiveness through psychological safety.

Hypothesis 12: Employees' perceptions of their leaders as a secure base will have an indirect effect on their perceptions of their leader's effectiveness through employees' psychological safety.

Pilot Study

The purpose of my pilot study was to test Hypotheses 1a – 1e, i.e., to identify key leader behaviors that help employees perceive their leader as a secure base. I used a sample of MTurk users and calculated bivariate correlations to identify behaviors that are significantly correlated with secure base. Next, I conducted a confirmatory factor analysis to examine the main factors underpinning the leader behaviors (Hypotheses 1a – 1e).

Pilot Study Method

Participants

I determined sample size based on an a priori simulation power analysis performed in R using lavaan package (Rosseel, 2012) which revealed that at least 150 participants were needed for each of my samples to detect an effect size of .3 at a significance level $\alpha = .05$, with a statistical power $1 - \beta = .80$. Accounting for 30% insufficient effort responding (IER) from MTurk users (Sprouse, 2011), I needed a total of 200 participants for each of my samples to

ensure I had a minimum of 150 participants with usable data.

To be eligible for my study, participants had to be 18 years of age, US citizens, working at least 30 hours per week, and with their current supervisor for a minimum of one year. Because 45 million immigrants live in U.S., accounting for 13.9% of the population of which 49% are naturalized citizens, in addition to being an American citizen, participants must have lived for at least 15 years in the U.S. Each participant received a monetary incentive of \$1 for completing my study. Failure to meet eligibility requirements or follow survey instructions led to participant data exclusion.

Procedure

I built my survey in Qualtrics and provided the survey link through MTurk. I gave participants two weeks to complete the survey at a time and setting of their choosing. Once a participant began their survey, they needed to finish it in one sitting and within two hours.

Survey Design

I administered measures in my survey in the following order: informed consent page (see Appendix A), demographic questions, primary measures, additional measures, and debriefing page (see Appendix B) to increase the likelihood of capturing at least primary measures data in case a participant returns an incomplete survey. Whereas a user did not have an option to skip a question, they did have an option to exit the survey anytime without completing it. Qualtrics stores respondent answers even if a participant does not complete the survey. Depending on the quality of data obtained, I included it in my analysis. I informed the participant of this possibility in their informed consent section. I built my survey to screen MTurk users' IP addresses to exclude participants having a non-U.S. IP or Virtual Private Server (VPS). Users use a VPS service to mask their location while accessing MTurk surveys. Over 15% of poor data quality

comes from MTurk respondents who use a VPS (Kennedy et al., 2020). I used the survey setting option, ‘Prevent Ballot Box Stuffing’, to prevent users from attempting to complete my survey a second time. My informed consent form included a Completely Automated Public Turing Test to tell Computers and Humans Apart (CAPTCHA) verification to prevent auto bot responses. To reduce user misrepresentation, instead of explicitly stating my survey eligibility requirements, I incorporated them into my survey design. For example, instead of informing users that they needed to have a minimum of 30 hours work week, I asked my survey respondents to enter the total number of hours they worked in a week. If the user input did not meet eligibility criteria, the survey design logic informed the user of their ineligibility and ended the survey. To avoid missing data, I built my survey to require a response to every question. Participants did not have the option of skipping a question. Also, I built into my survey five items of the Inefficient Effort Responding scale (IER, Huang et al., 2015b) to address the expected insufficient effort responding found among MTurk participants. Additionally, I used the MTurk platform to set eligibility restrictions, allowing only those users who had an approval rating greater than 95% and had completed at least 100 surveys. Both these settings helped reduce fraudulent respondents (Kennedy et al., 2020).

Primary Measures

Primary measures are described below. They include demographics, 13 leader behaviors, secure base, psychological safety, employee engagement, job satisfaction, job performance, perceived leader effectiveness, and IER.

Demographics

I assessed participants’ age, race, gender, nationality, years of residence in U.S., country of current employment, current position tenure, length of current supervisor relationship, and

number of hours per week worked. (See Appendix C.)

Belongingness

To measure belongingness, I modified Godard's (2001) Belongingness scale by stressing the role of the supervisor rather than just the work environment in creating a sense of belongingness. For example, instead of "You are well-accepted by your coworkers", I administered the item: "You are well-accepted by your supervisor". This measure contains four items, two of which are reverse-coded, and has an internal consistency of $\alpha = .72$ (Godard, 2001). Participants responded using a 5-point graphic rating scale rated from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating higher levels of belongingness. To calculate an overall score of belongingness, I averaged scores across the items. An example item is "When at work, my supervisor really makes me feel like I belong." (See Appendix D.)

Acceptance

To measure acceptance, I used Coombe's (2010) Acceptance sub-scale of the Secure Base Leadership Scale. The acceptance sub-scale contains 8 items and has an internal consistency of $\alpha = .82$ (Coombe, 2010). Participants responded using a 5-point graphic rating scale rated from 1 (never) to 5 (consistently) with higher scores indicating higher levels of acceptance. To calculate an overall score of acceptance, I averaged scores across the items. An example item is "My manager values me as a human being, not just as an employee performing a role." (See Appendix E.)

Sensitivity

I developed a 6-item measure of sensitivity for use in the current study (see Appendix F). Participants responded using a 5-point graphic rating scale rated from 1 (strongly disagree) to 5 (strongly agree) with higher scores indicating higher levels of sensitivity. To calculate an overall

score of sensitivity, I averaged scores across the items. An example item is “My boss knows when I need help.”

Cooperation

I developed a 3-item measure of cooperation for use in the current study (see Appendix G). Participants responded using a 5-point graphic rating scale rated from 1 (strongly disagree) to 5 (strongly agree) with higher scores indicating higher levels of cooperation. To calculate an overall score of cooperation, I averaged scores across the items. An example item is “My boss does not interfere in my tasks.”

Availability

I developed a 3-item measure of availability for use in the current study (see Appendix H). Participants responded using a 5-point graphic rating scale rated from 1 (strongly disagree) to 5 (strongly agree) with higher scores indicating higher levels of availability. To calculate an overall score of availability, I averaged scores across the items. An example item is “My manager makes time for me when needed.”

Willingness

I developed a 5-item measure of willingness for use in the current study (see Appendix I). Participants responded using a 5-point graphic rating scale rated from 1 (strongly disagree) to 5 (strongly agree) with higher scores indicating higher levels of willingness to help. To calculate an overall score of willingness, I averaged scores across the items. An example item is “My manager always reaches out and makes sure I have all the resources I need to do my job.”

Accessibility

To measure accessibility, I used Coombe’s (2010) Accessible sub-scale of the Secure Base Leadership Scale. The Accessible sub-scale contains 4 items and has an internal

consistency of $\alpha = .77$ (Coombe, 2010). Participants responded using a 5-point graphic rating scale rated from 1 (never) to 5 (consistently) with higher scores indicating higher levels of accessibility. To calculate an overall score of accessibility, I averaged scores across the items. An example item is “I have a sense that I could contact my manager anywhere, anytime.” (See Appendix J.)

See Potential in the Other

To measure see potential in the other, I used Coombe’s (2010) Potential sub-scale of the Secure Base Leadership Scale. The Potential sub-scale contains 5 items and has an internal consistency of $\alpha = .87$ (Coombe, 2010). Participants responded using a 5-point graphic rating scale rated from 1 (never) to 5 (consistently) with higher scores indicating a higher ability to see potential in others. To calculate an overall score of seeing potential in the other, I averaged scores across the items. An example item is “My manager sees my potential.” (See Appendix K.)

Opportunities for Risk

To measure opportunities for risk, I used Coombe’s (2010) Opportunity sub-scale of the Secure Base Leadership Scale. The Opportunity sub-scale contains 6 items, one of which is reverse-coded, and has an internal consistency of $\alpha = .70$ (Coombe, 2010). Participants responded using a 5-point graphic rating scale rated from 1 (never) to 5 (consistently) with higher scores indicating a higher ability in finding risk opportunities. To calculate an overall score of opportunities for risk, I averaged scores across the items. An example item is “My manager pushes me out of my comfort zone.” (See Appendix L.)

Listening and Inquiry

To measure listening and inquiry, I used Coombe’s (2010) Inquiry sub-scale of the Secure Base Leadership Scale. The Inquiry sub-scale contains 4 items, one of which is reverse-

coded, and has an internal consistency of $\alpha = .74$ and (Coombe, 2010). Participants responded using a 5-point graphic rating scale rated from 1 (never) to 5 (consistently) with higher scores indicating a higher level of listening and inquiry. To calculate an overall score of listening and inquiry, I averaged scores across the items. An example item is “My manager is a good listener.” (See Appendix M.)

Calm

To measure calm, I used Coombe’s (2010) Calm sub-scale of the Secure Base Leadership Scale. The Calm sub-scale contains 4 items and has an internal consistency of $\alpha = .70$ (Coombe, 2010). Participants responded using a 5-point graphic rating scale rated from 1 (never) to 5 (consistently) with higher scores indicating a higher level of calm. To calculate an overall score of calm, I averaged scores across the items. An example of item is “My manager remains supportive when under pressure.” (See Appendix N.)

Intrinsic Motivation

To measure intrinsic motivation, I used Coombe’s (2010) Intrinsic sub-scale of the Secure Base Leadership Scale. The Intrinsic motivation sub-scale contains 4 items, two of which are reverse-coded, and has an internal consistency of $\alpha = .61$ (Coombe, 2010). Participants responded using a 5-point graphic rating scale rated from 1 (never) to 5 (consistently) with higher scores indicating a higher level of intrinsic motivation. To calculate an overall score of intrinsic motivation, I averaged scores across the items. An example item is “My manager uses financial reward as a key motivating tool.” (See Appendix O.)

Positive Mindset

To measure mindset, I used Coombe’s (2010) Positive mindset sub-scale from the Secure Base Leadership Scale. The Positive mindset sub-scale contains 4 items, one of which is reverse-

coded, and has an internal consistency of $\alpha = .68$ (Coombe, 2010). Participants responded using a 5-point graphic rating scale rated from 1 (never) to 5 (consistently) with higher scores indicating a higher level of positive mindset. To calculate an overall score of positive mindset, I averaged scores across the items. An example item is “My manager finds the positive in situations.” (See Appendix P.)

Secure Base

To measure employees’ perception of their leader as a secure base, I used the Leader as Secure Base Scale (LSPS; Molero et al., 2019). This measure contains 15 items and has an internal consistency of $\alpha = .96$ (Molero et al., 2019). Participants responded using a 5-point graphic rating scale rated from 0 (strongly disagree) to 4 (strongly agree) with higher scores indicating higher levels of leader secure base perception. To calculate an overall score of secure base, I averaged scores across the items. An example item is “When something bad happens or I feel upset at work I turn to my leader for support.” (See Appendix Q.)

Psychological Safety

To measure psychological safety, I modified the Psychological safety scale (Edmondson, 1999) to reflect safety experienced in the context of an employee’s manager rather than the team. For example, instead of “If I make a mistake on this team it is often held against me”, I administered the item: “If I make a mistake my manager often holds it against me.” This measure contains seven items, four of which reverse coded, and has an internal consistency of $\alpha = .82$ (Edmondson, 1999). Participants responded using a 7-point graphic rating scale rated from 1 (strongly disagree) to 7 (strongly agree) with higher scores indicating a higher level of psychological safety. To calculate an overall score of psychological safety, I averaged scores across the items. An example item is “My manager makes it safe for me to take a risk.” (See

Appendix R.)

Employee Engagement

To measure employee engagement, I used the Utrecht Work Engagement Scale-9 (UWES-9; Schaufeli et al., 2006). This measure contains 9 items and is a self-report scale with an internal consistency of $\alpha > .80$ (Schaufeli et al., 2006). This measure has three subscales with three items each: vigor (VI), dedication (DE), and absorption (AB). Schaufeli et al. (2006) have defined employee engagement as a cognitive state of mind characterized by vigor, dedication, and absorption; hence this measure is scored as a composite across the three subscales. Participants responded using a 7-point graphic rating scale rated from 0 (never) to 6 (always) with higher scores indicating a higher level of employee engagement. To calculate an overall score of employee engagement, I averaged scores across the items. An example item is “At my work, I feel bursting with energy.” (See Appendix S.)

Job Satisfaction

To measure job satisfaction, I used the Michigan Organizational Assessment Questionnaire (Camman et al., 1979). This measure contains three items, one of which is reverse-coded, and has an internal consistency of $\alpha = .77$ (Camman et al., 1979). Participants responded using a 7-point graphic rating scale rated from 1 (strongly disagree) to 7 (strongly agree) with higher scores indicating a higher level of job satisfaction. To calculate an overall score of job satisfaction, I averaged scores across the items. An example item is “In general, I like working here.” (See Appendix T.)

Job Performance

To measure job performance, I used the In-role Performance Scale (Williams & Anderson, 1991). This measure contains seven items, two of which are reverse-coded, and has an

internal consistency of $\alpha = .91$ (Williams & Anderson, 1991). Participants responded using a 7-point graphic rating scale rated from 1 (strongly disagree) to 7 (strongly agree) with higher scores indicating a higher level of job performance. To calculate an overall score of job performance, I averaged scores across the items. An example item is “I adequately complete assigned duties.” (See Appendix U.)

Perceived Leadership Effectiveness

To measure perceived leadership effectiveness, I used the four-item measure from van Knippenberg and van Knippenberg (2005). The scale has an internal consistency of $\alpha = .91$ (van Knippenberg & van Knippenberg, 2005). Participants responded using a 7-point graphic rating scale rated from 1 (very much disagree) to 7 (very much agree) with higher scores indicating a higher level of perceived leadership effectiveness. To calculate an overall score of perceived leadership effectiveness, I averaged scores across the items. An example item is “My boss is a very effective boss.” (See Appendix V.)

Inefficient Effort Responding (IER) Assessments and Instructions

I used multiple methods to assess IER. I used the Infrequency IER Scale (Huang et al., 2015b). This measure contains 8 items and has an internal consistency of $\alpha = .85$ (Huang et al., 2015b). I distributed five items throughout my survey. Participants responded using a 7-point graphic rating scale rated from 1 (strongly disagree) to 7 (strongly agree). As the purpose of this scale is to identify probable responses from survey bots for exclusion from data analysis, this scale requires a ‘strongly disagree’ answer to each of the 8 items. Hence, I discarded data from any respondent who failed to select the ‘strongly disagree’ response option. An example item is “I work fourteen months in a year.” (See Appendix W.)

Also, following a recommendation from Huang et al. (2015b), I posted the following

message at the end of survey introduction to appeal to each participant's integrity and work ethic. "In our past survey work, we have found careless responding from a few respondents. We request that you to take a moment and make a sincere effort towards responding as carefully and honestly as possible."

Additional Measures

I administered additional measures to enable tests of alternative explanations. Specifically, I assessed attachment styles, personality traits, leader consideration and initiating structure, organizational citizenship behavior (OCB), counterproductive work behavior (CWB), satisfaction with leader, perceived supervisor support, and affective commitment with leader.

Attachment Styles

To measure adult attachment styles, I modified the items from the Experiences in Close Relationships – Relationship Structures Scale (ECR-RS; Fraley et al., 2011). To adapt ECR-RS for a work relationship, I added the word 'boss' to the scale instructions and replace 'this person' with 'my boss' in the items. ECR-RS has six items measuring avoidant and three items measuring anxious attachment styles and has an internal consistency of $\alpha > .80$ (Fraley et al., 2011). Of the six avoidant items, four are reverse scored. Participants responded using a 7-point graphic rating scale rated from 1 (strongly disagree) to 7 (strongly agree) with higher scores indicating a higher level of either avoidant attachment or anxious attachment. To calculate an overall attachment score, I averaged scores across the items. An example item of anxious attachment is "I am afraid that my boss may abandon me." (See Appendix X.)

Personality Traits

I assessed participants' personality using the 50-item Revised NEO-Personality Inventory measure of the Big Five personality factors (Costa & McCrae, 1992). Each of the five

personality factors has 10 items. Factor measures have adequate internal consistency: Extraversion ($\alpha = .87$), Agreeableness ($\alpha = .82$), Conscientiousness ($\alpha = .79$), Neuroticism ($\alpha = .86$), and Openness ($\alpha = .84$, Costa & McCrae, 1992). Participants responded using a 5-point graphic rating scale rated from 1 (very inaccurate) to 5 (very accurate) with higher scores indicating a higher level of personality trait measured. Approximately half of the items are reverse scored. I keyed them in a positive direction prior to calculating the score for each of the five traits. To calculate an overall score for each measured personality trait, I averaged scores across the items. An example item of extraversion personality trait is “I feel comfortable around people.” (See Appendix Y.)

