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SUPERVISOR'S ENGAGEMENT AND ORGANIZATION OUTCOMES: THE MEDIATING ROLE OF EMPLOYEE ENGAGEMENT ON TASK PERFORMANCE AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR

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by

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Abstract

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Researchers have found that several positive outcomes exist when employees are in a state of engagement. Studies also show that supervisor engagement positively affects employee engagement. This study was conducted to examine how the positive affect of employee engagement as a result of supervisor engagement affects the organization outcomes of task performance and organization citizenship behavior. The researcher proposed a model of these relationships for the study.

The quantitative, cross-sectional study involved a survey to collect the 313 responses used for data analysis. Structural Equation Modeling was used to test the hypotheses. All hypotheses were supported, indicating support for the model. Findings from the study indicate the importance of supervisors engaging with their direct reports in organizations. Several implications for theory, research, and practice exist based upon the findings of the study. Future research opportunities also exist.

Chapter 1

Introduction and General Information

Background to the Problem

Employee engagement is a concept receiving a lot of attention in research and organizations. Having an engaged workforce is seen as a competitive advantage (Whittington & Galpin, 2010), possibly because of the organizational benefits researchers have uncovered, such as organizations with higher employee engagement are more likely to have revenue growth that exceeds their industry average (Markos & Sridevi, 2010). Kahn (1990) defined *personal employee engagement* as "the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694). This type of engagement is considered an emerging area of study that needs further attention (Christian, Garza, & Slaughter, 2011). Researchers have found evidence that employee engagement has a positive relationship to several individual and organizational outcomes. Individual outcomes that result when employees are in a state of engagement include job satisfaction, organizational commitment, job performance, organizational citizenship behavior, and reduced turnover intention (Bakker & Bal, 2010; Hakanen, Bakker, & Schaufeli, 2006; Humphrey, 2012; Piccolo & Colquitt, 2006; Rich, Lepine, & Crawford, 2010; Saks, 2006; Wang, Law, Hackett, Wang, & Chen, 2005). In addition, engaged employees have other intangible outcomes that benefit them personally in the workplace, such as optimism, self-esteem, and active coping styles (Bakker, Schaufeli, Leiter, & Taris, 2008).

Organization-wide outcomes from engaged employees include customer satisfaction, productivity, reduced turnover, profitability, and workplace safety (Harter, Schmidt, & Hayes, 2002). An organization with engaged employees benefits from the positive correlation between employee engagement and business outcomes because of the increased energy engaged employees have, which increases performance (Bakker et al., 2008). Employees who are disengaged also have a major influence on themselves and the organization. Researchers have shown that the lack of engagement decreases fulfillment, reduces energy, and increases one's susceptibility for burnout (Bakker et al., 2008). Griffin (2015), Johnson (2015), and Leiter and Harvie (1997) found evidence to support that supervisor engagement and the engagement of direct reports are positively correlated.

Statement of the Problem

Although supervisor engagement is positively related to employee engagement, it is not clear how an increase in supervisor engagement relates to organization outcomes. Previous researchers have shown that the presence of an employee's engagement has a positive relationship to certain organization outcomes that are the result of activities employees perform, including task performance (Bakker et al., 2008; Christian et al., 2011; Rich et al., 2010) and organizational citizenship behavior (Christian et al., 2011; Rich et al., 2010; Salanova, Lorente, Chambel, & Martínez, 2011). Despite the existence of research that shows that supervisor engagement positively affects employee engagement (Griffin, 2015; Johnson, 2015; Leiter & Harvie, 1997), no researchers have clearly identified whether this influences organization outcomes. Without understanding

benefits to the organization, the positive results of employee engagement at the supervisor and nonsupervisory levels are unclear. Therefore, a need exists to better understand whether supervisor engagement relates to employee engagement in a way that positively affects certain organization outcomes.

Purpose of the Study

The purpose of this study was to examine how employees' perceptions of their supervisors' engagement affects the engagement of the employee and organization outcomes of task performance, organizational citizenship behavior toward the individual, and organizational citizenship behavior toward the organization.

Theoretical Underpinning

Kahn's (1990) foundational research of personal engagement, revealed that people engage themselves physically, cognitively, and emotionally when performing tasks. Kahn also noted that the three psychological conditions that work together for an employee to be engaged at work are (a) safety, (b) availability, and (c) meaningfulness in the work (Kahn, 1990). These three conditions work together to create fulfillment, or identification, with one's work; when an employee is fulfilled with his or her work, that employee will become engaged to maintain that fulfillment (Harter et al., 2002). Kahn (1990) further noted that employees desire work environments that allow them to be engaged, so if the environment does not allow that for the employee, negative organizational effects may occur, such as turnover (Harter et al., 2002).

Many outcomes of employee engagement exist, as supported by research. Two prevalent outcomes are (a) task performance, those outlined as part of the job description;

and (b) organizational citizenship behavior, also known as performance that exceeds the core job description (Whittington & Galpin, 2010). Task performance occurs as a function of the leader-member exchange that occurs between a supervisor and a direct report. Leader-member exchange (LMX) theory has evolved from its founding in the 1970s to incorporate elements of social exchange theory, role theory, reciprocity theory, and similarity-attraction theory (Shweta & Srirang, 2013; Yildiz, 2011). Key to LMX is the dyadic relationship that exists between the supervisor and subordinates. According to LMX theory, if a quality relationship exists between the two, the work experience for the individuals will be more positive, which leads to stronger performance outcomes for the organization (Shweta & Srirang, 2013). Chaurasia and Shukla (2013) found that the quality of the leader-member exchange relationship affects how engaged an employee is when performing work tasks.

Organizational citizenship behavior theory can be traced back to Katz (1964), who noted that for organizations to function properly, there need to be activities beyond formal job tasks performed by employees. Organ (1988) first defined *organizational citizenship behavior* as "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (p. 4). As the theory of organizational citizenship behavior has evolved, multiple definitions have emerged and researchers have found the theory to overlap numerous other theories (Humphrey, 2012; Lee & Allen, 2002). Central to all the ambiguity that exists within the theory of organizational citizenship behavior is the concept that the employee behaviors that are considered organizational citizenship

behaviors are not critical to an employee's specific task or job, yet are critical to the functioning of the overall organization (Lee & Allen, 2002). Examples of these behaviors include helping coworkers and attending functions considered optional (Lee & Allen, 2002). Organizational citizenship behavior can be conceptualized, based on the intended beneficiary of the citizenship behavior, and can produce different results when measured as such (Lee & Allen, 2002). Organizational citizenship behavior toward an individual reflects more "planned and deliberate behavior" (Lee & Allen, 2002, p. 138), while organizational citizenship behavior toward the organization reflects more "expressive emotional behavior" (Lee & Allen, 2002, p. 138).

Research suggests that supervisor engagement has a positive correlation to employee engagement (Griffin, 2015; Johnson, 2015; Leiter & Harvie, 1997), and that an employee's engagement has a positive correlation to the organization outcomes of task performance (Bakker et al., 2008) as well as organizational citizenship behavior for the individual and organization (Humphrey, 2012; Lee & Allen, 2002; Piccolo & Colquitt, 2006; Wang et al., 2005). However, further study needed to be conducted to better understand this relationship.

Research Question

How does the perception of a supervisor's engagement influence an employee's task performance, organizational citizenship behavior toward individuals, and organizational citizenship behavior toward the organization?

Figure 1 presents the conceptual model.

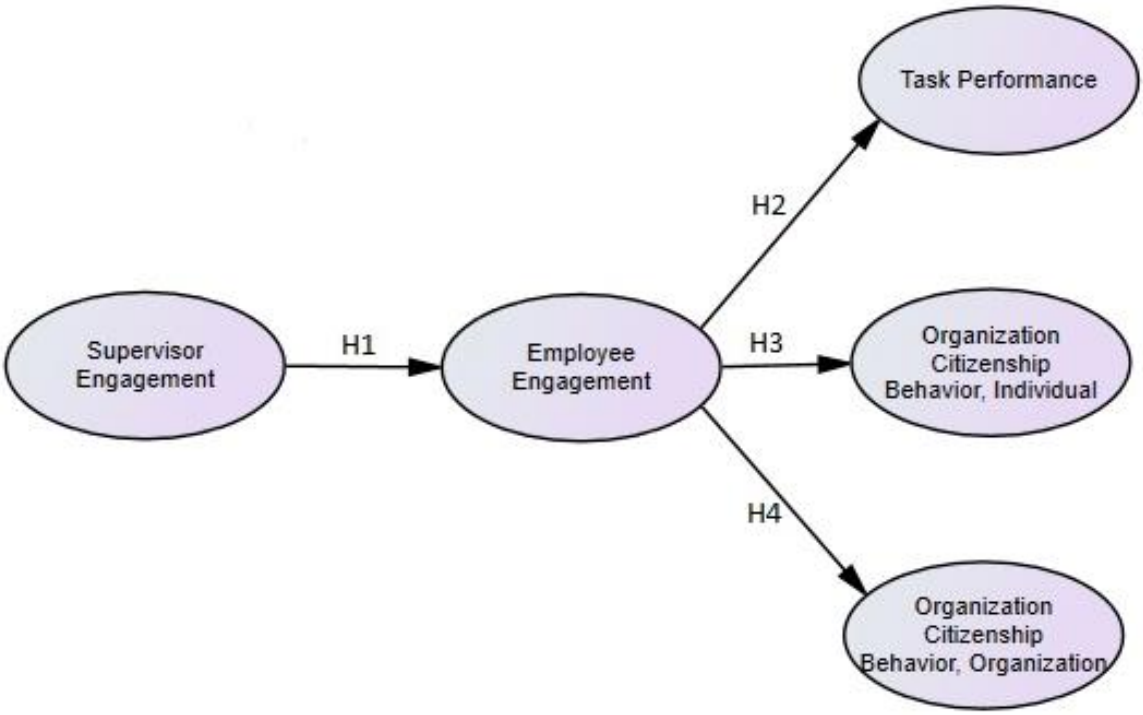

Figure 1. Proposed conceptual model.

Overview of the Design of the Study

This study was quantitative, cross-sectional, and correlational in design. The researcher built the survey in Qualtrics' survey system and the Qualtrics organization found participants who were members of the study population. The population of interest included English-speaking, nonsupervisory employees at least 18 years of age who lived and worked in the United States at least 30 hours a week for one organization. Those in the population of interest must have also worked for the same supervisor for the six months prior to being administered the survey. Utilizing Qualtrics to solicit study participants helped maintain each respondent's confidentiality. The sample size was 360.

This survey included scales to measure employee engagement (Rich et al., 2010), task performance (Janssen & Van Yperen, 2004), organizational citizenship behavior toward the individual (Lee & Allen, 2002), and organizational citizenship behavior toward the organization (Lee & Allen, 2002). The survey comprised all questions from the scales, with the employee engagement scale being utilized twice in this survey: (a) once to measure one's own engagement, and (b) then modified so questions on the scale reflected the perception of the engagement of one's supervisor. Perceptions were proposed for measurement of supervisor engagement because one person cannot measure the actual engagement of another since engagement is something only known by the person. However, measuring perceptions is appropriate, because if one person affects engagement of another person, it is based on the perception of the other's engagement. Responses pertained to experiences within the past six months of the date that respondents took the survey.

Demographic information collected as part of the survey was age, organizational tenure, sex, ethnicity, and income. Findings from previous studies indicated that age (James, McKechnie, & Swanberg, 2011; Pitt-Catsouphes & Matz-Costa, 2008; Terry, Grossmeier, Mangen, & Gingerich, 2013), organizational tenure (Bal, De Cooman, & Mol, 2013), sex (Terry et al., 2013), ethnicity (Jones & Harter, 2005), and income (J, 2014) were appropriate controls to use in this study. Structural equation modeling (SEM) was the data analysis used for the study.

Implications of the Study

This study was significant to advance the theory, research, and practice of employee engagement.

Implications for theory This study was significant to theory by providing enhancement to existing literature around these constructs. Understanding whether supervisor engagement positively affects employee engagement is a powerful step in advancing the theory of employee engagement by understanding the relationship one's engagement has on another's engagement. Researchers have found four types of employee engagement, known as (a) work engagement, (b) task engagement, (c) organization engagement, (d) and group or team engagement (Saks & Gruman, 2014). Research that shows a relationship between supervisor engagement and employee engagement may lead to identifying a new type of engagement, supervisory engagement, which focuses on the role of the supervisor and the relationship between the supervisor and employees.

Implications for research One research benefit the study provided was further testing of Kahn's (1990) theory of personal employee engagement, which has been noted as a theory that needs further testing (Saks & Gruman, 2014). Kahn's (1990) foundational theory of employee engagement is well regarded and often referred to in employee engagement research (Rich et al., 2010; Saks & Gruman, 2014). Despite this, minimal testing of employee engagement in the manner defined by Kahn (1990) exists, which indicated a need for research involving the operationalization of Kahn's (1990) theory. The research study included use of Rich et al.'s (2010) scale, which measured all three of

Kahn's (1990) psychological elements of engagement (physical, cognitive, emotional), and provided data for the operationalization of Kahn's (1990) theory of employee engagement.

The two additional prominent theories of engagement by Maslach et al. (2001) and Bakker and Demerouti (2007) are limited by not encompassing all psychological elements necessary for one to be engaged (May, Gilson, & Harter, 2004; Rich et al., 2010; Saks & Gruman, 2014). Most research regarding employee engagement involved these two theories, which raises concern that what is truly known regarding employee engagement is limited (Saks & Gruman, 2014). This researcher's utilization of Kahn's (1990) theory benefitted the research through examination of all elements theorized to affect employee engagement. This created a better understanding of each element individually and cohesively, which advanced the literature regarding employee engagement.

As noted previously, researchers have found support for (a) task performance; (b) organizational citizenship behavior, individual; and (c) organizational citizenship behavior, organization as outcomes of employee engagement (Alfes, Truss, Soane, Rees, & Gatenby, 2013; Bakker & Bal, 2010; Christian et al., 2011; J, 2014; Rich et al., 2010; Salanova et al., 2011; Whittington & Galpin, 2010). This study involved further exploration of these relationships by highlighting how employee engagement was operationalized to lead to these organization outcomes.

Although researchers in a variety of fields examine organizational citizenship behavior in terms of its constructs, most have not examined the intended recipient of the

behavior (individual or organization). Therefore, this study added to the emerging research in this area.

Implications for practice Understanding the role a supervisor has in his or her employee's engagement will enable senior managers and human resource professionals to benefit from better understanding how to focus efforts to improve employee engagement. If employee engagement can be positively linked to the organization outcomes of task performance and organizational citizenship behavior because of the engagement of the supervisor, this could provide support for investing resources toward increasing supervisor engagement. Results of the study could help organization leaders and human resource professionals justify focusing organization resources on motivating supervisor engagement to provide direct benefits to the organization. These direct benefits are the increased task performance and organizational citizenship behavior of the organization's employees.

Senior leaders and human resource professionals in organizations who understand how a supervisor's engagement can influence organization outcomes of task performance may influence succession management and supervisor selection. Succession management and supervisor selection could identify one who goes beyond being technically competent to consider one who has the highest potential for being engaged. Concepts such as utilizing realistic job previews for those aspiring to enter into supervisory roles could be considered to assess one's potential for engagement in that role. Knowing this ahead of selecting a supervisor for that role would help an organization select supervisors who are going to have the best potential for engagement in that role, affecting the overall

performance of the work unit for which he or she would be responsible. This may also allow for better individual understanding of whether one is an appropriate fit for a supervisory position. Lack of engagement has negative consequences, such as reduced energy and burnout (Bakker et al., 2008). If one is aware that the work required in a supervisory position could reduce one's engagement, one may not desire that position, which benefits the individual as well as the organization.

For one who is in a supervisory position, to understand the effect one's engagement has on his or her employees could provide the psychological motivation for a supervisor to maintain engagement. A supervisor who believes that his or her subordinate employee's engagement will allow the work unit to reach, possibly even exceed, desired work unit outcomes because of his or her own engagement, may be motivated to become engaged.

Assumptions

One of the key assumptions in this study was that respondents were truthful in responses because of efforts taken to ensure respondent confidentiality. The researcher made this assumption because a respondent's organization did not have access to responses. An assumption also existed that the theories of employee engagement, task performance, and organizational citizenship behavior can be applied in all workplace settings and contexts for the identified population. In addition, the term *employee engagement* encompassed all types of engagement one can have in the workplace.

Definitions of Terms

Several key terms were defined for the purposes of this study: *employee engagement, supervisor, employee, task performance*, and *organizational citizenship behavior*.

Employee engagement As noted earlier, Kahn (1990) defined personal employee engagement as "the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694). Kahn's seminal work (1990) is considered to be the first attempt at theorizing (and defining) employee engagement; however, some have challenged his work with their own theories (Bakker & Demerouti, 2007; Maslach et al., 2001).

Because of these multiple theories, several definitions exist to define personal employee engagement (Saks & Gruman, 2014). Kahn's (1990) theory is the foundation in this study because of the acknowledgement that it is comprehensive of all the facets necessary for one to choose to be in a state of engagement (May et al., 2004; Rich et al., 2010; Saks & Gruman, 2014) and has broad use in employee engagement research (Rich et al., 2010; Saks & Gruman, 2014). Because of the use of Kahn's theory of personal engagement, it was appropriate to use his definition to define engagement for this study.

Supervisor As part of a study by Panaccio and Vandenberghe (2011), the researchers performed an analysis of the role of supervisors related to their interactions with those they supervise. The definition the research used to describe a supervisor is one who is "formally responsible for monitoring the performance of employees, are involved

in decisions regarding pay and promotions that affect their employees and are increasingly made accountable for reducing turnover in their teams" (Panaccio & Vandenberghe, 2011, p. 1457). This definition was appropriate to use in this study since the supervisor was assessed based on the perceptions of the interaction of those who are supervised.

Employee Although Panaccio and Vandenberghe (2011) did not analyze the role of the nonsupervisory employee, a definition for a nonsupervisory employee can be ascertained from their definition of a supervisor. For this study, a nonsupervisory employee (termed employee in the study) was one who is not formally responsible for monitoring the performance of employees, was not involved in decisions regarding pay and promotions that affect employees, and was not made accountable for reducing turnover in their teams. This study specifically involved data obtained from nonsupervisory employees.

Task performance Task performance can be defined as those tasks explicitly required based on one's job description, and, as a result, are mandated, appraised, and rewarded as part of the performance appraisal process (Borman & Motowidlo, 1997; Janssen & Van Yperen, 2004; Whittington & Galpin, 2010). Further, these tasks result in a predictable workplace such that basic organizational tasks can occur to achieve organizational goals (Janssen & Van Yperen, 2004). Some researchers refer to these tasks as in-role performance (Borman & Motowidlo, 1997; Janssen & Van Yperen, 2004), however these tasks were referred to as task performance in this study.

Organizational citizenship behavior Organizational citizenship behavior is defined as the tasks not explicitly required as part of a job description, however the tasks are necessary for proper organizational functioning (Lee & Allen, 2002; Whittington & Galpin, 2010). These tasks, sometimes referred to as extra-role behaviors (Whittington & Galpin, 2010), were referred to as organizational citizenship behavior in this study. *Organizational citizenship behavior, individual* is when tasks performed are intended to benefit an individual such as a coworker, and *organizational citizenship behavior, organization* is when tasks performed are intended to benefit the entire organization (Lee & Allen, 2002).

Summary and Organization of the Dissertation Proposal

This chapter provided background to the problem, statement of the problem, the purpose of the study, theoretical underpinnings, the research question, an overview of the design of the study, significance of the study, assumptions, and definitions of terms to be used throughout the study. Chapter 2 includes a review of the relevant literature related to this topic. The literature review includes overviews of employee engagement, supervisor engagement, task performance, and organizational citizenship behavior. Chapter 3 details the method for the study. In this section, the researcher summarizes the two pilot studies and a design for the study, including an overview of the population, sample, and instruments used to collect data. Chapter 3 outlines data collection procedures, data analysis procedures, reliability, validity, assumptions, and limitations. Chapter 4 includes a description of how data cleaning occurred, how constructs were made, the reliability of those constructs, a description of the participant sample, and a detailed description of the

data analysis and results. Chapter 5 includes summaries of the research study information, key literature, study methods, and study findings. A discussion of these findings, significance of the study, implications of the study, limitations of the study, and suggestions for future research are also included in chapter 5.

Chapter 2

Literature Review

This section includes a review of the key literature related to employee engagement, supervisor engagement, task performance, and organizational citizenship behavior.

Employee Engagement

In this section, the researcher reviews key literature related to employee engagement. This section includes an overview of employee engagement theory, types of employee engagement, employee engagement antecedents, employee engagement outcomes, how employee engagement operates as a mediator, measurement of employee engagement, the relationship between leadership and employee engagement, and employee engagement limitations.

Employee engagement theory Kahn (1990) defined personal engagement as "the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694). The ability to express one's self physically, cognitively, and emotionally allows one to bring a personal presence to the role, allowing one's preferred self to be brought into the workplace (Kahn, 1990). The ability to bring one's preferred self into the workplace creates a relation of one's self to a role in which one can perform work tasks without sacrificing the ability to be one's preferred self in the workplace (Kahn, 1990).

Engagement occurs when the psychological conditions of safety, availability, and meaningfulness in work occur simultaneously (Kahn, 1990). These conditions create fulfillment, or identification, in one's work that one seeks to maintain by becoming engaged in his or her work (Harter et al., 2002). *Safety* refers to an employee's ability to be his or her full-self at work without consequences to his or her self-image, status, or career (Kahn, 1990). The factors found to influence psychological safety are interpersonal relationships, group and intergroup dynamics, management style and process, and organizational norms (Kahn, 1990). *Availability* refers to whether an employee has the appropriate resources to engage, despite distractions that may be present (Kahn, 1990). The four distractions that can influence availability are depletion of physical energy, depletion of emotional energy, individual insecurity, and outside lives (Kahn, 1990). *Meaningfulness* is present when one feels his or her work is valued by the organization (Kahn, 1990). According to Kahn's (1990) research, this comes from task characteristics, role characteristics, and work interaction.

Other employee engagement theories Since Kahn's foundational work regarding employee engagement, two other prominent theories of employee engagement have emerged (Saks & Gruman, 2014). Maslach et al. (2001) have a theory that relates engagement and job burnout. This theory notes that burnout results from a gap between a person's desire for and lack of (a) appropriate workload, (b) control, (c) fair reward and recognition, (d) supportive work community, (e) workplace fairness and justice, and (f) having meaningful work that is valued (Maslach et al., 2001). The researchers proposed that when people have these attributes met from the organization, they are engaged; when

they did not have these needs met, burnout resulted (Maslach et al., 2001). Some researchers questioned the link between burnout and engagement (Cole, Walter, Bedeian, & O'Boyle, 2012; Crawford, LePine, & Rich, 2010). Crawford et al. (2010) conducted a meta-analysis and found evidence that burnout and engagement are distinctly different constructs, while Cole et al. (2012) found evidence that the two constructs are similar.

Bakker and Demerouti (2007) conceptualized a theory of engagement known as the job-demands resources model. Similar to Maslach et al.'s (2001) theory, Bakker and Demerouti's (2007) theory also has its foundation in burnout theory. The researchers noted that job resources and job demands influence one's engagement and burnout (Bakker & Demerouti, 2007). Job resources can motivate one, leading to engagement, and allow one to handle his or her job demands, reducing the potential for burnout (Bakker & Demerouti, 2007). Also, one's job demands can result in increased stress and reduced energy, which leads to disengagement and burnout (Bakker & Demerouti, 2007). Although most employee engagement research uses the job-demands resources model as its theoretical foundation, some scholarly debate exists regarding whether the job-demands resources model is a theory or just a "framework for classifying job demands and job resources" (Saks & Gruman, 2014, p. 163). Job-demands resources model as a theory is limited by concluding that the more resources one has, the more engaged one is without clarifying which resources need to be present for engagement to exist (Saks & Gruman, 2014). In addition, the job-demands resources model does not include other relevant antecedents of employee engagement (Crawford et al., 2010).

No universally accepted theory of employee engagement existed at the time of this research to use in research or practice (Saks & Gruman, 2014). Kahn's (1990) theory has had minimal testing and there are some issues, as noted previously, with the other two theories of employee engagement (Saks & Gruman, 2014). A review of employee engagement literature resulted in some commonalities regarding how scholars interpret employee engagement: (a) it is a state not a trait; (b) it is a self-investment one makes in their work; and (c) it involves psychological identification with work tasks (Christian et al., 2011).

An analysis of Kahn's (1990) theory, Maslach et al.'s (2001) theory, and the job demands-resources model (Bakker & Demerouti, 2007) revealed that Kahn's (1990) is widely regarded as defining all elements (physical, cognitive, emotional) necessary for one to choose to be in a state of engagement (May et al., 2004; Rich et al., 2010; Saks & Gruman, 2014). Researchers have also widely referred to this theory in employee engagement literature and definitions (Rich et al., 2010; Saks & Gruman, 2014), which demonstrates the influence of the theory.

Types of employee engagement Several forms of engagement research include the term *employee engagement* to broadly encompass different types of employee engagement (Saks & Gruman, 2014). While most researchers focus on work engagement, which is the engagement one has with his or her job, researchers have found other types of engagement are task engagement, organization engagement, and group or team engagement (Saks & Gruman, 2014). One's position entails multiple tasks be performed with varied levels of engagement, known as task engagement (Schaufeli & Salanova,

2011). Saks (2006) found that task engagement and organizational engagement have a meaningful difference. Researcher have used organization engagement to explain the varied extent one engages as a member of an organization (Saks & Gruman, 2014). Group or team engagement refers to the extent one engages as a member of a particular group or team they are a member of (Saks & Gruman, 2014). Similar to work engagement, one's willingness to dedicate himself physically, cognitively, and emotionally is needed for one to be in a state of task engagement, organization engagement, or group or team engagement (Saks & Gruman, 2014).

