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Linking authentic leadership to positive employee health, behavioral engagement, and job performance

Yan Liu
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LINKING AUTHENTIC LEADERSHIP TO
POSITIVE EMPLOYEE HEALTH,
BEHAVIORAL ENGAGEMENT,
AND JOB PERFORMANCE

by

Yan Liu, B.S., M.B.A.

A Dissertation Presented in Partial Fulfillment
Of the Requirements for the Degree
Doctor of Business Administration

COLLEGE OF BUSINESS
LOUISIANA TECH UNIVERSITY

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We hereby recommend that the thesis prepared under our supervision by Yan Liu entitled "Linking Authentic Leadership to Positive Employee Health, Behavioral Engagement, and Job Performance" be accepted in partial fulfillment of the requirements for the Degree of Doctor of Business Administration.

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ABSTRACT

In recent years, there has been increasing interest in the emerging field of positive organizational behavior. The field of Positive Organizational Behavior (POB) has its roots in the concept of “positive psychology” (Bakker & Schaufeli, 2008) but is more narrowly defined as “the study and application of positively oriented human resources strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today’s workplace” (Luthans, 2002, p.698). More and more researchers have begun to emphasize what is right with people rather than focusing on what is wrong with people.

Given this opportunity, this dissertation explicitly focuses upon the power of positive psychological states and behaviors, such as psychological safety, job engagement, positive employee health, and proactive behaviors, which may have strong influence on employees’ behavior in the organization. A new emerging leadership style, authentic leadership, was employed as an important antecedent to see how leadership can promote these positive states and behaviors.

Based on Ryff’s (1995) positive human health concepts, this dissertation developed a positive employee health construct which focuses on organizational context and environments. A four dimensional measure was developed for this construct, including leading a purposeful worklife, quality connection to others, positive self-regard
and mastery, and perception of negative events. An initial nomological network was tested for the construct validity.

In addition to developing a valid measure for positive employee health, another objective of this dissertation is to examine incremental predictive validity of authentic leadership and the relationship between authentic leadership and several previously unexamined outcomes (i.e., positive employee health, job engagement, proactivity, job performance, and workplace deviance behavior). Many scholars believe that the influence of authentic leadership has an important role in modern organization and society because it helps to restore basic confidence, hope, optimism, resiliency, and meaningfulness. This dissertation adopted a positive organizational behavior approach to furthering our understanding of the process by which authentic leadership influences several important positive outcomes.

Findings of this dissertation indicated that newly developed positive employee health construct is useful in predicting job satisfaction and life satisfaction. It is significantly related to but also distinguished from other similar construct, such as psychological well-being and vigor. In addition, this dissertation also found that authentic leadership can be used to predict employees’ psychological safety, job engagement, positive employee health, knowledge sharing, and workplace deviance behavior. Indirect relationships between authentic leadership and job performance and proactivity through the mediation effect of job engagement were partially supported. Although authentic leadership can be distinguished from transformational leadership, it only showed incremental predict validity over transformational leadership with job engagement as outcome. Results of this study also suggest that need for leadership and perception of
organizational politics may work as direct outcomes of authentic leadership rather than moderators as proposed.
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Date: 1/21/3/2011
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CHAPTER ONE

INTRODUCTION

In recent years, there has been increasing interest in the emerging field of positive organizational behavior. The field of Positive Organizational Behavior (POB) has its roots in the concept of “positive psychology” (Bakker & Schaufeli, 2008). Like positive psychology, which studies the strengths and virtues that help individuals and communities thrive (Bakker & Schaufeli, 2008), POB focuses on building and testing theories that emphasize positive traits, states, and behaviors of employees (Luthans, 2002; Luthans & Youssef, 2003). However, POB is more narrowly defined than positive psychology. Luthans (2002) defined POB as “the study and application of positively oriented human resources strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today’s workplace” (p.698). Examples of focal variables in this new field include self-efficacy, proactive behavior, hope, health, psychological well-being, and psychological capital.

Fifty years ago, psychologists recognized that their mission was not only to deal with the mentally ill, but also to focus on human strengths and positive institutions (Luthans, 2002). Until that time, most research had emphasized the negative aspects of human psychology and behavior. Seligman (1998) notes studying people is much more
than just trying to fix the problems of human beings. Accordingly, a group of well-known researchers (e.g. Wright, 2003; Baker & Schaufeli, 2008; and Luthans & Avolio, 2009) have begun to emphasize what is right with people rather than focusing on what is wrong with people. This research has tended to focus on the power of positive psychological states and behaviors (e.g. psychological safety, job engagement, & proactive behavior) because these factors are thought to have a strong influence on performance.

