DISSERTATION

EMPLOYEE ENGAGEMENT: INTERPERSONAL LEADERSHIP PREDICTORS AND IDENTIFICATION

Submitted by

Anne M. Hansen

Department of Psychology

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WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER OUR SUPERVISION BY ANNE M. HANSEN ENTITLED EMPLOYEE ENGAGEMENT: INTERPERSONAL LEADERSHIP CHARACTERISTICS AND IDENTIFICATION BE ACCEPTED AS FULFILLING IN PART REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY.

Committee on Graduate Work

(Please print name under signature)

Alyssa Mitchell Gibbons, PhD

Tammi Vacha-Haase, PhD

Yolanda Sarason, PhD

Advisor Zinta S. Byrne, PhD

Department Head Ernest Chavez, PhD

ABSTRACT OF DISSERTATION

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Prior research has demonstrated that employee engagement is related to positive work outcomes, such as high performance and commitment (Hallberg & Schaufeli, 2006; Harter, Schmidt, & Hayes, 2002). Though employee engagement has been investigated in a wide variety of studies, little research has investigated the role of leadership as a predictor. The purpose of the present study was to introduce a framework to explain the relationship between interpersonal leadership characteristics and employee engagement. Based on this framework, it was hypothesized that leadership characteristics (transformational leadership, interpersonal justice, and informational justice) will predict employee engagement indirectly through the effects of organizational identification. Structural Equation Modeling (SEM) was used to test this hypothesis. Alternative models testing direct effects were also examined. Results are based on responses from 430 working adults from locations across the United States and Canada. Results partially supported the framework, showing that interpersonal leadership characteristics significantly predicted organizational identification and engagement. However, the results did not support mediation, as the best fitting model was the fully direct model where leadership and identification are both directly related to engagement.

These findings are further discussed, along with implications, practical applications, and future research directions.

Anne M. Hansen
Psychology Department
Colorado State University
Fort Collins, CO 80523
Spring 2009

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Introduction

Employee engagement has recently emerged as a popular topic in organizations, with research demonstrating its relationship with positive work outcomes, including high performance, low turnover, and positive business results (Hallberg & Schaufeli, 2006; Harris, 2007; Harter, Schmidt, & Hayes, 2002; Salanova, Agut, & Peiro, 2005; Schaufeli & Bakker, 2004). Although there are many benefits to high employee engagement, few studies have examined how leadership can encourage and foster employee engagement in the workplace (Macy & Schneider, 2008; May, Gilson, & Harter, 2004). Specifically, there is a dearth of research investigating the relationship between interpersonal leadership characteristics and employees' feelings of engagement (see Vogelgesang, 2007, for an exception). This is particularly surprising given the research evidence showing the influence of leaders on employees' work attitudes and performance (Bass, Avolio, Jung, & Berson, 2003; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). Therefore, this lack of studies examining leadership and employee engagement represents a critical gap in the employee engagement literature.

The purpose of the present study is to introduce a framework to explain the relationship between interpersonal leadership characteristics and employee engagement. Specifically, this framework integrates research in employee engagement (Kahn, 1990) and the group engagement model (Tyler & Blader, 2003) to develop and test the following hypothesis: interpersonal leadership characteristics create identification in employees; employees' identification with the organization, in turn, creates the

conditions necessary for them to engage at work, resulting in employee engagement, which then leads to positive work outcomes (see Figure 1).

Employee Engagement

In general, research on employee engagement focuses on how employees feel about and contribute to their jobs (Saks, 2008). Although variables labeled "engagement" have been studied for decades, the construct of employee engagement is still unclear and debated among researchers and practitioners (Harter & Schmidt, 2008; Macy & Schneider, 2008; Newman & Harrison, 2008). For example, much of a recent volume of the *Industrial and Organizational Psychology* journal was dedicated to a debate about the state of employee engagement theory and research. In this particular volume, Macy and Schneider (2008) provided a review of engagement research and proposed a framework to summarize the existing employee engagement literature, categorizing the previous variables labeled "engagement" into three major engagement constructs: behavioral engagement, state engagement, and trait engagement.

Behavioral engagement is defined as discretionary work effort beyond in-role performance, such as organizational citizenship behaviors (OCB; Organ, 1988) and proactive/personal initiative (Crant, 2000). It can also refer to a higher order factor comprised of a group of behavioral variables, such as OCBs and discretionary effort (Newman & Harrison, 2008). However, researchers suggests that behavioral engagement is simply a different label for discretionary effort, and that variables described as behavioral engagement are actually outcomes of state engagement (Dalal, Brummel, Wee, & Thomas, 2008; Macy & Schneider, 2008).

State engagement, the focus of the present study, refers to feelings of being energetic at work, absorbed in work activities, and dedicated to one's job (Schaufeli, Salanova, Gonzalez-Rema, & Bakker, 2002). State engagement is closely related to a host of other work attitudes, including job satisfaction, involvement, commitment, flow, and empowerment (Newman & Harrison, 2008). Indeed, all of these attitudes refer to some type of positive attachment at work (Hallberg & Schaufeli, 2006). However, some researchers (e.g., Schaufeli et al., 2002) have strived to make distinctions between state engagement and related work attitudes, noting that engagement is "not focused on any particular object, event, individual, or behavior" (Schaufeli et al., 2002; p. 74). The authors contrast this with attitudes such as job satisfaction, which often focuses on satisfaction with specific facets of the job (e.g., pay satisfaction). Hallberg and Schaufeli (2006) argue that whereas organizational commitment is an attachment to the organization, state engagement refers to absorption and dedication to one's job. Macy and Schneider (2008) contend that state engagement is the only engagement construct that is unique from other related constructs, whereas behavioral engagement is explained by existing constructs, as is trait engagement, which is described next.

Trait engagement is conceptualized as an individual difference variable that inclines individuals to view the world positively and be more likely to perform the positive work behaviors associated with behavioral engagement, such as OCBs. Some traits cited as facets of trait engagement are positive affectivity (Watson, Clark, & Tellegen, 1988) and proactive personality (Bateman & Crant, 1993). Although trait engagement may predispose an individual to feel energetic and involved at work, state

engagement focuses on the act of being absorbed at work and therefore is the focus of most research on employee engagement (Macy & Schneider, 2008).

Approaches to Employee Engagement: Previous Research

In the extant literature, two main approaches to studying employee engagement exist, each with different underlying models, empirical evidence, and measures of engagement: a) studies of stress and employee well-being, and b) Kahn's (1990) study of work engagement and subsequent studies. Of the two, the stress approach has received the most research attention and evidence; little research has investigated Kahn's model of engagement. Therefore, one goal of this paper is to investigate the approach offered by Kahn as a means of further developing the nomological net for employee engagement beyond stress models, and including stress outcomes to investigate how these approaches can be combined.

Stress perspective. Researchers focused on stress in organizations have investigated engagement and employee well-being within the framework of the job demands-resource model (Bakker, Hakenen, Demerouti, & Xanthopoulou, 2007) and burnout (Maslach, Schaufeli, & Leiter, 2001). This research typically defines employee engagement as an energetic state of involvement and the antithesis to burnout, located at the opposite end of a continuum from burnout (Maslach et al., 2001). As such, engagement is often studied as a stress-related outcome. Results have shown that job characteristics such as job resources, workload, and work/life balance (Bakker et al., 2007; Bakker, Schaufeli, Demerouti, & Euwema, 2005; Demerouti, Bakker, Janssen, & Schaufeli, 2001; Maslach & Leiter, 2008) can predict employee engagement and that

employee engagement is strongly negatively related to burnout, job stress, and stress-related health complaints (Andreassen, Ursin, & Eriksen, 2007; Schaufeli et al., 2002).

The research in the stress literature has provided evidence that stress and engagement show a strong negative relationship, indicating that engagement is important to the health and well-being of employees. Additionally, though results have shown ample support for job characteristics (e.g., workload) as predictors of engagement, little work has addressed the role of leadership. Further, stress models do not explicate how employees build engagement at work. Kahn's study of work engagement presents a comprehensive construct of engagement separate from burnout and the stress literature.

Kahn's (1990) construct of work engagement. In Kahn's (1990) seminal study of engagement at work, he described work engagement as personal presence and energy put into work. Kahn's in-depth qualitative study investigated a wide range of factors that could affect work engagement, including individual, interpersonal, group-level, intergroup, and organizational factors. He examined what types of experiences most impacted work engagement, with results yielding three critical psychological states that influence engagement at work: meaningfulness, availability, and psychological safety. For each of these psychological states, Kahn (1990) hypothesized what types of variables could predict each state.

Psychological meaningfulness is based on the incentives and disincentives to engage at work. It is the result of employees' assessments that if they invest in work, they will get a return on that investment by feeling worthwhile, useful, valuable, and as if they were not taken for granted. Kahn's (1990) analysis indicated that meaningfulness was

primarily predicted by characteristics of one's work tasks, characteristics of one's role (e.g., position status or influence), and interactions with others at work.