Employee engagement antecedents Researchers have concluded that a variety of variables can influence or predict the choice one makes to be in a state of employee engagement. Job resources that researchers have found to be antecedent of one's engagement include supervisor support, innovativeness, appreciation, organizational climate, and job control (Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Mauno, Kinnunen, & Ruokolainen, 2007). Individual differences found as an antecedent of one's engagement include conscientiousness, proactive personality, value congruence, perceived organizational support, and core self-evaluations (Christian et al., 2011; Rich et al., 2010). Researchers have also identified certain demographic variables, such as age (James et al., 2011; Pitt-Catsouphes & Matz-Costa, 2008; Terry et al., 2013) and sex (Terry et al., 2013) as antecedents of employee engagement. Transformational leadership has also been found to be an antecedent of employee engagement (Breevaart, Bakker, Demerouti, Sleebos, & Maduro, 2014b; Christian et al., 2011; Tims, Bakker, & Xanthopoulou, 2011). Griffin (2015), Johnson (2015), and Leiter and Harvie (1997)

demonstrated how supervisor engagement can function as an antecedent of employee engagement.

Employee engagement outcomes Research has revealed several outcomes when one is in a state of engagement. Individual outcomes include job satisfaction, organizational commitment, job performance, organizational citizenship behavior, and reduced turnover intention (Bakker & Bal, 2010; Hakanen et al., 2006; Rich et al., 2010; Saks, 2006). Intangible outcomes provide personal benefits in the workplace, such as optimism, self-esteem, and active coping styles (Bakker et al., 2008). Bakker et al. (2008) also noted that engaged employees have better psychological and physical health, seek their own resources personally and at work, and transfer engagement to others.

Organization outcomes that occur when an employee is in a state of engagement include customer satisfaction, productivity, reduced turnover, profitability, and workplace safety (Harter et al., 2002). These outcomes occur because engaged employees have a positive correlation to business outcomes because of their increased energy from their workplace fulfillment (Bakker et al., 2008). This increased energy is released in the workplace through increased performance (Bakker et al., 2008). Disengaged employees affect an organization as well (Bakker et al., 2008). Those with a lack of engagement have decreased fulfillment, which leads to reduced energy and an increased potential for burnout (Bakker et al., 2008).

Employee engagement as a mediator Researchers have also found employee engagement to mediate relationships, such as the one between value congruence, perceived organizational support, and core self-evaluations to the job performance

dimensions of task performance and organizational citizenship behavior (Christian et al., 2011; Rich et al., 2010). Employee engagement also mediates the relationship between job characteristics and job performance (Christian et al., 2011). In addition, employee engagement mediates the relationship between autonomy, leader-member exchange, and opportunities for development to job performance (Bakker & Bal, 2010; Chaurasia & Shukla, 2013).

Measuring employee engagement Seven prominent scales (Saks & Gruman, 2014) measure employee engagement, including those by May et al. (2004), Rich et al. (2010), Rothbard (2001), Saks (2006), Soane et al. (2012), Stumpf et al. (2013), and the Utrecht Work Engagement Scale (Schaufeli, Salanova, González-Romá, & Bakker, 2002). While most of the scales have foundations in Kahn's (1990) theory of engagement, only two of the scales (May et al., 2004; Rich et al., 2010) measure Kahn's (1990) physical, cognitive, and emotional dimensions of engagement (Saks & Gruman, 2014). The Utrecht Work Engagement Scale (UWES) scale measures engagement as the opposite of burnout (Saks & Gruman, 2014). Most of the scales have only been used in one study with the exception of UWES, which is widely used despite debates regarding its validity (Rich et al., 2010; Saks & Gruman, 2014). The UWES scale measures vigor, dedication, and absorption dimensions and includes scale items that do not find themselves based in Kahn's (1990) theory of engagement (Rich et al., 2010). The creators of this scale did not appropriately justify the position to include the items that do not relate to Kahn's (1990) theory (Rich et al., 2010).

Leadership and employee engagement This section provides an overview of the relationship between leadership and employee engagement. Researchers have found that transformational, servant, and authentic leadership styles have a positive correlation to employee engagement. Dimensions of different leadership styles often overlap (Sun, 2013). At the core of the research regarding the different leadership styles and employee engagement, a direct link suggests that a leader influences the engagement of his or her employees.

Transformational leadership Burns (1978) developed the first theory of transformational leadership, as well as its counterpart, transactional leadership. Both theories are rooted in interactions, however each has different motivations and levels of power (Burns, 1978). Transactional leadership is an exchange of pay for performance that takes place between a supervisor and employee, and when the exchange is completed, the purpose for the relationship ceases (Bass & Riggio, 2006; Burns, 1978). Transformational leadership involves a continued relationship in which the supervisor and employee share joint purposes that go beyond the basic exchange of the transactional relationship (Burns, 1978). Transformational leaders earn credibility by putting the needs of others ahead of their own, sharing risk with their direct reports, and following high standards of moral conduct (Whittington & Galpin, 2010). Furthermore, these leaders know how to delegate and create learning opportunities in a supportive environment in an effort to increase the performance potential for the leader's direct reports (Whittington & Galpin, 2010). Despite the numerous leadership theories that exist, the theory of transformational

leadership is arguably the most popular theory used to explain leader effectiveness (Piccolo & Colquitt, 2006).

The majority of studies regarding transformational leadership focus around individual characteristics the leader or follower have, such as level of follower well-being, follower personality, follower self-developmental needs, leader locus of control, and leader cynicism toward organizational change (Nielsen & Cleal, 2011). Nielsen and Cleal (2011) also found that the leader's cognitive demands and having meaningful work increase their transformational leadership behavior. The presence of a high leader-member exchange relationship increases the effectiveness a leader has when engaging in transformational leadership behaviors (Piccolo & Colquitt, 2006). Guay (2013) also found that the demands-ability fit of a supervisor relates to that supervisor's demonstration of transformational leadership behaviors.

Several researchers have explored and concluded that when a leader functions as transformational, he or she can positively influence employee engagement (Breevaart et al., 2014b; Tims et al., 2011). This increased employee engagement because of transformational leadership results in employees who are more service oriented toward customers and participate in knowledge creation practices (Popli, Rizvi, & Martin, 2015; Song, Kolb, Lee, & Kim, 2012). Transformational leadership can affect task performance (Aryee, Walumbwa, Zhou, & Hartnell, 2012; Breevaart et al., 2014b; Ghadi, Fernando, & Caputi, 2013; Piccolo & Colquitt, 2006) and organizational citizenship behavior (Humphrey, 2012; Piccolo & Colquitt, 2006; Wang et al., 2005) with employee engagement as a mediator of this relationship (Christian et al., 2011). Salanova et al.

(2011) found support for their model in which transformational leadership influenced organizational citizenship behavior (termed *extra-role performance* in the study) because of the full mediation of self-efficacy and work engagement; transformational leadership and work engagement also had a direct relationship. Other researchers have also reported the positive relationship transformational leadership has to employee engagement (Breevaart et al., 2014a; Christian et al., 2011; Ghadi et al., 2013).

Another key outcome of transformational leadership is the positive relationship found with job satisfaction (Munir, Rahman, Malik, & Ma'amor, 2012). Additionally, Guay (2013) found that leaders who engaged in transformational leadership behaviors were rated as being more effective by their own leaders. Transformational leadership has stronger effects than transactional leadership on the business performance aspects of profitability, sales, market share, customer satisfaction, and company reputation as compared to competitors (Yildez et al., 2014). In addition, Si and Wei (2012) found transformational leadership to be positively related to subordinate creative performance while transactional leadership was negatively related.

Although transformational leadership is considered a stable, innate characteristic of a leader, it is more effective in certain circumstances (Dóci & Hofmans, 2015). Relationships with low leader-member exchange result in transformational leader behavior effectiveness to be low (Piccolo & Colquitt, 2006). Researcher also found task complexity to be negatively related to transformational leadership behavior because leaders who are faced with overwhelmingly complex tasks temporarily lack the psychological resources to engage in transformational leadership behaviors (Dóci &

Hofmans, 2015). Problem solving, discussion, and evaluation are outcomes with a stronger relationship to transformational leadership behaviors than the outcomes of brainstorming, planning, and information sharing (Nielsen & Cleal, 2011). This relationship is because brainstorming, planning, and information sharing require work of both the leader and employee, meaning that the leader has less of an opportunity and need to exert transformational leadership behaviors (Nielsen & Cleal, 2011). Transformational leadership is also negatively related to person-organization-fit, which indicates that leaders who are more aligned with their organization are less likely to function as transformational leaders (Guay, 2013). Guay (2013) theorized that this phenomenon could be because transformational leaders operate as change agents for the organization and too much alignment to the organization can result in status-quo behaviors that have a negative influence on change.

Servant leadership Servant leadership is a significant contributor to effective organization functioning (Bambale, 2014). In Greenleaf's 1977 work *The Servant as a Leader*, the author first used the term *servant leadership* without development of a theory of servant leadership (Berger, 2014). Greenleaf (1977) proposed that a leader should strive to serve the needs of his or her employees. This serving of employees helps to improve employee performance (Andre, 2015). Spears (1995) produced 10 characteristics of servant leaders: (a) listening, (b) empathy, (c) healing, (d) awareness, (e) persuasion, (f) conceptualization, (g) foresight, (h) stewardship, (i) commitment to the growth of people, and (j) building community. These characteristics of servant leadership are the foundations of subsequent work around servant leadership (Berger, 2014). Many

definitions, conceptual models, and measures of servant leadership exist (Berger, 2014). Servant leadership has functional attributes that include honesty, vision, trust, service oriented, being a role model, appreciation of other's service, and empowerment (Avolio, Walumbwa, & Weber, 2009). Servant leadership's attributes include good communication, ability to listen effectively, credibility, competence, encouragement of others, teacher, and delegator (Avolio et al., 2009). Hunter et al. (2013) also found leader agreeableness to positively influence one's servant leadership.

De Clercq, Bouckenooghe, Raja, and Matsyborska (2014) studied four information technology companies and concluded that servant leadership and work engagement are positively correlated. Social interaction and goal congruence mediate this relationship (De Clercq et al., 2014). In a study of restaurant workers, Carter and Baghurst (2014) also found a positive relationship between servant leadership and employee engagement. This engagement was demonstrated by employees' perceived responsibility to deliver good customer service and positively contribute to the company (De Clercq et al., 2014). The researchers also found that the servant leader qualities most important to employees are kindness and leading by example (De Clercq et al., 2014).

In a study of a two organizations merging together, De Sousa and Van Dierendonck (2014) found that during organization mergers, servant leadership affects work engagement. This relationship is mediated by post-merger organization identification and psychological empowerment (de Sousa & van Dierendonck, 2014). Servant leadership can result in one who feels value in the workplace which is important because it leads to employee engagement (Claxton, 2014).

In addition to employee engagement, servant leadership positively affects job satisfaction, intrinsic work satisfaction, organizational commitment, and a focus on the safety of others (Avolio et al., 2009). Trust is also an outcome of servant leadership (Chatbury, Beaty, & Kriek, 2011; Miao, Newman, Schwarz, & Xu, 2014). Affective trust more than cognitive trust can positively affect affective and normative commitment (Miao et al., 2014). Task performance, creativity, and customer service behaviors have positive correlations to servant leadership (Liden, Wayne, Chenwei, & Meuser, 2014). In a study of a retail organization, Hunter et al. (2013) found that servant leadership reduced turnover intention and disengagement in employees. Other researchers have found that turnover intention has a negative correlation to servant leadership (Hunter et al., 2013; Liden et al., 2014).

Babakus, Yavas, and Ashill (2011) studied bank employees and found that the negative relationship of servant leadership and turnover intention is mediated by the level of burnout one has. Organizational citizenship behavior is also an outcome of servant leadership (Bambale, 2014). The variables of procedural justice, regulatory focus, affective commitment to the supervisor, self-efficacy, and service climate can mediate this relationship (Bambale, 2014). Person-organization fit and organization identification can moderate the relationship between servant leadership and organizational citizenship behaviors.

No universally-accepted theory of servant leadership exists (Berger, 2014). In addition, no universally-accepted definition of servant leadership exists (Avolio et al., 2009). This has led to the creation of numerous measures of servant leadership based on

the different definitions (Avolio et al., 2009). In the aforementioned studies, researchers found a positive relationship between servant leadership and employee engagement used the UWES scale, which does not measure all three constructs of employee engagement as identified by Kahn (1990). These studies were also not longitudinal in design, limiting the ability to make causal conclusions (Saks & Gruman, 2014).

Authentic leadership Authentic leaders are those who model fairness, pursue justice for others, and share their personal beliefs (Waite, McKinney, Smith-Glasgow, & Meloy, 2014). Authentic leaders bring one's true self to a position and use self-awareness and self-regulation to create meaning for the leader and employees (Waite et al., 2014). The concept of authentic leadership first emerged in the 1960s (Gardner, Cogliser, Davis, & Dickens, 2011). Research remained limited until 2005 when a focus on authentic leadership theory building began (Gardner et al., 2011). Authentic leadership is different than transformational and servant leadership because it accounts for one's ability to build relationships (Waite et al., 2014). A true self is formed based on one's experiences and influences how a leader develops and creates relationships with others (Waite et al., 2014). Jensen and Luthans (2006) found that the psychological capital constructs of hope, optimism, and resiliency all positively influence authentic leadership. This provides support for Luthans and Avolio's (2003) model of authentic leadership development.

Employee engagement is an outcome of authentic leadership (Bamford, Wong, & Laschinger, 2013; Bird, Wang, Watson, & Murray, 2009; Shu, 2015; Stander, de Beer, & Stander, 2015). In a study of principals and teachers at Kindergarten through 12th grade schools, Bird et al. (2009) revealed that authentic leadership was significantly and

positively correlated to teacher trust as well as teacher engagement levels. Other researchers concluded that the authentic leadership factors of consistency between words and actions as well as supervisor moral perception contributed to employee engagement (Wang, Hinrichs, Prieto, & Howell, 2013). Wang et al. (2013) concluded that employee trust can partially mediate the relationship between authentic leadership and employee engagement.

Stander et al. (2015) studied public health employees and found that optimism and trust mediated the relationship between authentic leadership and work engagement. Bamford et al. (2013) studied nurses and found that workload, control over work, reward for work, supportive work unit, perceived fairness, and similar personal and organization values all mediate the relationship between authentic leadership and employee engagement. Intrinsic motivation can moderate the relationship between authentic leadership and work engagement (Shu, 2015).

In addition to employee engagement, trust is an outcome of authentic leadership (Wang et al., 2013). Increased empowerment and identification with one's supervisor are also outcomes of authentic leadership (Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010). A positive correlation to job performance and a negative correlation to burnout are additional outcomes of authentic leadership (Wong & Cummings, 2009). Authentic leadership positively correlates to job satisfaction, organizational commitment, and work happiness.

Authentic leadership lacks a universally accepted theory and definition (Gardner et al., 2011). In addition, the aforementioned researchers whose studies correlated

authentic leadership and employee engagement did not use a scale rooted in Kahn's (1990) theory. Most researchers used the UWES scale, which, as noted earlier, has been criticized for not measuring all three constructs of employee engagement (Saks & Gruman, 2014). The need for more longitudinal designs, a focus on authentic followership, and how to develop authentic leaders are areas of further expansion for the theory (Gardner et al., 2011).

Employee engagement limitations Some study design limitations are associated with employee engagement research. Most of the research regarding employee engagement has foundations in the job-demands resources model theory and involve use of the UWES scale (Saks & Gruman, 2014). Based on the limitations of both the theory and the scale, there could be some argument as to the usefulness of the literature in accurately informing research and practice regarding employee engagement (Saks & Gruman, 2014). In addition, most researchers who studied employee engagement utilized a cross-sectional, correlational approach instead of a longitudinal, experimental approach (Christian et al., 2011; Crawford et al., 2010; Rich et al., 2010). Saks and Gruman (2014) noted that a cross-sectional approach is susceptible to inflation bias, which limits ability to apply causal conclusions. This type of research is problematic because a lack of causal conclusions regarding employee engagement leaves a void in understanding the antecedents and outcomes of employee engagement (Saks & Gruman, 2014).

Section summary Based on current employee engagement research, a few areas exist where employee engagement research needs to advance. First, more testing of Kahn's (1990) theory of employee engagement is needed. Until May et al.'s (2004) scale,

no other prominent scale measured employee engagement with all three dimensions of Kahn's theory, which left a 14-year gap existed between the theory's formulation and its ability to be tested and understood. This creates a significant knowledge gap that could account for some of the dissonance regarding the use of a universal theory and definition of employee engagement. One other scale, created by Rich et al. (2010), measures engagement based on all three dimensions Kahn's theory. Despite the existence of theories different than Kahn's regarding employee engagement, some literature demonstrates strong support for Kahn's theory (May et al., 2004; Rich et al., 2010; Saks & Gruman, 2014). More research that utilizes one of these scales to test Kahn's theory will lead to a better understanding of that theory, which could lead to a universally-accepted theory and definition of engagement in social sciences.

The limitation of a lack of experimental and longitudinal studies regarding employee engagement needs to be addressed. Research and practice do not benefit from studies in which researchers cannot appropriately infer causation based on research results. As a result, researchers have not appropriately answered the question, what causes employee engagement (or disengagement)? More experimental studies will help control for different variables to find which one(s) affect employee engagement. More longitudinal studies will allow researchers to determine, during a period of time, how different variables effect engagement instead of just assessing variables at one point in time. Studying just one point in time can be problematic because of the inability to assess the change, or strength, of employee engagement. An increase in experimental and longitudinal employee engagement studies rooted in Kahn's (1990) theory will provide

useful data for researchers, individuals, and organizations, benefiting theory, research, and practice.

Supervisor Engagement

This section includes a review of key literature related to supervisor engagement. This section provides an overview of the difference between supervisor engagement and employee engagement, supervisor engagement antecedents, supervisor engagement outcomes, the relationship between supervisor engagement and employee engagement, and supervisor engagement limitations.

Difference to employee engagement Gray and Shirley's (2013) analysis of the six items on Baylor University Medical Center's 2010 Employee Opinion Survey that comprised the engagement index portion of the self-report survey found that 100% of nurse managers were engaged compared to 82% of nonsupervisory nurse staff employees. The researchers suggested that lower scores for nonsupervisory nurses could be attributed to a lack of understanding of business objectives (Gray & Shirey, 2013). Griffin (2015) studied 46,000 participants from 140 organizations and found that senior leaders, management employees, and non-management employees have independent yet correlated levels of engagement. Mean engagement was the highest for senior leaders and lowest for non-management employees; the range was .48 (Griffin, 2015). Results of the study indicated the importance of one's management as well as work group to affect employee engagement (Griffin, 2015).

Supervisor engagement antecedents Gray and Shirley (2013) indicated that an understanding of the organization's business objectives can contribute to supervisor

engagement. Role overload, production demands, formal procedures, and workforce characteristics have a negative correlation to supervisor engagement, while social support (especially from the organization and coworkers) and perceived autonomy have a positive correlation to supervisor engagement in the construction industry (Conchie, Moon, & Duncan, 2013). Courtright, Colbert, and Choi (2014) found that development challenge (i.e., challenging job assignments) can result in supervisor engagement. This finding aligns with Kahn's (1990) theorization that tasks that are challenging create meaningfulness in work, one of the three psychological conditions of employee engagement.

Griffin (2015) found that peers, senior leaders, and direct reports can all affect a supervisor's engagement, with peers and direct reports having the highest affect. In a qualitative study of physicians in leadership roles, Snell, Briscoe, and Dickson (2011) found that personal motivation, the particular role, the ability to help the community, a desirable workplace, and teamwork contribute to engagement. The researchers stated that bureaucratic processes, lack of compensation for time spent on certain leadership activities, lack of leadership support, poor communication, lack of support for innovation, conflict, incompetence, and not being able to do what is best for patients all negatively correlated to engagement (Snell et al., 2011).

Supervisor engagement outcomes In addition to finding that development challenge can result in supervisor engagement, Courtright, Colbert, and Choi (2014) found that engagement can result in a leader exhibiting transformational leadership behaviors. Supervisor engagement can also mediate the relationship between

transformational leadership and change appraisal of direct reports (Holten & Brenner, 2015). Researchers have found that supervisor engagement can impact the engagement of direct reports (Griffin, 2015; Johnson, 2015; Leiter & Harvie, 1997), peers (Griffin, 2015), and senior leadership (Griffin, 2015).

Supervisor engagement and employee engagement Kahn (1990) noted that management style and process are factors that create safety in work, one of the three psychological conditions of employee engagement. Specifically, a supportive, resilient, and clarifying management style and process create this safety (Kahn, 1990). Kahn (1990) further noted that "like supportive interpersonal relationships, supportive managerial environments allowed people to try and to fail without fear of the consequences" (p. 711). High-quality relationships between supervisors and employees allow employees autonomy and growth opportunities, which positively affect their engagement (Loi, Ngo, Zhang, & Lau, 2011; Shweta & Srirang, 2013).

Leiter and Harvie (1997) found that supervisor engagement is positively related to the engagement of the employees he or she supervises. While the researchers did not use a scale that measured all three of Kahn's (1990) elements of engagement (physical, cognitive, emotional), the study involved a separate measure for meaningfulness in work, which showed a positive correlation between this construct for supervisor and staff employees (Leiter & Harvie, 1997). When a supervisor is engaged in his or her work, he or she provides support to staff employees, which promotes employee engagement and builds confidence in the employee's career development (Leiter & Harvie, 1997). Leiter and Harvie (1997) further noted that an engaged supervisor is a role model for direct

reports, which is consistent with findings from the Griffin (2015) study. This can be especially important in certain situations, such as in times of organizational change (Leiter & Harvie, 1997). Johnson (2015) found that when police field supervisors conducted more proactive stops and checks, this increased the amount of proactive stops and checks among patrol officers by approximately 50%. These findings indicated that supervisor engagement increases engagement of direct reports in part when the supervisor acts as a role model (Johnson, 2015).

The engagement of senior leaders, management employees, and non-management employees are correlated to each other (Griffin, 2015). According to Griffin (2015), a non-management employee's engagement is influenced most by peers, then management employees, and senior leadership the least. A senior leader's engagement is influenced most by peers, then management employees, and non-management employees the least (Griffin, 2015). A management employee's engagement is similarly influenced by peers and nonsupervisory employees, and least influenced by senior leaders (Griffin, 2015). Hypothesis 1 for the study was that a significant positive relationship exists between perceived supervisor engagement and employee engagement.

Supervisor engagement limitations Gray and Shirley (2013), Griffin (2015), Johnson (2015), and Leiter and Harvie (1997) did not utilize data collection instruments rooted in Kahn's (1990) theory of employee engagement. Testing the relationship of supervisor engagement and employee engagement utilizing Kahn's (1990) theory that encompasses all elements necessary for one to be engaged (May et al., 2004; Rich et al., 2010; Saks & Gruman, 2014) may provide a more robust understanding of the difference

between supervisor and employee engagement. Griffin (2015) suggested that within-group and between-group variance exists for nonsupervisory, supervisory, and senior-leader engagement that needs to be further explored and understood.

Section summary What is known regarding employee engagement is based largely on those in nonsupervisory roles. Although the majority of employees in the workforce are not in supervisory positions, a need exists to better understand the engagement of those in supervisory positions. This need for further understanding is based on researchers' suggestions that engagement can be different at the supervisory and nonsupervisory levels (Gray & Shirey, 2013; Griffin, 2015). Further, supervisors' engagement may affect the engagement of subordinate employees (Griffin, 2015; Johnson, 2015; Leiter & Harvie, 1997). A better understanding of the antecedents and outcomes of supervisory engagement would increase understanding of the overall theory of employee engagement and the emerging concept of supervisor engagement.

Task Performance

This section outlines key literature related to task performance. This section includes an overview of leader-member exchange theory as a foundation for task performance, task performance antecedents, and the relationship between task performance and employee engagement.

Leader-member exchange theory and task performance Leader-member exchange theory is similar to employee engagement theory in that it focuses on the role of individuals in an organization. At the core of LMX is the relationship between a supervisor and an employee, which has a positive correlation between the quality of the

relationship and the quality of employee task performance (Chaurasia & Shukla, 2013; Shweta & Srirang, 2013). This quality relationship is best described by the dimensions of affect, loyalty, contribution, and professional respect as summarized by Shweta and Srirang (2013). The researchers describe *affect* as the mutual personal affection the two dyad members have for each other based on personal characteristics, and *loyalty* as the public support each dyad member demonstrates for the other (Shweta & Srirang, 2013). *Contribution* is defined as "the perception of the amount, direction, and quality of work-oriented activities each member contributes toward mutual goals (explicit or implicit)" (Shweta & Srirang, 2013, p. 44). Finally, Shweta and Srirang (2013) defined *professional respect* as the perception of the degree the leader and employee has built a positive work reputation inside and outside of the organization, as well as how each one's competence is acknowledged. Researchers studying LMX have found evidence of the importance of the relationship between the supervisor and employee for each member of this dyad, as well as the influence on the organization (Chaurasia & Shukla, 2013; Christian et al., 2011; Loi et al., 2011; Shweta & Srirang, 2013).

Leader-member exchange theory is operationalized by both members of this dyad participating in interrelated activities and demonstrating interrelated behaviors toward a mutual outcome (Shweta & Srirang, 2013). Researchers have found that low-quality LMX relationships are characterized by their involvement of basic, obligatory exchanges necessary to meet basic job and performance requirements (Bezuijen, Dam, Berg, & Thierry, 2010; Loi, Chan, & Lam, 2014). In contract, high-quality LMX relationships are characterized by the presence of trust, mutual communication, and sharing of ideas

(Chaurasia & Shukla, 2013). Organization and employee benefits that research has linked to high-quality LMX relationships are increased job satisfaction, performance, team effectiveness, organizational commitment, employee development, employee engagement, organizational commitment, loyalty, reliability, innovation, creativity, and reduced turnover (Banks et al., 2014; Shweta & Srirang, 2013).

Task performance antecedents Alfres et al. (2013) found that the perceived line manager behaviors of effectiveness, equity, and integrity toward the line manager had a positive relationship to task performance. The researchers also stated that task performance was positively affected by the perceived human resource management practices of a fair selection process, training opportunities, a reward system, career management, development opportunities, and feedback mechanisms (Alfes et al., 2013). Rich et al. (2010) found that value congruence, perceived organizational support, and core self-evaluations all have an outcome of task performance (as well as organizational citizenship behavior) through the mediating roles of job engagement, job involvement, job satisfaction, and intrinsic motivation. Training, empowerment, and rewards have been found to positively affect work engagement, leading to a positive effect on task performance and extra-role customer service (Karatepe, 2013).