Consideration

I measured consideration using the Consideration sub-scale of the Leadership Behavioral Dimensions Questionnaire (LBDQ; Halpin, 1957). The Consideration sub-scale contains 15 items, three of which are reverse coded, and has an internal consistency of $\alpha = .92$ (Halpin, 1957). Participants responded using a 5-point graphic rating scale rated from 1 (rarely) to 5 (very often) with higher scores indicating a higher level of consideration. To calculate an overall consideration score, I averaged scores across the items. An example item is “He/she finds time to listen to group members.” (See Appendix Z.)

Initiating Structure

I assessed initiating Structure using the Initiating Structure sub-scale of the LBDQ (Halpin, 1957). The Initiating Structure scale contains 15 items and has an internal consistency of $\alpha = .83$ (Halpin, 1957). Participants responded using a 5-point graphic rating scale rated from 1 (rarely) to 5 (very often) with higher scores indicating a higher level of initiating structure. To calculate an overall initiating structure score, I averaged scores across the items. An example

item is “He/she assigns group members to particular tasks.” (See Appendix AA.)

Organizational Citizenship Behavior (OCB)

I measured OCB with Lee and Allen's (2002, 2003) 16-item scale, which includes an OCBI subscale (eight items, $\alpha = .83$) and an OCBO subscale (eight items, $\alpha = .88$). Participants responded using a 7-point graphic rating scale rated from 1 (never) to 7 (always) with higher scores indicating a higher frequency of OCBs. To calculate an overall OCB, I averaged scores across the items. An example item is “Help others who have been absent.” (See Appendix AB.)

Counterproductive Work Behavior (CWB)

I measured CWB with Bennett and Robinson's (2000) 19-item scale, which includes a CWB-I subscale (seven items, $\alpha = .84$) and a CWB-O subscale (12 items, $\alpha = .85$). Participants responded using a 7-point graphic rating scale rated from 1 (never) to 7 (daily) with higher scores indicating a higher frequency of CWBs. To calculate an overall CWB, I averaged scores across the items. An example item is “Played a mean prank on someone at work.” (See Appendix AC.)

Satisfaction with Leader (SWMSS)

I measured satisfaction with the leader using the 18-item Satisfaction With My Supervisor Scale (SWMSS, $\alpha = .95$, Scarpello & Vandenberg, 1987). Participants responded using a 5-point graphic rating scale from 1 (very dissatisfied) to 5 (very satisfied). I averaged item scores. Higher scores indicated higher levels of satisfaction with the leader. An example item is “The way my supervisor sets goals for me.” See Appendix AD.)

Perceived Supervisor Support (PSS)

I measured perceived supervisor support using a modified version of Perceived Organizational Support scale (POS; Eisenberger et al., 1986). To adapt POS for association with

leader, we replaced ‘organization’ with ‘my supervisor’ in the items. PSS has eight items of which four are reverse coded. The scale has an internal consistency of $\alpha = .94$ (Eisenberger, Malone, & Presson, 2016). Participants responded using a 7-point graphic rating scale from 1 (strongly disagree) to 7 (strongly agree). I averaged item scores. Higher scores indicated higher levels of perceived supervisor support. An example item is “My supervisor really cares about my well-being.” (See Appendix AE.)

Affective Commitment with Leader (ACL)

To measure affective commitment with leader, I used the 8-item Affective Commitment Scale (ACS, $\alpha = .87$, Meyer, Allen, & Gellatly, 1990). I modified items, replacing ‘organization’ with ‘my supervisor’ in the items. Four were reverse coded. Participants responded using a 7-point graphic rating scale from 1 (strongly disagree) to 7 (strongly agree). I averaged item scores. Higher scores indicated higher levels of affective commitment with their leader. An example item is “I really feel as if this supervisor’s problems are my own.” (See Appendix AF.)

Pilot Study Results

Data Cleaning

I surveyed 2263 participants of which 1061 failed eligibility criteria and another 658 failed due to IER. Related to IER, I reviewed impossible responses, long-string responses, and outliers. Also, I removed participants’ data if they spent an average of less than 2 seconds per item on a given page. I checked for outliers by searching for scores higher or lower than four standard deviations away from the mean score. As a result, I had usable data from 544 participants. I used half of these participants for my pilot study ($N = 272$) and half for Study 1 within my main study ($N = 272$).

Sample Characteristics and Descriptive Statistics

Of the 272 participants, only 219 completed demographic information. Of the 219 participants, 54% identified as female and 83% as Caucasian. Of my participants, 35% were in the 35 – 44-year age range. Of my participants, 59% had been at their current organization and 45% had been in their current position for more than five years. Of my participants, 97% identified as having lived in the U.S. for more than 20 years and as having worked for more than 40 hours per week and for over five years with their current supervisor. I reported means, standard deviations, alpha coefficients, and correlations for my primary study variables in Table 1.

Table 1. *Mean, Standard Deviations, Coefficient Alphas (in correlation matrix diagonal), and Bivariate Correlations (Pilot Study)*

	<i>M</i>	<i>SD</i>	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>i</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>m</i>	<i>n</i>
a	4.28	0.70	.86													
b	3.55	0.76	.59	.84												
c	3.99	0.75	.72	.63	.71											
d	3.84	0.74	.66	.65	.67	.72										
e	3.95	0.80	.75	.76	.81	.78	.91									
f	3.72	0.61	.68	.62	.68	.68	.71	.67								
g	4.00	0.85	.71	.62	.70	.73	.79	.79	.89							
h	3.76	0.98	.62	.64	.55	.66	.67	.66	.72	.93						
i	3.14	0.59	.42	.53	.37	.52	.54	.46	.57	.77	.56					
j	3.57	0.73	.70	.63	.66	.69	.72	.70	.78	.67	.51	.70				
k	4.05	0.85	.63	.57	.70	.65	.69	.71	.69	.56	.42	.69	.87			
l	3.28	0.63	.43	.45	.34	.49	.46	.50	.51	.63	.49	.57	.43	.26		
m	3.62	0.80	.58	.59	.60	.64	.69	.66	.69	.64	.51	.67	.71	.54	.75	
n	3.48	0.85	.70	.66	.70	.70	.78	.74	.79	.69	.53	.75	.68	.56	.69	.95

Note. a = Belongingness; b = Sensitivity; c = Cooperation; d = Availability; e = Willingness; f = Acceptance; g = Accessibility; h = Potential; i = Opportunity; j = Listen; k = Calm; l = Motivation; m = Positive; n = Secure Base.

All correlations are significant at $p < .01$.

Hypothesis Testing

I calculated bivariate correlations to establish the degree to which my study variables were related. All 13 leader behaviors had a significant positive correlation with secure base. The weakest correlation was $r = .53$ between opportunity and secure base, and the strongest correlation was $r = .79$ between accessibility and secure base. To test Hypotheses 1a-1e, I performed a confirmatory factor analysis (CFA) to examine my posited latent constructs (i.e., acceptance, willingness to help, sensitivity, accessibility, and advocacy). Researchers (e.g., Hu & Bentler, 1999) have defined adequate model fit as a non-significant χ^2 , a CFI greater than or equal to .90, an RMSEA less than or equal to .06, and an SRMR less than or equal to .08. However, because sample size affects both χ^2 and RMSEA (Rose et al., 2017), I considered an acceptable RMSEA or SRMR in addition to an acceptable CFI as evidence of acceptable, i.e., adequate, model fit. Despite multicollinearity, my proposed five-factor model had adequate fit, $\chi^2 = 334.387$; RMSEA = .137; SRMR = .050; CFI = .911.

Additional Analyses

Further, I performed a CFA for a one-factor model because I detected multicollinearity in my five-factor model. The alternative one-factor model demonstrated acceptable fit, $\chi^2 = 396.571$; RMSEA = .137; SRMR = .054; CFI = .894. However, the difference in chi-square values between my proposed five-factor and one-factor was significant, $\Delta\chi^2(10) = 62.184$, $p < .001$. This indicated that the five-factor model had a significantly better fit than the one-factor model, supporting my hypothesized model.

Pilot Study Discussion

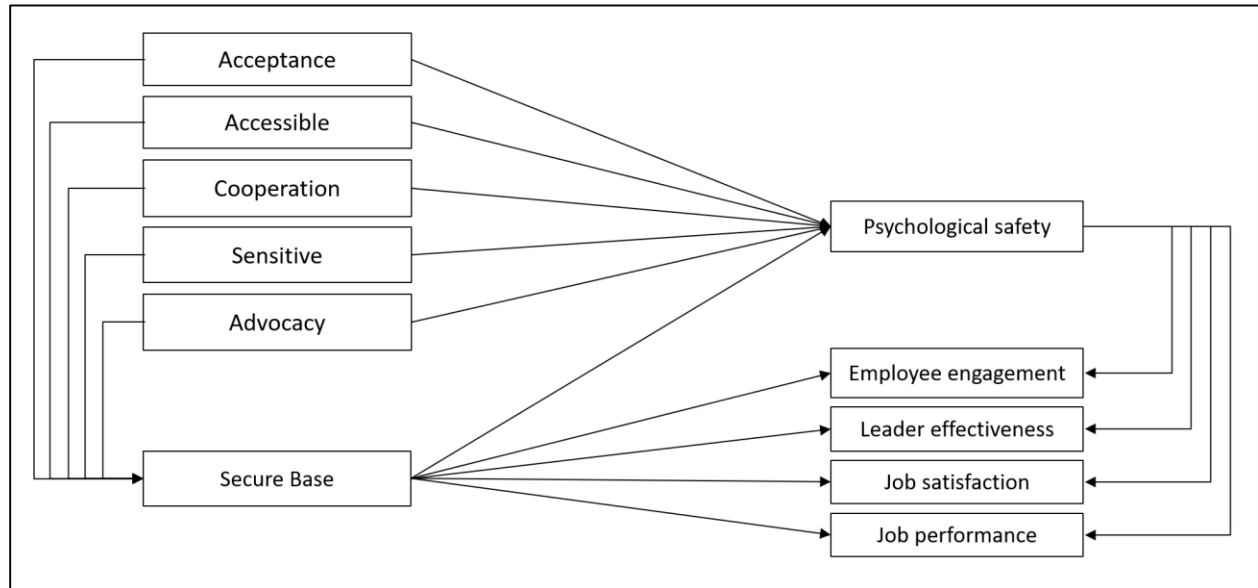
The purpose of my pilot study was to test Hypotheses 1a – 1e, i.e., to identify key leader behaviors that help employees perceive their leader as a secure base. I used a sample ($N = 272$)

of MTurk users and calculated bivariate correlations to identify behaviors that are significantly related with secure base. Based on strong positive correlations between leader behaviors and secure base, I performed a confirmatory factor analysis to confirm the latent structure underlying the proposed leader behaviors and found support for Hypotheses 1a – 1e. Based on support for Hypotheses 1a – 1e, next I sought to test the fit of my proposed model of antecedents and outcomes of secure base in two different samples in my main study.

Main Study

The purpose of my main study was two-fold: (1) to test the fit of my hypothesized secure base model and (2) to validate my model for two different samples, i.e., employees working in the U.S. (Study 1) and employees working in India (Study 2). I would have support for Hypotheses 2 through 12 if my study results provided evidence of an acceptable fit for my proposed secure base leader behavior model, revealed significant specific paths, and replicated across the two samples. If I observed adequate model fit in each of my two samples, this would suggest that my model generalizes across U.S. and Indian cultures. Using the five manifest variables from my pilot study, I used structural equation modeling to test relationships between leader behaviors, secure base, psychological safety, and employee and leader outcomes (Figure 3).

Figure 3. *Proposed Model of Secure Base Leader Behaviors*



Study 1 (US Sample) Method

Participants

For Study 1, I used the same eligibility criteria as used in my pilot study. I determined sample size based on an a priori simulation power analysis performed in R using the lavaan package (Rosseel, 2012), which revealed that at least 150 participants were needed for my US sample to detect an effect size of .3 at a significance level $\alpha = .05$ with a statistical power $1 - \beta = .8$. Accounting for 30% insufficient effort responding (IER) from MTurk users (Sprouse, 2011), I needed 200 participants to ensure I would have minimum of 150 participants with usable data.

Procedure

I used the same procedure in Study 1 that I used in my pilot study. See the description above.

Survey Design

I used the same survey design in Study 1 that I used in my pilot study. See the description above.

Measures

I used the same set of measures in Study 1 that I used in my pilot study. See the descriptions above.

Study 1 (US Sample) Results

Data Cleaning

I used the second half of the cleaned data ($N = 272$), having used the first half of the cleaned data for the Pilot study.

Sample Characteristics and Descriptive Statistics

Of the 272 participants, only 232 completed demographic information. Of the 232 participants, 57% identified as female and 80% as Caucasian. Of my participants, 37% were in the 25 – 34-year age range. Of my participants, 54% had been at their current organization and 42% had been in their current position for over five years. Of my participants, 99% identified as having lived in the U.S. for more than 20 years. Of my participants, 50% said that they worked between 31 – 40 hours per week and the remaining 50% more than 40 hours per week. Of my participants, 41% stated they had worked for over two but under five years with their current supervisor whereas 40% stated they had worked for more than five years with their current supervisor.

I reported measure means, standard deviations, Coefficients Alphas (see Table 2) and intercorrelations (see Table 2) for all primary Study 1 variables.

Table 2. *Mean, Standard Deviations, and Coefficient Alphas (Study 1)*

Variable	<i>M</i>	<i>SD</i>	α
Belongingness	4.04	0.76	.80
Sensitivity	3.47	0.73	.80
Cooperation	3.85	0.77	.70
Availability	3.74	0.72	.70
Willingness	3.88	0.79	.88
Acceptance	3.63	0.59	.64
Accessibility	3.87	0.85	.89
Potential	3.66	0.94	.91
Opportunity	3.23	0.57	.52
Listen	3.44	0.68	.61
Calm	3.91	0.82	.87
Motivation	3.21	0.57	.04
Positive	3.51	0.67	.63
Secure Base	3.44	0.83	.95
Leader Efficiency	5.09	1.47	.94
Psychological Safety	5.16	1.23	.87
Engagement	4.53	1.19	.94
Job Performance	6.19	0.76	.78
Job Satisfaction	5.46	1.52	.91

Table 3. *Bivariate Correlations (Study 1)*

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
a	-																		
b	.41	-																	
c	.63	.58	-																
d	.57	.69	.62	-															
e	.66	.67	.76	.76	-														
f	.54	.55	.63	.65	.72	-													
g	.63	.56	.69	.72	.81	.78	-												
h	.47	.55	.49	.54	.59	.62	.64	-											
i	.24	.51	.29	.46	.46	.48	.44	.69	-										
j	.52	.53	.65	.56	.62	.65	.66	.55	.37	-									
k	.59	.50	.70	.56	.70	.71	.72	.51	.29	.68	-								
l	.44	.37	.43	.46	.47	.46	.50	.55	.39	.45	.39	-							
m	.56	.51	.61	.55	.67	.66	.67	.58	.42	.67	.70	.45	-						
n	.60	.65	.68	.70	.78	.74	.79	.69	.54	.64	.68	.52	.70	-					
o	.59	.65	.68	.65	.78	.68	.74	.62	.51	.64	.70	.46	.72	.84	-				
p	.72	.47	.70	.59	.71	.61	.73	.59	.32	.66	.70	.54	.72	.73	.76	-			
q	.31	.38	.33	.39	.39	.41	.42	.50	.47	.37	.30	.31	.39	.40	.40	.33	-		
r	.44	.11	.21	.29	.25	.24	.28	.18	.03	.17	.29	.19	.22	.17	.18	.33	.20	-	
s	.38	.36	.36	.42	.46	.46	.47	.48	.39	.39	.38	.37	.45	.43	.45	.40	.76	.32	-

Note. a = Belongingness; b = Sensitivity; c = Cooperation; d = Availability; e = Willingness; f = Acceptance; g = Accessibility; h = Potential; i = Opportunity; j = Listen; k = Calm; l = Motivation; m = Positive; n = Secure Base; o = Leader Efficiency; p = Psychological Safety; q = Engagement; r = Job Performance; s = Job Satisfaction.

Italicized correlation is significant at $p < .05$; Bold correlations are non-significant. All remaining correlations are significant at $p < .01$.