Availability is associated with an individual's emotional and cognitive resources that allow him or her to engage at work. Availability consists of employees' physical energy, emotional energy, factors outside of work (e.g., work/life conflict), and their perceived job security.

Psychological safety describes "feeling able to show...one's self without fear of negative consequences to self-image, status, or career" (Kahn, 1990, p. 708). Kahn identified interpersonal relationships, connectedness to others, and work environment factors that create predictable and consistent situations as the most likely influences of psychological safety.

Though there have been many studies of engagement, few have explicitly tested Kahn's (1990) model, and even fewer have tested this model using established measures of engagement (i.e., those that show discriminant validity from other attitudinal constructs). May and colleagues (2004) provided the first empirical test of the model, and found that all three of Kahn's (1990) psychological conditions for engagement were positively related to engagement. Unfortunately, their measure failed to separate the three conditions and therefore it's unclear whether one condition is more important than another.

A Model of Interpersonal Leadership Characteristics and Employee Engagement

By extending the group engagement model (Tyler & Blader, 2003), the current study proposes a framework for how interpersonal leader characteristics create an environment that encourages high levels of employee engagement as defined by Kahn

(1990; Figure 1). Additionally, by focusing on leader characteristics that can be changed through intervention such as training (e.g., transformational leadership and informational justice perceptions; Barling, Weber, & Kelloway, 1996, and Skarlicki & Latham, 1996, respectively), the findings of this study will also provide practitioners with actionable recommendations for factors related to high employee engagement. The following sections describe the model in detail.

Overview of Model

Positive interpersonal leader characteristics facilitate identification with the group because the leader provides an indication of group success (Shamir, House, & Arthur, 1993), thereby elevating the status of group members (Tyler & Blader, 2003). Thus, employees who have leaders with positive leadership characteristics will exhibit high identification with the organization. When employees have high identification, they feel less uncertainty, trust that their contributions will be valued, and feel they can be themselves at work, creating availability, meaningfulness, and psychological safety (Vogelgesang, 2007). Therefore, organizational identification satisfies the psychological conditions of state engagement, predicting state engagement and mediating the relationship between leader characteristics and state engagement.

Leadership Characteristics

Transformational leadership. Transformational leadership (Burns, 1978) is a component of leadership that focuses largely on the relationship between leaders and followers and has been linked both theoretically and empirically to increased group identification (Jung & Avolio, 2000; Pillai, Schriesheim, & Williams, 1999). Additionally, Kahn (1990) described the importance of transformational qualities of

leaders for engagement when he wrote that "people need to feel that their authority figures are competent enough and secure enough in their own visions to create paths along which subordinates can safely travel" (p. 712).

Transformational leadership consists of four main components: charisma and idealized influence, inspirational motivation, individual consideration, and intellectual stimulation (Bass, 1990). Charisma and idealized influence are indicated when followers identify with their leader and want to emulate him or her. Inspirational motivation includes articulating a clear vision and motivating others. Individual consideration is provided by a leader when he or she considers each individual's need for achievement and growth. Intellectual stimulation occurs when leaders challenge employees and encourage creative solutions. Transformational leaders are able to motivate employees by inspiring them and transforming their attitudes, beliefs, and values into a common vision and goals (Bass, 1990).

Research indicates that leaders who are relationship oriented, such as leaders who exhibit transformational behaviors, create groups with stronger feelings of identification (Cicero & Pierro, 2007; Hogg & van Knippenberg, 2003; Wolfe, 2008). Shamir and colleagues (1993) report that transformational leadership produces group identification because the leader provides vision, consideration, and elevates the status of the group in the eyes of its members. Further, identification has been shown to be a key mediator of the relationship between transformational leadership and work attitudes and outcomes (e.g., Wolfe, 2008). In sum, the research indicates that transformational leadership builds identification and is a likely predictor of organizational identification.

Hypothesis 1: Transformational leadership will predict organizational identification.

Organizational justice. Organizational justice refers to the fairness of outcomes, procedures, and interpersonal treatment in organizations (Cropanzano & Greenberg, 1997). Perceptions of justice have been linked to high organizational commitment, trust, and OCBs, and low turnover intentions and work stress (Byrne, 2005; Cohen-Charash & Spector, 2001; Colquitt, Conlon, Wesson, Porter, & Ng 2001). Organizational justice is not traditionally regarded as a leadership characteristic; however, based on empirical evidence (van Knippenberg, De Cremer, & van Knippenberg, 2007), researchers have urged others to consider justice perceptions of leader behavior to be a facet of leadership (Janson, Levy, Sitkin, & Lind, 2008; van Knippenberg & De Cremer, 2008).

Research in organizational justice primarily investigates three different types of justice perceptions: distributive, procedural and interactional (Colquitt & Greenberg, 2003). Distributive justice refers to the fairness of outcomes (Adams, 1965), such as pay and other rewards (Colquitt, 2001). Procedural justice examines the fairness of the procedures used to decide outcomes (Thibaut & Walker, 1975). Interactional justice is the fairness of interpersonal treatment during the implementation of procedures and the explanations provided for decisions (Bies & Moag, 1986).

According to Bies and Moag (1986), four key factors produce fair interactions: truthfulness, respect, propriety, and justification. Further work has established that interactional justice has two components: interpersonal and informational justice (Colquitt, 2001; Greenberg, 1993), leading to a four-type typology of organizational justice. Interpersonal justice focuses on interpersonal treatment, such as the extent to

which employees are treated with dignity and respect. Informational justice refers to the fairness of the explanations and information shared during the implementation of a procedure or decision, such as providing clear explanations in a timely manner (Greenberg, 1993).

In support of the present study's framework, previous theory and research have connected perceptions of leader fairness to identification (Hakonen & Lipponen, 2008; Hogg & van Knippenberg, 2003). Fair leaders indicate to group members that they are valued, respected, and that they can be proud of their group membership (Tyler & Blader, 2001). Similar to the process described for transformational leadership, employees want to identify with high status groups to ensure strong social identity (Ashforth & Mael, 1989). Empirical findings that leader fairness is a significant predictor of identification provide support for this framework (DeCremer, van Dijke, & van den Bos, 2006; Hakonen & Lipponen, 2008). Though the above empirical findings did not specifically study interpersonal and informational justice, there is evidence that interactional justice (which includes these two types of justice) should be a significant predictor of identification. According to Tyler and Blader (2003), the characteristics of high interactional justice (e.g., respect; Bies & Moag, 1986) encourage the key conditions necessary for identification, pride in the group and respect from the leader. Therefore, it is hypothesized that:

Hypothesis 2: Interpersonal justice will predict organizational identification.

Hypothesis 3: Informational justice will predict organizational identification.

Organizational Identification

Organizational identification occurs when employees build a relationship with the

organization or an organizational group that defines a part of their self-concept (Edwards, 2005). Brown (1969) applied identification theory from social psychology to organizations, defining four key parts of identification: attraction to the organization, consistency of goals, loyalty, and reference of the self to membership in the organization. Since Brown's (1969) article was published, research on organizational identification has often conflated identification with organizational commitment, internalization, and behaviors that are now considered outcomes of identification (Ashforth & Mael, 1989; Edwards, 2005).

Ashforth and Mael (1989) provided much needed clarity to the organizational identification literature by specifically applying social identity theory (Tajfel, 1978) to organizational behavior. Social identity theory holds that people cognitively categorize themselves into groups (for example, by gender or ethnicity), allowing them to define themselves as part of the social environment (Tajfel, 1978; Tajfel & Turner, 1979). Ashforth and Mael (1989) showed that a similar process of identification occurs when employees categorize themselves as members of an organization or a group within the organization (e.g., a work team). When this occurs, employees are more likely to support the group, express pride and loyalty to the group, and internalize group values and norms (Ashforth & Mael, 1989).

As a result of Ashforth and Mael's (1989) seminal paper, substantial empirical evidence exists linking organizational identification to work attitudes similar to state engagement, such as trust and organizational commitment (Riketta, 2005). Organizational identification theory provides a framework to describe how and under which circumstances interpersonal leadership characteristics predict engagement.

Specifically, the group engagement model (Tyler & Blader, 2003) describes how identification with the group is the mechanism through which follower perceptions of a leader can influence employee attitudes, values, and behavior. When people identify with the group, they feel secure and trusting, which allows them to feel safe to engage at work. The feelings created from group identification creates the environment necessary for state engagement. Tyler and Blader (2003) emphasize that the key condition for building identification is the fairness of interpersonal treatment from the group leader. The extent to which leaders treat people with respect and enact procedures fairly allows employees to feel more secure in their identity with the group (Tyler & Blader, 2003). Although Tyler and Blader (2003) focused their theory on predicting behavioral engagement (i.e., discretionary work effort and cooperation), the same processes that foster group identification can be extended to understand how leadership characteristics create the conditions necessary for state engagement.