Task performance and employee engagement Several researchers have found that employee engagement positively affects task performance. In empirical studies (Alfes et al., 2013; Bakker & Bal, 2010; J, 2014; Rich et al., 2010), researchers have demonstrated support of the positive affect that employee engagement has on task

performance. Christian et al.'s (2011) meta-analysis found a positive effect of employee engagement on task performance.

Macey and Schneider (2008) noted that engaged employees have above average task performance. Employee engagement increases task performance because those who are engaged are able to utilize higher levels of energy to concentrate on work tasks and cope with adversity (Breevaart et al., 2014b). Also, those who are engaged use emotion when completing work tasks (May et al., 2004), which leads to increased focus and dedication to complete work tasks (Christian et al., 2011).

One of the roles of a supervisor is to allocate job resources within his or her work unit (Loi et al., 2011; Shweta & Srirang, 2013). Many leaders, as key resource providers, have direct influence over allocation of resources to an employee such as work assignments, salary, opportunities for development, and opportunities for advancement (Loi et al., 2014; Loi et al., 2011; Shweta & Srirang, 2013). Researchers have found that high-quality LMX relationships result in a long-term partnership in which employees secure access to resources that affect their engagement, such as autonomy and growth opportunities (Loi et al., 2011; Shweta & Srirang, 2013). In addition, researchers have shown that this leads to employees increasing their performance by increasing their contributions when necessary to complete tasks (Loi et al., 2011; Shweta & Srirang, 2013). This increased performance occurs when the quality of the exchange relationship between the supervisor and employee is high, which leads to increased engagement in the employee's work and increased performance (Chaurasia & Shukla, 2013). Hypothesis 2

for the study was that a significant positive relationship exists between employee engagement and task performance.

Section summary Researchers can use LMX to understand task performance because of the relationship between supervisors and task performance (Chaurasia & Shukla, 2013; Shweta & Srirang, 2013). A positive correlation exists between employee engagement and task performance, however research still needs to expand the understanding of why this relationship exists (Schaufeli, 2012). One assumption of LMX is that a leader, because of his or her limited time resource, cannot form a quality relationship with all employees and therefore has an "in-group" that benefits from a high-quality relationship (Shweta & Srirang, 2013; Yildiz, 2011). Research that indicated high-quality LMX relationships correlate to above-average task performance (Breevaart et al., 2014b; Christian et al., 2011; May et al., 2004) assumes that some may not reach a level beyond average task performance.

Although a quality relationship may not be possible with all employees, those in a work unit will be able to recognize a supervisor who is engaged, even if time interacting with the supervisor is limited. This employee recognition could come from any employee (in-group or out-group) becoming engaged and then increasing his or her task performance. Expanded understanding of the relationship between the supervisor, the employee, and task performance will help create a better understanding of how a supervisor can capitalize on the relationship with each employee (both in-group and out-group) to increase performance of all employees.

Organizational Citizenship Behavior

This section includes a review of key literature related to organizational citizenship behavior. This section provides an overview of organizational citizenship behavior theory, organizational citizenship behavior antecedents, and the relationship between organizational citizenship behavior and employee engagement.

Organizational citizenship behavior theory Katz (1964) theorized that three types of behavior were necessary for organizations to function properly: (a) recruitment and retaining of employees; (b) dependable task performance; and (c) "innovative and spontaneous activity in achieving organizational objectives which go beyond role specifications" (p. 132). It was not until these innovative and spontaneous activities were termed as *citizenship behaviors* by Bateman and Organ in 1983 that research regarding the theory of organizational citizenship behavior began to flourish (Humphrey, 2012). These behaviors are necessary, according to Katz (1964), because organizations cannot plan for all necessary actions that account for environment changes and human variability. Official tasks required of one's role can be set by organizational protocol and leadership, whereas organizational citizenship behaviors are harder to anticipate yet do "facilitate the accomplishment of organizational goals" (Katz, 1964, p. 132).

Although organizational citizenship behaviors are beneficial to an organization, these behaviors are not critical to one's specific job or work tasks (Lee & Allen, 2002). As a result, organizational citizenship behaviors are often not directly or explicitly required as part of one's role (Humphrey, 2012; Organ, 1988), which means that one's willingness to participate in organizational citizenship behaviors is a choice (Humphrey,

2012; Whittington & Galpin, 2010). These behaviors exceed the requirements of one's role and can even involve the willingness to endure personal costs, inconveniences, and frustrations (Whittington & Galpin, 2010). Helping coworkers and attending work-sponsored social functions are two examples of organizational citizenship behaviors in which one can participate (Lee & Allen, 2002). As research on organizational citizenship behaviors has evolved, similar constructs have been developed and sometimes used interchangeably with organizational citizenship behavior, including extra-role behavior and contextual performance (Humphrey, 2012; Sharma & Agrawal, 2014).

Organ (1988) stated that organizational citizenship behaviors are best organized into the dimensions of altruism, courtesy, civic virtue, conscientiousness, and sportsmanship. Williams and Anderson (1991) noted that while organizational citizenship behavior benefits the organization ultimately, the behaviors are directed toward recipients. Williams and Anderson (1991) organized citizenship behaviors into those directed toward individuals and those directed toward organizations. Altruism and courtesy are the behaviors directed toward individuals while civic virtue, conscientiousness, and sportsmanship are the behaviors directed toward organizations (Williams & Anderson, 1991).

Benefits of organizational citizenship behavior include reduced absenteeism, reduced turnover, employee retention, employee satisfaction, customer satisfaction, and customer loyalty (Chahal & Mehta, 2010). Jiao, Richards, and Zhang (2011) found that the benefits of organizational citizenship behavior are realized when employees perceive

that organizational citizenship behaviors are beneficial to the functionality and effectiveness of the organization.

Organizational citizenship behavior antecedents At the personal level, a key antecedent of organizational citizenship behavior is that a particular task requiring organizational citizenship behaviors must bring personal satisfaction for one to engage in it (Sharma & Agrawal, 2014). Attitudinal characteristics that reflect the attitude of an employee and can predict organizational citizenship behavior include organizational commitment, job satisfaction, job involvement, motivation, employee engagement, and level of trust (Sharma & Agrawal, 2014). Dispositional characteristics that reflect one's personality and can predict organizational citizenship behaviors include agreeableness, conscientiousness, equity sensitivity, propensity to trust, neuroticism, service orientation, empathy, positive affectivity, and negative affectivity (Sharma & Agrawal, 2014). Demographic characteristics such as age, gender, tenure, and educational level can all affect one's willingness to engage in organizational citizenship behaviors (Chahal & Mehta, 2010; Chou & Pearson, 2011).

Organizational characteristics, such as the type of organization (formal or informal), organization structure, presence of office politics, and how office politics are handled all influence an employee's willingness to engage in organizational citizenship behaviors (Sharma & Agrawal, 2014). Chahal and Mehta (2010) found that role perception, fairness perception, motivation, leadership, job satisfaction, and organizational commitment influence one's organizational citizenship behaviors as well. Rich et al. (2010) found that value congruence, perceived organizational support, and

core self-evaluations all have an outcome of organizational citizenship behavior (as well as task performance) through the mediating roles of job engagement, job involvement, job satisfaction, and intrinsic motivation.

Organizational citizenship behavior and employee engagement As noted previously, employee engagement is one of the attitudinal characteristics that can predict organizational citizenship behavior (Sharma & Agrawal, 2014). Rich et al. (2010) and Whittington and Galpin (2010) found that employee engagement leads to increased participation in organizational citizenship behaviors. Salanova et al. (2011) identified a linkage between transformational leadership, employee engagement, and organizational citizenship behavior when the researchers found that transformational leadership can explain organizational citizenship behavior (or *extra-role performance* in the study) because of the full mediation of self-efficacy and work engagement.

In a meta-analysis by Christian et al. (2011), a positive relationship was found between employee engagement and task performance, and between organizational citizenship behavior and employee engagement. Engaged employees who have high-quality leader-member exchange relationships with their supervisors are more likely to engage in organizational citizenship behaviors toward individuals, which results in an increase in team performance (Afacan-Findikli, 2015). The increase in organizational citizenship behaviors due to employee engagement results in an overall increase in organizational effectiveness (Kataria, Garg, & Rastogi, 2012). Hypothesis 3 for the study was that a significant positive relationship exists between employee engagement and organizational citizenship behavior, individual. Hypothesis 4 for the study was that a

significant positive relationship exists between employee engagement and organizational citizenship behavior, organization.

Section summary Since the initial work by Katz (1964) led to the development of the theory of organizational citizenship behavior, research has been vast in the theory. Researchers have shown that employee engagement can lead to increased participation in organizational citizenship behaviors (Rich et al., 2010; Whittington & Galpin, 2010). One argument on this topic is that one may feel required to do anything that benefits the organization, even if a task is not formally required as part of one's job (Podsakoff, MacKenzie, Paine, & Bachrach, 2000). This supports the notion by Organ (1988) that task performance behaviors and organizational citizenship behaviors may be difficult to distinguish. Organizational citizenship behaviors toward individuals positively correlate to increased task performance that benefits the organization (Afacan-Findikli, 2015). Additional researchers indicated that some supervisors do include organizational citizenship behaviors as part of employee performance evaluations (Podsakoff et al., 2000). Consequently, organizations need to understand both task performance behaviors and organizational citizenship behaviors since these behaviors are interrelated and both have a positive relationship to employee engagement.

Chapter Summary

Researchers have found that employee engagement can directly influence task performance (Alfes et al., 2013; Bakker & Bal, 2010; Christian et al., 2011; J, 2014; Rich et al., 2010; Salanova et al., 2011) and organizational citizenship behavior (Christian et al., 2011; Rich et al., 2010; Salanova et al., 2011; Whittington & Galpin, 2010), while

supervisor engagement can directly influence employee engagement (Griffin, 2015; Johnson, 2015; Leiter & Harvie, 1997). Various researchers have found relationships among the constructs of supervisor engagement, employee engagement, task performance, and organizational citizenship behavior. Thus, a single study examining the relationships between these constructs was beneficial in understanding how these concepts act simultaneously.

Chapter 3

Materials and Methods

This chapter details the research method of the study. The researcher conducted two pilot studies to inform proper study design, population, sample, data collection instruments and procedures, and data analysis procedures. This chapter also presents the study reliability, validity, and limitations.

Restatement of the Purpose of the Study

The purpose of this study was to examine how employees' perceptions of their supervisors' engagement affects the engagement of the employee and organization outcomes of task performance, organizational citizenship behavior toward the individual, and organizational citizenship behavior toward the organization.

Research Question

How does the perception of a supervisor's engagement influence an employee's task performance, organizational citizenship behavior toward individuals, and organizational citizenship behavior toward the organization?

Hypotheses

The hypotheses tested in this study were:

H1. A significant positive relationship exists between perceived supervisor engagement and employee engagement.

H2. A significant positive relationship exists between employee engagement and task performance.

H3. A significant positive relationship exists between employee engagement and organizational citizenship behavior, individual.

H4. A significant positive relationship exists between employee engagement and organizational citizenship behavior, organization.

Figure 2 presents the proposed model for this study.

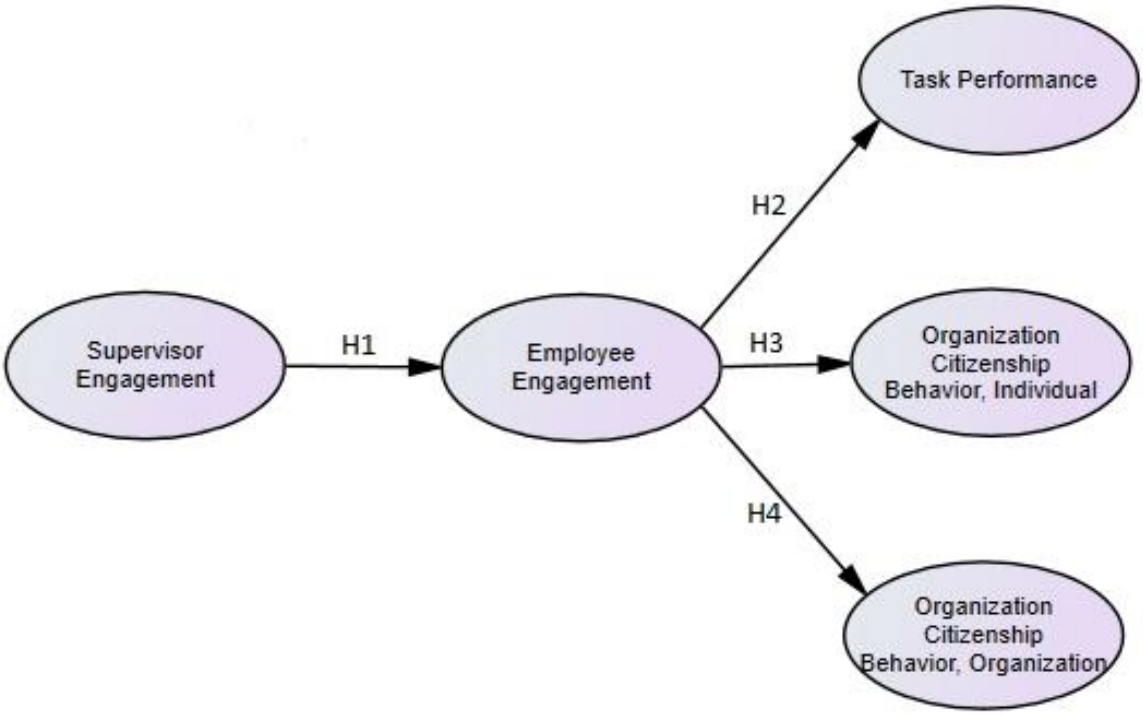

Figure 2. Proposed conceptual model.

Overview of Pilot Study 1

The researcher conducted the first pilot study to determine whether a relationship existed between perceptions of supervisor engagement and an employee's own engagement. Chughtai (2013) showed support for a model in which employee engagement (termed *work engagement* in the study) mediated the positive relationship between affective commitment to a supervisor and the work outcomes of innovative work

behavior, feedback seeking for self-improvement, and error reporting. The researcher revised this model to explore if employee engagement mediated the positive relationship between perceived supervisor engagement and the work outcomes of innovative work behavior, feedback seeking for self-improvement, and error reporting (see Figure 3).

The quantitative pilot study was observational, correlational, and cross-sectional in design. The research question for the study was: How does the perception of a supervisor's engagement influence an employee's innovative work behaviors, feedback seeking for self-improvement, and error reporting?

The hypotheses tested in this study were:

H1. A significant positive relationship exists between perceived supervisor engagement and employee engagement.

H2. A significant positive relationship exists between employee engagement and innovative work behaviors.

H3. A significant positive relationship exists between employee engagement and feedback seeking for self-improvement.

H4. A significant positive relationship exists between employee engagement and error reporting.

Figure 3 presents the conceptual model for Pilot Study 1.

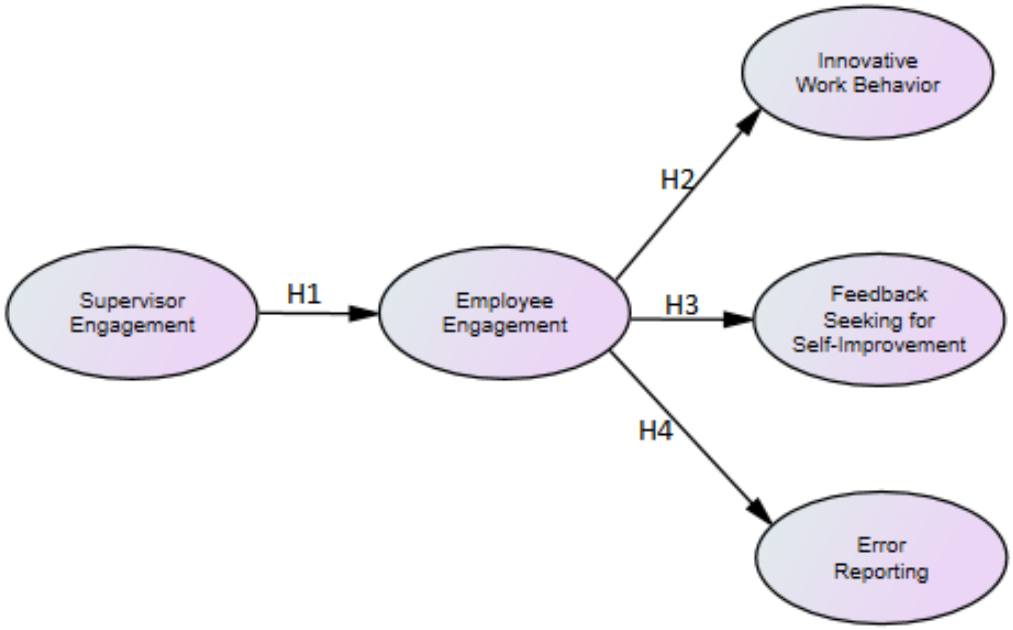

Figure 3. Pilot Study 1 proposed conceptual model.

Participants and procedures A total of 359 people accessed the survey; 52 people were disqualified because of qualifying questions, and 151 people exited during the survey, leading to 156 usable responses for data analysis. Of the 156 respondents, 65.4% of respondents were male and 34.6% of respondents were female. Of the respondents, 44.9% were between 18–29 years old, 44.9% were between 30–49, and 10.3% were 50–64 years old; no respondents were 65 and older. Demographically, 74.4% were White, 7.1% were Hispanic or Latino, 5.8% were Black or African American, 2.6% were Native American or American Indian, 8.3% were Asian or Pacific Islander, and 1.9% were of another ethnicity. Regarding the highest level of education, 8.3% of respondents were high school graduates, 28.2% had some college, 8.3% had trade, technical, or vocational training or certification, 37.2% held undergraduate degrees, 5.8%

had some post undergraduate work, and 12.2% held a degree higher than an undergraduate degree. The gross income before taxes category of $20,000–$39,999 was the category with the highest response rate (32.7%), with 16.7% making less than that and 50.6% making more than that. Regarding type of organization, 81.4% of respondents worked for a for-profit organization, 9% worked for a not-for-profit organization, 3.8% worked for the federal government, and 5.7% worked for a state or local government. Most respondents (52.6%) had been at their organization between 1–5 years, with 9.6% for less than a year, 25.6% were at their organization for 5–10 years, and 12.1% were at their organization for 10 years or longer.

The researcher built a survey in Qualtrics' survey sytem and administered a link to respondents via MTurk, a tool used for sample recruitement and data collection. Amazon operates the tool and provides researchers with access to participants who are willing to participate in surveys for compensation. Researchers using MTurk indicated that participants are demographically diverse (Buhrmester, Kwang, & Gosling, 2011) and reliability is comparable to data collected from traditional methods, such as convenience sampling or mass e-mailing for participants (Buhrmester et al., 2011; Johnson & Borden, 2012). MTurk has the ability to ensure proper research protocol can be taken when utilizing the system (Johnson & Borden, 2012). Anyone can sign up to be an MTurk participant as long as he or she has a valid e-mail address.

For this study, only those who were working and residing in the United States, 18 years of age of older, English speaking, and considered nonsupervisory employees working at least 30 hours (usually) for one organization were allowed to participate;

qualifying questions were used to determine participation. These participants were surveyed based on experiences in the past six months, and participants were compensated $.75 to complete the survey.

Measures Data collection involved four validated scales. Those surveyed answered 18 items from Rich et al.'s (2010) scale based on their own engagement (α = .953), followed by nine items from Jansen's (2000) scale on innovative work behavior (α = .952), five items from Janssen and Prins (2007) scale regarding feedback seeking for self-improvement (α = .887), and three items from Rybowiak et al.'s (1999) error communication scale (α = .726). After this, 18 items from the Rich et al. (2010) scale were asked based on the employee's perception of his or her supervisor's engagement (α = .970). Other than the Rich et al.'s (2010) scale, Chughtai (2013) utilized all of the other scales.

Analysis and results This research involved the Statistical Package for the Social Sciences (SPSS) to perform a regression analysis of the data. For the study, the controls of age, gender, ethnicity, income, and organizational tenure were used because these personal attributes have been shown to affect employee engagement (Bal et al., 2013; J, 2014; James et al., 2011; Jones & Harter, 2005; Pitt-Catsouphes & Matz-Costa, 2008; Terry et al., 2013). The researcher conducted a regression analysis to analyze the data. Table 1 presents means, standard deviations, and correlation for and among study variables.

Table 1. Pilot Study 1 Means, Standard Deviations and Correlation for and Among Study Variables.

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Age	2.65	.66										
2. Sex	1.35	.48	.178*									
3. Ethnicity	1.69	1.37	-.140	.105								
4. Income Level	2.94	1.63	-.015	.095	.043							
5. Organization Tenure	2.42	.88	.254**	.079	.114	.154						
6. Supervisor Engagement	3.86	.75	-.096	.076	.132	.107	-.094					
7. Employee Engagement	3.93	.66	.019	.152	.102	.015	-.110	.472**				
8. Innovative Work Behaviors	3.44	1.26	-.234**	-.103	.159*	.067	-.029	.234**	.296**			
9. Feedback Seeking	5.41	1.07	-.166*	-.016	.052	.014	-.129	.413**	.539**	.388**		
10. Error reporting	5.28	1.10	.006	-.111	.010	.033	-.050	.187*	.321**	.228**	.606**	

Note: *N* = 156.
*p < .05. **p,.01.

The only hypothesis supported with the study was H1, a significant positive relationship exists between supervisor engagement and an employee's own engagement, with a 22.3% variance explained in the dependent variable. While the researcher found the work outcomes tested to not be mediated by employee engagement, the relationship between perceived supervisor engagement and one's own engagement showed a relationship for further research to determine the relationship's influence on other work outcomes. Also, the high Cronbach's alpha found with the Rich et al. (2010) scale for testing of both the employee's own engagement ($\alpha = .953$) and his or her perception of the supervisor's engagement ($\alpha = .970$) indicated that this scale was appropriate to consider for further use. Limitations of the study included the data being self-reported and that several different factors could influence an employee engagement, some of which are outside the supervisor's control or direct influence.

Overview of Pilot Study 2

The researcher employed a second pilot study to test a conceptual model that hypothesized that supervisor engagement has a positive relationship with employee engagement directly and through the mediating role of transformational leadership. Employee engagement showed a positive relationship to the organization outcomes of task performance and organizational citizenship behavior (both individual and organization).

The inclusion of the supervisor engagement component increased understanding of how the theories of employee engagement, transformational leadership, leader-member exchange, and organizational citizenship are cohesively linked. The research question for the pilot study was: How does the perception of a supervisor's engagement influence transformational leadership, an employee's task performance, organizational citizenship behavior toward individuals, and organizational citizenship behavior toward the organization? The hypotheses tested in this study were:

H1. A significant positive relationship exists between perceived supervisor engagement and transformational leadership behavior.

H2. A significant positive relationship exists between transformational leadership and employee engagement.

H3. Transformational leadership will partially mediate the relationship between perceived supervisor engagement and employee engagement.

H4. A significant positive relationship exists between employee engagement and task performance.

H5. A significant positive relationship exists between employee engagement and organizational citizenship behavior, individual.

H6. A significant positive relationship exists between employee engagement and organizational citizenship behavior, organization

Figure 4 presents the proposed conceptual model for Pilot Study 2.

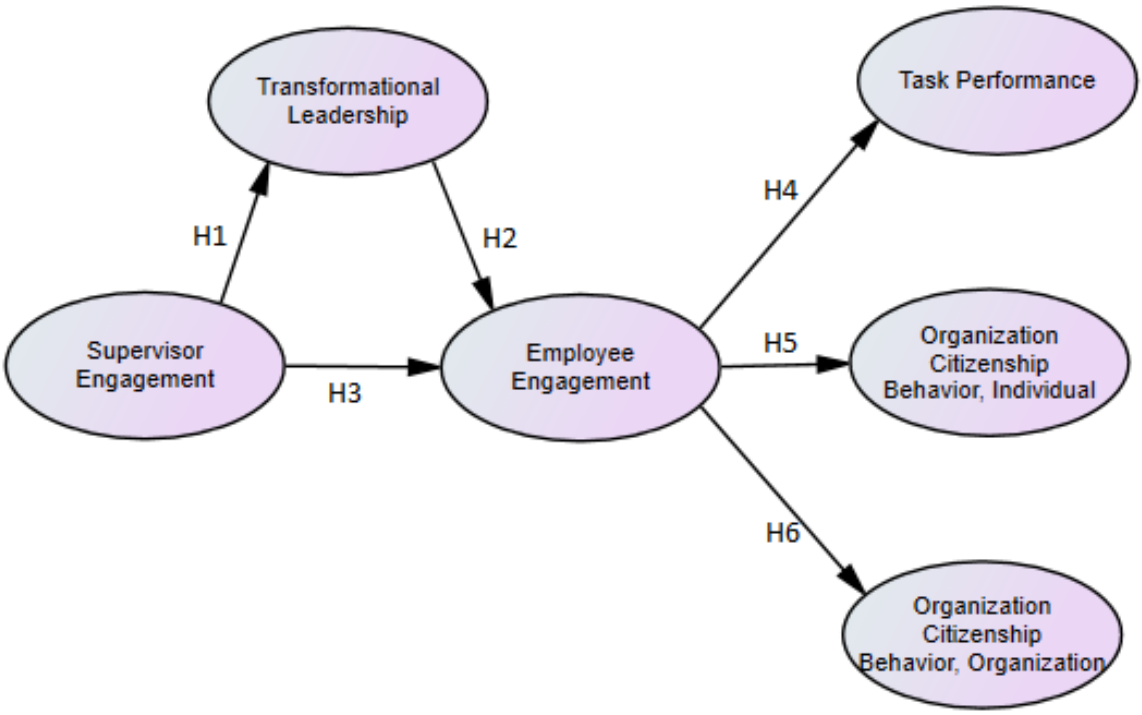

Figure 4. Pilot Study 2 proposed conceptual model.

Hypothesis 3 proposed that transformational leadership behaviors will have partial mediation between perceived supervisor engagement and an employee's own engagement. This was based on researchers who showed the relationship that supervisor engagement had to transformational leadership (Courtright et al., 2014), transformational leadership had to employee engagement (Breevaart et al., 2014b; Christian et al., 2011; Tims et al., 2011), and the direct relationship between supervisor engagement and

employee engagement (Griffin, 2015; Johnson, 2015; Leiter & Harvie, 1997). The findings from various research suggested that transformational leadership partially mediates the relationship between perceived supervisor engagement and employee engagement.