Hypothesis Testing: Model

I analyzed and interpreted my proposed model in two stages: (1) an assessment of the construct validity of the measurement model through confirmatory factor analysis (CFA) and (2) an assessment of the structural model.

CFA

I performed a confirmatory factor analysis (CFA) to examine my posited latent constructs (i.e., acceptance, willingness to help, sensitivity, accessibility, and advocacy). As noted above, researchers (e.g., Hu & Bentler, 1999) have defined adequate model fit as a non-significant χ^2 , a CFI greater than or equal to .90, an RMSEA less than or equal to .06, and an SRMR less than or equal to .08. However, because sample size affects both χ^2 and RMSEA (Rose et al., 2017), I considered an acceptable RMSEA or SRMR in addition to an acceptable CFI as evidence of acceptable, i.e., adequate, model fit. Results of CFA confirmed the proposed five-factor model had an adequate fit, $\chi^2 = 505.725$; RMSEA = .120; SRMR = .053; CFI = .906. Additionally, I tested an alternative one-factor model, which also demonstrated adequate fit, $\chi^2 = 615.630$; RMSEA = .113; SRMR = .058; CFI = .889. Finally, results revealed that my proposed five-factor model had a significantly better fit than the one-factor model, $\Delta\chi^2(34) = 109.91, p < .001$.

Structural Model Analysis

In Hypothesis 2, I predicted that the structural model in Figure 3 would adequately fit the data. Results revealed that my model had an adequate fit, $\chi^2 = 601.484$; RMSEA = .120; SRMR = .069; CFI = .889, providing support for Hypothesis 2. I used bootstrapping with 1000 replacements to evaluate indirect effects because bootstrapping provides more accurate parameter estimates by resampling with replacement numerous times (Kenny, 2020). Additionally, I tested an alternative one-factor model, which also demonstrated adequate fit, $\chi^2 =$

664.811; RMSEA = .117; SRMR = .071; CFI = .878. Finally, results revealed that my proposed five-factor model had a significantly better fit than the one-factor model, $\Delta\chi^2(18) = 63.327, p < .001$.

Hypothesis Testing: Paths

In addition to my model (Hypothesis 2), in Study 1, I proposed ten hypotheses addressing specific relationships in the model. Results fully supported two hypotheses, partially supported two hypotheses, and failed to support the remaining six hypotheses. The results of each hypothesis test are below.

Direct Effects of Leader Behaviors on Secure Base

In Hypotheses 3a – 3e, I predicted a positive effect of each of my latent leader factors (acceptance, cooperation, sensitivity, accessibility, and advocacy) on employees' perceptions of their leaders as a secure base. There was a nonsignificant relationship between each of my latent leader behaviors and employees' perceptions of their leaders as a secure base (acceptance, $b = -.528, se = 1.155, p = .648$; cooperation, $b = -.388, se = 1.142, p = .734$; sensitivity, $b = .239, se = 1.697, p = .888$; accessibility, $b = .734, se = 1.542, p = .634$; advocacy, $b = .494, se = 1.936, p = .799$). Thus, results provided no support for Hypotheses 3a – 3e.

Direct Effects of Leader Behaviors on Psychological Safety

In Hypotheses 4a – 4e, I predicted a positive effect of each of my latent leader factors (acceptance, cooperation, sensitivity, accessibility, and advocacy) on employees' psychological safety. There was a nonsignificant relationship between each of my latent leader behaviors and employees' psychological safety (acceptance, $b = -1.102, se = 2.234, p = .622$; cooperation, $b = .626, se = 2.672, p = .815$; sensitivity, $b = 2.970, se = 3.440, p = .388$; accessibility, $b = -.465, se$

= 3.686, $p = .900$; advocacy, $b = -.206$, $se = 4.498$, $p = .964$). Thus, results provided no support for Hypotheses 4a – 4e.

Direct Effect of Secure Base on Psychological Safety

In Hypothesis 5, I predicted a positive effect of employees' perceptions of their leaders as a secure base on employees' psychological safety. My results provided no support for Hypothesis 5. There was a nonsignificant relationship between employees' perceptions of their leaders as a secure base on employees' psychological safety, $b = .070$, $se = .517$, $p = .893$.

Direct Effects of Secure Base on Employee Engagement, Satisfaction, and Performance

In Hypothesis 6, I predicted a positive effect of employees' perceptions of their leaders as a secure base on employee engagement, job satisfaction, and job performance. Results provided partial support for Hypothesis 6. There was a significant positive relationship between employees' perceptions of their leaders as a secure base and employee engagement, $b = .501$, $se = .127$, $p < .001$, and job satisfaction, $b = .525$, $se = .149$, $p < .001$, but a significant negative (opposite the direction predicted) relationship with job performance, $b = -.144$, $se = .073$, $p = .049$.

Direct Effect of Secure Base on Perceived Leader Effectiveness

In Hypothesis 7, I predicted a positive effect of employees' perceptions of their leaders as a secure base on their perceptions of their leader's effectiveness. In support of Hypothesis 7, I found a significant positive relationship between employees' perceptions of their leaders as a secure base and their perceptions of their leader's effectiveness, $b = 1.091$, $se = .102$, $p < .001$.

Direct Effect of Psychological Safety on Employee Engagement, Satisfaction, and Performance

In Hypothesis 8, I predicted a positive effect of employees' psychological safety on their engagement, job satisfaction, and job performance. My results provided partial support for Hypothesis 8. There was a significant positive relationship between employees' psychological safety and job performance, $b = .273$, $se = .052$, $p < .001$, and job satisfaction, $b = .238$, $se = .090$, $p = .008$, but a nonsignificant relationship with employee engagement, $b = .068$, $se = .075$, $p = .369$.

Direct Effect of Psychological Safety on Perceived Leader Effectiveness

In Hypothesis 9, I predicted a positive effect of employees' psychological safety on their perceptions of their leader's effectiveness. In support of Hypothesis 9, I found a significant positive relationship between employees' psychological safety and their perceptions of their leader's effectiveness, $b = .363$, $se = .063$, $p < .001$.

Indirect Effects of Leader Behaviors on Psychological Safety through Secure Base

In Hypotheses 10a – 10e, I predicted an indirect effect of each of my latent leader factors (acceptance, cooperation, sensitivity, accessibility, and advocacy) on employees' psychological safety through employees' perceptions of their leaders as a secure base. There was a nonsignificant relationship between each of my latent leader behaviors and employees' psychological safety through employees' perceptions of their leaders as a secure base (acceptance, $b = .037$, $se = 1.006$, $p = .971$; cooperation, $b = -.027$, $se = 1.292$, $p = .983$; sensitivity, $b = .017$, $se = 1.254$, $p = .989$; accessibility, $b = .051$, $se = 1.867$, $p = .978$; advocacy, $b = .034$, $se = 1.316$, $p = .979$). Thus, my results provided no support for Hypotheses 10a – 10e.

Indirect Effect of Secure Base on Employee Engagement, Satisfaction, and Performance through Psychological Safety

In Hypothesis 11, I predicted an indirect effect of employees' perceptions of their leaders as a secure base on employee engagement, job satisfaction, and job performance through employees' psychological safety. My results provided no support for Hypothesis 11. There was a nonsignificant relationship between employees' perceptions of their leaders as a secure base and employee engagement, $b = .005$, $se = .046$, $p = .918$, job satisfaction, $b = .017$, $se = .124$, $p = .893$, and job performance, $b = .019$, $se = .161$, $p = .906$, through employees' psychological safety.

Indirect Effect of Secure Base on Perceived Leader Effectiveness through Psychological Safety

In Hypothesis 12, I predicted an indirect effect of employees' perceptions of their leaders as a secure base on their perceptions of their leader's effectiveness through employees' psychological safety. My results provided no support for Hypothesis 12. There was a nonsignificant relationship between employees' perceptions of their leaders as a secure base and their perceptions of their leader's effectiveness through employees' psychological safety, $b = .025$, $se = .182$, $p = .889$.

Additional Analyses

To understand the lack of significant direct and indirect paths of my proposed model despite the presence of overall adequate fit of model, I conducted additional analyses with three different models: (1) single leader behavior models: each latent leader behavior (i.e., acceptance, cooperation, sensitivity, accessibility, and advocacy) with secure base and psychological safety as outcomes, (2) leader behaviors as a set model: the five latent leader behaviors as a set with

secure base and psychological safety, and (3) saturated outcomes model: a saturated model with all of the outcomes (endogenous variables): secure base, psychological safety, perceived leader efficiency, employee engagement, employee job satisfaction, and employee job performance. Results of each of the models are summarized below.

Single Leader Behavior Models

I used structural equation modelling consisting of each latent leader behavior and the outcomes of secure base and psychological safety to test direct and indirect effects along with model fit indices. Table 4 shows a summary of model fit indices for each latent behavior with secure base and psychological safety. Table 5 shows the direct effects of results of each latent behavior on secure base and psychological safety. Table 6 shows the indirect effects of each of the latent leader behaviors on psychological safety through secure base.

Table 4. *Model Fit Indices for Each Latent Leader Behavior with Secure Base and Psychological Safety (Study 1)*

Model	χ^2	CFI	RMSEA	SRMR
AC + SB + PSY	36.851	.943	.363	.039
CO + SB + PSY	6.227	.993	.139	.013
SEN + SB + PSY	29.855	.961	.154	.033
ACS + SB + PSY	2.456	.998	.073	.009
AD + SB + PSY	150.274	.868	.256	.082

Note. SB = Secure Base; PSY = Psychological Safety; AC = Acceptance; CO = Cooperation; SEN = Sensitivity; ACS = Accessibility; AD = Advocacy

Table 5. *Direct Paths from Each Latent Leader Behavior to Secure Base and Psychological Safety (Study 1)*

Direct Effects	<i>b</i>	<i>se</i>	<i>p</i>	Model
Acceptance ~ Secure Base	1.378	.116	.000	Acceptance
Acceptance ~ Psychological Safety	2.993	.990	.002	
Secure Base ~ Psychological Safety	-0.720	.598	.228	
Cooperation ~ Secure Base	1.090	.066	.000	Cooperation
Cooperation ~ Psychological Safety	1.174	.181	.000	
Secure Base ~ Psychological Safety	0.323	.130	.013	
Sensitivity ~ Secure Base	1.514	.133	.000	Sensitivity
Sensitivity ~ Psychological Safety	2.085	.553	.000	
Secure Base ~ Psychological Safety	-0.009	.291	.977	
Accessibility ~ Secure Base	1.283	.082	.000	Accessibility
Accessibility ~ Psychological Safety	1.309	.262	.000	
Secure Base ~ Psychological Safety	0.305	.167	.069	
Advocacy ~ Secure Base	2.391	.252	.000	Advocacy
Advocacy ~ Psychological Safety	3.508	.623	.000	
Secure Base ~ Psychological Safety	-0.064	.184	.000	

Table 6. *Indirect Effects of Each Latent Leader Behavior on Psychological Safety through Secure Base (Study 1)*

Indirect Effects of Each Leader Behavior	<i>b</i>	<i>se</i>	<i>p</i>
Acceptance ~ Secure Base ~ Psychological Safety	-0.993	.879	.258
Cooperation ~ Secure Base ~ Psychological Safety	0.352	.140	.012
Sensitivity ~ Secure Base ~ Psychological Safety	-0.013	.441	.977
Accessibility ~ Secure Base ~ Psychological Safety	0.391	.212	.065
Advocacy ~ Secure Base ~ Psychological Safety	-0.153	.443	.730

Leader Behaviors as a Set Model

I used structural equation modelling consisting of the latent leader behaviors as a set, secure base, and psychological safety to test direct and indirect effects along with model fit indices. Table 7 shows a summary of model fit indices for all latent leader behaviors as a set with secure base and psychological safety. Table 8 shows the direct effects of each latent leader behavior with all five behaviors included as a set on secure base and psychological safety. Table 9 shows the indirect effects of each of the latent leader behaviors when they are entered as a set on psychological safety through secure base.

Table 7. *Model Fit Indices for the Set of Five Latent Leader Behaviors with Secure Base and Psychological Safety (Study 1)*

Model	χ^2	CFI	RMSEA	SRMR
AC + CO + SEN + ACS + AD + SB + PSY	432.117	.895	.137	.056

SB = Secure Base; PSY = Psychological Safety; AC = Acceptance; CO = Cooperation; SEN = Sensitivity; ACS = Accessibility; AD = Advocacy

Table 8. *Direct Effects of Each Latent Leader Behavior with Leader Behaviors Entered as a Set on Secure Base and Psychological Safety (Study 1)*

Direct Effects	<i>b</i>	<i>se</i>	<i>p</i>
Acceptance ~ Secure Base	0.528	1.296	0.684
Cooperation ~ Secure Base	-0.388	1.544	0.802
Sensitivity ~ Secure Base	0.239	1.956	0.903
Accessibility ~ Secure Base	0.734	1.860	0.693
Advocacy ~ Secure Base	0.494	1.911	0.796
Acceptance ~ Psychological Safety	-1.102	2.824	0.696
Cooperation ~ Psychological Safety	0.626	3.065	0.838
Sensitivity ~ Psychological Safety	2.970	4.260	0.486
Accessibility ~ Psychological Safety	-0.465	4.142	0.911
Advocacy ~ Psychological Safety	-0.205	4.348	0.962
Secure base ~ Psychological Safety	0.070	0.576	0.904

Table 9. *Indirect Effects of Each Latent Leader Behavior Entered as a Set on Psychological Safety through Secure Base (Study 1)*

Indirect Effects of Secure Base	<i>b</i>	<i>se</i>	<i>p</i>
Acceptance ~ Secure Base ~ Psychological Safety	0.037	2.186	0.987
Cooperation ~ Secure Base ~ Psychological Safety	-0.027	1.846	0.988
Sensitivity ~ Secure Base ~ Psychological Safety	0.017	3.171	0.996
Accessibility ~ Secure Base ~ Psychological Safety	0.051	2.633	0.985
Advocacy ~ Secure Base ~ Psychological Safety	0.034	2.542	0.989

Saturated Outcomes Model

I used structural equation modelling consisting of the endogenous variables, i.e., secure base, psychological safety, perceived leader efficiency, employee engagement, employee job satisfaction, and employee job performance, to better understand the relationships between these variables in the absence of any latent leader behaviors. As a saturated model, this model has the best fit possible as model fit indices show in Table 10. Table 11 shows the direct effects of secure base and psychological safety on each of the employee and leader outcomes. Table 12 shows the indirect effect of secure base on each of the employee and leader outcomes through psychological safety.

Table 10. *Model Fit Indices of Secure Base and Psychological Safety with Employee and Leader Outcomes (Study 1)*

Model	χ^2	CFI	RMSEA	SRMR
SB + PSY + EFF + ENG + JPERF + JSAT	0	1	0	0

SB = Secure Base; PSY = Psychological Safety; EFF = Leader Efficiency; ENG = Employee Engagement; JPERF = Employee Job Performance; JSAT = Employee Job Satisfaction

Table 11. *Direct Effects of Secure Base and Psychological Safety on Each of the Employee and Leader Outcomes (Study 1)*

Direct Effects	<i>b</i>	<i>se</i>	<i>p</i>
Secure base ~ Psychological Safety	1.084	0.062	.000
Secure Base ~ Perceived Leader Efficiency	1.091	0.099	.000
Secure Base ~ Employee Engagement	0.501	0.127	.000
Secure Base ~ Employee Job Performance	-0.144	0.073	.047
Secure Base ~ Employee Satisfaction	0.525	0.152	.001
Psychological Safety ~ Perceived Leader Efficiency	0.363	0.061	.000
Psychological Safety ~ Employee Engagement	0.068	0.078	.382
Psychological Safety ~ Employee Job Performance	0.273	0.051	.000
Psychological Safety ~ Employee Satisfaction	0.239	0.090	.008

Table 12. *Indirect Effects of Secure Base on Each of the Employee and Leader Outcomes through Psychological Safety (Study 1)*

Indirect Effects of Each Leader Behavior	<i>b</i>	<i>se</i>	<i>p</i>
Secure Base ~ Psychological Safety ~ Perceived Leader Efficiency	0.394	0.073	.000
Secure Base ~ Psychological Safety ~ Employee Engagement	0.073	0.084	.384
Secure Base ~ Psychological Safety ~ Employee Job Performance	0.296	0.058	.000
Secure Base ~ Psychological Safety ~ Employee Satisfaction	0.259	0.099	.009

Study 1 (US Sample) Discussion

The purpose of Study 1 was two-fold: (1) to test the fit of my hypothesized secure base model and (2) to validate my model in a sample of U.S. employees. Though my proposed model had overall support in the US sample, most of the individual paths were nonsignificant.