Identification is essential for employees to engage at work because it creates the environment necessary for all three of Kahn's (1990) psychological conditions of engagement to thrive. Identification ensures the group status and provides security in employees' work and role status, which is essential to availability (Kahn, 1990). Identification gives group members a feeling of connectedness (Ashforth & Mael, 1989) and creates an environment of predictability and reduced uncertainty (Hogg, Sherman, Dierselhuis, Maitner, & Moffit, 2007), which builds psychological safety (Kahn, 1990). Finally, identification with a high status group provides a feeling of meaningfulness to group members (Kahn, 1990).

Organizational identification as a mediator. As suggested by the model, organizational identification should mediate the relationship between interpersonal leadership characteristics (transformational leadership, interpersonal justice, and informational justice) and state engagement. The previous section outlined how organizational identification creates the conditions necessary for state engagement. Further, Kahn (1990) emphasized how each of the psychological conditions are necessary for engagement; without meaningfulness, safety and availability, people are not able to engage at work. Therefore, identification should fully mediate the relationship between leadership characteristics and engagement.

In support, studies have not only shown that identification is related to both organizational justice and transformational leadership; it is also a key factor in the relationship between these variables and work outcomes (Shamir et al., 1993; Tyler & Blader, 2003). For example, Cicero and Pierro (2007) found that identification fully mediated the relationship between transformational leadership and work behavior such as job performance.

Hypothesis 4: Organizational identification will predict state engagement.

Hypothesis 5: Organizational identification will fully mediate the relationship between transformational leadership, interpersonal justice, and informational justice and state engagement.

Outcomes of Engagement

The present study will investigate the relationship between state engagement and three outcome variables of interest to organizations previously linked to state engagement: affective organizational commitment, job tension, and work performance

(e.g., Moliner, Martinez-Tur, Ramos, Peiro, & Cropanzano, 2008; Salanova & Schaufeli, 2008). These outcomes are suggested by existing models of employee engagement (Kahn, 1990; Macy & Schneider, 2008) and have been associated with state engagement in previous studies (e.g., Salanova et al., 2005). Therefore, by showing the same relationships, one can provide additional validity evidence for the model presented in the current paper. It is expected that this study will replicate the findings of previous work.

Affective organizational commitment. Affective organizational commitment describes the emotional attachment employees have with their organization (Allen & Meyer, 1990). Affective organizational commitment is negatively related to withdrawal and positively related to employee performance (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Many studies have examined the relationship between engagement and commitment, showing engagement as a strong predictor of commitment (Demerouti et al., 2001; Hallberg & Schaufeli, 2006).

Job tension and work performance. The two other outcome variables, job tension and job performance, are important to organizations because they are indicators of worker well-being and productivity. Much research in the engagement literature has connected employee engagement to work stress variables, including job stress and tension (Schaufeli et al., 2002). Engagement is often described as the key to better performance (Corporate Leadership Council, 2004), and those studies that have examined state engagement and performance have found that state engagement is related to both specific types of performance (e.g., customer service performance) and general work performance (Moliner et al., 2008; Salanova & Schaufeli, 2008).

Method

Participants

Participants were employees at a large engineering and construction firm with offices located in multiple U.S. and Canada locations. A random sample of approximately 2500 employees company-wide and all 570 employees in one business unit were contacted by email to participate. Four hundred and thirty employees completed the survey, for a 14% response rate. Participants varied in age ($M = 44.56$, $SD = 11.88$) and organizational tenure ($M = 7.27$, $SD = 7.88$), and the majority of participants were male (58% Male, 34% Female, 7% missing).

Measures

Coefficient alpha reliabilities reported below are for scores obtained in this sample. See Appendix A for a complete list of all survey items.

Transformational leadership. Transformational leadership of employees' immediate supervisor was measured by Rafferty and Griffin's (2004) 15-item measure. This scale consists of five subscales, each with three items: articulating a vision ($\alpha = .82$), intellectual stimulation ($\alpha = .88$), inspirational communication ($\alpha = .88$), supportive leadership ($\alpha = .94$), and personal recognition ($\alpha = .95$). In reference to the employee's supervisor, sample items included "Has a clear understanding of where we are going," "Says things that make employees proud to be a part of this organization," and "Challenges me to think about old problems in new ways." Responses were captured on a 7-point Likert scale format (1 = *strongly disagree* to 7 = *strongly agree*). Validity evidence for the use of this scale is shown in Rafferty and Griffin (2004).

Interpersonal and informational justice. Interpersonal (α = .88) and informational (α = .92) justice perceptions were measured using 3-item scales based on those developed by Colquitt (2001). With reference to the supervisor, items included: "Has he/she treated you with respect?" and "Has he/she communicated details in a timely manner?" Responses were captured on a 7-point Likert scale format (1 = *strongly disagree* to 7 = *strongly agree*). Validity evidence is shown in Colquitt (2001).

Organizational identification. Organizational identification was measured using Mael and Ashforth's (1992) 5-item scale (α = .82). Sample items included: "When someone criticizes my organization, it feels like a personal insult," and "I am very interested in what others think about my organization." Responses were captured on a 7-point Likert scale format (1 = *strongly disagree* to 7 = *strongly agree*). Validity evidence for the use of this scale is shown in Mael and Ashforth (1992).

Employee work engagement. Employee engagement was measured using the 9-item version of the Utrecht Work Engagement Scale (UWES), comprised of three subscales (each with three items): vigor, dedication, and absorption (Schaufeli & Bakker, 2003; α = .90, α = .86, and α = .71, respectively). Sample items from each sub-scale follow: "When I get up in the morning, I feel like going to work," "I am proud of the work that I do," and "When I am working, I forget everything else around me," respectively. Responses were captured on a 7-point Likert scale format (1 = *never* to 7 = *always*). Validity evidence for the use of this scale is shown in Schaufeli, Bakker, and Salanova (2003).

Affective organizational commitment. Affective organizational commitment was measured with Allen and Meyer's (1990) 8-item scale (α = .90). Sample items included:

"I would be very happy to complete my career working for this organization," and "This organization has a great deal of personal meaning for me." Responses were captured on a 7-point Likert scale format (1 = *strongly disagree* to 7 = *strongly agree*). Validity evidence for the use of this scale is shown in Allen and Meyer (1990).

Job tension. Job tension was measured using House and Rizzo's (1972) 6-item sub-scale of the Anxiety-Stress Questionnaire (α = .86). Sample items included: "I work under a great deal of stress," and "My job tends to directly affect my health." Responses were captured on a 7-point Likert scale format (1 = *strongly disagree* to 7 = *strongly agree*). Validity evidence for the use of this scale can be found in House and Rizzo (1972).

Work performance. Work performance was measured using the supervisor-rated performance evaluation provided by the participating organization. Eight dimensions of performance and an omnibus rating of performance relative to work goals were rated. Responses were captured on a 5-point Likert scale format (1 = *does not meet expectations* to 5 = *exceeds expectations*). Items on the performance evaluation were created to rate employees on strategic performance priorities of the organization and employees' stated performance goals. Hence, the evaluation measures work performance as defined by the organization and shows initial evidence of content validity.

Procedure

Employees were informed of the questionnaire's web site address and invited to visit the site to complete the survey. A representative from the organization sent an email to employees to inform them of the opportunity to participate in the study. Data were collected through a web-based survey. A cover letter explaining the purpose of the study

was the first page of the survey and consent to participate was implied when participants agreed to participate in the study by clicking the "I agree" box on the first survey page. One week after the initial communication, a reminder email was sent to the same group of employees. Data was collected October – November 2008.

To protect confidentiality, each participant was assigned an identification number and performance evaluations were linked to each participant's survey responses using this number. The linked list with the names provided was destroyed after performance evaluation data were accessed. The performance evaluations contained ratings obtained between October and December of 2008. Two hundred and sixty four employees gave permission to access their performance evaluations from human resources records and provided their first and last name, which was used to access performance evaluation data from organizational records. Of those who provided their names, only 60 employees had complete performance evaluations. Therefore, due to the small sample size and extremely low response rate for evaluations, work performance was not included in the analyses.

Results

Descriptive Statistics

Means, standard deviations, correlations among observed variables and score reliability information is summarized in Table 1. All scale scores showed adequate reliability (Nunnally & Bernstein, 1994). Listwise deletion was used when complete data was not available for a participant.

The correlations among observed variables show that the transformational leadership subscales, interpersonal justice scale, and informational justice scale all significantly positively correlated with organizational identification and engagement

subscales, as expected. Additionally, engagement subscales exhibited significant relationships with organizational commitment (positive) and job tension (negative).

Analyses

Structural equation modeling (SEM) was used to test all hypotheses. All models were evaluated in EQS 6.1 (Bentler, 1995) using robust statistics to determine fit and parameter estimates based on the sample covariance matrix. Robust statistics provide a more accurate estimate of standard errors for non-normal variables and are corrected for non-normality (Byrne, 2006). Therefore, although several variables showed significant negative skew, these variables did not require transformation to change the distribution. The chi-square test (χ^2), comparative fit index (CFI), and root mean square error of approximation (RMSEA) indices were used to determine fit of the model. Ideally, to show adequate fit, the $\chi 2$ statistic should be non-significant; however, this test is extremely sensitive to sample size, so it is recommended that other fit indices be examined. For the remaining indices, adequate fit was indicated by CFI values greater than .90 and RMSEA values less than .06 (Hu & Bentler, 1999).