Participants and procedures Of the 882 people who initiated the pilot study survey, 387 completed all questions; only complete responses were used for data analysis. Males provided the majority of responses (51.9%). Regarding race, 74.4% identified as White, 8% as Black or African American, 7.8% as Asian or Pacific Islander, 6.2% as Hispanic or Latino, 2.6% as Other, and 1% as Native American or American Indian. When indicating age, 38.8% identified as 18–29, 48.8% as 30–49, 11.9% as 50–64, and .5% as 65 or older. A current annual household income before taxes of $20,000–$39,000 was the income group chosen most (28.7%), with 6.7% earning less than that, 26.6% making between $40,000–$59,999, 17.3% making between $60,000–$79,999, and 20.7% indicating an income of $80,000 or more. Most respondents (63.6%) had been at their organization for less than five years, 21.4% for 5–10 years, and 14.9% for more than 10 years. For-profit organization was the employer type for the majority of respondents (68.2%), followed by not-for-profit (16.8%), state government (7.5%), local government (4.7%), and federal government (2.8%).

For the pilot study, participants included those who were working and residing in the United States, 18 years of age of older, English speaking, and considered nonsupervisory employees working at least 30 hours (usually) for one organization. Screening questions determined eligibility to participate in the study. Participants were

solicited for the study via MTurk and paid $.75 for successful completion of all survey items. The link in MTurk directed respondents to a Qualtrics survey where respondents answered questions and then received a unique code to be entered into MTurk to verify successful completion of all survey items.

Measures The study involved five sets of measures to test the pilot study's theoretical model. Perceived supervisor engagement and employee engagement were measured using the scale from Rich et al. (2010). This scale has three subscales of six questions each, and is used to measure physical engagement for supervisors and employees, emotional engagement for supervisors and employees, and cognitive engagement for supervisors and employees. The researcher utilized Podsakoff, MacKenzie, Moorman, and Fetter's (1990) scale to measure transformational leadership. This scale is organized into five subscales for "core" transformational behaviors, high performance expectations, individualized support, intellectual stimulation, and contingent reward. Janssen and Van Yperen's (2004) 5-item scale helped to measure task performance. Lee and Allen's (2002) two scales measured organizational citizenship behavior, individual and organizational citizenship behavior, organization. Each scale has eight items. Because of the imbalance of the scales, the researcher followed guidance from Piccolo and Colquitt (2006) such that the 1st order factors for perceived supervisor engagement, employee engagement, and transformational leadership were used as manifest indicators for each latent variable. The other three latent variables used item scores as manifest indicators.

Analysis The researcher used standards outlined by Schumacker and Lomax (2010) to assess data fit to a measurement model prior to testing the theoretical and alternative models. For the measurement model, all factors were allowed to correlate (i.e., six-factor correlated model). The researcher also conducted Harman's single factor test for common method bias (i.e., single factor). Data analysis involved IBM's SPSS® AMOS 23.0.0 (AMOS).

In addition to testing the theoretical model (Table 4, model 1), four partial mediation models were tested. The first partial mediation model added a direct path from transformational leadership to task performance (Table 4, model 2). The second partial mediation model added a direct path from transformational leadership to organizational citizenship behavior, individual (Table 4, model 3). The third partial mediation model added a direct path from transformational leadership to organizational citizenship behavior, organization (Table 4, model 4). The fourth partial mediation model added a direct path from transformational leadership to all three variables (Table 4, model 5).

Results An assessment of fit indices found that the six-factor correlated model was a better fit to the data than a single-factor model (see Table 2). The delta chi-square ($\Delta\chi 2 = 3250.276$) and 15 degrees of freedom change indicated a statistically significantly better fit ($p < .001$) of the six-factor model to the single factor model. The comparative fit index (CFI) and root measure square effort approximation (RMSEA) were within Schumacker and Lomax's (2010) fit acceptance levels for the six-factor model. The CFI and RMSEA were not within Schumacker and Lomax's (2010) fit acceptance levels for the one-factor model. Although the standardized root mean square was not within

Schumacker and Lomax's (2010) fit acceptance levels for either model, the six-factor model was closer to the acceptance level.

Table 2. Pilot Study 2 Fit Indices

Variable	χ^2	*df*	RMSEA	SRMR	CFI
Six-factor correlated	1236.216	449	.067	.0642	.902
Single factor	4756.492	464	.155	.1290	.468

The standardized regression weights (see Appendix A) suggest, in general, an acceptable measurement model. Only one factor loading was below the minimum acceptance level of .5 and most were above the more stringent level of .7 (Bagozzi & Yi, 1988; Kline, 2011). The researcher decided to remove this factor for model fit testing, which is the individualized support subscale for transformational leadership. An examination of structure coefficients (see Appendix B) revealed that each manifest variable has the highest correlation with its respective factor.

The range of composite reliability (CR: .847–.933) provided sufficient evidence of adequate reliability (see Table 3). The range of average variance extracted (AVE, .514–.824) provided sufficient evidence of convergent validity (see Table 3). Examination of the correlation between factors and the square root of the AVE for the individual factors showed evidence of discriminant validity (see Table 3).

Table 3. Pilot Study 2 Implied Correlations, Average Variance Extracted, and Composite Reliability

Variable	1	2	3	4	5	6
1. Organizational Citizenship Behavior, Individual	.717					
2. Task Performance	.362	.774				
3. Employee Engagement	.382	.510	.865			
4. Supervisor Engagement	.353	.303	.324	.908		
5. Transformational Leadership	.413	.256	.390	.839	.733	
6. Organizational Citizenship Behavior, Organization	.582	.348	.535	.408	.547	.724
CR	.893	.878	.899	.933	.847	.897
AVE	.514	.599	.748	.824	.538	.524

Note. Square root of AVE along the diagonal.

Discriminant validity was found for all factors except for transformational leadership, which does not have discriminant validity with supervisor engagement. Since the transformational leadership structure coefficients had the highest correlation with the transformational leadership factor, the researcher retained all transformational leadership factors and deemed the measurement model sufficient to proceed.

The researcher tested Model 2 and Model 5, and the path from transformational leadership to task performance was found to be nonsignificant. This led to the post hoc addition of a model that added a direct path from transformational leadership to both organizational citizenship behavior, individual and organizational citizenship behavior, organization (Table 4, model 6).

Table 4. Pilot Study 2 Fit Indices for Structural Models

Model	χ^2	*df*	RMSEA	SRMR	CFI	R^2 (TP)	R^2 (OCBI)	R^2 (OCBO)
1	1280.491	428	.072	.1161	.892	.278	.191	.346
2	1279.500	427	.072	.1164	.892	.278	.189	.342
3	1257.184	427	.071	.1099	.895	.275	.241	.330
4	1229.789	427	.070	.1094	.899	.274	.177	.427
5	1197.589	425	.069	.0844	.902	.274	.245	.428
6	1200.602	426	.069	.0872	.902	.271	.244	.429

Note: R^2 TP = Task Performance; R^2 OCBI = organizational citizenship behavior, individual; R^2 OCBO = organizational citizenship behavior, organization

The factor correlations were positive for all 15 correlations (see Appendix B). Across all six models, Model 6 had the best fit (see Table 4). The delta chi-square between Model 6 and Model 1, the full mediation model, was statistically significant ($\Delta\chi^2 = 79.889$; $p < .001$). The delta chi-square between Model 6 and Model 5 (which had the lowest chi-square) was not statistically significant ($\Delta\chi^2 = 3.013$; $p = .083$). In addition, the RMSEA and CFI were the same for Models 5 and 6. None of the models had a SRMR value lower than .05; however, Model 5 had the value closest to .05. The difference between the SRMR for Model 5 and Model 6 (which had the next lowest SRMR) was .0028, which indicates only a small fit difference in the models. Model 6 showed the most variance in organizational citizenship behavior, organization. Model 5 showed only .001 more variance in organizational citizenship behavior, individual, than Model 6, and Model 1 showed only .007 more variance in task performance than Model 6. All parameter estimates for Model 6 were positive, within range, and statistically significantly different than zero.

Discussion With all factor correlations being positive, an indication exists that all constructs were positively related to each other (see Appendix C). All parameters

indicated that the direct effects from independent to dependent variables were positive and significant, providing support for Hypotheses 1, 2, 4 5, and 6 (see Appendix C). An examination of direct and indirect effects revealed that Hypothesis 3, transformational leadership will partially mediate the relationship between perceived supervisor engagement and employee engagement, should be rejected since transformational leadership fully mediated this relationship. The addition of the paths from transformational leadership to organizational citizenship behavior, individual and organizational citizenship behavior, organization is consistent with previous researchers who showed the relationship transformational leadership had with these outcomes (Humphrey, 2012; Piccolo & Colquitt, 2006; Wang et al., 2005).

Limitations Two limitations existed in the pilot study, which the researcher addressed in the research study. First, sampling occurred via an online tool in which people self-identified as being part of the target population and completed the survey for a fee. Some respondents may have been dishonest when answering screening questions in an attempt to access the survey and be paid. For this research study, the researcher minimized this limitation by utilizing Qualtrics organization's database to solicit participation from people who have pre-identified as meeting the criteria outlined to be considered in the research study's population.

In this study, the researcher also did not account for personal attributes that may affect employee engagement. Previous researchers have shown that age (James et al., 2011; Pitt-Catsouphes & Matz-Costa, 2008; Terry et al., 2013), organization tenure (Bal et al., 2013), sex (Terry et al., 2013), ethnicity (Jones & Harter, 2005), and income level

(J, 2014) may influence engagement. This research study involved these personal attributes as control variables.

Implications for the research study Findings from this study were significant for the development of the research study methodology. Findings from the measurement model indicated that the measures used in this study were appropriate for use in the research study. Transformational leadership was not measured in the research study. The lack of discriminant validity of transformational leadership to supervisor engagement and low factor loading of the individualized support subscale for transformational leadership led the researcher to conclude that it was best to not measure transformational leadership in this research study.

Design of the Study

This study was a cross-sectional, correlational design that was quantitative and observational in nature. The design was observational, since the researcher did not intend to make any intervention to administer to the sample group. The design was also cross-sectional because data collection occurred once. Although researchers have recommended more longitudinal, experimental research study designs for employee engagement instead of cross-sectional, correlational designs (Christian et al., 2011; Crawford et al., 2010; Rich et al., 2010), the researcher for this study proposed that a cross-sectional, correlational design be used to establish an initial relationship among study constructs. If a relationship was established, future researchers could explore a longitudinal and experimental research design to test potential causation.

Population and Sample

For the study, the population included nonsupervisory employees who work at least 30 hours (usually) for one organization. These individuals had to be at least 18 years old, live and work in the United States, and speak English. Since the survey measures perceived engagement of only one supervisor, the population also included those who have worked for the same supervisor for the six months prior to being administered the survey. An appropriate sample size for the study was calculated using methods proposed by MacCallum, Browne, and Sugawara (1996) and Kim (2005) for using the RMSEA fit indices. In order to calculate the sample size, the degrees of freedom (*df*) was set at 249, the alpha level (α) was set at 0.05, the power level at 0.80, the RMSEA for the null hypothesis (H_0) at 0.07, and the RMSEA for the alternative hypothesis (H_a) at 0.06. The researcher entered these parameters into quantpsy.org, where an R syntax code was produced (Preacher & Coffman, 2006). Once the syntax code was entered into R, the appropriate sample size was determined to be 338. In order to account for potential outliers, the researcher collected 360 responses. The researcher utilized Qualtrics organization's online sampling system to find participants to serve as the random sample.

Instrumentation

The study included four scales to measure employee engagement, task performance, and organizational citizenship behavior, individual, and organizational citizenship behavior, organization. The researcher tested the scale by Rich et al. (2010) to measure employee engagement. This scale consists of 18 items on a 5-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). This scale has three subscales

(physical, cognitive, and emotional engagement) to measure the three components of engagement identified by Kahn (1990). Rich et al. (2010) developed this scale and the corresponding subscales because the researchers believed a need existed for "a measure that maps more precisely onto Kahn's conceptualization" (p. 623) of engagement as being physical, emotional, and cognitive. Rich et al. (2010) found that internal consistency reliabilities ranged from .89 to .94 for the subscales; the entire scale's internal consistency reliability was found to be .95. Employees took a variation of the survey twice: (a) once to measure their own engagement, and (b) then wording was modified (e.g., from "I" to "My supervisor") to measure the employee's perception of his or her supervisor's engagement. Chaurasia and Shukla (2013) utilized this scale and found internal consistency reliabilities of .95 for physical engagement, .95 for cognitive engagement, and .95 for emotional engagement.

The researcher measured task performance with the scale developed by Janssen and Van Yperen (2004). This scale contains five items measured on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). One scale item is reverse coded ("I often fail to perform essential duties"). Soane et al. (2012) used this scale and found an internal consistency reliability of .80, and Alfes et al. (2013) noted an internal consistency reliability of .81.

Organizational citizenship behavior was measured by two scales developed by Lee and Allen (2002). One scale measures organizational citizenship behavior, individual (OCBI) and the other measures organizational citizenship behavior, organization (OCBO). Each scale has eight items measured on a 7-point frequency scale ranging from

never to *always*. Two scales for organizational citizenship behavior were appropriate since organization citizenship behavior can be conceptualized "in terms of the intended target or beneficiary of the citizenship behavior" (Lee & Allen, 2002, p. 135). Internal consistency reliability for OCBI and OCBO were found to be .83 and .88 respectively (Lee & Allen, 2002). Saks (2006) utilized the scale and found an internal consistency reliability of .75 for the OCBI scale and .73 for the OCBO scale, while Soane et al. (2012) utilized four of the items from the OCBO scale and found an internal consistency reliability of .85.

Data Collection Procedures

Approval from UT Tyler's Institutional Review Board was gained prior to administering the survey. The administration of the survey occurred online and those who participated in the survey were able to do so in a setting of their choice. UT Tyler's Qualtrics survey system helped create the survey. The researcher used Qualtrics organization's online sampling system database of potential study participants to find respondents to serve as the random survey sample. This organization was chosen instead of other sampling methods, such as convenience sampling, because it ensured participant confidentiality. In addition, Qualtrics prescreens each person prior to each person receiving the authorization to complete surveys in the online sampling system. This prescreening occurs when one requests to be a participant with Qualtrics. Before one is authorized to use the Qualtrics online sampling system, one must verify his or her physical and personal e-mail address and answer demographic questions. Once this process is successfully completed, that person gains approval to complete surveys in the

database. Qualtrics utilizes this prescreened information to ensure that survey respondents are in a researcher's target population. Each potential survey participant has a password-protected account to access the Online Sampling System and receives a personal e-mail notification when a qualified survey is available to him or her. For the research study, Qualtrics paid respondents $1 to take the survey.

The researcher uploaded a link from the UT Tyler Qualtrics survey system into the Qualtrics online sampling system. An e-mail from a Qualtrics employee was sent to those in the Qualtrics database who were eligible to complete the survey. People who received an e-mail did not know why they qualified as eligible to participate in the survey.

Although Qualtrics does prescreen participants, the first seven questions of the survey are screening questions to validate one's membership in the target population. Those who are not members of the target population were not allowed access to the survey. A total of 360 complete responses were used for data analysis.

Use of Qualtrics' online sampling system protected confidentiality, since Qualtrics maintained all personally identifiable information on respondents. Neither the researcher nor UT Tyler collected identifying information, such as a person's name, department, email address, computer number, or IP number. The researcher received the data collected from Qualtrics' online sampling system with unique participant identifiers known only by Qualtrics personnel.

Participation in this research study was completely voluntary. If one decided to participate in the study, he or she was directed to the informed consent page of the survey

that reviewed the survey's purpose, instructions, and efforts to maintain privacy. If one did not give informed consent, the system exited the person from the survey. If one did give informed consent, the person was directed to the next page where the survey began. Once one started the survey, he or she could withdraw at any time without consequence by closing the browser. Each research participant provided informed consent prior to beginning the survey. Survey instructions clarified efforts to maintain confidentiality and stated that responses were only shared with the researcher and appropriate UT Tyler personnel.

The online survey started with screening questions to ensure employees were in the target population, and included questions related to demographics and control variables. The definition of a supervisor was provided to help participants make the correct choice when answering this screening question. After the screening and demographic questions, the participants answered multiple-choice questions from the instruments with response choices as outlined previously. Instructions indicated that responses should be based on experiences within the past six months. The survey was based on experiences within the past six months to ensure participants had an adequate timeframe to consider when completing the survey.

The survey took an average of 8–9 minutes to complete. Participants had to take the survey all at once (there was no option to pause the survey). After a respondent read each question or statement, he or she clicked the button to the desired response. Questions were across multiple pages, so the respondent had to scroll down the page to answer all the questions, click the FORWARD button to continue after each page, and

then click FINISH when finished. At any time prior to clicking FINISH, a respondent could click the BACK button to go back to a previous page, or close the browser to withdraw.

Three attention filter questions were in the survey to ensure that participants read questions correctly and followed instructions when completing the survey. These attention filter questions said, “This is a filter question” and indicated a response for a participant to select. Those who did not answer all three filter questions correctly were allowed to complete the survey; however, the submission was not considered a complete response to use for data analysis. Further, the person was not compensated for the survey. A survey participant would be notified by a Qualtrics employee that he or she would not be compensated for the survey after survey competition.

To ensure participants read questions correctly and thoroughly, the researcher established the median time it took for each participant to complete the survey after collecting 36 initial responses. Of the first 36, those who did not complete the survey in one-third of the median time established, two minutes and 50 seconds, were still counted as a completed response to include in the data set. The median time established was in effect for further responses. Responses continued to be collected until the researcher received 360 completed surveys, as indicated by respondents who answered all survey and filter questions completely, and completed the survey in at least one-third of the median time established. Again, the survey participant was notified by a Qualtrics employee that he or she would not be compensated for the survey only after survey competition.

Once all responses were collected, the data was available on the Qualtrics survey site to be downloaded by the researcher. The researcher has stored the data from the surveys and analyses performed on the hard drive of a password-protected computer, owned by the researcher, in a password-protected file. Only the researcher knows the passwords.

Data Analysis Procedures

The researcher entered and analyzed data using SPSS 22 and AMOS 23 for Windows. The researcher used SEM as the analysis method for the study. Structural equation modeling is a type of statistical analysis based on the general linear model and considered appropriate for social science research when multiple observed variables make up a latent variable and can be tested on another latent variable (Ullman, 2006). Structural equation modeling allows for measured variables from a scale to be assessed as indicators of a latent construct (Ullman, 2006). The latent construct is free of the measurement error associated with measured variables (Ullman, 2006). The removal of measurement error is an advantage of using SEM (Ullman, 2006). The removal of measurement error leaves only common variance, allowing for better measurement of reliability (Ullman, 2006). Other advantages of SEM are the ability to test complex relationships and perform analysis on constructs (Ullman, 2006). The robustness of analysis provided with SEM is why this study involved the method.

Once all survey responses were received, the researcher reviewed the data prior to performing any analysis. First, the researcher verified that respondents completed the survey in the minimum time established. Second, answers to screening questions were

verified to ensure that respondents were in the target population. Third, data review occurred to ensure participants answered all survey questions. Fourth, the researcher verified that participants answered filter questions correctly. Fifth, the researcher examined data to ensure a respondent did not answer all questions with only one or two answer choices.

Prior to analysis, the researcher assessed the assumptions of SEM. The assumptions of SEM include multivariate normality, the absence of multicollinearity, and ensuring that a large enough sample size exists. Multivariate normality assumes a normal bell curve distribution between the independent variables and the dependent variables. The researcher assessed multivariate normality by examination of Q-Q plots (Tabachnick & Fidell, 2012). As previously discussed, a power analysis determined that a sample size of 338 participants was required to meet the sample size assumption. The absence of multicollinearity assumes that predictor variables are not too closely related and was assessed with the correlation matrix of all variables (Tabachnick & Fidell, 2012). Multicollinearity exists if a correlation is above .9 (Tabachnick & Fidell, 2012).

For the different study variables, SPSS helped calculate a mean score for each respondent. The employee engagement scale had mean scores for perceived supervisor engagement and one's own engagement. Subscale scores for supervisor engagement and one's own engagement were also calculated. The researcher performed an analysis on each variable to better understand its distribution, mean, median, mode, range, and standard deviation. The presence of outliers were tested by the examination of standardized value. Standardized values represent the number of standard deviations the

value is from the mean. Values greater than 3.29 standard deviations from the mean are considered to be outliers and may be removed from the data set (Tabachnick & Fidell, 2012)

For the entire data set, demographic data were assessed. This data included gender, age, education level, ethnicity, household income before taxes, industry, role in organization, tenure at organization, type of organization (i.e., public sector, private sector, or not-for-profit), total number of employees in the organization, time working for the current supervisor, and number of employees the supervisor oversees. The researcher used SPSS to calculate frequencies, distributions, medians, and modes.

Cronbach's alpha reliability was conducted on the study variables using SPSS. In order to present acceptable reliability, through Cronbach's alpha reliability measure, the scores should be above .70 (George & Mallery, 2010). The researcher conducted exploratory factor analysis (EFA) to examine the factor structure. The optimum number of factors for the model was determined based on eigenvalues. Factor loadings were also examined to ensure all were within the 0.32 criterion for reporting a loading, which equated to approximately 10% of the variance in a construct (Costello & Osborne, 2005).

The researcher performed confirmatory factor analysis in AMOS to assess model identification and correlation and to further assess reliability and validity. Modification indices were added to the model as appropriate to improve model fit. In addition, the researcher calculated AVE, square root of AVE, and composite reliability (CR).

The researcher also tested for common method bias during confirmatory factor analysis. Common method variance (bias) occurs because of the measurement method,

rather than the constructs, that are tested (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The Harman (1960) single-factor method tested for common method bias. The researcher used a confirmatory factor analysis in AMOS to load all of the variables onto one single factor. If the difference in variance for a variable with and without the single factor present is higher than 25%, this may signify common method bias for that variable. Remedy was taken into account for this common method bias during SEM.

In order to test the hypotheses, SEM was conducted in AMOS. The software fit the data to the study model (see Figure 2), and the results produced included overall model fit statistics and parameter estimates. Using AMOS, maximum-likelihood estimation estimated path coefficients and fit data to the model (Kupek, 2005, 2006). Model fitting involved testing the predictive power of the variables while using the sample covariance matrix (Gerstoft, Menon, Hodgkiss, & Mecklenbräuker, 2012). Construct validity was tested by examining the results of two model fit indices, the CFI and non-normed fit index (also known as the Tucker-Lewis Index or TLI). In order to determine whether or not the model fits the data in an acceptable manner, the researcher calculated the RMSEA. The RMSEA measures the discrepancy per degree of freedom; it measures the average amount of misfit in the model with ≤ 0.05 being considered a close fit and ≤ 0.08 a reasonable fit (Kline, 2005; Schumacker & Lomax, 2010). However, Hu and Bentler (1999) recommended statistical scores of .06 or lower to assess fit. In this study, the researcher also performed the chi-square test, which is an absolute test of model fit (Kline, 2005). Browne and Cudeck (1993) recommended a probability value (p) above .05. Model fit is evaluated with a range from 0 to 1, with 1 suggesting a perfect fit.

The CFI and TLI values ≥ .90 suggest of a good fit (Kline, 2011; Schumacker & Lomax, 2010). Schumaker and Lomax (2010) and Barret (2007) suggested CFI and TLI with values ≥ .90 indicate model fit. The path coefficients were used to assess each hypothesis. The researcher used the signs of the path coefficient (positive or negative) and a significant p-value ($p < .05$) to reject or fail to reject each hypothesis. The value of each path coefficient provided information on the strength of the effect of one variable to another variable.

Control variables For the study, the control variables used were age, organizational tenure, sex, ethnicity, and income. James et al. (2011); Pitt-Catsouphes and Matz-Costa (2008), and Terry et al. (2013) have found that age can affect one's employee engagement. In other studies regarding employee engagement (Alfes et al., 2013; Bal et al., 2013; Janssen & Van Yperen, 2004), researchers have used age as one of the control variables. In the survey, participants indicated one of the following age groups, 18–29, 30–49, 50–64, and 65 years or older.

Bal et al. (2013) found that one's tenure in an organization may affect what engages one to reach certain organization outcomes. Since this researcher explored the effect of engagement on organization outcomes, tenure was appropriate to use as a control variable. The survey asked if employees have been in their organization for less than one year, 1–5 years, 5–10 years, 10–20 years, 20–30 years, or more than 30 years.

Terry et al. (2013) found that one's gender may influence one's engagement. This control variable has also been used by Alfes et al. (2013), Janssen and Van Yperen

(2004), and Bal et al. (2013). The survey included this measure by asking respondents to identify as male or female.

Jones and Harter (2005) indicated one's ethnicity may influence employee engagement and the survey measured ethnicity by asking respondents to identify as White, Hispanic or Latino, Black or African American, Native American or American Indian, Asian or Pacific Islander, or other. Researchers have also found income level to influence employee engagement (J, 2014). The survey measured income level by asking if one's current annual income before taxes is under $19,999, $20,000–$39,999, $40,000–$59,999, $60,000–$79,999, $80,000–$99,999, $100,000–$150,000, or more than $150,000.

Correlation analyses Additional analyses were run on questions from the Study Screening and PreSurvey Questionnaire (see Appendix D). A correlation matrix using Pearson correlations were made to test the relationship of these additional questions (level of education, role in organization, industry, total employees in the organization, time working for current supervisor, type of organization, and number of employees supervisor oversees) with the study variables.

Pearson correlation (r) is a bivariate measure of association (strength) of the relationship between two variables (Pagano, 2009). When researchers seek to assess the relationships, or how the distribution of the z scores vary, Pearson correlations were the appropriate statistic (Pagano, 2009). Correlation coefficients can vary from 0 (no relationship) to +1 (perfect positive linear relationship) or -1 (perfect negative linear relationship). Positive coefficients indicate a direct relationship—as one variable

increases, the other variable also increases. Negative correlation coefficients indicate an inverse relationship—as one variable increases, the other variable decreases. The analysis involved Cohen's standard (Cohen, 1988) to evaluate the correlation coefficient to determine the strength of the relationship, where coefficients with an absolute value between .10 and .29 represent a small relationship, coefficients with an absolute value between .30 and .49 represent a medium relationship, and coefficients with an absolute value above .50 represent a large relationship.