According to Luthans and Avolio (2009), there are three specific inclusion criteria for a construct to fall within the realm of positive organizational behavior: (1) constructs must have a theory basis and have valid measurement; (2) constructs must be more “state-like” than “trait-like”, and be open to development; and (3) constructs must have an impact on employees’ performance in the organization. Luthans and Avolio (2009) admitted that there are many general organizational behavioral constructs which meet these criteria. However, Luthans and Avolio (2009) encouraged researchers to study those constructs that “had either been overlooked or not well researched” (p.299). Accordingly, this dissertation will focus upon gaining a greater understanding of several “positive” constructs that have not been well researched, including authentic leadership, behavioral engagement, and positive employee health.

One of the constructs that needs to be incorporated into the POB theoretical framework is positive employee health (Wright, 2003). Employee health and well-being are valuable to organizations because they has strategic implications (Zwetsloot & Pot, 2004; Bakker & Schufeli, 2008). For example, Quick & Macik-Frey (2007) suggested that employee health is an essential organizational resource which has a strong influence
on sustained productivity and the long-term well-being of the organization. While other resources may focus on short-term outcomes and profits, employee health can influence a company's sustainability. However, the relationship between work-related factors and the enhancement of human health has not been addressed (Ryff & Singer, 1998).

Positive employee health also has its root in positive psychology. Ryff and Singer (1998, p.1) define positive human health as "more than the absence of illness." Ryff and Singer propose three basic principles that underlies positive human health: (1) positive health is not a medical concept but rather a philosophical issue that relates to the meaning of a good life; (2) positive health is about human wellness which includes the mind, the body, and their interaction; and (3) positive health is a multidimensional dynamic process rather than a discrete state. Based on these three principles, Ryff and Singer (1998) define positive human health as a multidimensional construct which includes four core elements: (1) leading a life of purpose; (2) quality connections to others; (3) positive self-regard and mastery; and (4) perception of negative events as paths to meaning and purpose.

Employee health has been evaluated under a wide variety of different names or concepts for decades, including happiness, psychological well-being, job well-being, positive affect, job satisfaction, life satisfaction, or even negative concepts such as emotional exhaustion (burnout), and trait-state anxiety. For instance, Shaufeli, Taris, and Rhenen (2008) used four symptom clusters (i.e. distress, depression, anxiety, and psychosomatic) to measure perceived health. Another example is Joplin, Nelson, and Quick's (1999) research which examined the relationship between attachment behavior and employee health. They used items that represent individuals' anxiety, insomnia,
social dysfunction, and somatic and psychological symptoms to assess employee health. Obviously, both of these examples conceptualize human health as the “absence of illness.” However, research has yet to develop an understanding of employee health based on Ryff and Singer’s (1998) multidimensional construct of human health. Ryff’s (1989) measure of happiness which she later renamed psychological well-being (Ryff, 1995) has been widely used by researchers as a measure of human health. This instrument has several dimensions, including self-acceptance, environmental mastery, positive relations, purpose in life, personal growth, and autonomy. Thus, Ryff’s concept of psychological well-being provides researchers a more comprehensive investigation of positive human health than other positive measures of human health. However, Ryff’s (1989) psychological well-being construct examines individuals’ health under general context or normal life rather than health within a specific context such as at work. Consequently, because Ryff’s psychological well-being construct does not focus upon the work context, it does not capture important aspects of positive health aspects as it relates to one’s organizational identity. As a result, there is great potential for this dissertation to provide a more insightful way to study positive employee health by developing a workplace situated measure of health based on Ryff and her colleagues’ work on human health. While some researchers have studied the outcomes of POB variables, other researchers have been interested in studying antecedents of POB variables (e.g. Muse, Harris, Giles, and Field, 2008). Muse et al. (2008) argued that most of previous POB research has worked to define measurable components of POB, but has not yet explored how an organization can create or motivate POB. Consequently, this
dissertation will also focus on a key antecedent of POBs. One “not well researched” area is the influence of leadership on POBs.

It has been widely accepted that leadership has a strong influence on important outcomes such as subordinate job performance, job satisfaction, life-satisfaction, productivity (e.g., Finkelstein & Hambrick, 1990). But there is a need for additional research examining the relationship between leadership and employee health. In their meta-analysis of the relationship between leadership and job well-being, Kuoppala, Lamminpaa, Lira, and Vainio (2008) concluded that there were not enough well-founded studies linking leadership and employee health. Kuoppala et al. (2008) argued that previous studies were either “mostly weak” or “very weak” because of poor research design, small sample size, and large losses to follow-up. Kuoppala et al. also noted that discrepancies among different definitions of employee health may lead to inconsistent results too. Accordingly, more well-designed theoretical and empirical studies are needed to explore the relationship between leadership and employee health (Kuoppala et al., 2008).