Measurement Model

First, confirmatory factor analysis (CFA) was conducted to test the factor structure of the measurement model. Latent variables were created using a partial disaggregation model to parcel scale items. As Williams and O'Boyle (2008) discuss, this method is preferable in studies like the present one, where the goal of the analyses is to investigate the relationships among latent variables (rather than establishing individual item contribution to scales).

To parcel scale items, subscales were used as indicators of latent variables when available (e.g., vision subscale for transformational leadership). When subscales were not available, the factorial algorithm method of item parceling (Rogers & Schmitt, 2004) was used. This method creates parcels with the goal that all parcels are equally balanced in terms of item discrimination. To create these parcels, a one-factor exploratory factor analysis (EFA) was conducted for each scale, and the resulting standardized factor loadings were used to group items. First, the highest loading items were chosen and spread among the parcels, to "anchor" the parcels. Next, the fourth, fifth, and sixth highest loading items were assigned to parcels in the reverse order (the sixth item was paired with the highest loading item). This process continued until all items were assigned to a parcel. Three parcels were created for each latent variable, as researchers recommend a minimum of three indicators per latent variable (Williams & O'Boyle, 1998).

Although a three-factor model (with transformational leadership, interpersonal justice, and informational justice as separate factors) showed adequate model fit, the intercorrelations between the three latent variables were very highly correlated (e.g., r = .85 for transformational leadership and interpersonal justice). When these three variables were considered as separate latent variable predictors of identification and engagement in a structural model, there was evidence of suppression effects due to multicollinearity. As a result, the transformational leadership scales, interpersonal justice, and informational justice were combined into a single latent variable representing interpersonal leadership characteristics. The revised measurement model with a one-factor leadership variable

showed adequate fit (χ^2 = 352.51 (142), CFI = .95, RMSEA = .06) and all item paths were significant at the .05 level. These results are illustrated in Figure 2.

Structural Models

SEM structural models were used to test the hypothesized model that examines if perceptions of leader characteristics predict organizational commitment and job tension indirectly through organizational identification and employee engagement. The process of testing the hypothesized indirect relationships is described in the next section.

First, the hypothesized framework (model 1), where both identification and engagement fully mediate the relationship between leader characteristics and outcomes (Figure 3) was tested. In addition to the hypothesized model, alternative models were examined to determine if competing models of the relationships show better fit and to confirm support for hypothesized relationships. A direct effects model (model two) was tested, where the exogenous factors (predictors) directly predict the endogenous factors (mediator variables and outcomes); this model is illustrated in Figure 4. Next, more restrictive nested models were investigated to test the fit of alternative mediation models where organizational identification and state engagement individually mediate the relationship between interpersonal leadership characteristics and work outcomes. Model three tested if identification fully mediated the relationship between leadership characteristics and outcomes variables, including commitment, job tension, and engagement (Figure 5). Model four tested if engagement mediated the relationship between leader characteristics and identification and outcome variables (Figure 6). Models were statistically compared with a chi-square difference test, which quantifies the difference in fit between two nested models based on the change in chi-square value

($\Delta\chi^2$) and change in degrees of freedom (Δdf). A significant $\Delta\chi^2$ indicates that the data fits one model significantly better or worse than another model. Table 2 presents a summary of fit statistics for all structural model tests described above and in the following section.

All models showed good fit, with CFIs higher than .90 and RMSEA below or very close to .06. The direct model showed the strongest fit across all indices (χ^2 = 358.05 (143), CFI = .95, RMSEA = .06) and fit significantly better than model two, the next best fitting model ($\Delta\chi^2$ = 51.59 (Δdf = 3), $p < .05$). The direct effects model is depicted in Figure 3, with standardized path coefficients included for each path. Specific path findings to test hypotheses 1 – 5 are detailed in the next section.

Tests of Hypotheses

Hypotheses 1 – 3. Hypotheses 1 – 3 stated that identification would be predicted by transformational leadership, interpersonal justice, and informational justice, respectively. However, due to multicollinearity, these variables were combined into a single latent variable, interpersonal leader characteristics. Therefore, in place of these hypotheses, the relationship between the interpersonal leadership characteristics variable and identification was tested. The direct effects model shows a significant path between interpersonal leadership characteristics and identification (β = .36), providing support for this hypothesis.

Hypothesis 4. Hypothesis four stated that organizational identification would predict state engagement. The results support this hypothesis, showing a strong, significant path (β = .55) from identification to engagement, as depicted in Figure 3.

Hypothesis 5. Hypothesis five stated that organizational identification would mediate the relationship between interpersonal leader characteristics and state engagement. Comparing the mediated model (Figure 1) to the direct effects model (Figure 2) and testing the change in chi-square tested this hypothesis. The direct effect model showed significantly better fit than the mediated model ($\Delta\chi^2 = 162.17$ (5), $p <$ .05). This finding was supported by the other fit indices, which were also better for the direct effects model (CFI = .95, RMSEA = .06) than for the mediated model (CFI = .91, RMSEA = .08).

Engagement and Outcome Variables

Although not formally hypothesized, it was expected that results would support previous findings that engagement predicts organizational commitment and job tension. Previous studies have shown that engagement mediates the relationship between predictors and work outcomes. Results supported the relationship between engagement and outcome variables, showing significant paths to both organizational commitment (β = .28) and job tension (β = -.33). However, results did not support mediation, showing a significantly better fit for direct relationships between predictors and outcome variables. The direct effects model also showed that the interpersonal leadership characteristics variable directly predicted both engagement and outcome variables with significant paths between leader characteristics and engagement (β = .26), commitment (β = .16), and job tension (β = -.16).

Discussion

Summary Findings

The purpose of this study was to investigate the relationship between interpersonal leadership characteristics and employee engagement. Specifically, it was hypothesized that transformational leadership, interpersonal justice, and informational justice would build organizational identification in employees, which in turn creates the conditions necessary for employee state engagement. In general, results indicated that these interpersonal leadership characteristics are significant direct predictors of organizational identification and employee engagement. However, the results do not support the hypothesis that identification is the primary mechanism through which leadership affects engagement. Further, although interpersonal leadership characteristics are predictors of engagement, and engagement is related to organizational commitment (positive) and job tension (negative), there is no evidence that engagement is necessary for leadership characteristics to impact commitment and tension. Thus, the results partially supported the hypothesized framework connecting interpersonal leadership, employee engagement, and work outcomes (organizational commitment and job tension).

This study makes a significant contribution to the leadership and engagement literatures, as it provides strong support for the role of leadership in ratings of engagement, continues previous research connecting fairness and engagement (Moliner et al., 2006; Vogelgesang, 2007), and provides the initial evidence that transformational leadership contributes to predicting engagement. Additionally, the results are the first to explicitly connect organizational identification to engagement, expanding the nomological net of engagement and models of how identification affects employee attitudes. These findings also contribute to the stress literature, providing further evidence

that engagement can impact work stress and supplementing the studies on job demands, resources, and engagement to include leadership characteristics.

Elaboration on Model Results

The best fitting structural model was the direct effects model, which included strong, significant paths from interpersonal leader characteristics to both engagement and identification. The results of the direct effects model indicate that although identification is a strong predictor of engagement, it is not the only path through which interpersonal leader characteristics impact engagement. The relationship between leader characteristics and identification provides support for the group engagement model (Tyler & Blader, 2003) and is consistent with previous work that has connected transformational leadership and organizational justice to identification (Hakonen & Lipponen, 2008; Shamir et al., 1993). The results that indicate full mediation is not present are contrary to previous studies that have shown that organizational identification mediates the relationship between leader characteristics and behavioral engagement, such as discretionary cooperative behavior (Tyler & Blader, 2001). Further, there are no other existing studies investigating identification and state engagement and there is a strong, significant path between these two variables, indicating that expanding the group engagement model to state engagement warrants subsequent study.

There are several possible explanations for the lack of support for the fully mediated model. First, given that leadership characteristics are significantly related to both identification and engagement, results indicate that identification is not the only conduit for engagement and it is possible that both positive leadership characteristics and identification can create the environment necessary for engagement. Additionally, an

individual difference variable, such as need for affiliation (Ray & Hall, 1995), could impact the mediating role of identification, where employees with a higher need for affiliation may require identification to build engagement more than those with a lower need for affiliation.

Consistent with previous research, leader characteristics and engagement also significantly predicted organizational commitment and job tension. Previous studies have shown that transformational leadership and justice have a significant relationship with organizational commitment and stress-related outcomes (e.g., Barling et al., 1996; Greenberg, 2007). Additionally, these results support previous studies that have shown significant relationships between engagement, commitment and work stress (Andreassen et al., 2007; Hallberg & Schaufeli, 2006).