The assumptions of Pearson correlation were assessed, including linearity and homoscedasticity. Linearity assumes a straight-line relationship between the independent and dependent variables and homoscedasticity assumes that scores are normally distributed about the regression line. The researcher assessed linearity and homoscedasticity by examination of scatter plots (Stevens, 2009).

Reliability and Validity

For the research study, Cronbach's alpha tests of reliability and internal consistency were conducted on each of the variables that make up the factors in SPSS. Also known as the *coefficient alpha*, the Cronbach's alpha provides the mean correlation between each pair of items and the number of items in a scale (Brace, Kemp, & Snelgar, 2006). The researcher evaluated Cronbach's alpha coefficients using the guidelines suggested by George and Mallery (2010), where values 0.9 or greater indicate excellent reliability, values ranging from 0.8 to .089 indicate good reliability, values ranging from 0.7 to .79 indicate acceptable reliability, values ranging from 0.6 to .69 indicate questionable reliability, values ranging from 0.5 to .59 indicate poor reliability, and

values less than 0.5 indicate unacceptable reliability. The researcher also assessed composite reliability of the construct to determine how well each variable loaded onto their respective constructs. This analysis followed the guidelines used by George and Mallery (2010) to assess Cronbach's alpha for composite reliability.

The use of random sampling improved the external validity of this study. The use of screening questions in the survey, in addition to the Qualtrics participant screening, attention filter questions, and minimum survey completion time aided in the collection of accurate responses from the sample group, which furthered the study's external validity. Results from the second pilot study determined the appropriate scale composite reliability, convergent validity, and discriminant validity. As part of the research study, data collected reassessed appropriate convergent validity and discriminant validity. The researcher calculated AVE to determine convergent validity, with values above .5 indicating appropriate convergent validity (Fornell & Larcker, 1981). The researcher calculated discriminant validity by examining the implied correlations and square root of the AVE. Implied correlation values higher that the square root of the AVE indicate a lack of discriminant validity (Zait & Bertea, 2011).

Limitations

Several limitations are inherent within the scope of any quantitative study. Foremost, the use of a quantitative method allowed the researcher to address the research question and hypotheses. However, this method did not allow examination of the depth and underlying detail of why a hypothesis is supported or not supported (Mitchell & Jolley, 2001). Thus, in this study the researcher traded a degree of richness within the

results for a degree of statistical certainty that associations did not occur by chance alone, and an ability to examine the numerical change in these associations.

Another limitation of the study was the time that respondents referenced when responding to survey questions. This study only involved consideration of experiences within the previous six months of the survey. As mentioned previously, the survey was based on experiences within the past six months to ensure participants had an adequate timeframe to consider when completing the survey. Based on this, the results are only applicable to a limited period of one's employment. The researcher only sought respondents from the United States, which limits generalizability of results to those who work and live in the United States. In addition, known antecedents of employee engagement exist (Bakker et al., 2007; Christian et al., 2011; Mauno et al., 2007; Rich et al., 2010) that were not tested in this study. Although the researcher did control for some known antecedents, it was not feasible to control for all the known antecedents of employee engagement.

Power analysis results indicated the desirable sample size for a .80 power was 338. The researcher added 22 additional participant responses to account for potential outliers. During data analysis, 47 participants were removed from the dataset because they were outliers, according to the guidance from Tabachnick and Fidell (2012). Power analysis conducted based on the actual 313 participants was determined to be .77, slightly below the .80 recommended value.

Summary of the Chapter

This chapter included a review of the purpose of the study, research question and hypotheses, overview of two pilot studies, design of the study, population and sample, instrumentation, data collection procedures, data analysis procedures, reliability and validity, and limitations. The study was a cross-sectional, correlational design that was quantitative and observational to examine the research model. A random sample of 360 employees was taken using the UT Tyler Qualtrics survey system to collect responses and Qualtrics administered the study survey and find respondents in the target population. This study involved four scales developed by other researchers, and SEM helped to analyze the data. The control variables in the study were age, organizational tenure, gender, ethnicity, and income. Limitations of the study included using a solely quantitative study design, the timeframe respondents were asked to consider for their responses, seeking only United States respondents, antecedents of employee engagement that cannot be accounted for in the study, and the potential to not collect the desired number of responses.

Chapter 4

Results

The purpose of this study was to examine how employees' perceptions of their supervisor's engagement affects the engagement of the employee and organizational outcomes of task performance, organizational citizenship behavior toward the individual, and organizational citizenship behavior toward the organization. This chapter begins with a description of how data cleaning occurred, how constructs were made, and the reliability of those constructs. The chapter then presents a description of the participant sample and a detailed description of the data analysis and results.

Data Cleaning

Prior to conducting the analyses, the researcher screened the data for quality, including missing values, non-normality, and outliers. A total of 962 participants were examined through survey responses. Of those, 602 participants were removed for analysis. Twenty-five people did not complete all survey items. Of the respondents, 11 did not give consent to the survey, nine were removed because they only had one person in their organization, indicating that they did not have a direct supervisor, and 60 were removed because they did not answer one of the attention filters correctly. In addition, the researcher removed 60 people because they worked less than 30 hours a week, 26 because they had worked for their supervisor for less than the six month minimum established for the survey, and 408 because they indicated that they were in some level of management. Last, the researcher removed two people because they did not live in the United States, and one person because he or she did not work in the United States. The

remaining 360 participants completed the survey in the minimum time established of two minutes and 50 seconds and answered all questions with more than one or two answer choices.

A major assumption of factor analysis states that the data follow a multivariate normal distribution. In order to assess multivariate normality, the Mahalanobis distances were calculated and plotted against their corresponding Chi-Square distribution percentiles (Schmidt & Hunter, 2003). The resulting scatterplot is similar to a univariate normal Q-Q plot, where deviations from a straight line show evidence of non-normality. The data indicated only slight deviations from normality and no multivariate outliers, so both assumptions were met. Figure 5 shows the Chi-Square Q-Q scatterplot.

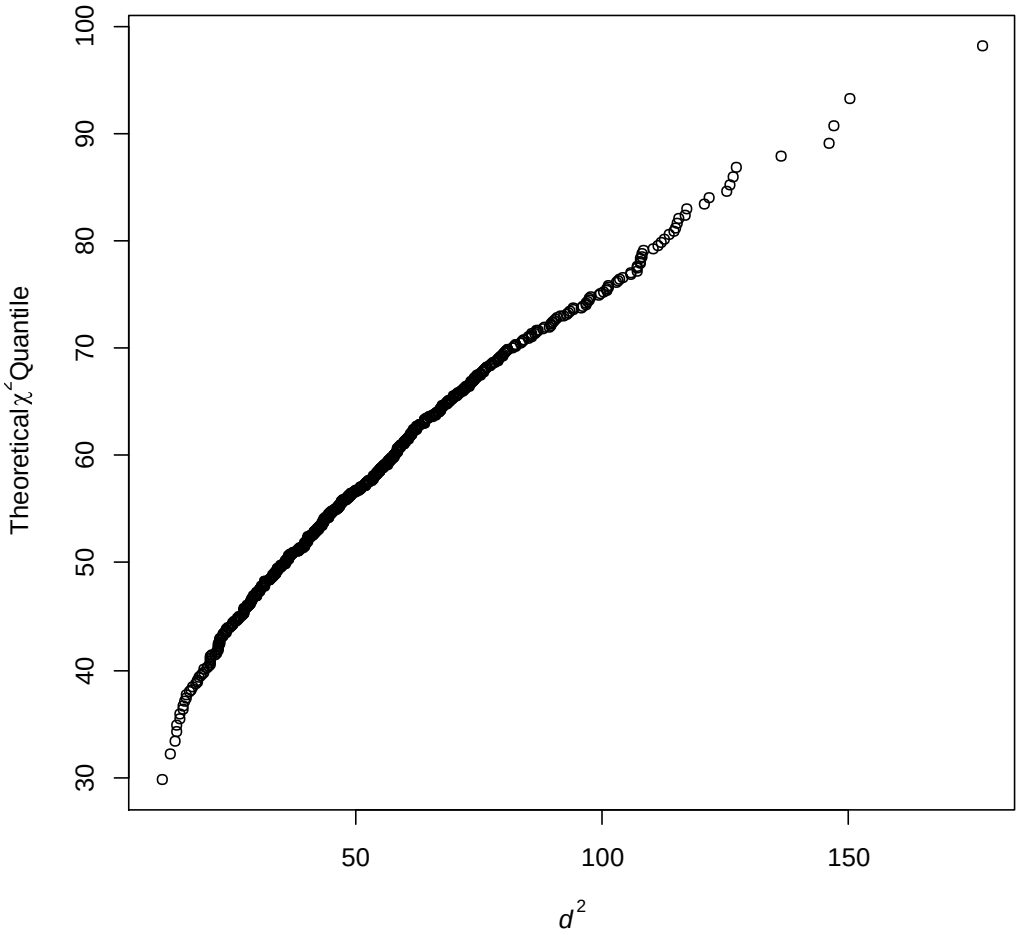

Figure 5. Chi-Square Q-Q scatterplot of squared Mahalanobis distances.

The remaining data points were screened for univariate outliers. The examination of outliers was tested by creating standardized residuals for each scale of interest and examining cases for values that fell above 3.29 and values that fell below -3.29 (Tabachnick & Fidell, 2012). Based on these standardized values, 47 additional participants were removed from the dataset and not included in the following analyses. The data from the remaining 313 participants formed the final data analyses. The researcher conducted a second power analysis based on the actual 313 participants used

in the analyses. The power for the 313 was determined to be .77, slightly below the .80 recommended value.

The assumption of the absence of multicollinearity of the data was also examined. Multicollinearity exists if a correlation in the correlation matrix is above .9 (Tabachnick & Fidell, 2012). The researcher found that the data had an absence of multicollinearity.

Descriptive Statistics

The data consisted of 313 observations measured on 75 variables. The researcher conducted descriptive statistics on the overall sample and frequencies and percentages for categorical variables. All participants were U.S. residents (*n* = 313, 100.0%) and worked in the U.S. (*n* = 313, 100.0%). All participants worked for their organization 30 hours or more a week (*n* = 313, 100.0%). The majority of the participants were female (*n* = 231, 73.8%). The majority of participants were also White (*n* = 246, 78.6%). Most participants (*n* = 178, 56.9%) were in the 30 to 49-year age range, with 24.6% (*n* = 77) of participants being 18–29 years old, 17.3% (*n* = 54) of participants being 50–64 years old, and 1.3% (*n* = 4) being 65 years of age or older. The two largest roles in the organizations of participants were administrative staff (*n* = 103, 32.9%) and trained professional (*n* = 111, 35.5%). Other categories included skilled laborer (*n* = 77, 24.6%), consultant (*n* = 12, 3.8%), temporary employee, (*n* = 3, 1.0%), researcher (*n* = 3, 1.0%), and self-employed (*n* = 4, 1.3%). The most frequent response for how long one worked for their current supervisor was one to three years (*n* = 109, 34.8%). Regarding time at the organization, one to five years (*n* = 145, 46.3%) was the most frequent response, followed by six to 10 years (*n* = 83, 26.5%). The most frequent response to organization size was for the 100 to

499 range (*n* = 75, 24.0%). The highest level of education was primarily some college (*n* = 75, 24.0%) and an undergraduate degree (*n* = 88, 28.1%). Most participants worked for a for-profit organization (*n* = 217, 69.3%). Household income was primarily spread across the $20,000–$39,999 (*n* = 75, 24.0%), $40,000–$59,999 (*n* = 98, 31.3%), and $60,000–$79,999 (*n* = 53, 16.9%) ranges. The two most common industry types were health care (*n* = 59, 18.8%) and professional services (*n* = 59, 18.8%). Finally, the most frequent response to the number of people one's supervisor oversaw was 21 or more people (*n* = 89, 28.4%). Table 5 presents frequencies and percentages for all categorical variables.

Table 5. Frequencies and Percentages for Demographic Variables

Variable	*n*	*%*
U.S. Resident		
Yes	313	100.0
No	0	0.0
Work in United States		
Yes	313	100.0
No	0	0.0
Gender		
Male	82	26.2
Female	231	73.8
Age		
18–29 years	77	24.6
30–49 years	178	56.9
50–64 years	54	17.3
65 years or over	4	1.3
Role in Organization		
Administrative Staff	103	32.9
Trained Professional	111	35.5

Skilled Laborer	77	24.6
Consultant	12	3.8
Temporary Employee	3	1.0
Researcher	3	1.0
Self-Employed	4	1.3
Time with Current Supervisor		
6 months–1 year	31	9.9
1–3 years	109	34.8
4–5 years	78	24.9
6–8 years	31	9.9
8–10 years	23	7.3
More than 10 years	41	13.1
Number of People in Organization		
2–9	25	8.0
10–50	46	14.7
51–99	32	10.2
100–499	75	24.0
500–999	29	9.3
1000–4999	46	14.7
5000+	60	19.2
Level of Education		
Some High School	5	1.6
High School Graduate	59	18.8
Some College	75	24.0
Trade/Technical/Vocational Training/Certification	38	12.1
Undergraduate Degree	88	28.1
Some Postgraduate Work	12	3.8
Post Graduate Degree	36	11.5
Ethnicity		
White	246	78.6
Hispanic or Latino	25	8.0
Black or African American	24	7.7
Native American or American Indian	1	0.3
Asian/Pacific Islander	16	5.1
Other	1	0.3
Household Income		

Under $19,999	11	3.5
$20,000 - $39,999	75	24.0
$40,000 - $59,999	98	31.3
$60,000 - $79,999	53	16.9
$80,000 - $99,999	11	3.5
$75,000 - $99,999	27	8.6
$100,000 - $150,000	28	8.9
Over $150,000	10	3.2
Time with Organization		
Less than 1 years	21	6.7
1–5 years	145	46.3
6–10 years	83	26.5
11–20 years	40	12.8
21–30 years	16	5.1
More than 30 years	8	2.6
Industry Type		
Aerospace/Defense	1	0.3
Construction	16	5.1
Finance/Banking/Insurance	16	5.1
Hotel/Restaurant	12	3.8
Healthcare	59	18.8
Manufacturing	36	11.5
Mining/Oil and Gas	3	1.0
Professional Services	59	18.8
Retail Sales	36	11.5
Real Estate	4	1.3
Transportation/Warehousing	14	4.5
Travel/Entertainment	4	1.3
Waste Management	1	0.3
Wholesale Trade	7	2.2
Education	45	14.4
Type of Organization		
For-Profit	217	69.3
Non-for-Profit	54	17.3
Federal Government	4	1.3
State Government	24	7.7
Local Government	14	4.5

Number of People Under Supervisor		
1–5	58	18.5
6–10	71	22.7
11–15	52	16.6
16–20	43	13.7
21 and older	89	28.4

Note. Percentages may not sum to 100 due to rounding.

Cronbach's Alpha

The researcher calculated Cronbach's alpha values for the items in each construct. The coefficients were evaluated using the guidelines suggested by George and Mallery (2010), where values 0.9 or higher indicate excellent reliability, values ranging from 0.8 to .89 indicate good reliability, values ranging from 0.7 to .79 indicate acceptable reliability, values ranging from 0.6 to .69 indicate questionable reliability, values ranging from 0.5 to .59 indicate poor reliability, and values less than 0.5 indicate unacceptable reliability. The employee engagement (EE) construct was represented by 18 items (Q16–Q29, Q31–Q34). The employee engagement scale has subscales for physical engagement (EPE, Q16–Q21), emotional engagement (EEE, Q22–Q27), and cognitive engagement (ECE, Q28–29, Q31–Q34). The alpha for EE ($\alpha = 0.93$) indicated excellent reliability. The subscale alpha for EPE ($\alpha = 0.83$) indicated good reliability. The subscale alphas for EEE ($\alpha = 0.90$) and ECE ($\alpha = 0.91$) both indicate excellent reliability. Eight items represented the organizational citizenship behavior, individual (OCBI) construct (Q35–Q42). The alpha for OCBI ($\alpha = 0.87$) indicated good reliability. Eight items represented the organizational citizenship behavior, organization (OCBO) construct (Q43–Q48 and Q50–Q51). The alpha for OCBO ($\alpha = 0.89$) indicated good reliability. Five items represented the construct task performance (TP; Q52–Q56). The researcher reverse coded

Q56 on the survey, so for analysis this item was recoded in SPSS to be consistent with the other items. The alpha for TP ($\alpha = 0.84$) indicated good reliability. The final construct, supervisor engagement (SE), was made up of 18 items (Q57–Q68, Q70–75). The supervisor engagement scale has subscales for physical engagement (SPE, Q57–Q62), emotional engagement (SEE, Q63–Q68), and cognitive engagement (SCE, Q70–Q75). The alpha for SE ($\alpha = 0.98$) indicated excellent reliability. The subscale alphas for SPE ($\alpha = 0.97$), SEE ($\alpha = 0.95$), and SCE ($\alpha = 0.97$) also indicated excellent reliability. Table 6 lists the Cronbach's Alpha values for each of the constructs.

Table 6. Cronbach's Alpha Values for each Latent Construct

Construct	Standardized α	No. of Items
EE	0.93	18
EPE	0.83	6
EEE	0.90	6
ECE	0.91	6
OCBI	0.87	5
OCBO	0.89	8
TP	0.84	8
SE	0.98	18
SPE	0.97	6
SEE	0.95	6
SCE	0.97	6

Note. EE = Employee Engagement, EPE = Employee Physical Engagement, EEE = Employee Emotional Engagement, ECE = Employee Cognitive Engagement, OCBI = Organizational Citizenship Behavior, Individual, OCBO = Organizational Citizenship Behavior, Organization, TP = Task Performance, SE = Supervisor Engagement, SPE = Supervisor Physical Engagement, SEE = Supervisor Emotional Engagement, SCE = Supervisor Cognitive Engagement.

Exploratory Factor Analysis

Structural equation modeling was the analysis method most suited to investigating the hypotheses. Prior to conducting the structural equation model, the researcher conducted five different EFAs to examine the factor structure. The promax rotation

method helped to calculate the loadings on each of the constructs (Browne, 2001). To determine the optimal number of factors, the eigenvalues were calculated for the correlation matrix of all constructs. The first five eigenvalues were 13.34, 8.62, 4.62, 4.32, and 2.99. The Kaiser criterion states that the optimal number of factors is given by the number of eigenvalues above 1. However, the Kaiser rule is not absolute and frequently does not produce the most optimal result (Costello & Osborne, 2005). For this dataset, eigenvalues above two were used as the criterion. Each EFA showed that one factor could be drawn from each set of questions, suggesting that the optimal number of factors was five for this particular dataset.

Factor loadings The researcher examined the five factors for the model. A value of 0.32 served as the criterion for reporting a loading, which equates to approximately 10% of the variance in a construct (Costello & Osborne, 2005). The first factor had high loadings for all of the variables except Q16 (0.462). However, this was above the 0.32 threshold, so it was still used in the analyses. The second factor had high loadings for each of the variables, ranging from 0.599 to 0.796. The third factor also had high loadings for Q43 to Q51, ranging from 0.632 to 0.814. The fourth factor had high loadings for Q52 through Q56, ranging from .527 to 0817. The fifth factor showed extremely high loadings for Q57 through Q75 (*Min* = 0.730, *Max* = 0.923). Table 7 presents the loadings of the five factor solution, factor loadings below 0.32 are not shown. Table 8 presents the sum of squared loadings and proportion of variance in the constructs explained by each factor. The five factor solution accounted for a 56.8% of the total variance in the constructs.

Table 7. Factor Loadings for a Five Factor Solution

Variables	*Factor1*	*Factor2*	*Factor3*	*Factor 4*	*Factor 5*
Q16	.46				
Q17	.66				
Q18	.64				
Q19	.58				
Q20	.61				
Q21	.53				
Q22	.70				
Q23	.64				
Q24	.69				
Q25	.62				
Q26	.62				
Q27	.66				
Q28	.72				
Q29	.78				
Q31	.81				
Q32	.69				
Q33	.78				
Q34	.77				
Q35		.68			
Q36		.74			
Q37		.60			
Q38		.67			
Q39		.65			
Q40		.80			
Q41		.77			
Q42		.60			
Q43			.67		
Q44			.64		
Q45			.80		
Q46			.81		
Q47			.64		
Q48			.82		
Q50			.63		
Q51			.69		
Q52				.82	
Q53				.85	
Q54				.93	
Q55				.67	
Q56				.54	
Q57					.88
Q58					.92

Q59	.90
Q60	.91
Q61	.90
Q62	.87
Q63	.75
Q64	.79
Q65	.80
Q66	.74
Q67	.73
Q68	.75
Q70	.85
Q71	.89
Q72	.92
Q73	.84
Q74	.90
Q75	.91

Table 8. Cumulative Variance for a Five Factor Solution

Source	*Factor 1*	*Factor 2*	*Factor 3*	*Factor 4*	*Factor 5*
SS Loadings	8.06	3.82	4.13	2.99	13.00
Proportion of Variance	0.45	0.48	0.52	0.60	0.72
Cumulative Variance	0.09	0.19	0.29	0.42	0.57

Confirmatory Factor Analysis

The researcher conducted a confirmatory factor analysis (CFA) to determine whether the observed and latent variables for the overall model would be a good fit. The variables Q16 through Q29 and Q31 through Q34 were entered under the latent variable for employee engagement (EE). Because of the imbalance of scales, the study followed guidance from Piccolo and Colquitt (2006) such that the first order factor of employee engagement was used along with the second order factors of employee physical engagement (Q16–Q21), employee emotional engagement (Q22–Q27), and employee cognitive engagement (Q28–29, Q31–Q34). The variables for Q35 through Q42 were

entered under the latent variable for organizational citizenship behavior, individual (OCBI). The variables for Q43 to Q48 and Q50 to Q51 were entered under the latent variable for organizational citizenship behavior, organization (OCBO). The variables for Q52 through Q55 were entered under the latent variable for task performance (TP). Finally, the variables for Q57 to Q68 and Q70 to Q75 were entered under the latent variable for supervisor engagement (SE). Similar to employee engagement, the researcher addressed the imbalance of scales with guidance from Piccolo and Colquitt (2006) such that the first order factor of supervisor engagement was used along with the second order factors of supervisor physical engagement (Q57–Q62), supervisor emotional engagement (Q63–Q68), and supervisor cognitive engagement (Q70–Q75).

The initial results of the CFA did not show good model fit ($\chi^2(1529) = 4895.85$, $p < .001$, *CFI* = .79, *TLI* = .78, *RMSEA* = .08). A significant *p*-value for the Chi-square test indicated that the observed covariance matrix was significantly different from the implied model covariance matrix. In order to improve model fit, the researcher examined modification indices to determine which parameter constraints were significantly limiting the model fit of the observed covariance structure. Modification indices are indicators of how the model could be improved. The modification indices showed that certain error terms of the observed variables for all five latent variables could covary. The results of the CFA with the covariations showed much improved fit, ($\chi^2(1501) = 3340.83$, $p < .001$, *CFI* = .88, *TLI* = .88, *RMSEA* = .06). A good model fit is defined as having CFI and TLI values higher than .9 (Kline, 2011; Schumacker & Lomax, 2010) and an RMSEA value less than .06 (Hu & Bentler, 1999). The Chi-square test showed that the model did not fit

the data; however, the Chi-square test is based on sample size. The larger the sample size, the more likely the Chi-square test will be significant (Barrett, 2007). Since one of the assumptions of CFA and SEM demands a large enough sample size, it was more likely that the Chi-square test would be significant. The *p* value was significant for the delta Chi-square for the model with the modification indices and without the medication indices ($\Delta\chi^2 = 1555.02$, $p < .001$). This indicated that the model with modification indices was a better fit. The fit statistics showed that the CFA was reasonably specified, even though the RMSEA was right at the cutoff point, which indicated that the model with the modification indices had good overall fit. Table 9 presents a summary of the model iterations.

Table 9. Confirmatory Factor Analysis Fit Indices

CFA	χ^2	*df*	*p*	*CFI*	*TLI*	*RMSEA*
No MI	4895.85	1529	< .001	.79	.78	.08
MI	3340.83	1501	< .001	.88	.88	.06

Note. MI = Modification indices.

Once achieving an acceptable fit for the model, the researcher tested the common method bias. Common method bias was examined through Harman's (1960) single factor method. This method involves creating a single latent factor that loads onto all of the observed variables in the model. After creating the common latent factor and retesting the model, the researcher found that 16 different observed variables (Q57–61, Q64–Q75) had at least 25% of their variance because of common method bias. Table 10 presents the amount of variance represented by common method bias for each observed. Because these variables had at least 25% of their variance accounted for through common method

bias, the common latent factor needed to remain in the model for the structural equation model.

Table 10. Variance from Common Method Bias

Variables	Without CLF	With CLF	CMB
Q16	0.44	0.41	0.03
Q17	0.65	0.61	0.03
Q18	0.64	0.64	0.00
Q19	0.59	0.57	0.02
Q20	0.62	0.61	0.01
Q21	0.52	0.53	-0.01
Q22	0.64	0.61	0.03
Q23	0.56	0.51	0.06
Q24	0.66	0.61	0.04
Q25	0.58	0.48	0.10
Q26	0.55	0.45	0.10
Q27	0.59	0.51	0.07
Q28	0.73	0.67	0.06
Q29	0.81	0.78	0.03
Q31	0.83	0.78	0.05
Q32	0.68	0.64	0.05
Q33	0.81	0.78	0.03
Q34	0.81	0.76	0.04
Q35	0.66	0.66	0.00
Q36	0.74	0.73	0.01
Q37	0.60	0.60	0.00
Q38	0.69	0.68	0.01
Q39	0.68	0.64	0.03
Q40	0.78	0.78	0.00
Q41	0.75	0.75	0.00
Q42	0.61	0.61	0.00
Q43	0.69	0.69	0.00
Q44	0.65	0.59	0.06
Q45	0.80	0.75	0.05
Q46	0.78	0.71	0.07
Q47	0.66	0.67	-0.01
Q48	0.79	0.72	0.07
Q50	0.62	0.62	0.00
Q51	0.68	0.68	0.01

Q52	0.83	0.81	0.01
Q53	0.85	0.83	0.02
Q54	0.92	0.91	0.01
Q55	0.68	0.64	0.04
Q56	0.55	0.53	0.02
Q57	0.89	0.55	0.33*
Q58	0.93	0.59	0.34*
Q59	0.90	0.62	0.28*
Q60	0.92	0.60	0.31*
Q61	0.91	0.58	0.33*
Q62	0.88	0.64	0.24
Q63	0.71	0.48	0.23
Q64	0.75	0.46	0.29*
Q65	0.78	0.44	0.34*
Q66	0.70	0.33	0.38*
Q67	0.69	0.32	0.37*
Q68	0.71	0.41	0.31*
Q70	0.84	0.17	0.67*
Q71	0.89	0.23	0.67*
Q72	0.92	0.27	0.65*
Q73	0.85	0.29	0.56*
Q74	0.90	0.24	0.66*
Q75	0.91	0.30	0.61*

Note. * indicates variance that is greater than or equal to 25%.