Additional analyses showed that variable redundancy might be a potential reason for lack of significance between the individual paths of my proposed model.

Study 2 (India Sample) Method

Participants

For Study 2, I determined sample size based on an a priori simulation power analysis performed in R using the lavaan package (Rosseel, 2012), which revealed that at least 150 participants were needed for my India sample to detect an effect size of .3 at a significance level $\alpha = .05$ with a statistical power $1 - \beta = .80$. Accounting for 30% IER from MTurk users (Sprouse, 2011), I needed 200 participants to ensure I would have minimum of 150 participants with usable data. To be eligible for Study 2, participants had to be 18 years of age, living in India, working at least 30 hours per week, and with their current supervisor for a minimum of one year. Each participant received a monetary incentive of \$1 for completing my study. Failure to meet eligibility requirements or follow survey instructions led to participant data exclusion.

Procedure

I used the same procedure in Study 2 that I used in both Study 1 and my pilot study. See the description in the pilot study.

Survey Design

I used the same survey design in Study 2 that I used in both Study 1 and my pilot study except for IP address exclusion. Unlike Study 1 and the pilot study, for Study 2 I excluded participants who had a U.S. or non-Indian IP or Virtual Private Server (VPS). See the description in the pilot study.

Measures

I used the same set of measures in Study 2 that I used in both Study 1 and my pilot study. See the descriptions in the pilot study.

Study 2 (India Sample) Results

Data Cleaning

I surveyed 898 participants of which 332 failed eligibility criteria and another 478 failed due to IER. I was left with usable data from 88 participants. To retain as much data as possible, I only removed participants if they failed an IER item in my primary variables. I reviewed impossible responses, long-string responses, and outliers. Also, I removed participants' data if they spent an average of less than 2 seconds per item on a given page. I checked for outliers by searching for scores higher or lower than four

Sample Characteristics and Descriptive Statistics

Of the 88 participants, 76% identified as female. Of my participants, 45% were in the 25 – 34 age range. Of my participants, 48% had been at their current organization for over 5 years, and 52% stated they had spent more than two but under five years in their current position. Of my participants, 64% said that they worked more than 40 hours per week, and 51% stated they had worked for more than five years with their current supervisor. I reported measure means, standard deviations, Coefficient Alphas (see Table 13), and intercorrelations (see Table 14) for all primary study variables.

Table 13. *Mean, Standard Deviations, and Coefficients Alphas (Study 2)*

Variable	<i>M</i>	<i>SD</i>	α
Belongingness	3.90	0.62	.45
Sensitivity	3.82	0.60	.76
Cooperation	3.75	0.60	.32
Availability	3.70	0.72	.68
Willingness	3.75	0.70	.82
Acceptance	3.65	0.62	.69
Accessibility	3.70	0.82	.83
Potential	3.81	0.79	.87
Opportunity	3.16	0.59	.55
Listen	3.51	0.51	.04
Calm	3.59	0.79	.72
Motivation	3.18	0.47	-.45
Positive	3.57	0.56	.33
Secure Base	3.51	0.71	.92
Leader Efficiency	5.41	1.34	.91
Psychological Safety	4.74	0.89	.61
Engagement	5.39	0.87	.87
Job Performance	5.80	0.63	.47
Job Satisfaction	6.06	1.03	.72

Table 14. *Bivariate Correlations (Study 2)*

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s
a	-																		
b	.36	-																	
c	.49	.53	-																
d	.44	.64	.47	-															
e	.35	.70	.60	.51	-														
f	.44	.60	.52	.54	.60	-													
g	.53	.63	.61	.59	.69	.68	-												
h	.45	.70	.53	.57	.67	.72	.75	-											
i	.24	.48	.45	.46	.51	.44	.59	.66	-										
j	.41	.43	.53	.38	.50	.51	.49	.57	.39	-									
k	.41	.51	.54	.40	.59	.70	.67	.64	.45	.55	-								
l	.21	.16	.24	.05	.09	.22	.15	.24	.05	.25	.18	-							
m	.36	.42	.29	.28	.53	.50	.48	.55	.50	.42	.44	.26	-						
n	.39	.71	.46	.51	.79	.67	.69	.74	.57	.44	.64	.16	.59	-					
o	.41	.67	.41	.52	.69	.70	.68	.72	.41	.46	.61	.24	.53	.84	-				
p	.53	.41	.38	.39	.55	.49	.57	.40	.23	.38	.50	.32	.37	.56	.59	-			
q	.09	.32	.18	.24	.31	.15	.20	.27	.10	.04	.13	.00	.25	.34	.32	.14	-		
r	.27	.19	.09	.23	.11	.12	.22	.18	.13	-.01	.16	.08	.29	.18	.21	.35	.35	-	
s	.11	.41	.10	.30	.21	.11	.15	.18	.07	-.04	.06	.11	.22	.37	.35	.27	.57	.39	-

Note. a = Belongingness; b = Sensitivity; c = Cooperation; d = Availability; e = Willingness; f = Acceptance; g = Accessibility; h = Potential; i = Opportunity; j = Listen; k = Calm; l = Motivation; m = Positive; n = Secure Base; o = Leader Efficiency; p = Psychological Safety; q = Engagement; r = Job Performance; s = Job Satisfaction.

Italicized correlation is significant at $p < .05$. Bold correlations are non-significant. All remaining correlations are significant at $p < .01$.

Hypothesis Testing: Model

I analyzed and interpreted my proposed model in two stages: (1) an assessment of the construct validity of the measurement model through confirmatory factor analysis (CFA) and (2) an assessment of the structural model.

CFA

I performed a confirmatory factor analysis (CFA) to examine my posited latent constructs (i.e., acceptance, willingness to help, sensitivity, accessibility, and advocacy). As noted above, researchers (e.g., Hu & Bentler, 1999) have defined adequate model fit as a non-significant χ^2 , a CFI greater than or equal to .90, an RMSEA less than or equal to .06, and an SRMR less than or equal to .08. However, because sample size affects both χ^2 and RMSEA (Rose et al., 2017), I considered an acceptable RMSEA or SRMR in addition to an acceptable CFI as evidence of acceptable, i.e., adequate, model fit. Results of CFA confirmed the proposed five-factor model had an adequate fit, $\chi^2 = 184.933$; RMSEA = .095; SRMR = .063; CFI = .919. Additionally, I tested an alternative one-factor model, which also demonstrated adequate fit, $\chi^2 = 243.114$; RMSEA = .094; SRMR = .066; CFI = .895. Finally, results revealed that my proposed five-factor model had a significantly better fit than the one-factor model, $\Delta\chi^2(34) = 58.181, p < .001$.

Structural Model Analysis

In Hypothesis 2, I predicted that the structural model in Figure 3 would adequately fit the data. Results revealed that my model had an adequate fit, $\chi^2 = 221.600$; RMSEA = .095; SRMR = .070; CFI = .903, providing support for Hypothesis 2. I used bootstrapping with 500 replacements to evaluate indirect effects as bootstrapping provides more accurate parameter estimates by resampling with replacement numerous times (Kenny, 2020). Additionally, I tested an alternative one-factor model, which also demonstrated adequate fit, $\chi^2 = 255.084$; RMSEA =

.096; SRMR = .070; CFI = .888. Finally, results revealed that my proposed five-factor model had a significantly better fit than the one-factor model, $\Delta\chi^2(18) = 33.484, p = .05$.

Hypothesis Testing: Paths

In addition to my model (Hypothesis 2), in Study 2, I proposed ten hypotheses addressing specific relationships in the model. Results fully supported two of my hypotheses, partially supported two hypotheses and failed to support the remaining six hypotheses. The results of each hypothesis test are below.

Direct Effects of Leader Behaviors on Secure Base

In Hypotheses 3a – 3e, I predicted a positive effect of each of my latent leader factors (acceptance, cooperation, sensitivity, accessibility, and advocacy) on employees' perceptions of their leaders as a secure base. There was a nonsignificant relationship between each of my latent leader behaviors and employees' perceptions of their leaders as a secure base (acceptance, $b = -.390, se = 1.200, p = .745$; cooperation, $b = .502, se = .924, p = .587$; sensitivity, $b = 1.070, se = 1.105, p = .333$; accessibility, $b = -.699, se = 1.256, p = .578$; advocacy, $b = .290, se = 1.533, p = .850$). Thus, results provided no support for Hypotheses 3a – 3e.

Direct Effects of Leader Behaviors on Psychological Safety

In Hypothesis 4a – 4e, I predicted a positive effect of each of my latent leader factors (acceptance, cooperation, sensitivity, accessibility, and advocacy) on employees' psychological safety. There was a nonsignificant relationship between three of my latent leader behaviors and employees' psychological safety (cooperation, $b = 1.234, se = 2.408, p = .608$; sensitivity, $b = -4.892, se = 2.836, p = .085$; advocacy, $b = 7.649, se = 3.455, p = .124$), a significant relationship but opposite than the predicted direction for acceptance, $b = -12.404, se = 4.486, p = .006$, and a significant relationship in the predicted direction for accessibility, $b = 7.479, se = 3.455, p =$

.030. Thus, results provided partial support for Hypotheses 4a – 4e, i.e., for one of the five leader behaviors.

Direct Effect of Secure Base on Psychological Safety

In Hypothesis 5, I predicted a positive effect of employees' perceptions of their leaders as a secure base on employees' psychological safety. My results provided no support for Hypothesis 5. There was a nonsignificant relationship between employees' perceptions of their leaders as a secure base on employees' psychological safety, $b = .349$, $se = .868$, $p = .688$.

Direct Effects of Secure Base on Employee Engagement, Satisfaction, and Performance

In Hypothesis 6, I predicted a positive effect of employees' perceptions of their leaders as a secure base on employee engagement, job satisfaction, and job performance. Results provided partial support for Hypothesis 6. There was a significant positive relationship between employees' perceptions of their leaders as a secure base and employee engagement, $b = .470$, $se = .189$, $p = .013$, and job satisfaction, $b = .463$, $se = .210$, $p = .028$, and a nonsignificant relationship with job performance, $b = -.015$, $se = .133$, $p = .913$.

Direct Effect of Secure Base on Perceived Leader Effectiveness

In Hypothesis 7, I predicted a positive effect of employees' perceptions of their leaders as a secure base on their perceptions of their leader's effectiveness. In support of Hypothesis 7, I found a significant positive relationship between employees' perceptions of their leaders as a secure base on their perceptions of their leader's effectiveness, $b = 1.1405$, $se = .183$, $p < .001$.

Direct Effect of Psychological Safety on Employee Engagement, Satisfaction, and Performance

In Hypothesis 8, I predicted a positive effect of employees' psychological safety on their engagement, job satisfaction, and job performance. My results provided partial support for

Hypothesis 8. There was a significant positive relationship between employees' psychological safety and job performance, $b = .256$, $se = .093$, $p = .006$, but a nonsignificant relationship with employee engagement, $b = -.076$, $se = .116$, $p = .509$, and job satisfaction, $b = .102$, $se = .163$, $p = .533$.

Direct Effect of Psychological Safety on Perceived Leader Effectiveness

In Hypothesis 9, I predicted a positive effect of employees' psychological safety on their perceptions of their leader's effectiveness. In support of Hypothesis 9, I found a significant positive relationship between employees' psychological safety and their perceptions of their leader's effectiveness, $b = .258$, $se = .125$, $p = .039$.

Indirect Effects of Leader Behaviors on Psychological Safety through Secure Base

In Hypotheses 10a – 10e, I predicted an indirect effect of each of my latent leader factors (acceptance, cooperation, sensitivity, accessibility, and advocacy) on employees' psychological safety through employees' perceptions of their leaders as a secure base. There was a nonsignificant relationship between each of my latent leader behaviors and employees' psychological safety through employees' perceptions of their leaders as a secure base (acceptance, $b = .136$, $se = 1.348$, $p = .920$; cooperation, $b = .175$, $se = 1.145$, $p = .879$; sensitivity, $b = .373$, $se = 1.281$, $p = .771$; accessibility, $b = -.244$, $se = 1.403$, $p = .862$; advocacy, $b = .101$, $se = 2.039$, $p = .960$). Thus, my results provided no support for Hypotheses 10a – 10e.

Indirect Effect of Secure Base on Employee Engagement, Satisfaction, and Performance through Psychological Safety

In Hypothesis 11, I predicted an indirect effect of employees' perceptions of their leaders as a secure base on employee engagement, job satisfaction, and job performance through

employees' psychological safety. My results provided no support for Hypothesis 11. There was a nonsignificant relationship between employees' perceptions of their leaders as a secure base and employee engagement, $b = -.027$, $se = .134$, $p = .842$, job satisfaction, $b = .035$, $se = .177$, $p = .842$, and job performance, $b = .089$, $se = .242$, $p = .712$, through employees' psychological safety.

Indirect Effect of Secure Base on Perceived Leader Effectiveness through Psychological Safety

In Hypothesis 12, I predicted an indirect effect of employees' perceptions of their leaders as a secure base on their perceptions of their leader's effectiveness through employees' psychological safety. My results provided no support for Hypothesis 12. There was a nonsignificant relationship between employees' perceptions of their leaders as a secure base and their perceptions of their leader's effectiveness through employees' psychological safety, $b = .090$, $se = .235$, $p = .703$.

Additional Analyses

To understand the lack of significant direct and indirect paths of my proposed model despite the presence of overall adequate fit of model, I conducted additional analyses with three different models: (1) single leader behavior models: each latent leader behavior (i.e., acceptance, cooperation, sensitivity, accessibility, and advocacy) with secure base and psychological safety as outcomes, (2) leader behaviors as a set model: the five latent leader behaviors as a set with secure base and psychological safety, and (3) saturated outcomes model: a saturated model with all of the outcome (endogenous variables): secure base, psychological safety, perceived leader efficiency, employee

engagement, employee job satisfaction, and employee job performance. Results of each of the models are summarized below.

Single Leader Behavior Models

I used structural equation modelling consisting of each latent leader behavior and the outcomes of secure base and psychological safety to test direct and indirect effects along with model fit indices. Table 15 shows a summary of model fit indices for each latent behavior with secure base and psychological safety. Table 16 shows the direct effects of results of each latent behavior on secure base and psychological safety. Table 17 shows the indirect effects of each of the latent leader behaviors on psychological safety through secure base.

Table 15. *Model Fit Indices for Each Latent Leader Behavior with Secure Base and Psychological Safety (Study 2)*

Model	χ^2	CFI	RMSEA	SRMR
AC + SB + PSY	8.281	.937	.288	.050
CO + SB + PSY	.471	1	.000	.014
SEN + SB + PSY	10.849	.944	.139	.067
ACS + SB + PSY	.191	1	.000	.007
AD + SB + PSY	12.785	.981	.082	.048

SB = Secure Base; PSY = Psychological Safety; AC = Acceptance; CO = Cooperation; SEN = Sensitivity; ACS = Accessibility; AD = Advocacy

Table 16. *Direct Paths from Each Latent Leader Behavior to Secure Base and Psychological Safety (Study 2)*

Direct Effects	<i>b</i>	<i>se</i>	<i>p</i>	Model
Acceptance ~ Secure Base	1.656	0.365	.000	Acceptance
Acceptance ~ Psychological Safety	1.959	1.009	.052	
Secure Base ~ Psychological Safety	-0.101	0.427	.813	
Cooperation ~ Secure Base	1.554	0.252	.000	Cooperation
Cooperation ~ Psychological Safety	0.740	0.392	.059	
Secure Base ~ Psychological Safety	0.393	0.200	.049	
Sensitivity ~ Secure Base	1.237	0.216	.000	Sensitivity
Sensitivity ~ Psychological Safety	0.492	0.533	.356	
Secure Base ~ Psychological Safety	0.406	0.332	.221	
Accessibility ~ Secure Base	1.162	0.194	.000	Accessibility
Accessibility ~ Psychological Safety	0.910	0.349	.009	
Secure Base ~ Psychological Safety	0.236	0.211	.264	
Advocacy ~ Secure Base	1.464	0.201	.000	Advocacy
Advocacy ~ Psychological Safety	0.113	0.458	.805	
Secure Base ~ Psychological Safety	0.640	0.252	.011	

Table 17. *Indirect Effects of Each Latent Leader Behavior on Psychological Safety through Secure Base (Study 2)*

Indirect Effects of Each Leader Behavior	<i>b</i>	<i>se</i>	<i>p</i>
Acceptance ~ Secure Base ~ Psychological Safety	-0.167	0.724	.818
Cooperation ~ Secure Base ~ Psychological Safety	0.610	0.325	.061
Sensitivity ~ Secure Base ~ Psychological Safety	0.503	0.388	.196
Accessibility ~ Secure Base ~ Psychological Safety	0.274	0.244	.261
Advocacy ~ Secure Base ~ Psychological Safety	0.937	0.390	.016

Leader Behaviors as a Set Model

I used structural equation modelling consisting of the latent leader behaviors as a set, secure base, and psychological safety to test direct and indirect effects along with model fit indices. Table 18 shows a summary of model fit indices for all latent leader behaviors as a set with secure base and psychological safety. Table 19 shows the direct effects of each latent leader behavior with all five behaviors included as a set on secure base and psychological safety. Table 20 shows the indirect effects of each of the latent leader behaviors when they are entered as a set on psychological safety through secure base.