Contrary to previous research in the stress literature, results of the present study did not support state engagement as a mediator between leadership characteristics and work outcomes. Several studies investigating engagement and stress have previously found that engagement mediates the relationship between work conditions and outcomes such as commitment and work stress (e.g., Hakonen & Lipponen, 2008; Richardsen, Burke, & Marinussen, 2006). However, these studies that have found evidence for engagement as a mediator have focused on environmental factors such as job demands and resources as predictors, rather than leadership factors. It is possible that engagement is the driving factor for how job demands and resources impact commitment, but that relationship-focused variables like leader characteristics and organizational identification are directly related to engagement, commitment, and job tension. Given these results, additional research should be conducted into the mediating role of engagement, and

future studies investigating the relationship between work or leader characteristics and engagement should explicitly test for evidence of mediation.

Study Strengths and Limitations

A key strength of this study is the generalizability of the findings. The study sample is comprised of working adults from locations throughout the United States and Canada, varying in age, gender, and tenure with the organization from a wide variety of jobs. Although participants all work within one organization, they work across different offices and a wide variety of positions (e.g., engineering, administration, project management) within the engineering and construction industry. Additionally, surveying participants from a single organization provides a control for extraneous effects of different organizational cultures and values that can occur in samples that comprise employees from multiple organizations.

Another positive aspect of this study is the quality of measurement. Established measures with existing validity evidence were used and all scale scores exhibited adequate reliability, indicating good internal consistency. CFAs were conducted to test for discriminant validity and measures that could not be empirically distinguished were combined or removed. These factors are especially important when measuring engagement, which has often been measured inconsistently and with little evidence of discriminant validity (Macy & Schneider, 2008). A potential limitation of the engagement scale is that it was designed to assess engagement as used in the stress-model, not Kahn's model of engagement. However, no other validated scale for assessing engagement currently exists. Therefore, future research should replicate this study once a scale assessing Kahn's model of engagement is developed.

One limitation of this study was the relatively low response rate. It is likely that this response rate was due to pressure to bill maximum time to clients; therefore, there may be some non-response bias. Another limitation was the lack of performance evaluation data available for the sample. Although an adequate number of people provided approval to access their records, the number of people who had completed records was too small to include the structural model and still have adequate statistical power (MacCallum, Browne, & Sugawara's, 1996).

Finally, this study used cross-sectional design, where ratings were taken at only one moment in time. Therefore, causal relationships cannot be established and equivalent alternative models in SEM cannot be ruled out statistically (MacCallum, Wegener, Uchino, and Fabrigar, 1993). Results from experimental studies support the model presented in this paper, that attitudes flow from manipulation of group status (e.g., identification; Tyler & Blader, 2001). However, it is still possible that reported relationships occur in the opposite order (e.g., engagement leads to identification) and there is no way to statistically make this distinction in the present study.

Conclusions and Future Research Directions

Despite these limitations, this study provides initial evidence that identification and interpersonal leadership characteristics are direct predictors of state engagement. However, some results were contradictory to the hypothesized framework and therefore warrant further study. Additional research should further investigate how leadership, identification, and engagement are related to each other and whether environmental or individual differences may affect these relationships.

Because this is the first study to connect organizational identification to state engagement, additional research should replicate these findings in another organization, as well as investigate potential moderators of this relationship. For example, the existence of organizational subgroups and employees' identification with these groups may impact the relationship between organizational identification and engagement (Huo, Smith, Tyler, & Lind, 1996). If an employee identifies with the organization, but identifies more strongly with a particular business unit or his or her role in the organization (e.g., engineer), he or she may have high engagement, but show a weak relationship between organization-level identification and engagement. Additionally, as previously discussed, individual difference variables that impact identification (e.g., need for affiliation) could also impact the relationships among variables.

Given the paucity of research connecting leadership and engagement, future research should also investigate the role of leadership variables that are not focused on building relationships and respect, such as transactional leadership (Avolio, Bass, & Jung, 1999) and cognitive trust (McAllister, 1995). For example, if a supervisor relies primarily on the rewards and negative feedback of transactional leadership, this may affect engagement through a mechanism other than identification, such as a social exchange model (e.g., engagement is built based on the give and take of rewards, rather than identification with the group).

The findings of this study demonstrate that when leaders are relationship-oriented (e.g., treat their employees with respect, consider their individuals needs, provide support, and challenge employees), they can directly impact employees' work engagement in a positive way. These same characteristics also have a direct relationship

with identification, affective commitment, and work-related stress. Further, results indicate that organizational identification is also a significant predictor of engagement and commitment.

The present study primarily contributes to the theory and study of employee engagement in two areas. First, it represents the first test of expanding the group engagement model to state engagement. Though full mediation was not supported, the results provide initial evidence that identification is a key predictor of state engagement, a key part of the model. Additionally, this study expands the nomological net of engagement research to include leadership characteristics. Building on previous work (Moliner et al., 2008; Vogelgesang, 2007), the results support the role of interpersonal leadership characteristics as a significant predictor of engagement.

The study findings also provide guidance for practitioners to apply the results in the workplace. Results indicate that interventions that help employees build identification with the organization, such as taking actions that communicate that the organization values employees and cares about their well-being (Rousseau, 1998), can contribute to high engagement and commitment. Further, previous studies (Barling et al., 1996; Skarlicki & Latham, 1996) have established that the leadership characteristics investigated in the present study can be taught to managers within classroom training programs. Therefore, training programs that teach leaders how to increase employees' perceptions of fairness and the behaviors that contribute to transformational leadership can increase managers' leadership behaviors that are related to high identification, engagement, and commitment, and low job tension. Further, the link between engagement and job tension demonstrated in this study and others (e.g., Andreassen et al.,

2007) indicates that increasing employee engagement may be an effective intervention to decrease work stress. By taking these steps, organizations can contribute to their employees' well-being and feelings of engagement at work.

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Table 1. *Correlations*

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Age	44.56	11.88	--															
2. Tenure	7.27	7.88	.46**	--														
3. Gender	.63	.49	.27**	.11*	--													
4. VS	5.46	1.26	.05	.00	.08	(.82)												
5. IC	5.43	1.30	.01	-.01	.05	.69**	(.88)											
6. IS	4.74	1.31	-.02	-.06	-.01	.58**	.70**	(.88)										
7. SL	5.22	1.44	-.04	-.03	.04	.59**	.84**	.59**	(.94)									
8. PR	5.19	1.46	-.08	-.02	.02	.56**	.78**	.67**	.76**	(.95)								
9. IntJ	6.06	1.09	-.04	-.03	.01	.54**	.70**	.41**	.73**	.56**	(.88)							
10. InfoJ	5.22	1.32	.02	-.03	.03	.63**	.78**	.62**	.77**	.71**	.66**	(.92)						
11. OID	5.80	.83	.14**	.05	.03	.26**	.32**	.31**	.28**	.32**	.15**	.30**	(.82)					
12. Vigor	4.87	1.07	.17**	.02	-.04	.37**	.39**	.37**	.31**	.36**	.18**	.34**	.55**	(.90)				
13. Dedic	5.40	1.01	.15**	.06	-.02	.39**	.44**	.37**	.36**	.38**	.23**	.39**	.57**	.84**	(.86)			
14. Absor	5.36	.88	.16**	.09	-.06	.22**	.24**	.28**	.17**	.23**	.09	.23**	.49**	.61**	.67**	(.71)		
15. OC	5.10	1.14	.09	.08	-.11*	.43**	.45**	.40**	.38**	.40**	.30**	.43**	.72**	.61**	.66**	.50**	(.90)	
16. Job Tension	3.98	1.30	.09	.17**	.00	-.20**	-.22**	-.11*	-.22**	-.17**	-.21**	-.21**	-.13	-.26**	-.29**	-.04	-.18***	(.86)

Note. VS = Vision, IC = Inspirational Communication, IS = Intellectual Stimulation, SL = Supportive Leadership, PR = Personal Recognition, IntJ = Interpersonal Justice, InfoJ = Informational Justice, OID = Organizational Identification, Dedic = Dedication, Absor = Absorption, OC = Organizational Commitment;

*$p < .05$

**$p < .01$

Table 2. *Latent Variable Correlations*

Variable	1	2	3	4	5
1. Interpersonal Leader Characteristics	--				
2. Organizational Identification	.36*	--			
3. Engagement	.46*	.64*	--		
4. Organizational Commitment	.49*	.80*	.72*	--	
5. Job Tension	-.28*	-.17*	-.34*	-.24*	--

Note. *$p<.05$

Table 3. *Fit Indices for Models 1-4 and Chi-Square Difference Tests*

Model	*S-B* $\chi 2$	*df*	*CFI*	*RMSEA*	$\Delta\chi 2$	Δdf	*p*
Measurement Model	358.09	142	.95	.06	--	--	--
Model 1: Fully mediated model	520.22	148	.91	.08	32.99	1	$p < .05$
Model 2: Fully direct model	358.05	143	.95	.06	--	--	--
Model 3: Identification mediator model	409.64	146	.94	.07	51.59	3	$p < .05$
Model 4: Engagement mediator model	487.23	147	.92	.07	77.59	1	$p < .05$

Note: *S-B* $\chi 2$ = Sartorra-Bentler Chi-square; CFI = comparative fit index; RMSEA = root mean square error of approximation

Figure 1. Proposed conceptual framework.