Structural Equation Model

In order to address the research questions, the researcher conducted a SEM using a five factor model for employee engagement (EE), organizational citizenship behavior, individual (OCBI), organizational citizenship behavior, organization (OCBO), task performance (TP), and supervisor engagement (SE). These five factors were created using the same variables from the CFA. Table 6 presents the proposed model.

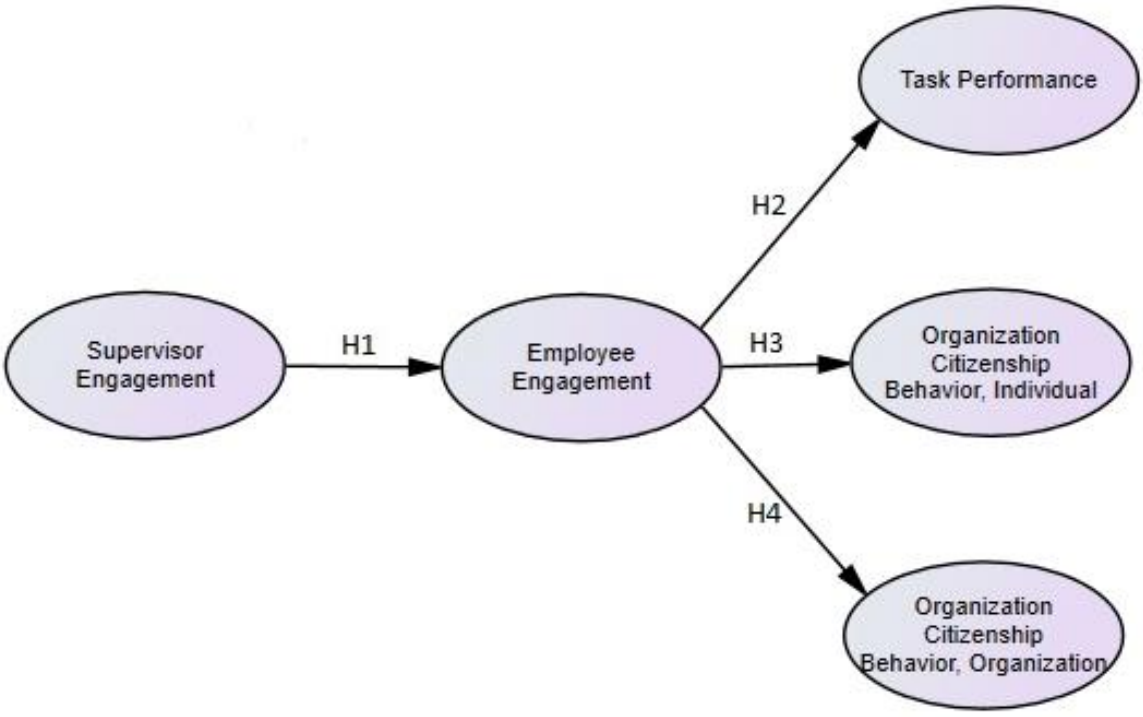

Figure 6. Proposed five factor structural equation model.

Model specification The initial results of the model did show good model fit ($\chi^2(1447) = 2636.78$, $p < .001$, *CFI* = .92, *TLI* = .92, *RMSEA* = .05). A significant *p* value for the Chi-square test indicates that the observed covariance matrix is significantly different from the implied model covariance matrix. The Chi-square test showed that the model did not fit the data, although the fit statistics showed that the model was reasonably specified. However, the results of the model are without the control variables (age, income, organizational tenure, sex, and ethnicity). The researcher added the variables for age (Q5), gender (Q8), ethnicity (Q10), income (Q11), and organizational tenure (Q12) into the model. The results of the model with the control variables showed similar model fit, ($\Delta\chi^2(1722) = 3027.42$, $p < .001$, *CFI* = .92, *TLI* = .91, RMSEA = .05). Based on the same parameters used above, the Chi-square test showed that the model did

not fit the data. However, the fit statistics show that the model was a good fit. The *p* value was significant for the delta Chi-square for the model with the control variables and without the control variables ($\chi^2 = 390.64$, $p < .001$). This indicated that the model with the control variables was a better fit. Table 11 presents a summary of the model with and without the controls.

Table 11. Model Fit Statistics for the Model

SEM	χ^2	*df*	*p*	*CFI*	*TLI*	*RMSEA*
No Control	2636.78	1447	< .001	.92	.92	.05
Control	3027.42	1722	< .001	.92	.91	.05

Factor loadings After re-specifying the model with the control variables, the researcher examined the factor loadings and regression estimates. For the EE latent construct, Q16 was an intercept term for the EPE subscale, Q22 was an intercept for the EEE subscale, and Q28 was an intercept for the ECE subscale. The questions used as the intercept term formed the baseline for the scale of all other indicators of the question's construct, and therefore a *p* value was not estimated. Q16 had a loading of .48, Q22 had a loading of .80, and Q28 had a loading of .70. Loadings for EE ranged from 0.48 to 0.82 and were all significant (all *p*'s < .001). For the OCBI latent construct, Q39 had a standardized loading of 0.65 and was used as the intercept. The remaining variables had low to medium loadings on OCBI with standardized loadings ranging from 0.60 to 0.79. All of the loadings were significant (*p*'s < .001). For the OCBO latent construct, the intercept consisted of the Q47 variable, which had a standardized loading of 0.66. The variables for Q46 ($p = .488$) and Q48 ($p = .628$) did not significantly load onto the OCBO latent construct. All of the loadings were significant (*p*'s < .001), with loadings ranging

from .61 to .77. For the TP latent construct, the intercept consisted of the Q52 variable, which had a standardized loading of 0.82. The remaining variables significantly loaded (all *p*'s < .001) onto the TP latent construct, with loadings ranging from .53 to .91. After re-specifying the model with the control variables, the researcher examined the factor loadings and regression estimates. For the SE latent construct, Q62 was an intercept term for the EPE subscale, Q68 was an intercept term for the EEE subscale, and Q75 was an intercept term for the ECE subscale. In addition, Q62 had a loading of .75, Q68 had a loading of .51, and Q75 had a loading of .47. Loadings for SE ranged from .34 to .75 and were all significant (all *p*'s < .001). Table 12 presents all factor loadings.

Table 12. Structural Equation Model Factor Loadings for Model 3

Construct	*B*	*SE*	*z*	*p*
EE				
Q16	0.48			
Q17	0.76	0.18	8.15	< .001
Q18	0.70	0.15	7.84	< .001
Q19	0.69	0.14	7.81	< .001
Q20	0.74	0.14	8.05	< .001
Q21	0.61	0.17	8.08	< .001
Q22	0.80			
Q23	0.65	0.07	13.83	< .001
Q24	0.72	0.07	12.44	< .001
Q25	0.63	0.07	11.25	< .001
Q26	0.59	0.07	11.14	< .001
Q27	0.67	0.07	13.15	< .001
Q28	0.70			
Q29	0.82	0.07	14.59	< .001
Q31	0.82	0.06	14.79	< .001
Q32	0.65	0.09	11.48	< .001
Q33	0.80	0.06	14.30	< .001
Q34	0.80	0.06	14.33	< .001
OCBI				
Q35	0.67	0.11	10.52	< .001
Q36	0.74	0.11	11.47	< .001

Q37	0.60	0.14	9.54	< .001
Q38	0.68	0.10	10.68	< .001
Q39	0.65			
Q40	0.79	0.11	12.00	< .001
Q41	0.76	0.10	11.68	< .001
Q42	0.60	0.14	9.43	< .001
OCBO				
Q43	0.69	0.12	10.59	< .001
Q44	0.61	0.08	9.73	< .001
Q45	0.77	0.10	11.81	< .001
Q46	0.73	0.10	11.34	< .001
Q47	0.66			
Q48	0.74	0.09	11.41	< .001
Q50	0.61	0.10	9.51	< .001
Q51	0.68	0.10	10.43	< .001
TP				
Q52	0.82			
Q53	0.83	0.05	17.46	< .001
Q54	0.91	0.05	19.50	< .001
Q55	0.65	0.08	12.77	< .001
Q56	0.53	0.11	9.67	< .001
SE				
Q57	0.68	0.05	17.73	< .001
Q58	0.72	0.05	20.54	< .001
Q59	0.74	0.05	20.62	< .001
Q60	0.73	0.05	20.68	< .001
Q61	0.71	0.05	19.71	< .001
Q62	0.75			
Q63	0.57	0.09	13.16	< .001
Q64	0.56	0.08	14.32	< .001
Q65	0.55	0.09	11.92	< .001
Q66	0.43	0.07	10.39	< .001
Q67	0.42	0.06	13.77	< .001
Q68	0.51			
Q70	0.34	0.09	8.48	< .001
Q71	0.39	0.07	11.62	< .001
Q72	0.44	0.07	14.75	< .001
Q73	0.44	0.09	11.48	< .001
Q74	0.41	0.07	12.64	< .001
Q75	0.47			

Note. EE = Employee Engagement, OCBI = Organizational Citizenship Behavior, Individual, OCBO = Organizational Citizenship Behavior, Organization, TP = Task Performance, SE = Supervisor Engagement.

Factor correlations The factor correlations were calculated between the five factors of the model as well the EE and SE subscales. All correlations were positive. The SE factor had weak positive relationships with EE, ECE, EEE, EPE, OCBO, OCBI, and TP and a perfect linear relationship with its subscales of SPE, SEE, and SCE. The EE factor had weak positive relationships with SPE, SEE, and SCE and strong positive relationships with ECE, EEE, EPE, OCBO, OCBI, and TP. The OCBO had weak positive relationships with OCBI and TP. The OCBI had a weak positive relationship with TP. Table 13 presents the latent variable correlation matrix.

Table 13. Factor Correlations for the Model

Construct	SE	EE	ECE	EEE	EPE	SPE	SEE	SCE	OCBO	OCBI	TP
SE											
EE	0.26										
ECE	0.21	0.81									
EEE	0.22	0.87	0.70								
EPE	0.21	0.82	0.66	0.71							
SPE	1.00	0.26	0.21	0.22	0.21						
SEE	1.00	0.26	0.21	0.22	0.21	1.00					
SCE	1.00	0.26	0.21	0.22	0.21	1.00	1.00				
OCBO	0.18	0.70	0.56	0.61	0.57	0.18	0.18	0.18			
OCBI	0.18	0.68	0.55	0.59	0.56	0.18	0.18	0.18	0.47		
TP	0.14	0.54	0.43	0.47	0.44	0.14	0.14	0.14	0.37	0.36	

Note. SE = Supervisor Engagement, EE = Employee Engagement, ECE = Employee Cognitive Engagement, EEE = Employee Emotional Engagement, EPE = Employee Physical Engagement, SPE = Supervisor Physical Engagement, SEE = Supervisor Emotional Engagement, SCE = Supervisor Cognitive Engagement, OCBO = Organizational Citizenship Behavior, Organization, OCBI = Organizational Citizenship Behavior, Individual, TP = Task Performance.

Convergent validity To assess convergent validity, the researcher calculated the AVE values for the constructs in the model. The AVE value indicated the amount of variance in the indicator variables, explained by the linear combination of each latent construct. The AVE values for each construct were calculated using Equation One (Fornell & Larcker, 1981).

$$AVE = \frac{\sum \lambda_i^2}{n} \quad (1)$$

This showed AVE values of 1.00 for EE, 0.48 for OCBI, 0.52 for OCBO, 0.55 for TP, and 1.00 for SE. Table 14 outlines the AVE values for all constructs in the three model specifications. Using the AVE cutoff value of .5 (Fornell & Larcker, 1981), these results indicated acceptable convergent validity for EE, OCBO, TP, and SE, however did not show convergent validity for the OCBI construct.

Table 14. Average Variance Extracted for Each Construct

	EE	OCBI	OCBO	TP	SE
Model	1.00	.48	.52	.55	1.00

Discriminant validity To assess discriminant validity, the researcher calculated and compared the square root of the AVE values to the implied correlations for the constructs of each model. Implied correlation values higher that the square root of the AVE indicate a lack of discriminant validity (Zait & Bertea, 2011). Table 15 shows the implied correlations with the square root of the AVE along the diagonal. The results showed discriminant validity for all factors except OCBI.

Table 15. Implied Correlations and Square Root of Average Variance Extracted

Construct	OCBI	EE	SE	OCBO
OCBI	0.69			
EE	0.55	1.00		
SE	0.22	0.37	1.00	
OCBO	0.73	0.64	0.41	0.72
TP	0.38	0.52	0.18	0.31

Note: OCBI = Organizational Citizenship Behavior, Individual, EE = Employee Engagement, SE = Supervisor Engagement, OCBO = Organizational Citizenship Behavior, Organization, TP = Task Performance, square root of AVE along the diagonal.

Composite reliability The researcher assessed composite reliability to determine how well each indicator loaded onto their respective constructs. This occurred by taking a ratio of square of summed loadings and the total variance. The formula is provided by Equation Two (Raykov, 1997).

$$CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum Var(\varepsilon_i)} \quad (2)$$

The researcher evaluated the coefficients using the guidelines suggested by George and Mallery (2010), where values 0.9 or higher indicate excellent reliability, values ranging from 0.8 to .089 indicate good reliability, values ranging from 0.7 to .79 indicate acceptable reliability, values ranging from 0.6 to .69 indicate questionable reliability, values ranging from 0.5 to .59 indicate poor reliability, and values less than 0.5 indicate unacceptable reliability. For the model, EE had excellent composite reliability (*CR* = 1.00), OCBI had good composite reliability (*CR* = 0.88), OCBO had good composite reliability (*CR* = 0.89), TP had good composite reliability (*CR* = 0.87), and SE had excellent composite reliability (*CR* = 1.00). Table 16 presents the composite reliability values for each model.

Table 16. Composite Reliability for Each Construct

Model	EE	OCBI	OCBO	TP	SE
Model 1	1.00	.88	.89	.87	1.00

Regression estimates Regression paths were included in the model between each of the independent and dependent latent constructs, as well as age, income, organizational tenure, sex, and ethnicity as control variables. The standardized regression path for EE regressed on SE showed high significance (*B* = 0.26, *p* <.001). This indicated that a one

standard deviation increase in SE results in a .26 standard deviation increase in EE on average. The standardized regression path for OCBI regressed on EE showed high significance ($B = 0.68$, $p < .001$). This indicated that a one standard deviation increase in EE results in a .68 standard deviation increase in OCBI on average. The standardized regression path for OCBO regressed on EE showed high significance ($B = 0.70$, $p < .001$). This indicated that a one standard deviation increase in EE results in a .70 standard deviation increase in OCBO on average. The standardized regression path for TP regressed on EE showed high significance ($B = 0.54$, $p < .001$). This indicated that a one standard deviation increase in TP results in a .54 standard deviation increase in OCBO on average. For each control variable, none of the paths showed significance. Table 17 presents a summary of the regression results. Figure 7 shows a path diagram with the results of the model.

Table 17. Standardized Regression Paths for the Model

Regression	*B*	*SE*	*z*	*p*
SE ~ EE	0.26	0.03	3.49	< .001
SPE ~ SE	1.00			
SEE ~ SE	1.00	0.06	10.36	< .001
SCE ~ SE	1.00	0.06	8.87	< .001
EE ~ OCBI	0.68	0.27	6.39	< .001
EE ~ OCBO	0.70	0.34	6.43	< .001
EE ~ TP	0.54	0.17	6.11	< .001
EPE ~ EE	0.82			
EEE ~ EE	0.87	0.26	7.28	< .001
ECE ~ EE	0.81	0.21	7.01	< .001
Age ~ EE	0.02	0.03	0.29	0.77
Gender ~ EE	0.06	0.04	1.03	0.31
Tenure ~ EE	0.00	0.02	0.01	0.99
Income ~ EE	-0.02	0.01	-0.31	0.76
Ethnicity ~ EE	-0.10	0.02	-1.58	0.12

Note. EE = Employee Engagement, EPE = Employee Physical Engagement, EEE = Employee Emotional Engagement, ECE = Employee Cognitive Engagement, OCBI = Organizational Citizenship Behavior, Individual, OCBO = Organizational Citizenship Behavior, Organization, TP = Task Performance, SE = Supervisor Engagement, SPE = Supervisor Physical Engagement, SEE = Supervisor Emotional Engagement, SCE = Supervisor Cognitive Engagement.

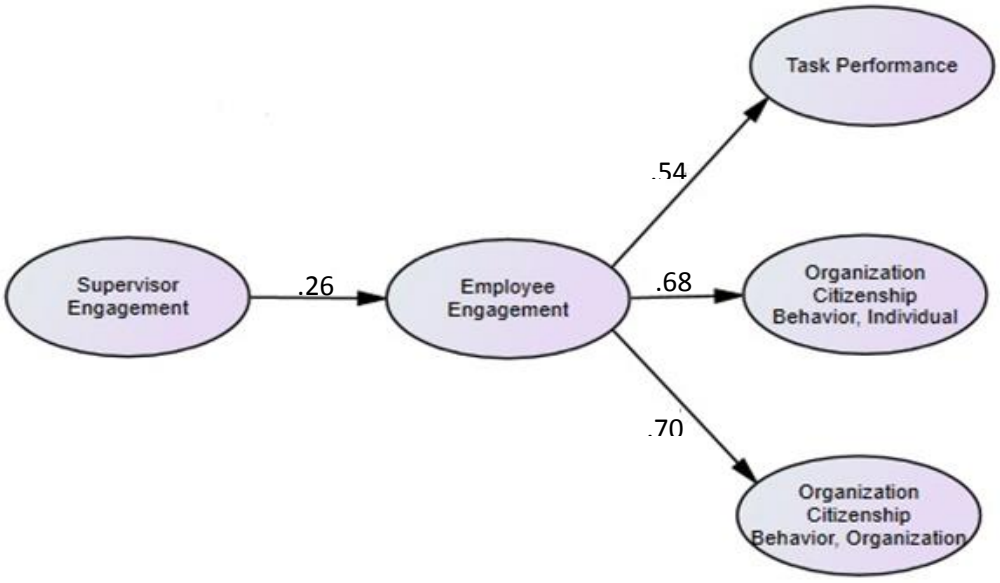

Figure 7. Structural equation model path diagram with standardized loadings.

Correlation Analyses

Pearson's correlations tested the relationship of demographic variables (level of education, industry, number of people who work for the organization, total employees, time under current supervisor, number of employees the supervisor oversees, types of organization, and role in the organization) with the variables of the constructs for SE, EE, TP, OCBI, and OCBO. The assumptions of linearity and homoscedasticity were met for this data. The analysis involved Cohen's standard (Cohen, 1988) to evaluate the correlation coefficient and determine the strength of the relationship.

Supervisor engagement Tests of the relationship of the demographic variables with the supervisor engagement variables revealed that most of the relationships were not significant (p's > .05). However, some small significant negative relationships existed (p's < .05). This meant that as one variable increased, the other variable decreased. Table 18 presents the correlations for the SE scale and subscales, Table 19 presents the correlations for the first half of the SE variables, and Table 20 presents the second half of the correlations.

Table 18. Correlations between Demographic Variables and Supervisor Engagement Scale and Subscales

	SE	SPE	SEE	SCE
Q4	-.14*	-.14*	-0.10	-.14*
Q6	-0.11	-.13*	-0.07	-0.10
Q7	-0.01	-0.01	-0.02	-0.01
Q9	0.05	0.05	0.08	0.01
Q13	0.01	0.00	-0.02	0.05
Q14	-0.04	-0.03	-0.05	-0.02
Q15	0.05	0.03	0.04	0.05

Note. SE = Supervisor Engagement, SPE = Supervisor Physical Engagement, SEE = Supervisor Emotional Engagement, SCE = Supervisor Cognitive Engagement, * indicates $p < .05$, ** indicates $p < .01$.

Table 19. Correlations between Demographic Variables and First Half of Supervisor Engagement Variables

	Q57	Q58	Q59	Q60	Q61	Q62	Q63	Q64	Q65
Q4	-.15**	-.15**	-.15**	-.13*	-.12*	-0.09	-0.05	-0.08	-0.11
Q6	-.16**	-0.11	-0.11	-.13*	-0.10	-.14*	-0.04	-0.04	-0.07
Q7	0.01	-0.05	0.01	0.00	-0.02	-0.02	0.03	-0.02	-0.05
Q9	0.08	0.05	0.07	0.02	0.02	0.06	0.09	0.02	0.09
Q13	0.02	0.00	0.03	-0.03	0.00	-0.01	-0.03	-0.06	0.03
Q14	0.02	-0.03	-0.03	-0.05	-0.02	-0.07	-0.05	-0.09	-0.02
Q15	0.01	0.00	0.06	0.05	0.02	0.04	0.04	0.05	0.02

Note. * indicates $p < .05$, ** indicates $p < .01$.

Table 20. Correlations between Demographic Variables and Second Half of Supervisor Engagement Variables

	Q66	Q67	Q68	Q70	Q71	Q72	Q73	Q74	Q75
Q4	-0.06	-0.10	-.13*	-.14*	-.14*	-.16**	-.12*	-0.11	-.12*
Q6	-0.07	-0.07	-0.08	-0.05	-.12*	-.14*	-0.03	-0.10	-.12*
Q7	-0.04	-0.01	-0.01	0.05	0.02	-0.01	0.00	-0.04	-0.06
Q9	0.09	0.06	0.08	0.01	0.02	0.02	0.02	-0.02	0.01
Q13	-0.01	-0.04	0.00	0.06	0.03	0.06	0.05	0.03	0.08
Q14	-0.06	-0.05	-0.02	-0.02	-0.04	-0.04	-0.01	-0.03	0.01
Q15	0.04	0.04	0.05	0.07	0.06	0.03	0.04	0.03	0.06

Note. * indicates $p < .05$, ** indicates $p < .01$.

Employee engagement Tests of the relationship of the demographic variables with the employee engagement variables revealed that most of the relationships were not significant (p's > .05). However, some small significant negative relationships existed (p's < .05). This meant that as one variable increased, the other variable decreased. In addition, two significant positive relationships occurred (p's < .05). This indicated that as one variable increased, the other variable increased as well. Table 21 presents correlations for the SE scale and subscales, Table 22 presents correlations for the first half of the SE variables, and Table 23 presents the second half of the correlations.

Table 21. Correlations between Demographic Variables and Employee Engagement Scale and Subscales

	EE	EPE	EEE	ECE
Q4	0.03	0.03	0.01	0.06
Q6	0.02	-0.02	0.00	0.06
Q7	-0.09	-0.03	-.14*	-0.04
Q9	0.02	-0.01	0.03	0.03
Q13	0.01	-0.04	0.03	0.02
Q14	0.06	0.03	0.05	0.06
Q15	-0.05	-0.05	-0.05	-0.03

Note. EE = Employee Engagement, EPE = Employee Physical Engagement, EEE = Employee Emotional Engagement, ECE = Employee Cognitive Engagement, * indicates $p < .05$, ** indicates $p < .01$.

Table 22. Correlations between Demographic Variables and First Half of Employee Engagement Variables

	Q16	Q17	Q18	Q19	Q20	Q21	Q22	Q23	Q24
Q4	0.01	-0.01	0.04	0.04	-0.05	0.09	0.01	0.05	0.03
Q6	0.04	-0.07	0.04	0.00	-0.06	-0.03	-0.05	-0.04	0.07
Q7	0.00	-0.07	-0.02	-0.04	-0.03	0.01	-0.10	-.14*	-.15**
Q9	0.04	-0.05	0.00	-0.01	0.01	-0.01	-0.02	0.01	0.06
Q13	-0.04	-0.10	-0.02	-0.05	0.01	0.02	-0.04	0.02	0.02
Q14	0.06	0.03	0.02	0.01	0.03	-0.01	0.01	-0.01	0.09
Q15	0.02	-0.04	-0.03	-0.10	-0.03	-0.03	-0.04	-0.04	-0.04

Note. * indicates $p < .05$, ** indicates $p < .01$.

Table 23. Correlations between Demographic Variables and Second Half of Employee Engagement Variables

	Q25	Q26	Q27	Q28	Q29	Q31	Q32	Q33	Q34
Q4	-0.04	-0.02	-0.01	0.08	0.03	0.06	0.08	0.01	0.00
Q6	0.10	-0.02	-0.03	0.04	0.06	0.03	-0.02	0.11	.12*
Q7	-0.06	-.11*	-.12*	-0.11	-0.04	0.01	-0.01	-0.03	-0.02
Q9	0.08	-0.01	0.04	-0.03	0.00	0.11	0.05	0.01	0.04
Q13	0.07	0.04	0.04	0.04	0.05	0.01	-0.01	-0.01	0.03
Q14	.14*	-0.01	0.04	0.00	0.03	0.07	0.08	0.04	0.09
Q15	-0.05	-0.06	-0.01	-0.06	0.04	-0.02	-0.02	-0.06	-0.03

Note. * indicates $p < .05$, ** indicates $p < .01$.

Organizational citizenship behavior, individual Tests of the relationship between the demographic variables and the organizational citizenship behavior, individual variables revealed that most of the relationships were not significant (*p*'s > .05). However, several small significant negative relationships existed (*p*'s < .05). This meant that as one variable increased, the other variable decreased. Two small significant positive relationships also occurred (*p*'s < .05), which meant that as one variables increased, so did the other variable. Table 24 presents correlations for all of the OCBI variables with the demographic variables.