Table 18. *Model Fit Indices for the Set of Five Latent Leader Behaviors with Secure Base and Psychological Safety (Study 2)*

Model	χ^2	CFI	RMSEA	SRMR
AC + CO + SEN + ACS + AD + SB + PSY	138.943	.916	.104	.062

SB = Secure Base; PSY = Psychological Safety; AC = Acceptance; CO = Cooperation; SEN = Sensitivity; ACS = Accessibility; AD = Advocacy

Table 19. *Direct Effects of Each Latent Leader Behavior with Leader Behaviors Entered as a Set on Secure Base and Psychological Safety (Study 2)*

Direct Effects	<i>b</i>	<i>se</i>	<i>p</i>
Acceptance ~ Secure Base	0.390	1.307	0.766
Cooperation ~ Secure Base	0.502	0.874	0.566
Sensitivity ~ Secure Base	1.070	1.099	0.331
Accessibility ~ Secure Base	-0.699	1.376	0.611
Advocacy ~ Secure Base	0.290	1.622	0.858
Acceptance ~ Psychological Safety	-12.402	5.016	0.013
Cooperation ~ Psychological Safety	1.234	2.289	0.590
Sensitivity ~ Psychological Safety	-4.892	2.864	0.088
Accessibility ~ Psychological Safety	7.479	4.135	0.070
Advocacy ~ Psychological Safety	7.648	6.611	0.247
Secure base ~ Psychological Safety	0.349	1.362	0.798

Table 20. *Indirect Effects of Each Latent Leader Behavior Entered as a Set on Psychological Safety (Study 2)*

Indirect Effects of Secure Base	<i>b</i>	<i>se</i>	<i>p</i>
Acceptance ~ Secure Base ~ Psychological Safety	0.136	1.771	0.939
Cooperation ~ Secure Base ~ Psychological Safety	0.175	1.305	0.893
Sensitivity ~ Secure Base ~ Psychological Safety	0.373	1.490	0.802
Accessibility ~ Secure Base ~ Psychological Safety	-0.244	2.785	0.930
Advocacy ~ Secure Base ~ Psychological Safety	0.101	4.463	0.982

Saturated Outcomes Model

I used structural equation modelling consisting of the endogenous variables, i.e., secure base, psychological safety, perceived leader efficiency, employee engagement, employee job satisfaction, and employee job performance, to better understand the relationships between these variables in the absence of any latent leader behavior. As a saturated model, this model has the best fit possible as model fit indices show in Table 21. Table 22 shows the direct effects of secure base and psychological safety on each of the employee and leader outcomes. Table 23 shows the indirect effect of secure base on each of the employee and leader outcomes through psychological safety.

Table 21. *Model Fit Indices of Secure Base and Psychological Safety with Employee and Leader Outcomes (Study 2)*

Model	χ^2	CFI	RMSEA	SRMR
SB + PSY + EFF + ENG + JPERF + JSAT	0	1	0	0

SB = Secure Base; PSY = Psychological Safety; EFF = Leader Efficiency; ENG = Employee Engagement; JPERF = Employee Job Performance; JSAT = Employee Job Satisfaction

Table 22. *Direct Effects of Secure Base and Psychological Safety on Each of the Employee and Leader Outcomes (Study 2)*

Direct Effects	<i>b</i>	<i>se</i>	<i>p</i>
Secure base ~ Psychological Safety	0.696	0.133	0.000
Secure Base ~ Perceived Leader Efficiency	1.405	0.188	0.000
Secure Base ~ Employee Engagement	0.470	0.190	0.013
Secure Base ~ Employee Job Performance	-0.015	0.132	0.912
Secure Base ~ Employee Satisfaction	0.463	0.211	0.028
Psychological Safety ~ Perceived Leader Efficiency	0.258	0.126	0.041
Psychological Safety ~ Employee Engagement	-0.076	0.117	0.516
Psychological Safety ~ Employee Job Performance	0.256	0.092	0.005
Psychological Safety ~ Employee Satisfaction	0.102	0.162	0.529

Table 23. *Indirect Effects of Secure Base on Each of the Employee and Leader Outcomes through Psychological Safety (Study 2)*

Indirect Effects of Each Leader Behavior	<i>b</i>	<i>se</i>	<i>p</i>
Secure Base ~ Psychological Safety ~ Perceived Leader Efficiency	0.180	0.101	0.076
Secure Base ~ Psychological Safety ~ Employee Engagement	-0.053	0.084	0.525
Secure Base ~ Psychological Safety ~ Employee Job Performance	0.178	0.081	0.028
Secure Base ~ Psychological Safety ~ Employee Satisfaction	0.071	0.114	0.535

Study 2 (India Sample) Discussion

The purpose of Study 2 was two-fold: (1) to test the fit of my hypothesized secure base model and (2) to validate my model in a second sample. Though my proposed model had overall support in the India sample, most of the individual paths were nonsignificant. Additional analyses showed that variable redundancy might be a potential reason for lack of significance between the individual paths of my proposed model.

Summary of Results from the Main Study US and India Samples

In my main study, I aimed to test Hypotheses 2 – 12, i.e., to build and test a model of secure base leader behaviors and positive work outcomes. I used two samples (Study 1, US sample, $N = 272$; Study 2, India sample, $N = 88$) of MTurk users and conducted structural equation analyses to identify the significant relationships of my proposed secure base model. Based on acceptable model fit indices, I found support for Hypothesis 2 in Studies 1 and 2 and thus validated my proposed model. I found partial support for predicted direct effects, i.e., Hypotheses 3-9, and no support for predicted indirect effects, i.e., Hypotheses 10-12, in either of my samples.

General Discussion

The purposes of my study were 1) identify leader behaviors that enable an employee to perceive their leader as a secure base and (2) propose and test a secure base model of leader behaviors and positive employee and leader outcomes. In my study, I integrated leader behaviors into a secure base model and explored its relation to various employee outcomes. Overall, the results of this present study supported many of the proposed relationships. Specifically, I found that leader behaviors were positively associated with employees' perception of their leader as a secure base. The results also demonstrated that employees' perception of their leader as a secure base positively influenced employee engagement, job satisfaction, and their perception of their leader's efficiency. My results raised issues related to the role of secure base and safety in a work setting, the role of secure base and exploration in a work setting, relationships between leader behaviors and secure base, the uniqueness of secure base in leadership literature, and psychometric properties of these leadership measures.

Secure Base and Safety in a Work Setting

This study advances theory and research regarding secure base influences on safety in adult life. Bowlby stated that secure base predicts safety in infants. One can view psychological safety as functionally parallel to what Bowlby called safety. For adults, psychological safety (similar to safety in children) is a major source of actual and perceived safety. In the absence of psychological safety, adults would fear speaking or doing anything remotely innovative for fear of ridicule. I am not claiming that physical safety is unnecessary, but unlike infants, most adults can care for themselves and have a well-developed sense of self-preservation. The extent to which an adult needs another individual to care for their physical safety in a work environment is minimal. Hence, I considered psychological safety as an appropriate measure of safety.

Psychological safety refers to functioning without fear of negative consequences in the workplace. Having psychological safety means employees feel safe to express themselves. Employees feel confident in sharing ideas and feel trusted and respected. When employees do not experience psychological safety, they worry about being blamed for any failure. Fear prevents employees from reporting issues, and such employees do not trust their colleagues or leaders. Lack of psychological support can make employees feel ignored and abandoned in a workplace resulting in adverse employee outcomes.

My results suggested that organizations aiming to improve employees' psychological safety should train their leaders to engage in behaviors that would enable them to become a secure base for their employees. Secure base makes people feel safe to take risks, share, and contribute ideas without worry or fear. Results of SEM analyses in both Study 1 and Study 2 indicated that secure base predicted psychological safety among employees. Additionally, in Study 1 and Study 2, psychological safety was positively associated with job performance, job

satisfaction, and perception of leader efficiency. These results are consistent with Bowlby's predictions regarding secure base and safety. When employees perceive their leader as a secure base, they know that they can depend on their leader when needed and hence experiences psychological safety. Psychological safety allows employees to be their authentic selves and empowers them to do their best. However, contrary to expectations, psychological safety did not predict employee engagement in either of my studies. Hence, a lack of clarity in the relationship between psychological safety and employee engagement merits further research.

From a practical perspective, the notion that secure base predicts psychological safety, and psychological safety, in turn, predicts job performance, job satisfaction, and perceived leader efficiency has implications for organizations and leadership training. Employees with a secure base do not have to exhaust themselves worrying about a lack of support, fear of failure, or potential threats to their well-being. They experience psychological safety and are free to focus on their performance. Hence, organizations would benefit from training their leaders to become a secure base for their employees.

Secure Base and Exploration in a Work Setting

This study advances theory and research regarding secure base influences on exploration in adult life. Bowlby stated that secure base predicts exploration behaviors in infants. In their seminal article, Hazan and Shaver (1990) proposed that in adults, work is potentially synonymous with exploration in infants. In children, exploration promotes the development of self, autonomy, and competence. Work plays a crucial role in fulfilling these functions in adults because many employees strive to achieve meaning and personal development from their work and view work as fulfilling and socially beneficial (Avolio & Sosik, 1999). Consequently, networking, taking the initiative, and taking risks are examples of adult exploratory behaviors in

a work environment. Often such behaviors result in growth and development, leading to an engaged and productive employee. Hence, I used several standard performance metrics, namely, employee engagement, employee performance, employee job satisfaction, and perceived leader efficiency, to quantify the effects of secure base on adult exploration in a work setting.

My results suggested that organizations aiming to improve employee engagement, satisfaction, and perceptions of leader efficiency should train their leaders to engage in behaviors that would enable them to become a secure base for their employees. Results of SEM analyses in both Study 1 and Study 2 indicated that secure base predicted engagement, satisfaction, and perceptions of leader efficiency among employees. These results are consistent with Bowlby's predictions regarding secure base and exploration and with prior research that employees' perception of their leader as a secure base predicts positive outcomes. However, contrary to expectations, secure base did not predict job performance in Study 2 and had a statistically significant negative influence on job performance in Study 1. Hence, a lack of clarity in the relationship between secure base and job performance might warrant further research.

Practically, the notion that secure base predicts employee outcomes has implications for organizations and leadership training. Employees trust and rely on their leaders when they become a secure base. Employees feel secure, are less anxious, and are free to focus on exploration. Hence, organizations would benefit from training their leaders to become a secure base for their employees.

Relationship between Leader Behaviors and Secure Base

One of my primary objectives was to examine relationships between leader behaviors and employees' perceptions of their leaders as a secure base. Based on prior research (e.g., Ainsworth et al., 1989; Schofield & Beek, 2005), I hypothesized that leader behaviors positively affect

employees' perceptions of their leaders as a secure base. Results from my Pilot study supported my hypothesis and indicated that all 13 leader behaviors positively correlated with secure base. Conceptual similarities among the 13 leader behaviors led to the development of a 5-factor model (acceptance, cooperation, sensitivity, accessibility, and advocacy) of secure base. Despite multicollinearity, confirmatory factor analyses revealed that the 5-factor model had an acceptable fit. Also, additional analyses indicated that the 5-factor model had a significantly better fit of the data than a 1-factor model. However, multicollinearity indicated factor similarity, suggesting the need for further examination of the five factors and their relationships.

Conceptual definitions are foundational to research and provide clarity to researchers and participants. The latent factor of acceptance is about creating an environment of employee acceptance and developing in them a sense of belongingness to their team and organization. Cooperation is about a leader willing to help their employees when needed. Leader behaviors showing understanding of employee motivations and listening to employee concerns define the latent factor of sensitivity. Making sure that employees know their leader's availability and how to reach them is key to the latent factor of accessibility. Advocacy is about leaders promoting their employees' achievements and encouraging their growth.

Sometimes, despite conceptual distinctiveness, subtle differences between the constructs might be impossible to capture empirically (see Appendix AG & AH). For example, theory has defined the cooperation factor as the ability of a leader to help their employees as needed and the accessibility factor as the ability of a leader to be reachable and available to their employee when needed. Though conceptually distinct, the number of times a leader was available to their employee when needed might reflect both factors. Thus, depending on the context, a leader

ensuring their availability to employees could be demonstrating accessibility, cooperation behaviors, or both.

Additionally, expecting participants to capture subtle differences between the construct evident to a researcher is unrealistic because people form impressions based on intuition rather than logic (Ambady & Rosenthal, 1992). For example, theory has defined the acceptance factor as the ability of a leader to acknowledge and accept employees irrespective of their differences and the sensitivity factor as the ability of a leader to understand and empathize with employees' needs. However, one can argue that, for a leader to accept their employees, they need to be sensitive to their employees' diverse beliefs, needs, and values. Thus, the enmeshed nature of the two constructs might make them indistinguishable to the average respondent, making the process of empirical distinctiveness impossible. Further complicating the issue of empirical distinctiveness could be the halo effect. An individual experiences the halo effect when perceptions of a person's single trait influence perceptions of that person's other traits. So, noticing that a leader is effective in one factor might create a perception that they are effective in all factors. For example, perceiving a leader as an advocate might influence the respondents to perceive the leader as accepting, sensitive, cooperative, and accessible resulting in strong correlations between the factors. In such instances, the halo effect can negate conceptual uniqueness and create an illusion of construct similarity.

In each of the above instances, leadership literature would benefit from future research reevaluating latent leader behavior constructs and developing items that capture the uniqueness of each construct. Moreover, in cases in which empirical distinction is not possible, future research must revisit and revise the nomological net. The law of parsimony dictates the use of the simplest theory with the greatest generality. From a practical standpoint, my study showed

that it would do good for organizations to be aware that often employees perceive their leaders through the lens of the halo effect. Hence, training leaders to exhibit any one of the latent leader behavior constructs might help them become a secure base for their employees.

Uniqueness of Secure Base in Leadership Literature

Numerous researchers have widely acknowledged the importance of organizational leadership, leading to a myriad of research dedicated to developing and identifying leadership theories, models, traits, and behaviors. Given the large amount of prior research and theory, researchers have raised concerns related to potential conceptual redundancy in the leadership literature. Hence, although the primary goal of my study was to investigate the importance of secure base in a work setting, a secondary goal was to explore the conceptual similarity of secure base with existing concepts within the leadership literature. Based on the key attributes of a secure base, namely, support and encouragement, I collected data for perceived supervisor support, satisfaction with leader, and affective commitment with leader. Results of bivariate correlations indicated strong positive associations between the four variables suggesting convergent validity, i.e., a possibility of conceptual similarity among them (see Appendix AI).

Construct validation is the first step in developing any new construct, and it requires convergent and discriminant validity based on theory. Theoretical foundations provide meaning and context to a construct and should identify also assumptions and challenges. Though Attachment theory provides the theoretical framework for secure base, the other three constructs, namely, perceived supervisor support, satisfaction with leader, and affective commitment with leader, have little or no theoretical underpinnings. The lack of theory makes it difficult to differentiate between the various nuances that characterize these constructs. For example, a leader's ability to provide consistent support and encouragement enables them to become a

secure base for their employees. To an extent, one can argue that these same behaviors would lead employees to perceive their leaders as supportive, be satisfied with them, and develop affective commitment towards them. Hence, a certain degree of conceptual overlap among these variables is inevitable. However, a theory would help identify the limits of the similarities and the conditions under which these constructs might differ. Hence future research needs to develop a theoretical framework within which these constructs might operate.