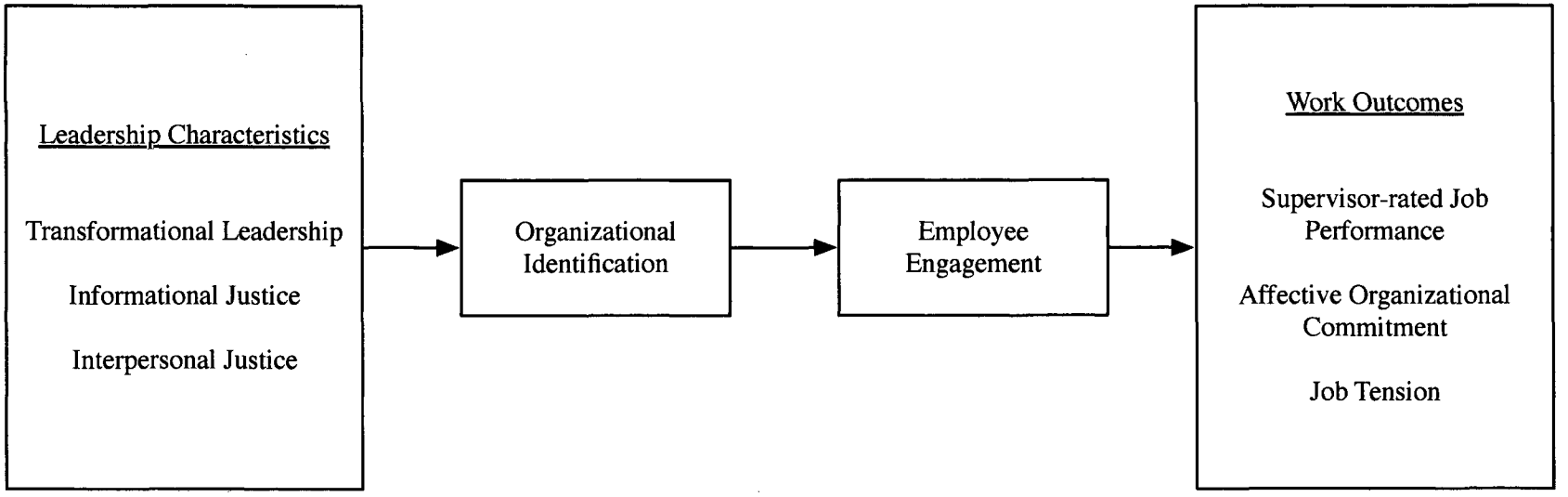


Figure 2. Measurement Model

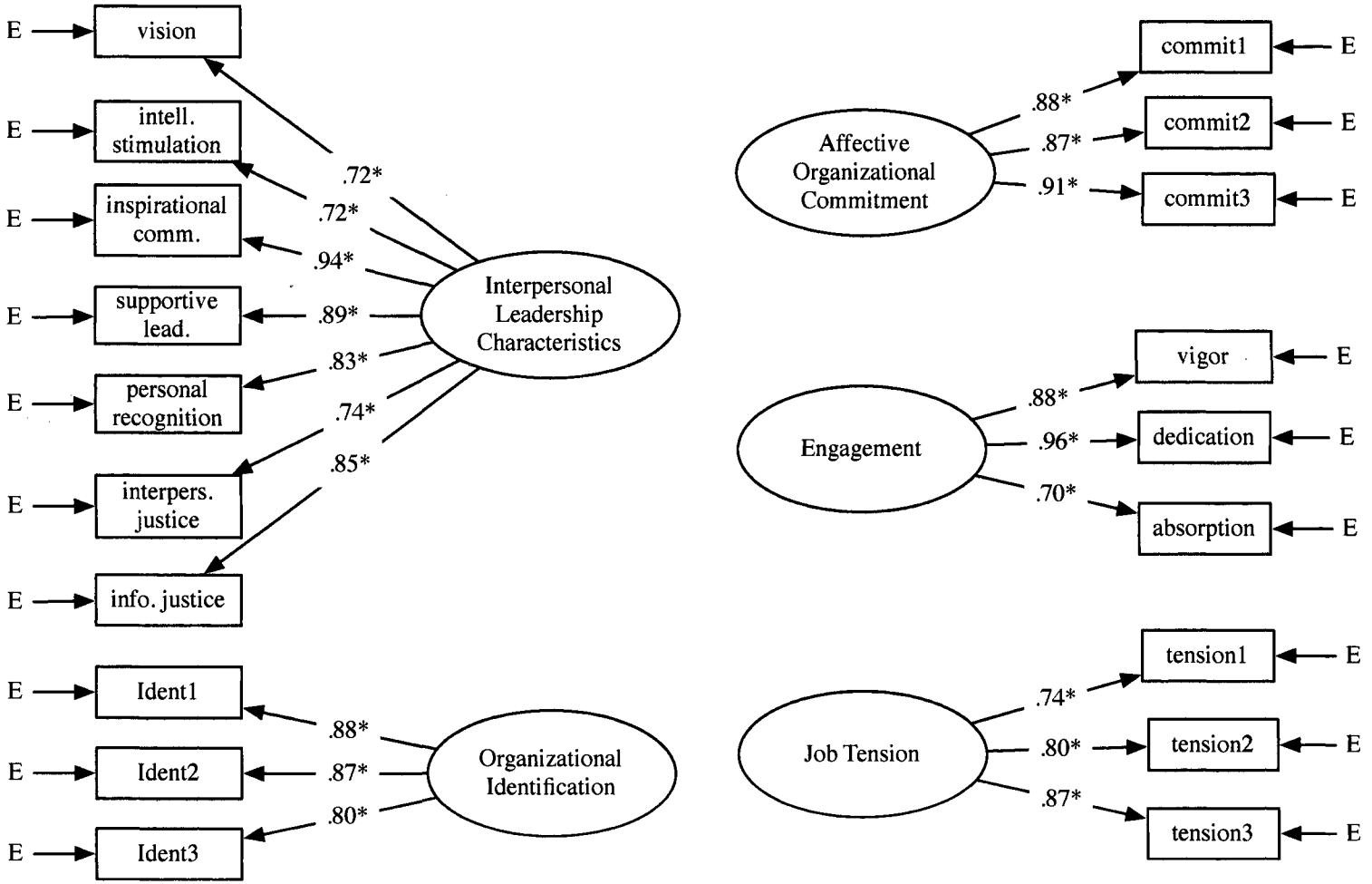


Figure 3. Model 1: Fully Mediated Model

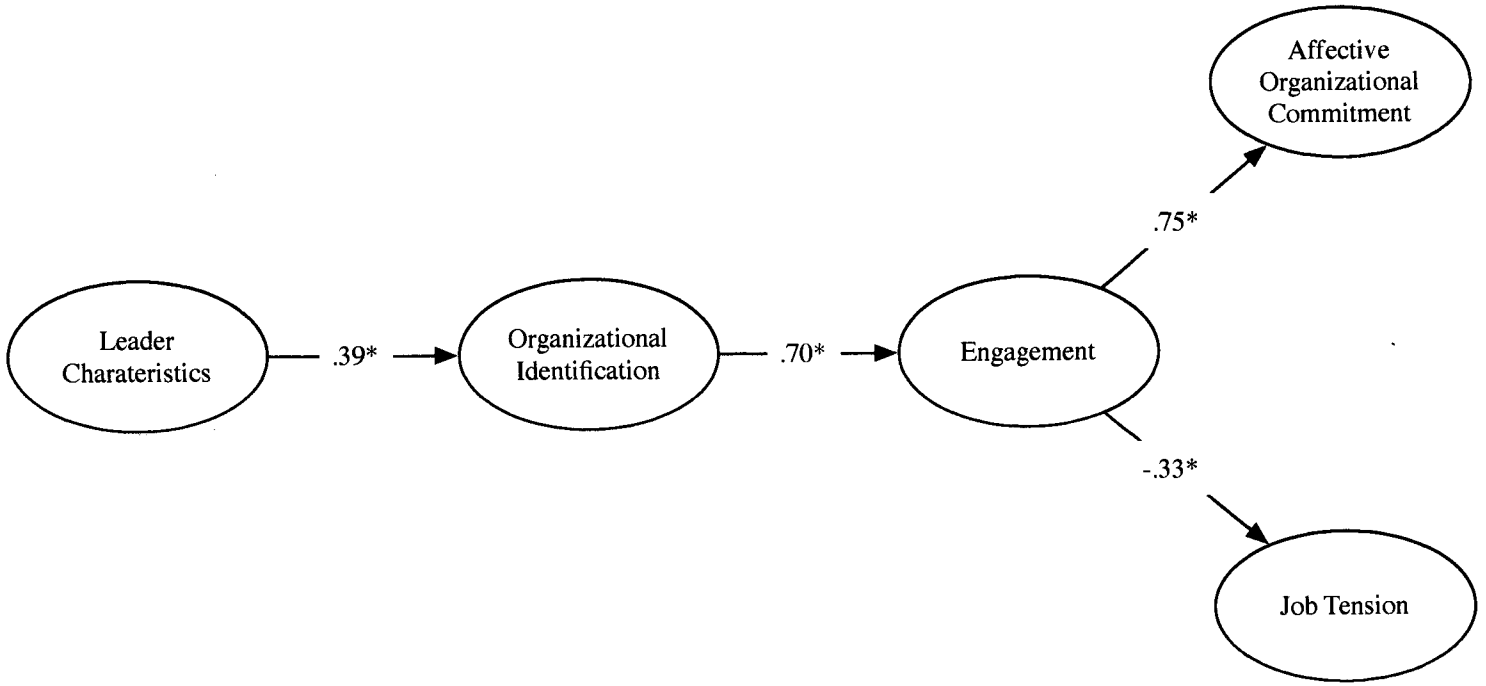