Table 24. Correlations between Demographic Variables and Organizational Citizenship Behavior, Individual Variables

	Mean	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42
Q4	0.02	-0.04	0.01	-0.02	0.03	-0.04	0.04	0.01	0.08
Q6	0.05	-0.08	0.02	0.05	0.11	0.10	0.01	-0.03	0.08
Q7	-.12*	-0.03	-0.05	-.15**	-0.11	-0.08	-0.05	-0.01	-.17**
Q9	-0.03	-0.01	0.00	-0.09	-.12*	0.04	0.04	-0.06	0.03
Q13	0.03	0.01	-0.02	0.06	-0.08	-0.03	0.05	-0.05	.16**
Q14	0.02	.11*	-0.05	-0.07	-0.05	-0.01	0.06	-0.01	0.11
Q15	-.12*	-0.06	-.11*	-0.11	-0.02	-0.04	-.15**	-0.05	-.15**

Note. * indicates $p < .05$, ** indicates $p < .01$.

Organizational citizenship behavior, organization Tests of the relationship between the demographic variables and the OCBO variables revealed that several small significant negative relationships existed (*p*'s < .05). This meant that as one variable increased, the other variable decreased. In addition, two significant positive relationships occurred (*p*'s < .05), which meant that as one variable increased, the other variable increased as well. Table 25 presents correlations for all of the OCBO variables with the demographic variables.

Table 25. Correlations between Demographic Variables and Organizational Citizenship Behavior, Organization Variables

	Mean	Q43	Q44	Q45	Q46	Q47	Q48	Q50	Q51
Q4	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.0
Q6	0.1	0.1	.13*	0.0	0.1	0.0	0.0	0.0	.11*
Q7	-.22**	-.13*	-.15**	-.25**	-.20**	-.16**	-.15**	-.16**	-.13*
Q9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Q13	0.0	0.0	0.1	0.1	0.1	0.0	0.0	-0.1	0.0
Q14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0
Q15	-0.1	-0.1	0.0	-0.1	-0.1	-0.1	0.0	-0.1	-0.1

Note. * indicates $p < .05$, ** indicates $p < .01$.

Task performance Tests of the relationship between the demographic variables and the task performance variables revealed that two small significant negative relationships existed (p's $< .05$). This meant that as one variable increased, the other variable decreased. Table 26 presents correlations for all of the TP variables with the demographic variables.

Table 26. Correlations between Demographic Variables and TP Variables

	Mean	Q52	Q53	Q54	Q55	Q56
Q4	-0.08	-0.02	-0.02	-0.04	-0.03	-.14*
Q6	0.08	0.06	0.06	0.09	0.05	0.08
Q7	-0.05	-0.07	-0.01	-0.07	-.15**	0.07
Q9	-0.01	0.00	0.04	0.01	-0.08	0.01
Q13	0.01	0.01	0.05	0.08	-0.02	-0.04
Q14	-0.05	-0.03	-0.02	-0.06	-0.07	-0.02
Q15	-0.05	-0.01	0.01	-0.02	-0.09	-0.07

Note. * indicates $p < .05$, ** indicates $p < .01$.

Research Hypotheses

Research Question How does the perception of a supervisor's engagement influence an employee's task performance, organizational citizenship behavior toward individuals, and organizational citizenship behavior toward the organization?

H1 A significant positive relationship exists between perceived supervisor engagement and employee engagement.

For H1, the researcher examined the regression path for SE predicting EE. The path was significant at the .001 level ($B = 0.26$, $p < .001$). This indicated that SE is a positive significant predictor of EE. The coefficient of 0.26 indicated that a one standard deviation increase in SE resulted in a .26 standard deviation increase in EE on average. Since the path between SE and EE was significant, the researcher rejected the null hypothesis.

H2 A significant positive relationship exists between an employee engagement and task performance.

For H2, the researcher examined the regression path for EE predicting TP. The path was significant at the .001 level ($B = 0.54$, $p < .001$). This indicated that EE is a positive significant predictor of TP. The coefficient of 0.54 indicated that a one standard deviation increase in EE results in a .54 standard deviation increase in TP on average. Since the path between EE and TP was significant, the researcher rejected the null hypothesis.

H3 A significant positive relationship exists between an employee engagement and organizational citizenship behavior, individual.

For H3, the researcher examined the regression path for EE predicting OCBI. The path was significant at the .001 level ($B = 0.68$, $p < .001$). This indicated that EE is a positive significant predictor of OCBI. The coefficient of 0.68 indicated that a one standard deviation increase in EE results in a .68 standard deviation increase in OCBI on

average. Since the path between EE and OCBI was significant, the researcher can reject the null hypothesis.

H4 A significant positive relationship exists between an employee engagement and organizational citizenship behavior, organization.

For H4, the researcher examined the regression path for EE predicting OCBO. The path was significant at the .001 level ($B = 0.70$, $p < .001$). This indicated that EE is a positive significant predictor of OCBO. The coefficient of 0.70 indicated that a one standard deviation increase in EE results in a .70 standard deviation increase in OCBO on average. Since the path between EE and OCBO was significant, the researcher rejected the null hypothesis.

Chapter 4 Summary

This chapter began with a description of the data cleaning process. The researcher checked the data for outliers (values greater 3.29 and less than -3.29) and it was found that 47 participants needed to be removed from the data for having non-normal patterns. The researcher also checked the data for multivariate normality and it was found that this assumption was met. The assumptions of large enough sample size were also met.

The researcher then conducted an EFA to see how many factors would be optimal for this dataset. It was determined that five factors best fit the model, which fit the SEM. The researcher ran a CFA to determine whether the variables and the constructs would be a good fit for the model. After applying the modification indices, acceptable fit was achieved. The researcher then tested the model for common method bias (CMB). It was

determined that 16 different variables in the model were affected by common method bias, which meant that common method bias needed to be accounted for in the SEM.

Once acceptable fit was achieved for the model and common method bias was accounted for, the SEM was built. The initial model without control variables was tested and found to have good model fit. When the researcher added the control variables, the model maintained good overall fit. Factor loadings for the model showed that all of the variables significantly loaded onto their corresponding factors. Convergent and discriminant validity was found for all factors except OCBI. Composite reliability was good for all of the factors. The regression estimates were calculated between the factors and the control variables. All paths other than the control variables were significant. These results supported all four hypotheses tested.

The researcher tested additional correlations to determine whether a relationship existed between demographic variables (level of education, industry, number of people who work for the organization, total employees, time under current supervisor, number of employees the supervisor oversees, hours worked per week, types of organization, and role in the organization) and the variables that made up the constructs in the model (SE, EE, OCBI, OCBO, TP). The results showed that significant negative and positive relationships existed between some variables of these constructs, however mostly no relationships existed between the variables.

Chapter 5

Discussion

This chapter provides discussion of the research study, which found support for all four hypotheses. The chapter includes summaries of the research study information, key literature, study methods, and study findings. A discussion of these findings, significance of the study and implications, limitations of the study, and suggestions for future research are also included in this chapter.

Restatement of Study Information, Key Literature, and Study Methods

Employee engagement is receiving a lot of attention in research and practice because of the various positive outcomes of employee engagement. Positive individual and organization outcomes result when employees are in a state of engagement. In addition, employees who are disengaged have a negative influence on themselves and the organization. Researchers have found that supervisor engagement positively influenced employee engagement (Griffin, 2015; Johnson, 2015; Leiter & Harvie, 1997). Although supervisor engagement positively related to employee engagement, it was not clear how an increase in supervisor engagement related to organization outcomes. The purpose of this study was to examine how employees' perceptions of their supervisors' engagement affect the engagement of the employee and organization outcomes of task performance, organizational citizenship behavior toward the individual, and organizational citizenship behavior toward the organization. The research question for this study was: How does the perception of a supervisor's engagement influence an employee's task performance,

organizational citizenship behavior toward individuals, and organizational citizenship behavior toward the organization?

The researcher used Kahn's (1990) theory of employee engagement for the study because analysis found Kahn's theory was widely regarded as defining all elements (i.e., physical, cognitive, emotional) necessary for one to choose to be in a state of engagement (May et al., 2004; Rich et al., 2010; Saks & Gruman, 2014). Researchers have found that transformational, servant, and authentic leadership styles have a positive correlation to employee engagement (Bamford et al., 2013; Bird et al., 2009; Breevaart et al., 2014b; 2014; De Clercq et al., 2014; Shu, 2015; Stander et al., 2015; Tims et al., 2011).

Dimensions of different leadership styles often overlap (Sun, 2013). At the core of the research regarding the different leadership styles and employee engagement, a direct link exists between a leader and the engagement of his or her employees. Although research on supervisor engagement is limited, supervisor engagement has been found to directly influence employee engagement (Griffin, 2015; Johnson, 2015; Leiter & Harvie, 1997). Researchers have also demonstrated that employee engagement can directly influence task performance (Alfes et al., 2013; Bakker & Bal, 2010; Christian et al., 2011; J, 2014; Rich et al., 2010; Salanova et al., 2011) and organizational citizenship behavior (Christian et al., 2011; Rich et al., 2010; Salanova et al., 2011; Whittington & Galpin, 2010).

The study was quantitative, cross-sectional, and correlational in design. The population of interest included English-speaking, nonsupervisory employees at least 18 years of age who lived and worked in the United States for at least 30 hours a week for

one organization. Those in the population of interest must have also worked for the same supervisor for the six months prior to being administered the survey.

The researcher built the survey in the Qualtrics survey system and Qualtrics found participants who were members of the study population. Utilizing Qualtrics to solicit study participants helped maintain respondents' confidentiality. The survey utilized screening questions to validate one's membership in the target population. The survey also utilized attention filter questions and had a minimum completion time to ensure respondents were reading questions correctly and not hastily choosing answers without thinking through an answer choice.

This survey included scales to measure employee engagement (Rich et al., 2010), task performance (Janssen & Van Yperen, 2004), organizational citizenship behavior toward the individual (Lee & Allen, 2002), and organizational citizenship behavior toward the organization (Lee & Allen, 2002). The survey comprised all questions from the scales, with the employee engagement scale being utilized twice in this survey: (a) once to measure one's own engagement, and (b) then modified so questions on the scale reflected the perception of the engagement of one's supervisor. Participants' perceptions measured supervisor engagement because one person cannot measure the actual engagement of another since engagement is something only known by the individual person. However, measuring perceptions was appropriate, because if one person affected engagement of another person, it was based on the perception of the other's engagement. Participants based responses on experiences within the past six months of the date that respondents took the survey.

Summary of Study Findings

Findings of this study provide support for each hypothesis. In order to determine how many factors were optimal for this data set, the researcher conducted EFA using the promax rotation method. Using the cutoff eigenvalue of 2, five factors proved to be optimal. The EFA also showed that the five factor solution accounted for a moderate 56.8% of the overall variance.

The researcher ran a CFA to determine how the variables and factors fit in a measurement model. The results of the initial model indicated that no good model fit existed, *CFI* = .79, *TLI* = .78, *RMSEA* = .08. However, after addressing the modification indices, the model fit significantly increased, *CFI* = .88, *TLI* = .88, *RMSEA* = .06. Once an acceptable model fit was achieved, the researcher tested CMB using Harman's (1960) single factor method. A common latent factor was created and entered into the model, which revealed that CMB affected 16 of the variables. The common latent factor needed to remain to account for CMB in the SEM.

Acceptable model fit was achieved with the CFA and CMB was accounted for, then SEM was conducted. The results of the initial model indicated good model fit, *CFI* = .92, *TLI* = .92, *RMSEA* = .05. However, when the researcher added the control variables to the model, the fit changed slightly, *CFI* = .92, *TLI* = .91, *RMSEA* = .05, yet remained acceptable. An examination of the factor loadings indicated that all of the variables in the model significantly loaded onto their corresponding factors. Factor correlations indicated that all relationships among factors were positive, with some being strong positive relationships. The results showed convergent and discriminant validity for all factors

except OCBI. Composite reliability was acceptable for all of the factors. The regression weights between the constructs and controls were then tested. No significant relationship existed between the control variables and employee engagement. A significant relationship existed between SE and EE, EE and OCBI, EE and OCBO, and EE and TP.

After the SEM was completed, correlations were ran between demographic variables and the variables that made up the constructs from the model. The results showed that some significant positive and negative relationships existed between these variables; however, most of the relationships were not significant. Finally, the researcher examined the hypotheses through the results of the regression paths from the SEM. The researcher rejected the null hypothesis for all four hypotheses. This is because significant positive relationships (p's $< .05$) existed between SE and EE, EE and OCBI, EE and OCBO, and EE and TP.

Discussion of Study Findings

Each hypothesis will be addressed. Construct validity and the correlation analysis will also be addressed.

H1 A significant positive relationship exists between perceived supervisor engagement and employee engagement.

One of the researcher's primary findings was that a significant positive relationship existed between supervisor engagement (SE) and an employee's own engagement (EE). This expands emerging research findings that confirms that this relationship exists (Griffin, 2015; Johnson, 2015; Leiter & Harvie, 1997). Griffin (2015) suggested that within-group and between-group variance exists for nonsupervisory,

supervisory, and senior-leader engagement that needs to be further explored and understood. This study helps explain the between-group variance for supervisor and employee engagement by demonstrating that EE functions as an antecedent of SE. The study also supported that SE functions as an antecedent of TP and organizational citizenship behavior through the mediating role of EE. This study finding is important since it expands knowledge of employee engagement. This finding may be used to impact supervisor training content, supervisor coaching, and supervisor selection process.

H2 A significant positive relationship exists between an employee engagement and task performance.

The finding that a significant positive relationship existed between an employee's own engagement on task performance confirmed work of prior researchers who also found this relationship (Alfes et al., 2013; Bakker & Bal, 2010; Christian et al., 2011; J, 2014; Macey & Schneider, 2008; Rich et al., 2010). This finding also provides additional support for the relationship between supervisors and task performance (Chaurasia & Shukla, 2013; Shweta & Srirang, 2013). Previous researchers have found a positive relationship between employee engagement and task performance without understanding why this relationship exists (Schaufeli, 2012). This study was a pivotal step in understanding the relationship between those two variables. Supervisor engagement relates to task performance with employee engagement acting as a mediator. This study finding may be used to support the use of employee task performance as a criteria for supervisor performance evaluation. The use of task performance as a criteria may result in a supervisor who engages to maintain or improve direct report task performance.

H3 A significant positive relationship exists between an employee engagement and organizational citizenship behavior, individual.

H4 A significant positive relationship exists between an employee engagement and organizational citizenship behavior, organization.

The findings of significant positive relationships between an employee's own engagement and organizational citizenship behavior, individual and between an employee's own engagement and organizational citizenship behavior, an organization is consistent with previous research findings (Rich et al., 2010; Whittington & Galpin, 2010). These researchers examined the relationship between employee engagement and organization citizenship behavior as one construct, instead of as the intended recipient of individual or organization. This study expanded support for employee engagement as one of the attitudinal characteristics that can predict organizational citizenship behavior (Sharma & Agrawal, 2014). This study also expanded on findings from Rich et al. (2010) and Whittington and Galpin (2010) that employee engagement leads to increased participation in organizational citizenship behaviors. The researcher found employee engagement leads to increased participation in organizational citizenship behaviors because supervisor engagement mediates the relationship between employee engagement and organizational citizenship behaviors. This study finding may be used to support the use of employee organizational citizenship behavior as a criteria for supervisor performance evaluation. The use of organizational citizenship behavior as a criteria may result in a supervisor who engages to maintain or improve direct organizational citizenship behavior.

Construct validity Convergent and discriminant validity are both measures of construct validity. Construct validity measures how the instrument captures the latent variable (Zait & Bertea, 2011). The researcher found organizational citizenship behavior, individual to lack both convergent and discriminant validity. This finding occurred when measuring discriminant validity, as OCBI loaded higher with the OCBO factor, suggesting that these items are related to each other. This finding provides evidence that although the intended recipients of organizational citizenship behaviors are different (individual or organization), they cannot be separated for measurement. The researcher conducted post hoc analysis of Cronbach's alpha, which was .92 for a single scale combining OCBI and OCBO. This is higher than the actual Cronach's alphas of .87 for OCBI and .89 for OCBO.

A review of the literature showed that task performance behaviors and organizational citizenship behaviors may be difficult to distinguish (Organ, 1988), because one may feel required to do something that benefits the organization, even if a task is not formally required as part of one's job (Podsakoff et al., 2000). The results of this study suggest that that task performance behaviors and organizational citizenship behaviors can be distinguished. When examining construct validity, no issues occurred with the convergent and discriminant validity of the task performance or organizational citizenship behavior, organization scale items. This indicates that while organizational citizenship behavior, organization and organizational citizenship behavior, individual are related, neither one is related to task performance.

The Cronbach's alphas for all scales and subscales were in the good to acceptable range (*Min* = .83, *Max* = .97). This indicated that all the items on the scales and subscales had internal consistency in their group. The composite reliabilities scores were in the good to acceptable range as well (*Min* = .87, *Max* = 1.00). The scores verified that the study has reliability.

Correlation analysis The researcher performed a correlation analysis of demographic variables on survey items collected that were not part of the measurement instruments, not used as screening questions, and not used as control variables. Since SE is an emerging concept in research, the intention of this analysis was to give insight for potential areas for further research. Correlation analysis of demographic variables occurred for all study constructs, even though the primary correlation of interest was the correlation between the demographic variables and the SE construct. The analysis involved Cohen's standard (Cohen, 1988) to evaluate the correlation coefficient to determine the strength of the relationship, where coefficients with an absolute value between .10 and .29 represent a small relationship, coefficients with an absolute value between .30 and .49 represent a medium relationship, and coefficients with an absolute value above .50 represent a large relationship.

Small significant negative relationships occurred for certain SE scale, subscale, and item scores when correlated to Q4 (Which of the following best describes your role in the organization?) and Q6 (How long have you worked for your current supervisor). The small relationship does not indicate that the relationship found in this sample would

be consistent across the population. Thus, the researcher makes no specific recommendations for further research.

The results showed small significant negative relationships for certain EE subscale and item scores when correlated to Q7 (Counting all locations your employer operates, what is the total number of persons who work there?). Small significant positive relationships occurred for certain EE item scores when correlated to Q6 (How long have you worked for your current supervisor) and Q14 (The organization you work for is in which of the following…). Even though significant relationships existed, they all had a small relationship. The small relationships do not indicate that the relationship found in this sample would be consistent across the population. Thus, the researcher makes no specific recommendations for further research.

The results showed small significant negative relationships for certain OCBI scale and item scores when correlated to Q7 (Counting all locations your employer operates, what is the total number of persons who work there?), Q9 (What is the highest level of education you have completed?), and Q15 (How many employees does your supervisor oversee, including you?). Small significant positive relationships occurred for certain OCBI item scores when correlated to Q13 (Which of the following categories best describes your industry (regardless of your actual position)?) and Q14 (The organization you work for is in which of the following…). The small relationships do not indicate that the relationship found in this sample would be consistent across the population. Thus, the researcher makes no specific recommendations for further research.

The results showed small significant negative relationships for certain OCBO scale and item scores when correlated to Q7 (Counting all locations your employer operates, what is the total number of persons who work there?). Small significant positive relationships occurred for certain OCBO item scores when correlated to Q6 (How long have you worked for your current supervisor?). The small relationships do not indicate that the relationship found in this sample would be consistent across the population. Thus, the researcher makes no specific recommendations for further research.

The results showed small significant negative relationships for certain task performance item scores when correlated to Q4 (Which of the following best describes your role in your organization?) and Q7 (Counting all locations your employer operates, what is the total number of persons who work there?). The small relationships do not indicate that the relationship found in this sample would be consistent across the population. Thus, the researcher makes no specific recommendations for further research.

Implications of the Study

The findings of the study are significant to advance the theory, research, and practice of employee engagement.

Implications for theory Research on supervisor engagement is emerging, so the addition of research to expand on this concept benefits the advancement of employee engagement theory. Since what is known about the theory of engagement is largely based on those in nonsupervisory positions, this study has a large implication for theory by expanding the understanding of employee engagement to those in supervisor positions. The researcher also expanded the literature around task performance and organizational

citizenship behavior by demonstrating that supervisor engagement functions as an antecedent of task performance and organizational citizenship behavior through the mediating role of employee engagement.

Implications for research The high scores on the Cronbach's alphas (*Min* = .83, *Max* = .97) expanded on research by demonstrating the reliability of each scale. The only caveats to this were the OCBI and OCBO scales. As aforementioned, construct validity was found with these constructs so it is recommended that researchers intending to use these scales concurrently measure organizational citizenship behavior. The high Cronbach's alphas found for the Rich et al. (2010) scale suggests that this scale can appropriately measure all three of Kahn's (1990) psychological elements of engagement—physical, cognitive, emotional.

The need for research that operationalizes Kahn's (1990) theory of employee engagement is highlighted in literature as a research need to advance the theory of employee engagement (Rich et al., 2010; Saks & Gruman, 2014). Most research on employee engagement utilizes a theory criticized for not having all psychological elements necessary for one to be engaged (May et al., 2004; Rich et al., 2010; Saks & Gruman, 2014). This raises concern that what is truly known regarding employee engagement is limited (Saks & Gruman, 2014). In this study, the researcher addressed this concern by utilizing Kahn's (1990) theory of employee engagement and tested all three physiological elements necessary to be in a state of engagement.

Another research benefit is the understanding that OCBI and OCBO are related. This means that future researchers desiring to use the scales by Lee and Allen (2002)

need to use both scales concurrently as one scale if they intend to measure organizational citizenship behavior. It is possible that the intended recipients of the organizational citizenship behavior (individual or organization) could be utilized as subscales.

Implications for practice The support of all four research hypotheses means the research model was supported. The model has a variety of implications for practice. Supervisor engagement is related to work outcomes, demonstrating the effect and importance of a supervisor in an organization. The researcher's conclusions that 54% of TP, 68% of OCBI and 70% of OCBO is the result of SE mediating EE expands support for the effect supervisors have on their employees and their organizations. This knowledge can be utilized in a variety of ways.

The performance management process can be enhanced as a result of this study. Many companies conduct engagement surveys at the organization and unit level. As part of these surveys, questions should be included to assess a direct supervisor's physical, cognitive, and emotional engagement. The data collected would provide insight used to create personalized performance elements for supervisors related to their engagement. Each direct supervisor and his or her supervisor would be able to use the data to aid in identifying what specific actions the direct supervisor can take to engage more and more effectively. Once these actions are determined, agreement between the two can be made as to how the supervisor will be evaluated on these actions as part of the performance management process.

The study provides support for employee task performance and organizational citizenship behavior to be considered as evaluation criteria for a direct supervisor.

However, there are other variables that can impact employee task performance and organizational citizenship behavior so a direct supervisor's performance appraisal should consider these other variables as well.

This study supports the need for work environments that support the engagement of both the supervisor and employee. Since supervisor and employee engagement have direct outcomes to the organization, employer provided training for employees and supervisors should include content around employee and supervisor engagement. This training should create an awareness of engagement, the relationship between employee and supervisor engagement, and the impact of engagement on the individual and the organization. Engagement training should also teach one how to identify whether one has the psychological conditions of safety, availability, and meaningfulness in work that Kahn (1990) outlined must work occur simultaneously for engagement to occur. Supervisor specific training on engagement would need to focus on creating this awareness in supervisors and teaching supervisors the skills they need to create an environment of psychological safety, ensure proper resources are available for employees to perform in their roles, and enable all supervisors to create environments in which their direct reports will find the work meaningful.

Employee specific training on engagement should focus on the employee being able to identify when the psychological conditions of enragement are not met, and what the employee can do to address this. This approach of training managers and supervisors on engagement simultaneously helps promote a culture of maximized employee

engagement. This benefits the organization as a result of the outcomes of increased task performance and organizational citizenship behavior.

This study also supports the need for coaches and first-line supervisors to focus on engagement. Skills learned in training courses for supervisors are necessary; however, some supervisors may need more individualized help on how to best apply their skills. Supervisors who engage must consider what is best for his or her personal style, the employees in the work unit, the culture of the organization, and the resources available. Training alone may not work for all supervisors due to the complexity of engagement. Having a coach as a guide for supervisors may enhance the success of their engagement

Senior leaders and human resource professionals can use this study to support the need to design supervisor selection systems that use supervisor engagement as a selection criteria. It is probable that an organization cannot fully assess how one will engage as a supervisor until one is in the role. Utilizing a probationary period for new supervisors may be effective in assessing supervisor engagement and its impact to employee engagement and organization outcomes. During a probationary period a supervisor could be required to complete training and utilize a coach who specializes in employee engagement. Before the probationary period ends, employee criteria such as direct report feedback surveys, direct report task performance, and direct report organization citizenship behavior participation can be used to determine whether the supervisor was engaged and how that engagement impacted the work unit. At the end of the probation period, multiple criteria would need to be used to determine whether a supervisor should

remain in the role permanently. The data available would allow supervisor engagement to be utilized as one of those criteria.

A supervisor who understands the benefits of his or her engagement on employees and the organization's outcomes may experience enhanced psychological motivation to maintain engagement. This may occur when supervisor recognizes that engagement may facilitate achievement of desired organization outcomes, including customer satisfaction, productivity, reduced turnover, profitability, and workplace safety (Harter et al., 2002).

Limitations of the Study

As mentioned in Chapter 3, a few limitations existed with this study. First, the use of a quantitative method allowed the researcher to address the research question and hypotheses. However, this method did not allow examination of the depth and underlying detail of why a hypothesis is supported or not supported (Mitchell & Jolley, 2001). While the study did support the relationships in the hypotheses, the study did not allow for the understanding of why these relationships exist.

Another limitation of the study was the six month timeframe that respondents referenced when responding to survey questions. The survey was based on experiences within the past six months to ensure participants had an adequate timeframe to consider when completing the survey. As a result, the results were only applicable to a limited period of one's employment. The researcher also only sought respondents from the United States, which limited generalizability of results to those who worked and lived in the United States. Also, known antecedents of employee engagement exist (Bakker et al., 2007; Christian et al., 2011; Mauno et al., 2007; Rich et al., 2010) that were not tested in

this study. Although the researcher controlled for some known antecedents, it was not feasible to control for all the known antecedents of employee engagement. Although the correlation of SE to EE was positive and significant, the variance was only .26, which indicates that other antecedents of employee engagement were not captured in this study.

As mentioned previously, power analysis results indicated the desirable sample size for a .80 power is 338. The researcher added 22 additional participant responses to account for potential outliers. During data analysis, 47 participants needed to be removed from the dataset because they outliers according to the guidance from Tabachnick and Fidell (2012). Power analysis occurred based on the actual 313 participants used for data analysis and determined to be .77, slightly below the .80 recommended value. Despite this lowered power, SEM indicated acceptable model fit.