As previously stated in this study, sometimes, despite the theoretical framework, an empirical distinction might be elusive. Attachment theory positions secure base as a prerequisite for safety. When an individual experiences consistent care and support, they perceive the provider as a secure base. In the presence of a secure base, the individual experiences safety. However, one can argue that both constructs have certain common emotions. For example, secure base allows an individual to explore without fear because they know they have someone reliable on whom they can depend if a need arises. Secure base instills an emotional bond built on trust. The absence of fear, dependability, trust and emotional bond characterize not just secure base but psychological safety as well. This commonality of emotions is evident when reviewing the scale items for both these constructs. Similarly, the lack of predictive validity of employee outcomes in the presence of each other is another indicator that empirical distinction between secure base and psychological safety needs additional psychometric work. Subsequently, future research must establish the discriminant validity of these constructs and explore if these constructs can explain unique variance in organizational outcomes.

Psychometric Properties

My study highlighted possible issues with scale quality. Eight of the leader behavior measures I used had lower than optimal reliabilities in Study 2, i.e., alphas less than .45. Three of

the leader behavior measures (acceptance, motivation, and opportunity) had lower than desired reliability in all my studies, i.e., alphas less than .69. Ambiguous test items and a lack of cross-cultural testing could be the potential reasons.

Issues with the motivation scale provide me with an opportunity to discuss some issues with psychometric properties in the measures I used. The motivation scale was the least reliable scale in my study. The construct of motivation in this study meant intrinsic factors that motivate employees. When leaders use employees' intrinsic motivations to lead them, they perceive their leader as a secure base. The motivation scale had four items, of which two items were reverse coded. One of the reverse-coded items was 'My manager uses financial reward as a key motivating tool.' Research has consistently found that financial reward is an extrinsic motivator and is not a sufficient motivating factor for employees cross-culturally. However, in the item mentioned above, the definition of 'financial reward' lacks clarity. The value of a financial reward is largely subjective. Financial rewards have a definite monetary value, such as pay, bonus, stock options, or commissions, but have indefinite psychological value, such as self-esteem, family security, or pursuit of dreams. Hence, it is reasonable to assume that my study participants' interpretation of 'financial reward' might have affected the reliability of this scale. Future research must conduct item generation and develop clear and unbiased items to ensure content and construct validity.

Other issues related to psychometric properties included the lack of available measures, the limited psychometric information for existing measures, and the lack of examination of cross-cultural generality of measures. I developed four of the 13 leader behavior measures for this study. The remaining seven leader behavior measures (except belongingness) have fewer than five studies that have used them. The leader behavior measures I used in my studies do not

show empirical evidence of cross-cultural validation research. The scale developers used either homogenous or convenience sampling for their scale development. Research (e.g., Blankson et al., 2012) has associated generalizability as an issue with both sample types. Seven of my study scales used European subjects whereas the remaining six used US participants. I collected my data using US and Indian participants. The items in my measures might have a different interpretation across cultures resulting in poor generalizability. Future research should consider using heterogeneous and random sampling to ensure cross-cultural construct validity and reliability.

Limitations

A few limitations constrain the interpretation of my study's results. First, I collected data for all my variables using a single-source, self-report method. This method of data collection often leads to common method variance. However, for my study, I was interested in understanding employees' points of view. Hence, self-report data was unavoidable. Additionally, I found relationships of very different sizes between my primary variables, indicating that common method variance was not a substantial issue.

A second potential limitation involved the use of MTurk data. I collected my data in the Spring of 2021, during the peak of COVID-19. Worldwide uncertainty prevalent at that time might have affected employee performance, including MTurk user performance. One indicator was a higher than desired level of IER in my participants. However, I conducted multiple a priori and a posteriori IER checks to ensure acceptable data quality, removing participants with unacceptable levels of IER.

A final potential limitation of my study was the presence of multicollinearity in my data. However, I expected some degree of multicollinearity. Because leaders who

exhibit one effective leader behavior would likely display other effective leader behaviors also. Hence, I expected a positive correlation between the leader behaviors. However, my results indicated that a five-factor model fit the data significantly better than a one-factor model, confirming the presence of distinctions between these five latent leader behaviors.

Conclusion

My study had two purposes. First, I sought to identify leader behaviors that would enable an employee to perceive their leader as a secure base. Second, I built and validated a model of secure base leader behaviors. My results revealed that secure base, from Attachment theory (Bowlby, 1969), is relevant not just in infancy but also in adult life, including work life. Secure base influences various positive employee and leader outcomes. Also, my results revealed that leader behaviors influence employees' perceptions of their leader as a secure base. If a leader can exhibit even one secure base behavior, employees will perceive them as their secure base. Hence organizations should train their leaders to exhibit secure base behaviors. An important direction for future research will be to examine the discriminant validity of these conceptually similar constructs. I have listed above reasons why this might be challenging. In sum, my study contributes to the advancement of research and practice by providing evidence of the relevance of Attachment theory for leadership. My results provide important insights into the functions of a secure base in an organization. Specifically, secure base behaviors enable a leader to create an environment of safety and exploration in which employees trust their leader to have their back, navigate the world without fear, and take risks that enable them to learn and reach their potential.

References

- Ainsworth, M. D. S. (1967). *Infancy in Uganda: Infant care and the growth of love*. Johns Hopkins Press.
- Ainsworth, M. D. S., & Bell, S. M. (1970). Attachment, exploration, and separation: Illustrated by the behavior of one-year-olds in a strange situation. *Child Development*, 41(1), 49–67. <https://doi.org/10.2307/1127388>
- Ainsworth, M. D. S., Bell, S. M., & Stayton, D. J. (1971) Individual differences in strange-situation behavior of one-year-olds. In H. R. Schaffer (Ed.) *The origins of human social relations* (pp. 17–58). Academic Press.
- Ainsworth, M. D. S., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Erlbaum.
- Ainsworth, M. S. (1989). Attachments beyond infancy. *American Psychologist*, 44(4), 709–716. <https://doi.org/10.1037/0003-066X.44.4.709>
- Ambady, N., & Rosenthal, R. (1992). Thin slices of expressive behavior as predictors of interpersonal consequences: A meta-analysis. *Psychological Bulletin*, 111(2), 256.
- Avolio, B., Walumbwa, F., & Weber, J. T. (2009). Leadership: Current theories, research, and future directions. *Annual Reviews of Psychology*, 60, 421–449. <https://doi.org/10.1146/annurev.psych.60.110707.163621>
- Avey J. B., Reichard R. J., Luthans F., Mhatre K. H. (2011). Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance. *Human Resource Development Quarterly*, 22(2), 127–152. <https://doi.org/10.1002/hrdq.20070>

- Bass, B. M. (1985). *Leadership and performance beyond expectations*. The Free Press.
- Bass, B. M. (1997). Does the transactional–transformational leadership paradigm transcend organizational and national boundaries? *American Psychologist*, 52(2), 130-139.
<https://doi.org/10.1037/0003-066X.52.2.130>
- Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. Sage Publications.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529. <https://doi.org/10.1037/0033-2909.117.3.497>
- Bennett, R. J., & Robinson, S. L. (2000). Development of a measure of workplace deviance. *Journal of Applied Psychology*, 85(3), 349–360. <https://doi.org/10.1037/0021-9010.85.3.349>
- Biro, S., Alink, L. R., Huffmeijer, R., Bakermans-Kranenburg, M. J., & van IJzendoorn, M. H. (2015). Attachment and maternal sensitivity are related to infants' monitoring of animated social interactions. *Brain and Behavior*, 5(12), <https://doi.org/10.1002/brb3.410>
- Blankson, C., Paswan, A., & Boakye, K. G. (2012). College students' consumption of credit cards. *International Journal of Bank Marketing*, 30(7), 567–585.
<http://doi.org/10.1108/02652321211274327>
- Bowlby, J. (1969). *Attachment and loss* (Vol. 1.). Basic Books.
- Bowlby, J. (1980). *Loss: Sadness & depression* (Vol. 3.). Basic Books.
- Bowlby, J. (1982). Attachment and loss: Retrospect and prospect. *American Journal of Orthopsychiatry*, 52(4), 664–678. <https://doi.org/10.1111/j.1939-0025.1982.tb01456.x>

- Cammann, C., Fichman, M., Jenkins, D. & Klech, J. (1979). *The Michigan organizational assessment questionnaire*. Michigan State University.
- Chen, H. C., Chu, C. I., Wang, Y. H., & Lin, L. C. (2008). Turnover factors revisited: a longitudinal study of Taiwan-based staff nurses. *International Journal of Nursing Studies*, 45(2), 277-285. <https://doi.org/10.1016/j.ijnurstu.2006.08.010>
- Chen, P. Y., & Spector, P. E. (1991). Negative affectivity as the underlying cause of correlations between stressors and strains. *Journal of Applied Psychology*, 76(3), 398–407. <https://doi.org/10.1037/0021-9010.76.3.398>
- Coombe, D. D. (2010). Secure base leadership: A positive theory of leadership incorporating safety, exploration and positive action [Doctoral dissertation, Case Western Reserve University]. OhioLINK Electronic Theses and Dissertations Center. http://rave.ohiolink.edu/etdc/view?acc_num=case1270505789
- Costa, P. T., & McCrae, R. R. (1992). Normal personality assessment in clinical practice: The NEO Personality Inventory. *Psychological assessment*, 4(1), 5–13. <https://doi.org/10.1037/1040-3590.4.1.5>
- Coyle, P. T., & Foti, R. (2015). If you're not with me you're...? Examining prototypes and cooperation in leader–follower relationships. *Journal of Leadership & Organizational Studies*, 22(2), 161-174. <https://doi.org/10.1177/1548051814550830>
- Crowell, J. A., Treboux, D., Gao, Y., Fyffe, C., Pan, H., & Waters, E. (2002). Assessing secure base behavior in adulthood: Development of a measure, links to adult attachment representations and relations to couples' communication and reports of relationships. *Developmental Psychology*, 38(5), 679–693. <https://doi.org/10.1037/0012-1649.38.5.679>

- Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(2), 350–383. <https://doi.org/10.2307/2666999>
- Edmondson, A., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annual Review of Organizational Psychology and Organizational Behavior*, 1, 23-43. <https://doi.org/10.1146/annurev-orgpsych-031413-091305>
- Erozkan, A. (2016). The link between types of attachment and childhood trauma. *Universal Journal of Educational Research*, 4(5), 1071-1079. <https://doi.org/10.13189/ujer.2016.040517>
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500–507. <https://doi.org/10.1037/0021-9010.71.3.500>
- Eisenberger, R., Malone, G. P., & Presson, W. D. (2016). Optimizing perceived organizational support to enhance employee engagement. *Society for Human Resource Management and Society for Industrial and Organizational Psychology*, 2, 3-22.
- Fearon, R. M. P., & Roisman, I. G., (2017). Attachment theory: progress and future directions. *Current Opinion in Psychology*, 15, 131-136. <https://doi.org/10.1016/j.copsyc.2017.03.002>
- Feeney, B. C. (2004). A secure base: Responsive support of goal strivings and exploration in adult intimate relationships. *Journal of personality and social psychology*, 87(5), 631–648. <https://doi.org/10.1037/0022-3514.87.5.631>

- Fila, J. M., Paik, S. L., Griffeth, R., & Allen, D. (2014). Disaggregating job satisfaction: Effects of perceived demands, control, and support. *Journal of Business and Psychology*, 29(4), 639–649. <https://doi.org/10.1007/s10869-014-9358-5>
- Fraley, R. C., Heffernan, M. E., Vicary, A. M., & Brumbaugh, C. C. (2011). The experiences in close relationships—Relationship Structures Questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment*, 23(3), 615–625. <https://doi.org/10.1037/a0022898>
- Frazier, M. L., Fainshmidt, S., Klinger, R. L., Pezeshkan, A., & Vacheva, V. (2017). Psychological safety: A meta-analytic review and extension. *Personnel Psychology*, 70(1), 113–165. <https://doi.org/10.1111/peps.12183>
- Galvin, B. M., Balkundi, P. & Waldman, D. A. (2010). Spreading the word: The role of surrogates in charismatic leadership processes. *Academy of Management Review*, 35(3), 477-494.
- Godard, J. (2001). High performance and the transformation of work? The implications of alternative work practices for the experience and outcomes of work. *Industrial and Labor Relations Review*, 54(4), 776–805. <https://doi.org/10.2307/2696112>
- 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. *The Leadership Quarterly*, 6(2), 219–247. [https://doi.org/10.1016/1048-9843\(95\)90036-5](https://doi.org/10.1016/1048-9843(95)90036-5)
- Griffin, M., Patterson, M., & West, A. M. (2001). Job satisfaction and teamwork: The role of supervisor support. *Journal of Organizational Behavior*, 22(5), 537–550. <https://doi.org/10.1002/job.101>

- Gyensare, M. A., Anku-Tsedde, O., Sanda, M. A., & Okpoti, C. A. (2016). Transformational leadership and employee turnover intention: The mediating role of affective commitment. *World Journal of Entrepreneurship, Management and Sustainable Development*, 12(1), 243–266 <https://doi.org/10.1108/WJEMSD-02-2016-0008>
- Halpin, A. W. (1957). *Manual for the leader behavior description questionnaire*. Bureau of Business Research, College of Commerce and Administration, The Ohio State University.
- Hazan, C., & Shaver, P. R. (1990). Love and work: An attachment-theoretical perspective. *Journal of Personality and Social Psychology*, 59(2), 270–280. <https://doi.org/10.1037/0022-3514.59.2.270>
- Hollander, E. P. (1964). *Leaders, groups, and influence*. Oxford University Press.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6(1), 1-55. <https://doi.org/10.1080/10705519909540118>
- Huang, J.L., Bowling, N.A., Liu, M., & Li, Y. (2015b). Detecting insufficient effort responding with an infrequency scale: Evaluating validity and participant reactions. *Journal of Business and Psychology*, 30, 299-311. <https://doi.org/10.1007/s10869-014-9357-6>
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755–768. <https://doi.org/10.1037/0021-9010.89.5.755>
- Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), 692–724. <https://doi.org/10.2307/256287>

- Kennedy, R., Clifford, S., Burleigh, T., Waggoner, P. D., Jewell, R., & Winter, N. J. (2020). The shape of and solutions to the MTurk quality crisis. *Political Science Research and Methods*, 8(4), 614-629.
- Khan, Z. A., Nawaz, A., & Khan, I. (2016). Leadership theories and styles: A literature review. *Journal of Resources Development and Management*, 16(1), 1-8.
- Kinicki, A. J., McKee-Ryan, F. M., Schriesheim, C. A., & Carson, K. P. (2002). Assessing the construct validity of the Job Descriptive Index: A review and meta-analysis. *Journal of Applied Psychology*, 87(1), 14–32. <https://doi.org/10.1037/0021-9010.87.1.14>
- Komives, S., Longerbeam, S., Owen, J., Mainella, F., & Osteen, L. (2006). A leadership identity development model: Applications from a Grounded theory. *Journal of College Student Development*, 47(4), 401–418. <https://doi.org/10.1353/csd.2006.0048>
- Kundu, S.C. & Lata, K. (2017). Effects of supportive work environment on employee retention: Mediating role of organizational engagement. *International Journal of Organizational Analysis*, 25(4), 703–722. <https://doi.org/10.1108/IJOA-12-2016-1100>
- Lacerda, T.M. (2015). *Understanding leadership effectiveness in organizational settings: An integrative approach* [Thesis, University of Lisbon]. ResearchGate. <https://doi.org/10.13140/RG.2.1.2870.1289>.
- Lambert, E. G., & Paoline, E. A. III. (2008). The influence of individual, job, and organizational characteristics on correctional staff job stress, job satisfaction, and organizational commitment. *Criminal Justice Review*, 33(4), 541–564. <https://doi.org/10.1177/0734016808320694>

- Lee, K., & Allen, N. (2002). Organizational citizenship behavior and workplace deviance: The role of affect and cognitions. *Journal of Applied Psychology*, 87, 131-142.
<https://doi.org/10.1037/0021-9010.87.1.131>
- Luthans, F., & Avolio, B. J. (2003) Authentic leadership: A positive developmental approach. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship* (pp. 241–261). Barrett-Koehler.
- Main, M., & Solomon, J. (1990). Procedures for identifying infants as disorganized/disoriented during the Ainsworth Strange Situation. In M. T. Greenberg, D. Cicchetti, & E. M. Cummings (Eds.), *The John D. and Catherine T. MacArthur Foundation series on mental health and development. Attachment in the preschool years: Theory, research, and intervention* (pp. 121–160). University of Chicago Press.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396.
<https://doi.org/10.1037/h0054346>
- Mayseless, O., & Popper, M. (2007). Reliance on leaders and social institutions: An attachment perspective. *Attachment & Human Development*, 9(1), 73–93.
<https://doi.org/10.1080/14616730601151466>
- Meyer, J. P., Allen, N. J., & Gellatly, I. R. (1990). Affective and continuance commitment to the organization: Evaluation of measures and analysis of concurrent and time-lagged relations. *Journal of Applied Psychology*, 75(6), 710 –720. <https://doi.org/10.1037/0021-9010.75.6.710>
- Mikulincer, M. (2019). An attachment perspective on managing death concerns. In C. Routledge, & M. Vess (Eds.), *Handbook of terror management theory* (pp. 243-257). Academic Press. <https://doi.org/10.1016/B978-0-12-811844-3.00010-X>.