Figure 4. Model 2: Fully Direct Model

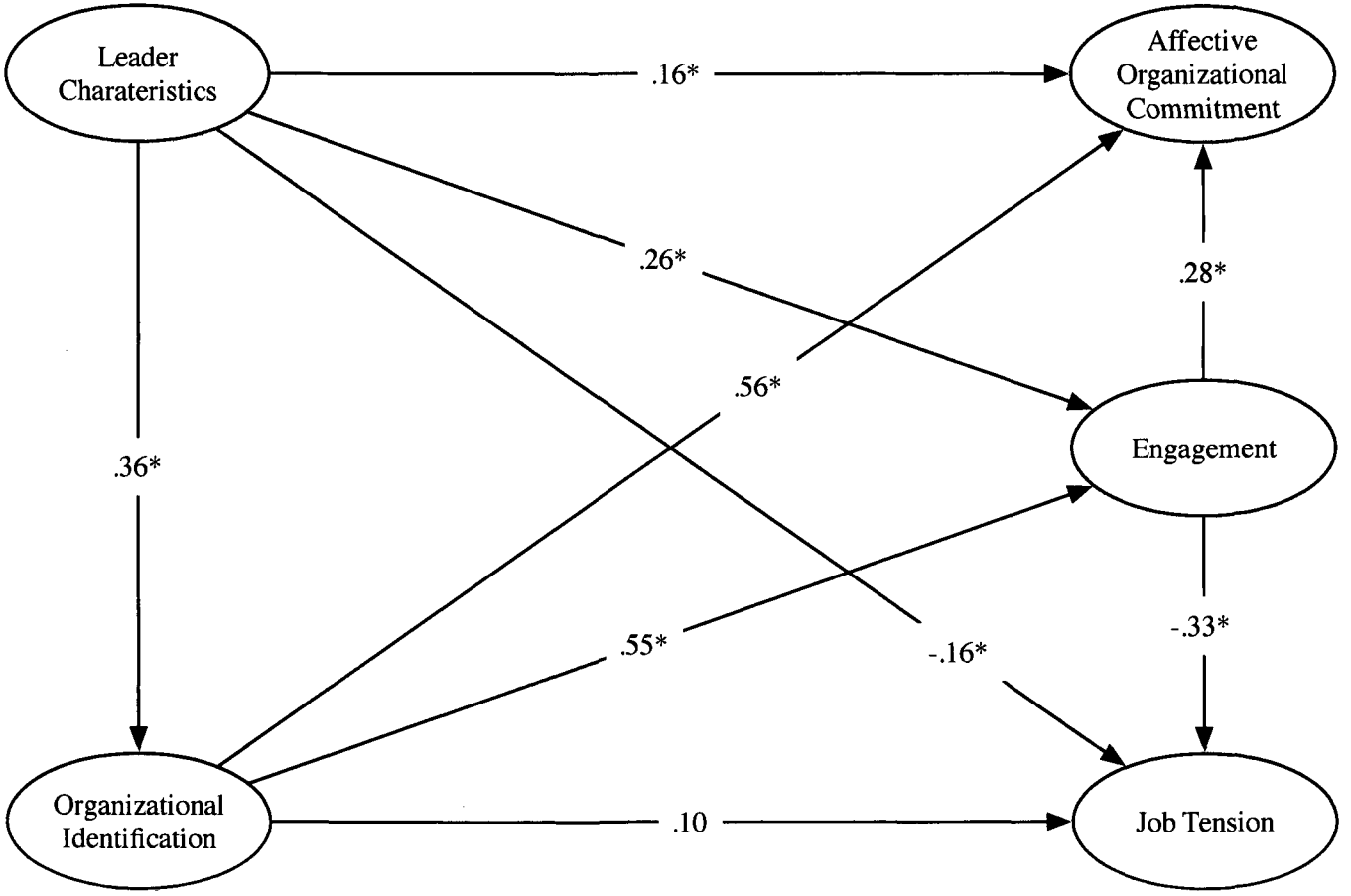


Figure 5. Model 3: Identification Mediator Model

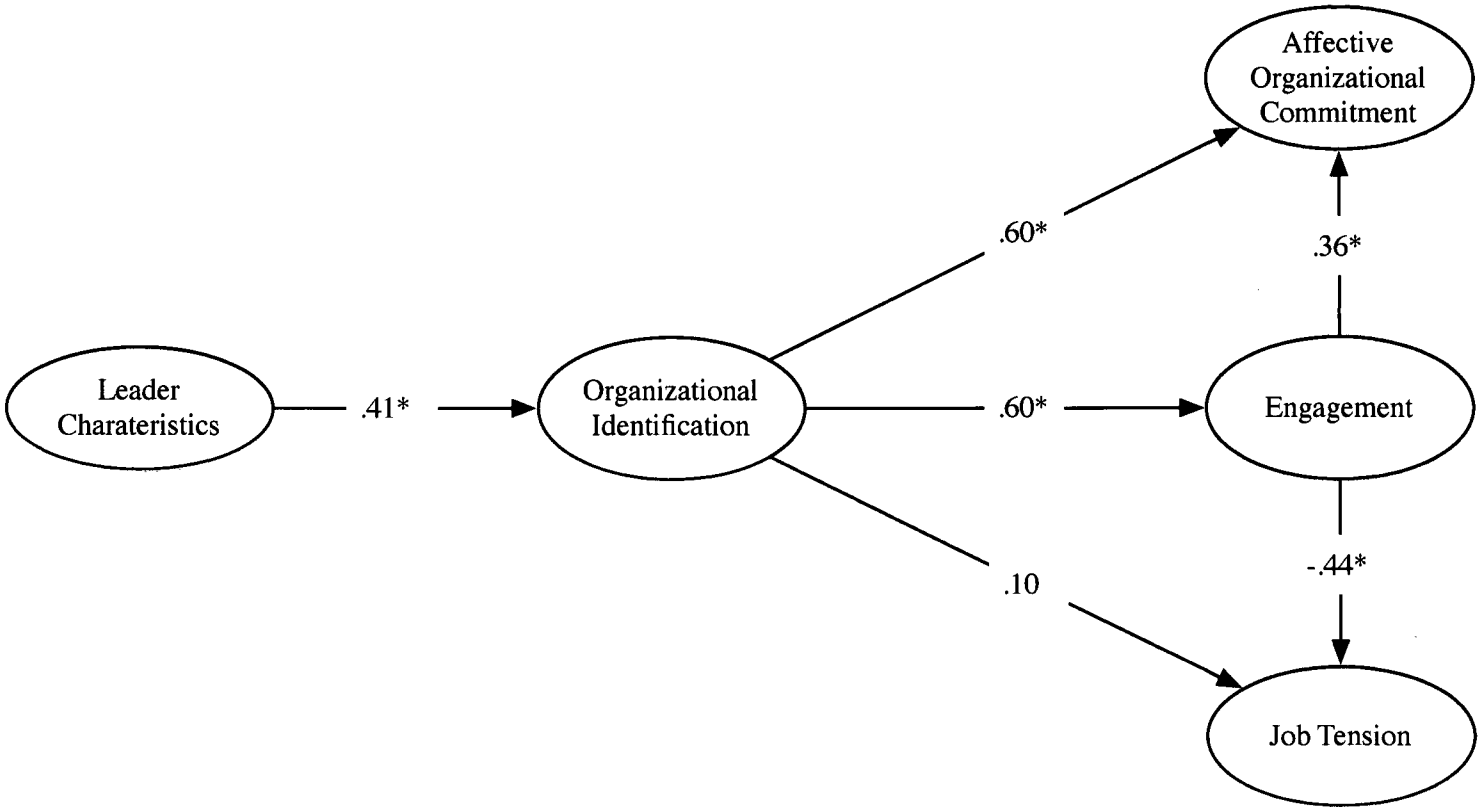
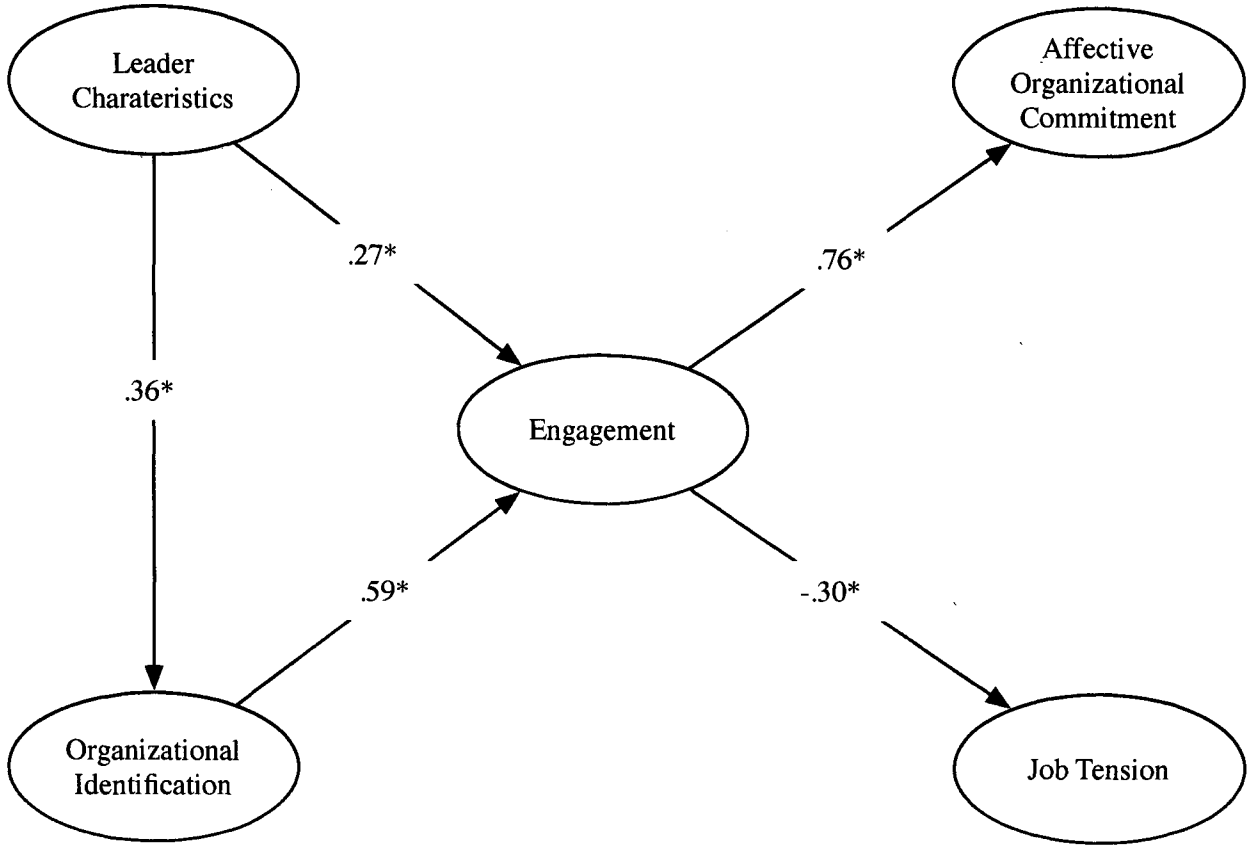