Suggestions for Future Research

Future researchers could explore several potential topics based on the study findings and limitations. A qualitative or mixed methods study would be beneficial to understand why supervisor engagement leads to employee engagement. Because of the limited research regarding supervisor engagement and its relationship to employee engagement, a qualitative or mixed methods study could reveal insights that would advance understanding of both supervisor engagement and employee engagement.

As mentioned, the six month timeframe respondents referenced when responding to survey questions was a limitation in the study. To replicate the study as longitudinal with the survey being completed at multiple times may better assess whether supervisor engagement causes employee engagement. Also, to replicate the study as an experimental

one in which the supervisor purposely alters his or her engagement while other variables remain constant would help assess causation of employee engagement. Researchers have noted the need for more longitudinal and experimental research study designs for research on employee engagement (Christian et al., 2011; Crawford et al., 2010; Rich et al., 2010).

Analysis of the research study showed that common method bias affected 16 variables. All of these variables were on the supervisor engagement scale. To address common method bias, future researchers could replicate the study with dyads of the supervisor and the employee completing certain survey items. The employee could complete all survey items while the supervisor could complete the items related to his or her own engagement. The ability to compare responses across groups may lessen any bias revealed in this study.

Another potential research study would involve exploring whether employee engagement leads to supervisor engagement, and how that relationship affects supervisor work outcomes. Researchers have found that leader-member exchange theory is operationalized by both members of this dyad participating in interrelated activities and demonstrating interrelated behaviors toward a mutual outcome (Shweta & Srirang, 2013). These interrelated behaviors could be related to engagement. In addition, a supervisor could be engaged based on how he or she perceives the direct report's engagement. Examining this proposition could expand the understanding of leader-member exchange theory and its relationship with engagement theory.

Conclusion

The results of this research study support the positive relationship between supervisor engagement and employee engagement and that supervisor engagement functions as an antecedent of task performance and organizational citizenship behavior through the mediating role of employee engagement. An examination of convergent and discriminant validity revealed that the scales for OBCI and OCBO should be combined and used as one scale to measure organization citizenship behavior with subscales for each intended recipient. This examination also demonstrated that task performance behaviors and organizational citizenship behaviors can be distinguished. The correlation analysis of the demographic variables resulted in no recommendations for further research.

The study has several implications for theory, research, and practice. Limitations of the study included using a quantitative study design, the timeframe respondents were asked to consider for their responses, seeking only U.S. respondents, antecedents of employee engagement that cannot be accounted for in the study, and the number of responses used for data analysis. Suggestions for further research include a qualitative or mixed methods study, a longitudinal study, an experimental study, measuring supervisor-employee dyads, and exploring whether employee engagement leads to supervisor engagement and how that relationship affects supervisor work outcomes.

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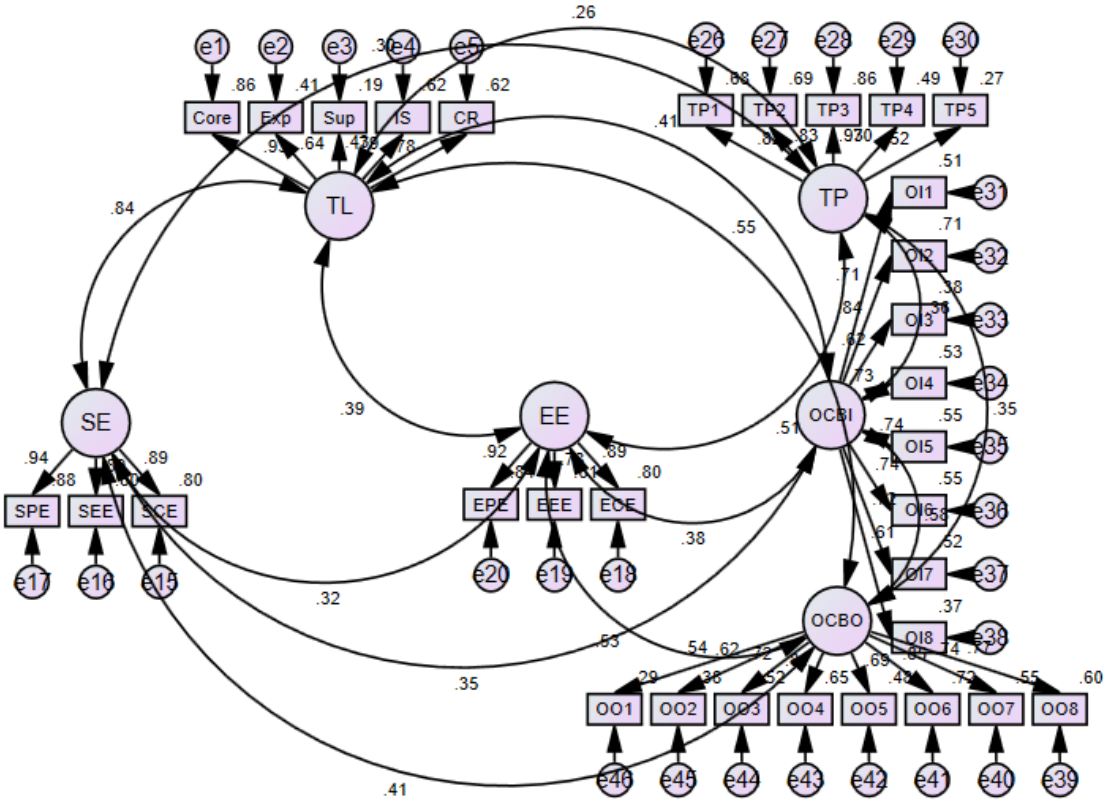
Appendix A. Pilot Study 2 Measurement Model



Note: Perceived supervisor engagement (SE), perceived supervisor physical engagement (SPE) perceived supervisor emotional engagement (SEE), perceived supervisor cognitive engagement (SCE), employee engagement (EE), employee physical engagement (EPE), employee emotional engagement (EEE), employee cognitive engagement (ECE), transformational leadership (TL), "core" transformational behaviors (Core), high performance expectations (Exp), individualized support (Sup), intellectual stimulation (IS), contingent reward (CR), task performance (TP), organizational citizenship behavior, individual (OCBI), organizational citizenship behavior, organization (OCBO)

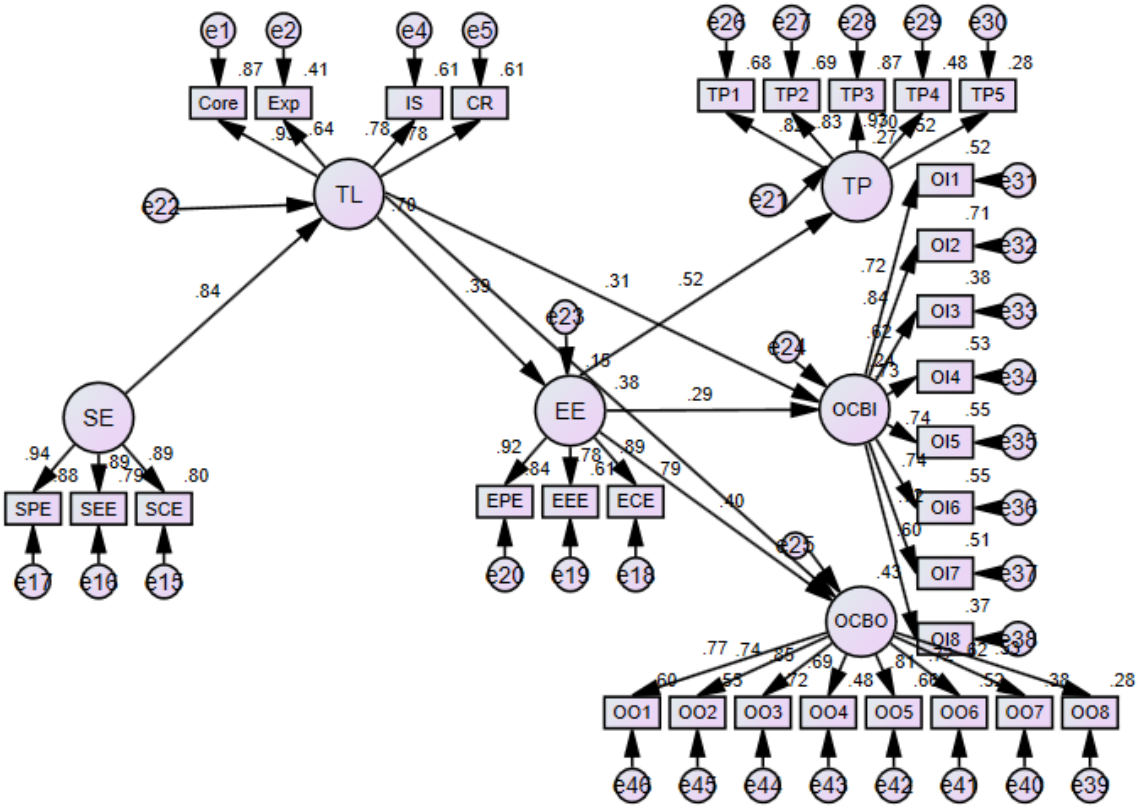
Appendix B. Pilot Study 2 Pattern (P) and Structure (S) Coefficients

	Trans Lead[a]		Sup. Eng.[b]		Emp. Eng.[c]		Task Perf.[d]		OCBI[e]		OCBO[f]	
Construct Variable	P	S	P	S	P	S	P	S	P	S	P	S
Trans. Lead.												
Core[g]	.928	.928		.779		.362		.238		.383		.508
Expec.[h]	.640	.640		.537		.249		.164		.264		.350
Support[i]	.432	.432		.362		.168		.111		.178		.236
Int. Stim.[j]	.785	.785		.659		.306		.201		.324		.429
Reward[k]	.785	.785		.658		.306		.201		.324		.429
Sup. Eng.												
Cog. Eng.[l]		.750	.894	.894		.290		.271		.316		.365
Emo. Eng.[m]		.748	.892	.892		.289		.270		.315		.364
Phys. Eng.[n]		.785	.936	.936		.303		.284		.331		.382
Emp. Eng.												
Cog. Eng.		.347		.289	.892	.892		.455		.341		.477
Emo. Eng.		.303		.252	.778	.778		.397		.297		.416
Phys. Eng.		.358		.297	.918	.918		.469		.351		.491
Task Perf.												
Item 1		.211		.250		.420	.824	.824		.298		.287
Item 2		.213		.252		.424	.831	.831		.301		.289
Item 3		.238		.282		.474	.930	.930		.337		.324
Item 4		.178		.211		.356	.697	.697		.252		.243
Item 5		.134		.158		.267	.523	.523		.189		.182
OCBI												
Item 1		.294		.251		.272		.258	.712	.712		.414
Item 2		.347		.297		.321		.304	.840	.840		.489
Item 3		.255		.218		.236		.223	.617	.617		.359
Item 4		.301		.258		.279		.264	.730	.730		.424
Item 5		.306		.262		.283		.269	.742	.742		.432
Item 6		.306		.262		.283		.269	.742	.742		.432
Item 7		.296		.254		.274		.260	.718	.718		.418
Item 8		.250		.214		.231		.219	.606	.606		.353
OCBO												
Item 1		.423		.315		.414		.269		.450	.773	.773
Item 2		.406		.303		.397		.259		.432	.743	.743
Item 3		.463		.345		.453		.295		.492	.846	.846
Item 4		.380		.283		.372		.242		.404	.695	.695
Item 5		.441		.329		.431		.281		.469	.806	.806
Item 6		.394		.294		.385		.251		.419	.721	.721
Item 7		.339		.253		.332		.216		.361	.620	.620

Item 8	.295	.220	.289	.188	.314	.539	.539

Note: [a]transformational leadership, [b]supervisor engagement, [c]employee engagement, [d]task performance, [e]organizational citizenship behavior, individual, [f]organizational citizenship behavior, organization, [g]core transformational leadership behaviors, [h]high performance expectations, [i]individualized support, [j]intellectual stimulation, [k]continent reward, [l]cognitive engagement, [m]emotional engagement, [n]physical engagement

Appendix C. Pilot Study 2 Structural Model



Note: Perceived supervisor engagement (SE), perceived supervisor physical engagement (SPE) perceived supervisor emotional engagement (SEE), perceived supervisor cognitive engagement (SCE), employee engagement (EE), employee physical engagement (EPE), employee emotional engagement (EEE), employee cognitive engagement (ECE), transformational leadership (TL), "core" transformational behaviors (Core), high performance expectations (Exp), individualized support (Sup), intellectual stimulation (IS), contingent reward (CR), task performance (TP), organizational citizenship behavior, individual (OCBI), organizational citizenship behavior, organization (OCBO)

Appendix D. UT Tyler Institutional Review Board Approval

THE UNIVERSITY OF TEXAS AT TYLER
3900 University Blvd. • Tyler, TX 75799 • 903.565.5774 • FAX: 903.565.5858

Office of Research and Technology Transfer

Institutional Review Board

December 7, 2015

Dear Mr. Thomas,

Your request to conduct the study: *Supervisor's Engagement and Organization Outcomes: The Mediating Role of Employee Engagement on Task Performance and Organizational Citizenship Behavior,* IRB #F2015-31 has been approved by The University of Texas at Tyler Institutional Review Board as a study exempt from further IRB review. This approval includes a waiver of signed, written informed consent. In addition, please ensure that any research assistants are knowledgeable about research ethics and confidentiality, and any co-investigators have completed human protection training within the past three years, and have forwarded their certificates to the IRB office (G. Duke).
Please review the UT Tyler IRB Principal Investigator Responsibilities, and acknowledge your understanding of these responsibilities and the following through return of this email to the IRB Chair within one week after receipt of this approval letter:

- Prompt reporting to the UT Tyler IRB of any proposed changes to this research activity
- **Prompt reporting to the UT Tyler IRB and academic department administration will be done of any unanticipated problems involving risks to subjects or others**
- Suspension or termination of approval may be done if there is evidence of any serious or continuing noncompliance with Federal Regulations or any aberrations in original proposal.
- Any change in proposal procedures must be promptly reported to the IRB prior to implementing any changes except when necessary to eliminate apparent immediate hazards to the subject.

Best of luck in your research, and do not hesitate to contact me if you need any further assistance.

Sincerely,

Gloria Duke, PhD, RN
Chair, UT Tyler IRB

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Appendix E. Employee Engagement Scale Permission Approval

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Appendix G. Organization Citizenship Behavior, Individual Scale Permission Approval

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for the American Psychological Association

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Appendix H. Organization Citizenship Behavior, Organization Scale Permission Approval

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Appendix I. Survey Instrument

IC INFORMED CONSENT You have been invited to participate in this study, titled Attitudes and Perceptions of Work. The purpose of this study is to better understand certain aspects and perceptions of work. Your participation is completely voluntary, and if you begin participation and choose to not complete it, you are free to not continue without any adverse consequences. If you agree to be in this study, we will ask you to do the following things: Complete an online survey with multiple choice questions about your perceptions of your work. The survey will take about 10-15 minutes to complete. After you read each question or statement, click the button that best corresponds to your response. You may need to scroll down the page to answer all the questions. Click the FORWARD button to continue after each page. Click EXIT when finished. At any time prior to clicking EXIT, you can click the BACK button to go back to a previous page, or close the browser to withdraw. We know of no known risks to this study, other than becoming a little tired of answering the questions, or you may even become a little stressed or distressed when answering some of the questions. If this happens, you are free to take a break and return to the survey to finish it, or, you can discontinue participation without any problems. Potential benefits to this study are guiding future work on issues such as employee engagement, work performance, and the role of the supervisor.

I know my responses to the questions are anonymous. If I need to ask questions about this study, I can contact the principle researcher, Romell Thomas (rthomas20@patriots.uttyler.edu), or, if I have any questions about my rights as a

research participant, I can contact Dr. Gloria Duke, Chair of the UT Tyler Institutional Review Board at gduke@uttyler, or 903-566-7023. I have read and understood what has been explained to me. If I choose to participate in this study, I will click "Yes" in the box below and proceed to the survey. If I choose to not participate, I will click "No" in the box.

- ❍ Yes, I choose to participate in this study (1)
- ❍ No, I choose to not participate in this study (2)

If No, I choose to not partici... Is Selected, Then Skip To End of Block

Q1 Do you reside within the United States?

- ❍ Yes
- ❍ No

If No Is Selected, Then Skip To End of Block

Q2 Do you work within the United States?

- ❍ Yes
- ❍ No

If No Is Selected, Then Skip To End of Block

Q3 How many hours per week do you USUALLY work at your primary organization?

- ❍ Under 20 hours
- ❍ 20-29 hours
- ❍ 30 or more hours

If 30 or more hours Is Not Selected, Then Skip To End of Block

Q4 Which of the following best describes your role in your organization? Note that "Upper management/Executive," "Middle management," and "First-line management" are ones that have duties which include formally monitoring the performance of employees, having involvement in decisions regarding pay and promotions that affect employees, and are increasingly made accountable for reducing turnover in their teams.

- ❍ Upper management/Executive
- ❍ Middle management
- ❍ First-line management
- ❍ Administrative staff
- ❍ Trained professional
- ❍ Skilled laborer
- ❍ Consultant
- ❍ Temporary employee
- ❍ Researcher
- ❍ Self-employed

If Upper management/Executive Is Selected, Then Skip To End of BlockIf Middle management Is Selected, Then Skip To End of BlockIf First-line management Is Selected, Then Skip To End of Block

Q5 What is your age?

- ❍ 17 years of age or younger
- ❍ 18-29 years old
- ❍ 30-49 years old
- ❍ 50-64 years old
- ❍ 65 years or over

If 17 years of age or younger Is Selected, Then Skip To End of Block

Q6 How long have you worked for your current supervisor?

- ❍ Less than 6 months
- ❍ 6 months-1 year
- ❍ 1-3 years
- ❍ 4-5 years
- ❍ 6-8 years
- ❍ 8-10 years
- ❍ Over 10 years

If Less than 6 months Is Selected, Then Skip To End of Block

Q7 Counting all locations where your employer operates, what is the total number of persons who work there (including you)?

- ❍ 1
- ❍ 2-9
- ❍ 10-50
- ❍ 51-99
- ❍ 100-499
- ❍ 500-999
- ❍ 1,000-4,999
- ❍ 5,000+

If 1 Is Selected, Then Skip To End of Block

Q8 What is your gender?

- ❍ Male
- ❍ Female

Q9 What is the highest level of education you have completed?

- ❍ Some high school
- ❍ High school graduate
- ❍ Some college
- ❍ Trade/technical/vocational training and/or certification
- ❍ Undergraduate degree
- ❍ Some postgraduate work
- ❍ Post graduate degree

Q10 Please specify your ethnicity:

- ❍ White
- ❍ Hispanic or Latino
- ❍ Black or African American
- ❍ Native American or American Indian
- ❍ Asian / Pacific Islander
- ❍ Other

Q11 What is your current household income before taxes?

- ❍ Under $19,999
- ❍ $20,000 - $39,999
- ❍ $40,000 - $59,999
- ❍ $60,000 - $79,999
- ❍ $80,000 - $99,999
- ❍ $75,000 - $99,999
- ❍ $100,000 - $150,000
- ❍ Over $150,000

Q12 How long have you been at your organization?

- ❍ Less than 1 year
- ❍ 1-5 years
- ❍ 6-10 years
- ❍ 11-20 years
- ❍ 21-30 years
- ❍ Over 30 years

Q13 Which of the following categories best describes your industry (regardless of your actual position)?

- ❍ Aerospace/Defense
- ❍ Construction
- ❍ Education
- ❍ Finance/Banking/Insurance
- ❍ Hotel/Restaurant
- ❍ Healthcare
- ❍ Manufacturing
- ❍ Mining/Oil and Gas
- ❍ Professional Services
- ❍ Retail Sales
- ❍ Real Estate
- ❍ Transportation/Warehousing
- ❍ Travel/Entertainment
- ❍ Waste Management
- ❍ Wholesale Trade

Q14 The organization you work for is in which of the following:

- ❍ For-Profit Organization
- ❍ Non-for-profit Organization
- ❍ Federal Government
- ❍ State Government
- ❍ Local Government

Q15 How many employees does your supervisor oversee, including you?

- ❍ 1-5
- ❍ 6-10
- ❍ 11-15
- ❍ 16-20
- ❍ 21 or over

Based on my experience over the past six months:

Q16 I work with intensity on my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q17 I exert my full effort to my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q18 I devote a lot of energy to my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q19 I try my hardest to perform well on my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q20 I strive as hard as I can to complete my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q21 I exert a lot of energy on my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q22 I am enthusiastic in my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q23 I feel energetic at my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q24 I am interested in my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Based on my experience over the past six months:

Q25 I am proud of my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q26 I feel positive about my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q27 I am excited about my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q28 At work, my mind is focused on my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q29 At work, I pay a lot of attention to my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q30 This is a filter question. Answer "Disagree" below to continue.

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

If Disagree Is Not Selected, Then Skip To End of Block

Q31 At work, I focus a great deal of attention on my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q32 At work, I am absorbed by my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q33 At work, I concentrate on my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q34 At work, I devote a lot of attention to my job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Based on my experience over the past six months, how often do you:

Q35 Help others who have been absent

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

Q36 Willingly give your time to help others who have work-related problems

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

Q37 Adjust your work schedule to accommodate other employees' requests for time off

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

Q38 Go out of the way to make newer employees feel welcome in the work group

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

Q39 Show genuine concern and courtesy toward coworkers, even under the most trying

business or personal situations

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

Q40 Give up time to help others who have work or nonwork problems

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

Q41 Assist others with their duties

- never
- very rarely
- rarely
- sometimes
- frequently
- very frequently
- always

Q42 Share personal property with others to help their work

- never
- very rarely
- rarely
- sometimes
- frequently
- very frequently
- always

Based on my experience over the past six months, how often do you:

Q43 Attend functions that are not required but that help the organizational image

- never
- very rarely
- rarely
- sometimes
- frequently
- very frequently
- always

Q44 Keep up with developments in the organization

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

Q45 Defend the organization when other employees criticize it

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

Q46 Show pride when representing the organization in public

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

Q47 Offer ideas to improve the functioning of the organization

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

Q48 Express loyalty toward the organization

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

Q49 This is a filter question. Answer "frequently" below to continue.

- ❍ never
- ❍ very rarely
- ❍ rarely
- ❍ sometimes
- ❍ frequently
- ❍ very frequently
- ❍ always

If frequently Is Not Selected, Then Skip To End of Block

Q50 Take action to protect the organization from potential problems

- never
- very rarely
- rarely
- sometimes
- frequently
- very frequently
- always

Q51 Demonstrate concern about the image of the organization

- never
- very rarely
- rarely
- sometimes
- frequently
- very frequently
- always

Based on my experience over the past six months:

Q52 I always complete the duties specified in my job description

- strongly disagree
- disagree
- somewhat disagree
- neither agree or disagree
- somewhat agree
- agree
- strongly agree

Q53 I meet all the formal performance requirements of the job

- ❍ strongly disagree
- ❍ disagree
- ❍ somewhat disagree
- ❍ neither agree or disagree
- ❍ somewhat agree
- ❍ agree
- ❍ strongly agree

Q54 I fulfill all responsibilities required by my job

- ❍ strongly disagree
- ❍ disagree
- ❍ somewhat disagree
- ❍ neither agree or disagree
- ❍ somewhat agree
- ❍ agree
- ❍ strongly agree

Q55 I never neglects aspects of the job that I am obligated to perform

- ❍ strongly disagree
- ❍ disagree
- ❍ somewhat disagree
- ❍ neither agree or disagree
- ❍ somewhat agree
- ❍ agree
- ❍ strongly agree

Q56 I often fail to perform essential duties

- ❍ strongly disagree
- ❍ disagree
- ❍ somewhat disagree
- ❍ neither agree or disagree
- ❍ somewhat agree
- ❍ agree
- ❍ strongly agree

The following questions are about your immediate supervisor. For this survey, your immediate supervisor is the one who is formally responsible for monitoring performance for you and your work unit, is involved in decisions regarding pay and promotions that affect you and your work unit, and is increasingly made accountable for reducing turnover in your work unit.

Based on my perception of my immediate supervisor over the past six months:

Q57 My immediate supervisor works with intensity on his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q58 My immediate supervisor exerts his/her full effort to his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q59 My immediate supervisor devotes a lot of energy to his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q60 My immediate supervisor tries his/her hardest to perform well on his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q61 My immediate supervisor strives as hard as he/she can to complete his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q62 My immediate supervisor exerts a lot of energy on his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q63 My immediate supervisor is enthusiastic in his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q64 My immediate supervisor feels energetic at his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q65 My immediate supervisor is interested in his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Based on my perception of my immediate supervisor over the past six months:

Q66 My immediate supervisor is proud of his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q67 My immediate supervisor feels positive about his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q68 My immediate supervisor is excited about his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q69 This is a filter question. Answer "Strongly Disagree" below to continue.

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

If Strongly Disagree Is Not Selected, Then Skip To End of Block

Q70 At work, my immediate supervisor’s mind is focused on his/her job

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q71 At work, my immediate supervisor pays a lot of attention to his/her job.

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q72 At work, my immediate supervisor focuses a great deal of attention on his/her job.

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q73 At work, my immediate supervisor is absorbed by his/her job.

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q74 At work, my immediate supervisor concentrates on his/her job.

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Q75 At work, my immediate supervisor devotes a lot of attention to his/her job.

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Neither Agree nor Disagree
- ❍ Agree
- ❍ Strongly Agree

Thank you for participating in this survey. Please continue to save your response.

Biography Sketch

Romell Thomas has a background in employee development, organizational development, change management, technical training, and human resource analytics. He has worked for the National Aeronautics and Space Administration (NASA) since 2008. During this time, he has served in Human Resources in the Workforce Planning Office and in the Training and Development Office. Romell Thomas is a certified mediator and also holds a Professional in Human Resources (PHR) certification.

Romell received his B.A. in Finance from the University of St Thomas and his M.A. in Industrial-Organizational Psychology from the University of Houston Clear Lake. Romell began his Ph.D. studies at the University of Texas at Tyler in Fall 2013. His research interests include workplace engagement, leadership behavior, and leadership development.