- Molero, F., Mikulincer, M., Shaver, P. R., Laguía, A., & Moriano, J. A. (2019). The development and validation of the Leader as Security Provider Scale. *Journal of Work and Organizational Psychology*, 35, 183–193. <https://doi.org/10.5093/jwop2019a20>
- Mohamed, Z., Newton, J. M., & McKenna, L. (2014). Belongingness in the workplace: A study of Malaysian nurses' experiences. *International Nursing Review*, 61(1), 124–130. <https://doi.org/10.1111/inr.12078>
- Mountain, G., Cahill, J., & Thorpe, H. (2017). Sensitivity and attachment interventions in early childhood: A systematic review and meta-analysis. *Infant Behavior and Development*, 46, 14–32, <https://doi.org/10.1016/j.infbeh.2016.10.006>
- Piccolo, R. F., & Colquitt, J. A. (2006). Transformational leadership and job behaviors: The mediating role of core job characteristics. *Academy of Management Journal*, 49(2), 327–340. <https://doi.org/10.5465/AMJ.2006.20786079>
- Popper, M., & Mayseless, O. (2003). Back to basics: Applying a parenting perspective to transformational leadership. *The Leadership Quarterly*, 14(1), 41–65. [https://doi.org/10.1016/S1048-9843\(02\)00183-2](https://doi.org/10.1016/S1048-9843(02)00183-2)
- Rahimnia, F., & Sharifirad, S. M. (2014). Authentic leadership and employee well-being: The mediating role of attachment insecurity. *Journal of Business Ethics*, 132(2), 363–377. <https://doi.org/10.1007/s10551-014-2318-1>
- Randeree, K., & Chaudhry G. A. (2012). Leadership – style, satisfaction and commitment: An exploration in the United Arab Emirates' construction sector. *Engineering, Construction and Architectural Management*, 19(1), 61–85. <https://doi.org/10.1108/09699981211192571>

- Rosseel Y (2012). Lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, 48(2), 1–36.
- Rose, S. A., Markman, B., & Sawilowsky, S. (2017). Limitations in the systematic analysis of structural equation model fit indices. *Journal of Modern Applied Statistical Methods*, 16(1), 69-85. [https:// doi.org/10.22237/jmasm/1493597040](https://doi.org/10.22237/jmasm/1493597040) 5
- Rowold, J., Borgmann, L., & Bormann, K. (2014). Which leadership constructs are important for predicting job satisfaction, affective commitment, and perceived job performance in profit versus nonprofit organizations? *Nonprofit Management and Leadership*, 25, 147–164. <https://doi.org/10.1002/nml.21116>
- Sarason, B. R., Pierce, G. R., & Sarason, I. G. (1990). Social support: The sense of acceptance and the role of relationships. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), *Wiley series on personality processes. Social support: An interactional view* (pp. 97–128). John Wiley & Sons.
- Scales, P. C., Benson, P. L., Oesterle, S., Hill, K. G., Hawkins, J. D., & Pashak, T. J. (2015). The dimensions of successful young adult development: A conceptual and measurement framework. *Applied Developmental Science*, 20(3), 150–174. <https://doi.org/10.1080/10888691.2015.1082429>
- Scarpello, V., & Vandenberg, R. J. (1987). The satisfaction with my supervisor scale: Its utility for research and practical applications. *Journal of Management*, 13(3), 447-466. <https://doi.org/10.1177/014920638701300302>
- Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66(4), 701-716. <https://doi.org/10.1177/0013164405282471>

- Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, 3(1), 71–92. <https://doi.org/10.1023/A:1015630930326>
- Schoenmaker, C., Huffmeijer, R., van IJzendoorn, H. M., Bakermans-Kranenburg J. M., van den Dries, L., Linting, M., van der Voort, A., & Juffer, F. (2015). Attachment and physiological reactivity to infant crying in young adulthood: Dissociation between experiential and physiological arousal in insecure adoptees. *Physiology & Behavior*, 139, 49–556. <https://doi.org/10.1016/j.physbeh.2014.11.055>
- Schofield, G., & Beek, M. (2005). Providing a secure base: Parenting children in long-term foster family care. *Attachment & Human Development*, 7(1), 3-26. <https://doi.org/10.1080/14616730500049019>
- Simpson, J. A., & Rholes, W. S. (2017). Adult attachment, stress, and romantic relationships. *Current Opinion in Psychology*, 13, 19–24. <https://doi.org/10.1016/j.copsyc.2016.04.006>
- Spector, B. A. (2016). Carlyle, Freud, and the Great Man theory more fully considered. *Leadership*, 12(2), 250–260. <https://doi.org/10.1177/1742715015571392>
- Sprouse, J. (2011). A validation of Amazon Mechanical Turk for the collection of acceptability judgments in linguistic theory. *Behavior Research Methods*, 43(1), 155-167.
- Stogdill, R. M. (1948). Personal factors associated with leadership: A survey of the literature. *The Journal of Psychology*, 25(1), 35–71. <https://doi.org/10.1080/00223980.1948.9917362>

- Sun, Y., Gergen, E., Avila, M., & Green, M. (2016). Leadership and job satisfaction: Implications for leaders of accountants. *American Journal of Industrial and Business Management*, 6, 268–275. <https://doi.org/10.4236/ajibm.2016.63024>
- Tepret, N. Y., & Tuna, K. (2015). Effect of management factor on employee job satisfaction: An application in telecommunication sector. *Procedia - Social and Behavioral Sciences*, 195(0224), 673-679. <https://doi.org/10.1016/j.sbspro.2015.06.264>
- Tsai, W. C., Chen, H. W., & Cheng, J. W. (2009). Employee positive moods as a mediator linking transformational leadership and employee work outcomes. *The International Journal of Human Resource Management*, 20(1), 206-219. <https://doi.org/10.1080/09585190802528714>
- van Knippenberg, B., & van Knippenberg, D. (2005). Leader self-sacrifice and leadership effectiveness: The moderating role of leader prototypicality. *Journal of Applied Psychology*, 90, 25–37.
- Washington, R. R., Sutton, C. D. & Feild, H. S. (2006). Individual differences in servant leadership: The roles of values and personality. *Leadership and Organization Development Journal*, 27(8), 700-716.
- 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.
- Wilkinson, A.D., & Wagner, R.M. (1993). Supervisory leadership styles and state vocational rehabilitation counselor job satisfaction and productivity. *Rehabilitation Counseling Bulletin*, 37(1), 15 -24.

- Wu, C. H., & Parker, S. K. (2017). The role of leader support in facilitating proactive work behavior: A perspective from Attachment theory. *Journal of Management*, 43(4), 1025–1049. <https://doi.org/10.1177/0149206314544745>
- Yukl, G. (2006). *Leadership in organizations* (6th ed.). Pearson Prentice-Hall.

Appendix A: Informed Consent

The purpose of this study is to learn about leadership and how it effects employees. Your task is to carefully read the instructions and respond to the survey items.

To participate, you must be at least 18 years of age and be a U.S. citizen*. Your participation should take about 30 minutes, and you must complete it in one sitting.

Although it may not directly benefit you, this study may benefit society by improving our knowledge of leadership. There are no risks for participating in this study beyond those associated with normal computer use.

If you complete the study satisfactorily, you will receive \$0.75 to compensate you for your participation. You will be paid via Amazon's payment system. Please note that this study contains several checks to make sure that participants are finishing the tasks honestly and completely. In accordance with the policies set by Amazon Mechanical Turk, we may reject your work if you do not complete the Human Intelligence Task (HIT) correctly or if you do not follow the relevant instructions.

Please understand that your participation is voluntary, and you have the right to withdraw your consent or discontinue participation at any time. To stop, click on the "Return HIT" button, or close your browser window. If you decide to withdraw, data collected up until the point of withdrawal may still be included in analysis.

Your responses will be confidential and can be identified only by your Amazon Worker ID number, which will be kept confidential and will not appear in any reports or publications of this study. All your responses, including responses to demographic

information (e.g., age, employment), will only be analyzed and reported at a group level. Please be aware that your MTurk Worker ID can potentially be linked to information about you on your Amazon public profile page, depending on the settings you have for your Amazon profile. We will not access any personally identifying information about you that you may have put on your Amazon public profile page.

If you have questions about this research study or your participation, please contact Bincy Davis at davis.1189@wright.edu or Dr. Debra Steele-Johnson at debra.steele-johnson@wright.edu. If you have any questions about your rights as a participant in this research, feel you have been harmed, or wish to discuss other study-related concerns with someone who is not part of the research team, you can contact Wright State University's Institutional Research Board director, Whitney McAllister at whitney.mcallister@wright.edu.

Consent

Participation is voluntary. Thank you very much for your participation.

By clicking the “I consent” button below, you indicate that you are 18 years of age or older, that you have read and understood the description of the study, and that you agree to participate.

By clicking the “I do NOT consent” button below, you will be exited from this survey.

Please print or save a copy of this page for your records.

Note: * For Sample 2, I will replace ‘U.S. citizen’ with ‘Indian citizen’.

Appendix B: Debriefing Form

Thank you for participating in this study!

The purpose of this study is to identify leader behaviors that will help employees feel safe, supported, and encouraged at work. Evidence suggests that leader behaviors have a strong influence on employee outcomes. However, prior research has not investigated which specific leader behaviors affects employee' sense of safety and through which mechanisms. The goal of this study is to further leadership research and help leaders make their employees feel safe, empowered, and successful.

The data you provided today is important to us, and we appreciate your help. Please let the researcher know if you have any questions. Thank you for your participation in this study!

Contact for further information:

Bincy Davis | davis.1189@wright.edu

Dr. Debra Steele-Johnson | debra.steele-johnson@wright.edu

APPENDIX C: Demographics Items

1. In which year were you born?

2. In which country were you born?

3. What is your nationality?

4. How long have you lived in the U.S.? *

Less than 5 years

More than 5 years but less than 10 years

More than 10 years but less than 15 years

More than 15 years but less than 20 years

More than 20 years

5. In which country do you currently work?

6. What is your ethnicity? *

1 = White/Caucasian

2 = Black/African American

3 = Asian/Pacific

4 = Hispanic

5 = Native American

6 = Other

7. What is your gender?

1 = male

2 = female

3 = other

8. On average, how many hours per week do you work?

0 -10 Hours

11 – 20 Hours

21 – 30 Hours

31 – 40 Hours

More than 40 Hours

9. Approximately how long have you worked for your current organization?

Less than 6 months

More than 6 months but less than 1 year

More than 1 year but less than 2 years

More than 2 years but less than 5 years

More than 5 years

10. Approximately how long have you been in your current position?

Less than 6 months

More than 6 months but less than 1 year

More than 1 year but less than 2 years

More than 2 years but less than 5 years

More than 5 years

11. Approximately how long have you worked with your current supervisor?

Less than 6 months

More than 6 months but less than 1 year

More than 1 year but less than 2 years

More than 2 years but less than 5 years

More than 5 years

Note: * This question is more relevant to U.S.; hence I will exclude it from Sample 2.

APPENDIX D: Belongingness

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1. I am well-accepted by my supervisor.
2. When at work, my supervisor really makes me feel like I belong.
3. My supervisor makes me feel like I just don't fit in at work. (R)
4. My supervisor makes me feel quite isolated from others at work. (R)

R indicates reverse scored.

APPENDIX E: Acceptance

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Consistently

1. My manager values me as a human being, not just as an employee performing a role.
2. My manager accepts me for who I am, rather than always trying to correct me.
3. I feel constantly judged and evaluated by my manager. (R)
4. My manager understands and appreciates me as a person.
5. My manager treats all people with high regard.
6. My manager accepts people's limitations and weaknesses in a supportive way.

R indicates reverse scored.

Appendix F: Sensitivity

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

My Supervisor

1. Is well aware of my needs and concerns.
2. Knows when I need help.
3. Always provides constructive criticism.
4. Pays full attention to me when I am talking.
5. Always knows what task I am working on.
6. Is always aware of any problems I may have at work.

Appendix G: Cooperation

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

My Supervisor

1. Creates an environment for open and honest discussions.
2. Does not interfere in my tasks.
3. Helps me when needed.

Appendix H: Availability

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

My Supervisor

1. Makes me a priority.
2. Makes sure I know how to reach him / her when needed.
3. Always keeps his / her meetings with me.

Appendix I: Willingness

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

My Supervisor

1. Ensures I have all the resources I need to do my job.
2. Is always ready to help.
3. Has my back.
4. Helps me when I have a misstep.
5. Can be counted on for any help I need.

Appendix J: Accessibility

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Consistently

1. My manager is available and accessible to me.
2. I have a sense that I could contact my manager anywhere, anytime.
3. I know that my manager supports me, even when we have less contact.
4. I think of my manager as a supportive figure, even when I do not see him/her.

Appendix K: See Potential in the Other

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Consistently

1. My manager sees my potential.
2. My manager shows confidence that I can grow and develop.
3. My manager suggests ways that I might develop within the organization.
4. My manager has a vision for how I might develop and grow in my career.
5. My manager challenges and stretches me to fulfill my potential.

Appendix L: Opportunities for Risk

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Consistently

1. My manager provides me with significant opportunities to grow and develop.
2. My manager is prepared to take risks in giving me opportunities.
3. My manager micromanages me. (R)
4. My manager gives me freedom to get on with my job.
5. My manager pushes me out of my comfort zone.
6. My manager gives me tough feedback when it is necessary.

R indicates reverse scored.

Appendix M: Listening and Inquiry

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Consistently

1. My manager is a good listener.
2. My manager asks questions before coming to conclusions.
3. My manager asks for my opinion before giving me instructions.
4. My manager gives solutions before asking for my input. (R)

R indicates reverse scored.

Appendix N: Calm

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Consistently

1. My manager is a calm person.
2. My manager is dependable and predictable in terms of his/her moods and emotions.
3. I feel that I can approach my manager for support, even in stressful situations.
4. My manager remains supportive when under pressure.

Appendix O: Intrinsic Motivation

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Consistently

1. My manager uses financial reward as a key motivating tool. (R)
2. My manager stresses the importance of my learning, growth and development.
3. Conversations with my manager focus more on business goals and objectives than on my learning and development. (R)
4. My manager knows what is really important to me as a person, and uses that insight to motivate me.

R indicates reverse scored.

Appendix P: Positive mindset

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Consistently

1. My manager finds the positive in situations.
2. My manager re-frames difficult situations into opportunities.
3. My manager focuses on problems and difficulties more than on opportunities and solutions. (R)
4. My manager keeps us focused on the goal when we are under pressure.

R indicates reverse scored.

Appendix Q: Secure Base

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

0	1	2	3	4
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

1. When something bad happens or I feel upset at work I turn to my leader for support.
2. I can count on my leader to support me when I propose new ideas or procedures.
3. If my leader left, I would miss him/her a lot.
4. My leader is the person I count on most for useful advice at work.
5. I think my leader would support my growth and advancement on the job.
6. If my leader moved to another organization, or another position in this organization, I would try to go with him/her.
7. I feel emotionally connected to my leader, whether our relationship is positive, negative, or a combination of the two.
8. I don't let too much time pass without being in close contact with my leader.
9. When I need help at work, I seek out my leader.
10. I trust that my leader will be pleased with and proud of my work.

11. I would want to stay in contact with my leader even if he or she no longer worked for my organization.
12. When I am under stress at work my leader helps me to remain calm.
13. I can count on my leader to be there for me, no matter what.
14. If I need reassurance or encouragement, I can count on my leader to supply it.
15. I can count my leader will support my efforts on the job.