Figure 6. Model 4: Engagement Mediator Model



Appendix A: Study Measures

Please answer the following questions about your current job and supervisor with regard to your attitudes and feelings *right now*.

All items are rated 1 = Strongly Disagree to 7 = Strongly Agree unless otherwise noted

Employee Engagement (Schaufeli et al., 2002)

Indicate how often you feel the way described in the following statements.

(1=Never to 7=Always)

1	At my work, I feel bursting with energy.	1	2	3	4	5	6	7
2	At my job I feel strong and vigorous.	1	2	3	4	5	6	7
3	I am enthusiastic about my job.	1	2	3	4	5	6	7
4	My job inspires me.	1	2	3	4	5	6	7
5	When I get up in the morning, I feel like going to work.	1	2	3	4	5	6	7
6	I feel happy when I am working intensely.	1	2	3	4	5	6	7
7	I am proud of the work that I do.	1	2	3	4	5	6	7
8	I am immersed in my work.	1	2	3	4	5	6	7
9	I get carried away when I am working.	1	2	3	4	5	6	7

Transformational Leadership (Griffin & Rafferty, 2004)

In reference to your immediate supervisor, rate the extent to which you agree with each of the following statements.

My supervisor...

10	Has a clear understanding of where we are going.	1	2	3	4	5	6	7
11	Has a clear sense of where he/she wants our unit to be in 5 years.	1	2	3	4	5	6	7
12	Has no idea where the organization is going (R)	1	2	3	4	5	6	7
13	Says things that make employees proud to be a part of this organization.	1	2	3	4	5	6	7

14	Shows respect for my personal feelings.	1	2	3	4	5	6	7
15	Encourages people to see changing environments as situations full of opportunities.	1	2	3	4	5	6	7
16	Challenges me to think about old problems in new ways.	1	2	3	4	5	6	7
17	Has ideas that have forced me to rethink some things that I have never questioned before.	1	2	3	4	5	6	7
18	Has challenged me to rethink some of my basic assumptions about my work.	1	2	3	4	5	6	7
19	Considers my personal feelings before acting	1	2	3	4	5	6	7
20	Behaves in a manner which is thoughtful of my personal needs	1	2	3	4	5	6	7
21	Sees that the interests of employees are given due consideration	1	2	3	4	5	6	7
22	Commends me when I do a better than average job	1	2	3	4	5	6	7
23	Acknowledges improvement in my quality of work	1	2	3	4	5	6	7
24	Personally compliments me when I do outstanding work	1	2	3	4	5	6	7
Interpersonal Justice (Colquitt, 2001, reduced)								
	The following items refer to your supervisor. To what extent:							
25	Has (he/she) treated you in a polite manner?	1	2	3	4	5	6	7
26	Has (he/she) treated you with respect?	1	2	3	4	5	6	7
27	Has (he/she) refrained from improper remarks or comments?	1	2	3	4	5	6	7
Informational Justice (Colquitt, 2001, reduced)								
28	Has (he/she) explained the procedures thoroughly?	1	2	3	4	5	6	7
29	Were (his/her) explanations regarding the procedures reasonable?	1	2	3	4	5	6	7

30	Has (he/she) seemed to tailor (his/her) communications to individuals' specific needs?	1	2	3	4	5	6	7
	Affective Trust (McAllister, 1995)							
	Referring to your supervisor, rate the extent to which you agree with the following statements:							
31	We have a sharing relationship. We can both freely share our ideas, feelings, and hopes.	1	2	3	4	5	6	7
32	I can talk freely to my supervisor about difficulties I am having at work and know that he/she will want to listen.	1	2	3	4	5	6	7
33	We would both feel a sense of loss if one of us was transferred and we could no longer work together.	1	2	3	4	5	6	7
34	If I shared my problems with my supervisor, I know he/she would respond constructively and caringly.	1	2	3	4	5	6	7
35	I would have to say that we have both made considerable emotional investments in our working relationship.	1	2	3	4	5	6	7
	Organizational Commitment (Allen & Meyer, 1990)							
	Rate the extent to which you agree with the following statements.							
36	I would be very happy to complete my career working for this organization.	1	2	3	4	5	6	7
37	I enjoy talking about my organization with people outside of the organization.	1	2	3	4	5	6	7
38	I do not feel like "part of the family" at my organization. (R)	1	2	3	4	5	6	7
39	I think that I could as easily become attached to another organization as I am to this one. (R)	1	2	3	4	5	6	7

40	I really feel as if this organization's problems are my own.	1	2	3	4	5	6	7
41	I do not feel "emotionally attached" to this organization. (R)	1	2	3	4	5	6	7
42	This organization has a great deal of personal meaning for me.	1	2	3	4	5	6	7
43	I do not feel a strong sense of belonging to my organization. (R)	1	2	3	4	5	6	7

Organizational Identification (Mael & Ashforth, 1992)

Rate the extent to which you agree with the following statements.

44	When someone criticizes my organization, it feels like a personal insult.	1	2	3	4	5	6	7
45	I am very interested in what others think about my organization.	1	2	3	4	5	6	7
46	When I talk about my organization, I usually say "we" rather than "they".	1	2	3	4	5	6	7
47	My organization's successes are my successes.	1	2	3	4	5	6	7
48	When someone praises my organization, it feels like a personal compliment.	1	2	3	4	5	6	7

Job Tension (House & Rizzo, 1972)

Rate the extent to which you agree with the following statements.

49	My job tends to directly affect my health.	1	2	3	4	5	6	7
50	I work under a great deal of tension.	1	2	3	4	5	6	7
51	I often take my job home with me in that I think about it while I'm away from work.	1	2	3	4	5	6	7
52	I often feel fidgety or nervous as a result of my job.	1	2	3	4	5	6	7
53	If I had a different job, my health would probably improve.	1	2	3	4	5	6	7
54	Problems with my job have kept me awake at night.	1	2	3	4	5	6	7

Which Business Group do you belong to? [Business groups listed]

How long have your worked at [organization name]? _____

Gender: ___M ___F

Age: _____