Appendix R: Psychological Safety

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-7 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Disagree	Neutral	Agree	Somewhat Agree	Strongly Agree

1. If I make a mistake my manager often holds it against me. (R)
2. I am not able to bring up problems and tough issues with my manager. (R)
3. My manager sometimes rejects me for being different. (R)
4. My manager makes it safe for me to take a risk.
5. It is difficult to ask my manager for help. (R)
6. My manager would not deliberately act in a way that undermines my efforts.
7. My manager values and utilizes my unique skills and talents.

R indicates reverse scored.

Appendix S: Employee Engagement

INSTRUCTIONS: The following 9 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job by selecting the number (from 0 to 6) that best describes how frequently you feel that way.

Never = Never; Almost Never = A few times a year or less; Rarely = Once a month or less;

Sometimes = A few times a month; Often = Once a week; Very Often = A few times a week;

Always = Every day.

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

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)

Note: VI = Vigor scale; DE = Dedication scale; AB = Absorption scale.

Appendix T: Job Satisfaction

INSTRUCTIONS: The following 3 statements are about how you feel about your job. Using the 1-7 scale below, please select a response option that most closely matches your attitude towards your job. Please answer according to what really reflects your feeling about your job rather than what you think your feeling about your job should be. Please treat each item separately from every other item.

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

1. All in all I am satisfied with my job.
2. In general, I do not like my job. (R)
3. In general, I like working here.

R indicates reverse scored.

Appendix U: Job Performance

INSTRUCTIONS: The following 7 statements are about how you feel about your job performance. Using the 1-7 scale below, please select a response option that most closely matches your job performance. Please answer according to what really reflects your current job performance rather than what you think your job performance should be. Please treat each item separately from every other item.

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

1. I adequately complete assigned duties.
2. I fulfill the responsibilities specified in my job description.
3. I perform tasks that are expected of myself.
4. I meet formal performance requirements of the job.
5. I engage in activities that will directly affect my performance evaluation.
6. I neglect aspects of the job I am obligated to perform. (R)
7. I fail to perform essential duties. (R)

R indicates reverse scored.

Appendix V: Perceived Leader Effectiveness

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-7 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5	6	7
Very Much Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Very Much Agree

1. My boss is very effective as a boss.
2. My boss leads me in a way which motivates me.
3. I put my trust in my boss.
4. My boss is an excellent boss.

Appendix W: Insufficient Effort Responding

INSTRUCTIONS: Below is a collection of statements that I will insert throughout my survey to capture user IER.

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

1. I eat cement occasionally.
2. I can teleport across time and space.
3. I can run 2 miles in 2 min.
4. I am interested in pursuing a degree in parabanjology.
5. I have never used a computer.
6. I work fourteen months in a year.
7. I will be punished for meeting the requirements of my job.
8. I work twenty-eight hours in a typical work day.

Appendix X: Attachment Style

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-7 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

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

1. It helps to turn to my boss in times of need. (R) (AV)
2. I usually discuss my problems and concerns with my boss. (R) (AV)
3. I talk things over with my boss. (R) (AV)
4. I find it easy to depend on my boss. (R) (AV)
5. I do not feel comfortable opening up to my boss. (AV)
6. I prefer not to show my boss how I feel deep down. (AV)
7. I often worry that my boss does not really care for me. (AX)
8. I am afraid that my boss may abandon me. (AX)
9. I worry that my boss will not care about me as much as I care about him or her. (AX)

Note: AV = Avoidance scale; AX = Anxiety scale. R indicates reverse scored.

Appendix Y: Personality Traits

INSTRUCTIONS: Please use the scale below to describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence.

1	2	3	4	5
Very Inaccurate	Rarely	Sometimes	Often	Very Accurate

Extraversion

1. I am the life of the party.
2. I do not talk a lot. (R)
3. I feel comfortable around people.
4. I keep in the background. (R)
5. I start conversations.
6. I have little to say. (R)
7. I talk to a lot of different people at parties.
8. I don't like to draw attention to myself. (R)
9. I don't mind being the center of attention.
10. I am quiet around strangers. (R)

Agreeableness

1. I feel little concern for others. (R)
2. I am interested in people.

3. I insult people. (R)
4. I sympathize with others' feelings.
5. I am not interested in other peoples' problems. (R)
6. I have a soft heart.
7. I am not really interested in others. (R)
8. I take time out for others.
9. I feel others' emotions.
10. I make people feel at ease.

Conscientiousness

1. I am always prepared.
2. I leave my belongings around. (R)
3. I pay attention to details.
4. I make a mess of things. (R)
5. I get chores done right away.
6. I often forget to put things back in their proper place. (R)
7. I like order.
8. I shirk my duties. (R)
9. I follow a schedule.
10. I am exacting in my work.

Emotional Stability

1. I get stressed out easily. (R)
2. I am relaxed most of the time.
3. I worry about things. (R)

4. I seldom feel blue.
5. I am easily disturbed. (R)
6. I get upset easily. (R)
7. I change my mood a lot. (R)
8. I have frequent mood swings. (R)
9. I get irritated easily. (R)
10. I often feel blue. (R)

Openness

1. I have a rich vocabulary.
2. I have difficulty understanding abstract ideas. (R)
3. I have a vivid imagination.
4. I am not interested in abstract ideas. (R)
5. I have excellent ideas.
6. I do not have a good imagination. (R)
7. I am quick to understand things.
8. I use difficult words.
9. I spend time reflecting on things.
10. I am full of ideas.

R indicates reverse scored.

Appendix Z: Consideration

INSTRUCTIONS: Please read each item carefully. Think about how frequently your immediate supervisor engages in the behavior described in each item below. Select a response you believe to be most accurate of your supervisor.

1	2	3	4	5
Rarely	Sometimes	Frequently	Often	Very Often

1. He/she does personal favors for group members.
2. He/she does little things to make it pleasant to be a member of the group.
3. He/she is easy to understand.
4. He/she finds time to listen to group members.
5. He/she keeps to his/herself. (R)
6. He/she looks out for the personal welfare of individual group members.
7. He/she refuses to explain his/her actions. (R)
8. He/she acts without consulting the group. (R)
9. He/she backs up the members in their actions.
10. He/she treats all group members as his/her equals.
11. He/she is willing to make changes.
12. He/she is friendly and approachable.
13. He/she makes group members feel at ease when talking with them.
14. He/she puts suggestions made by the group into operation.
15. He/she gets group approval on important matters before going ahead

R indicates reverse scored.

Appendix AA: Initiating Structure

INSTRUCTIONS: Please read each item carefully. Think about how frequently your immediate supervisor engages in the behavior described in each item below. Select a response you believe to be most accurate of your supervisor.

1	2	3	4	5
Rarely	Sometimes	Frequently	Often	Very Often

1. He/she makes his/her attitudes clear to group members.
2. He/she tries out his/her new ideas with group members.
3. He/she rules with an iron hand.
4. He/she criticizes poor work.
5. He/she speaks in a manner not to be questioned.
6. He/she assigns group members to particular tasks.
7. He/she schedules the work to be done.
8. He/she maintains definite standards of performance.
9. He/she emphasizes the meeting of deadlines.
10. He/she encourages the use of uniform procedures.
11. He/she makes sure that his/her part in the team is understood by all team members.
12. He/she asks that group members follow standard rules and regulations.
13. He/she lets group members know what is expected of them.
14. He/she sees to it that group members are working up to capacity.

15. He/she sees to it that the work of group members is coordinated.

Appendix AB: Organizational Citizenship Behaviors

INSTRUCTIONS: Below are statements describing people's behaviors at work. Please use the rating scale below to describe how accurately each statement describes you at work and only at work. Describe yourself as you generally are now, not as you wish to be in the future.

1	2	3	4	5	6	7
Never	Rarely	Occasionally	Sometimes	Frequently	Usually	Always

At work, how frequently do you engage in these behaviors?

OCB-I Items

1. Help others who have been absent.
2. Willingly give your time to help others who have work-related problems.
3. Adjust your work schedule to accommodate other employees' requests for time off.
4. Go out of the way to make newer employees feel welcome in the work group.
5. Show genuine concern and courtesy toward coworkers, even under the most trying business or personal situations.
6. Give up time to help others who have work or non-work problems.
7. Assist others with their duties.
8. Share personal property with others to help their work.

OCB-O Items

1. Attend functions that are not required but that help the organizational image.
2. Keep up with developments in the organization.

3. Defend the organization when other employees criticize it.
4. Show pride when representing the organization in public.
5. Offer ideas to improve the functioning of the organization.
6. Express loyalty toward the organization.
7. Take action to protect the organization from potential problems.
8. Demonstrate concern about the image of the organization.

Appendix AC: Counterproductive Work Behaviors

INSTRUCTIONS: Below are statements describing people's behaviors at work. Please use the rating scale below to describe how accurately each statement describes you at work and only at work in the last one year. Describe yourself as you generally are now, not as you wish to be in the future.

1	2	3	4	5	6	7
Never	Once a year	Twice a year	Several times a year	Monthly	Weekly	Daily

At work, how frequently do you engage in these behaviors?

CWB-I

1. Made fun of someone at work.
2. Said something hurtful to someone at work.
3. Made an ethnic, religious, or racial remark at work.
4. Cursed at someone at work.
5. Played a mean prank on someone at work.
6. Acted rudely toward someone at work.
7. Publicly embarrassed someone at work.

CWB-O

1. Taken property from work without permission.
2. Spent too much time fantasizing or daydreaming instead of working.

3. Falsified a receipt to get reimbursed for more money than you spent on business expenses.
4. Taken an additional or longer break than is acceptable at your workplace.
5. Come in late to work without permission.
6. Littered your work environment.
7. Neglected to follow your boss's instructions.
8. Intentionally worked slower than you could have worked.
9. Discussed confidential company information with an unauthorized person.
10. Used an illegal drug or consumed alcohol on the job.
11. Put little effort into your work.
12. Dragged out work in order to get overtime.

Appendix AD: Satisfaction with Leader

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-5 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5
Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied

1. The way my supervisor listens when I have something important to say.
2. The way my supervisor sets clear work goals.
3. The way my supervisor treats me when I make a mistake.
4. My supervisor's fairness is appraising my job performance.
5. The way my supervisor is consistent in his/her behavior toward subordinates.
6. The way my supervisor helps me to get the job done.
7. The way my supervisor gives me credit for my ideas.
8. The way my supervisor gives me clear instructions.
9. The way my supervisor informs me about work changes ahead of time.
10. The way my supervisor follows through to get problem solved.
11. The way my supervisor understands the problem I might run into doing my job.
12. The way my supervisor shows concern for my career progress.

13. My supervisor's backing me up with other management.
14. The frequency with which I get a pat on the back for doing a good job.
15. The technical competence of my supervisor.
16. The amount of time I get to learn a task before I'm moved to another task.
17. The time I have to do the job right.
18. The way my job responsibilities are clearly defined.

Appendix AE: Perceived Supervisor Support

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-7 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5	6	7
Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree

1. My supervisor values my contribution to its well-being.
2. My supervisor fails to appreciate any extra effort from me. (R)
3. My supervisor would ignore any complaint from me. (R)
4. My supervisor really cares about my well-being.
5. Even if I did the best job possible, my supervisor would fail to notice. (R)
6. My supervisor cares about my general satisfaction at work.
7. My supervisor shows very little concern for me. (R)
8. My supervisor takes pride in my accomplishments at work.

R indicates reverse score

Appendix AF: Affective Commitment

INSTRUCTIONS: Below is a collection of statements about your experience with your supervisor at your current job. Using the 1-7 scale below, please select a response option that most closely matches your experience with your manager. Please answer according to what really reflects your experience with them rather than what you think your experience with them should be. Please treat each item separately from every other item.

1	2	3	4	5	6	7
Strongly Disagree	Somewhat Disagree	Disagree	Neutral	Agree	Somewhat Agree	Strongly Agree

1. I would be very happy to spend the rest of my career with my supervisor.
2. I enjoy discussing my supervisor with people outside my organization.
3. I really feel as if this supervisor's problems are my own.
4. I think that I could easily become as attached to another supervisor as I am to this one.

(R)

5. I do not feel like 'part of the family' with my supervisor. (R)
6. I do not feel 'emotionally attached' to my supervisor. (R)
7. My supervisor has a great deal of personal meaning for me.
8. I do not feel a strong sense of belonging to my supervisor. (R)

R indicates reverse scored.

Appendix AG

Table 24. Factor loadings (Study 1 and Study 2)

Latent Variables	Estimate	Std. Err	z-value	P(> z)	Std. lv	Std. all	Study
laccept =~							Study 1
Belongingness	1.000				0.529	0.699	
Acceptance	0.864	0.065	13.241	0.000	0.457	0.775	
lcoop =~							
Cooperation	1.000				0.628	0.819	
Willingness	1.170	0.060	19.483	0.000	0.735	0.933	
lsense =~							
Sensitivity	1.000				0.504	0.695	
Listen	1.019	0.084	12.179	0.000	0.514	0.757	
Motivation	0.641	0.069	9.237	0.000	0.323	0.570	
laccess =~							
Availability	1.000				0.580	0.803	
Accessibility	1.290	0.071	18.044	0.000	0.752	0.886	
ladvocate =~							
Opportunity	1.000				0.317	0.559	
Potential	2.222	0.236	9.434	0.000	0.704	0.749	
Calm	2.036	0.210	9.709	0.000	0.646	0.787	
Positive	1.705	0.173	9.827	0.000	0.540	0.804	
laccept =~							Study 2
Belongingness	1.000				0.343	0.559	
Acceptance	1.422	0.252	5.651	0.000	0.488	0.787	
lcoop =~							
Cooperation	1.000				0.400	0.670	
Willingness	1.565	0.213	7.338	0.000	0.627	0.901	
lsense =~							
Sensitivity	1.000				0.464	0.781	
Listen	0.630	0.107	5.886	0.000	0.292	0.575	
Motivation	0.227	0.104	2.175	0.030	0.105	0.224	
laccess =~							
Availability	1.000				0.476	0.668	
Accessibility	1.519	0.210	7.246	0.000	0.723	0.889	
ladvocate =~							
Opportunity	1.000				0.397	0.676	
Potential	1.774	0.233	7.623	0.000	0.704	0.894	
Calm	1.462	0.226	6.473	0.000	0.580	0.742	
Positive	0.871	0.159	5.465	0.000	0.345	0.617	
Note. laccept = Acceptance; lcoop = Cooperation; lsense = Sensitivity; laccess = Accessibility; ladvocate = Advocacy.							

Appendix AH

Table 25. *Latent factor correlations (Study 1 and Study 2)*

Study 1					
Latent Factors	laccept	lcoop	lsense	laccess	ladvocate
laccept	1.000				
lcoop	0.912	1.000			
lsense	0.952	0.941	1.000		
laccess	0.986	0.937	0.971	1.000	
ladvocate	0.916	0.901	0.901	0.929	1.000
Study 2					
Latent Factors	laccept	lcoop	lsense	laccess	ladvocate
laccept	1.000				
lcoop	0.847	1.000			
lsense	0.998	0.994	1.000		
laccess	0.998	0.886	0.951	1.000	
ladvocate	0.997	0.864	0.999	0.951	1.000
<i>Note.</i> laccept = Acceptance; lcoop = Cooperation; lsense = Sensitivity; laccess = Accessibility; ladvocate = Advocacy.					

Appendix AI

Table 26. Mean, Standard Deviations, and Bivariate Correlations (Study 1 and Study 2)

Variables	<i>M</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	Study 1
1. <i>SB</i>	3.38	0.86				<i>N</i> = 204
2. <i>PSS</i>	5.40	1.36	.83			
3. <i>ACL</i>	4.08	1.44	.83	.72		
4. <i>SWL</i>	3.68	0.80	.81	.85	.69	
	<i>M</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	Study 2
1. <i>SB</i>	3.37	0.79				<i>N</i> = 29
2. <i>PSS</i>	5.37	1.11	.87			
3. <i>ACL</i>	4.27	1.26	.87	.82		
4. <i>SWL</i>	3.68	0.77	.87	.85	.83	
<i>Note.</i> <i>SB</i> = Secure Base; <i>PSS</i> = Perceived Supervisor Support; <i>ACL</i> = Affective Commitment with Leader; <i>SWL</i> = Satisfaction with Leader. All correlations are significant at $p < .01$.						