The most captivating leadership concept have emerged in recent years is “authentic leadership.” Well-known leadership researchers Avolio and Gardner (2005) state that more and more scholars and practitioners realized that a more authentic leadership development strategy has become relevant and needed for desirable outcomes. Many scholars believe that the influence of authentic leadership has a critical role to play in modern organizations and society because it helps to restore basic confidence, hope, optimism, resiliency, and meaningfulness (George, 2003; Avolio, Gardner, Walumbwa, Luthans, & May, 2004). Scholars also observe that there are organizational leaders who
are effective but do not necessarily fall into previously studied leadership theories, such as
transformation leadership or ethical leadership (Wood, 2003).

Drawing from Greek philosophy (Harter, 2002 and Seligman, 2002) and positive
psychology authentic leadership has been defined “as a process that draws from both
positive psychological capacities and a highly developed organizational context, which
results in both greater self-awareness and self-regulated positive behaviors on the part of
leaders and associates, fostering positive self-development” (Luthans & Avolio,
2003,p243). Other researchers (e.g., Cooper, Scandura, & Schriesheim, 2005; Illies,
Morgeson, & Nahrgang, 2005) have proposed that some positive psychological capacities
(i.e., confidence, hope, optimism, & resilience) should also be included in the definition.

Authentic leadership researchers admit that there are overlaps between authentic
leadership, transformation leadership, and ethical leadership (e.g. Luthans & Avolio,
2003). Researchers also argue that authentic leadership is a different leadership style
which provides a unique contribution to our understanding of a variety of outcomes. To
some extent, authentic leadership can be seen as a fundamental element of transformation
leadership, but it can also play an important and efficient role by itself. For example,
Wood (2003) found that authentic leadership provides incremental validity over other
leadership styles, including transformational leadership, in predicting employee
performance. In their study developing a measure for authentic leadership, Walumbwa,
Avolio, Gardner, Wernsing, and Peterson (2008) compared their multidimensional
measure with the predominant instrument used to assess transformational leadership.
They found that their measure of authentic leadership accounted for incremental variance
in a variety of variables beyond that accounted for by transformation leadership. In
general, the results of Walumba et al.'s (2008) study supported the construct validity of their authentic leadership measurement instrument. Accordingly, Walumba et al. (2008) concluded that their measure of authentic leadership provided a strong tool for further authentic leadership research. They summarized the theoretical difference among Authentic Leadership, Transformational Leadership, and Ethical Leadership in the following table (See Table 1). More comprehensive discussion of the differences among leadership conceptualizations will be addressed in Chapter Two.

Table 1.1 Comparisons of Authentic Leadership Development Theory, Ethical Leadership Theory, and Transformational Leadership Theory

<table>
<thead>
<tr>
<th>Theoretical Components</th>
<th>Authentic Leadership</th>
<th>Transformational Leadership</th>
<th>Ethical Leadership</th>
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<tr>
<td><strong>Authentic leadership</strong></td>
<td></td>
<td></td>
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<tr>
<td>Leader self-awareness</td>
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<tr>
<td>Relational transparency</td>
<td>**</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Internalized moral perspective</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Balanced processing</td>
<td>**</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td><strong>Ethical leadership</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moral person</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Moral manager</td>
<td>*</td>
<td>*</td>
<td>**</td>
</tr>
<tr>
<td><strong>Transformational leadership</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idealized influence</td>
<td>*</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Inspirational motivation</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual stimulation</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individualized consideration</td>
<td>**</td>
<td></td>
<td>*</td>
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</table>

Note: ** focal component; * = minor or implicit component.

1 Walumbwa, et al., 2008, P. 102
Because authentic leadership theory is still in the early stages of theory development, there are few empirical studies of this type of leadership. Therefore, this dissertation will make an important contribution to the authentic leadership literature by providing empirical tests of a variety of theoretical proposals made prior to this time.

Interestingly, researchers have proposed that authentic leadership is a root construct wherein POB constructs could be both an input which promotes authentic leadership and an outcome which is cultivated by authentic leadership (Luthans & Avolio, 2003, 2009; Avolio & Gardner, 2005). Consequently, authentic leadership should be associated with a variety of follower-related POB variables. According to Macik-Frey, Quick, and Cooper (2009), a positive health model can be used to highlight highly effective leadership, such as authentic leadership, because leaders must strive to enhance the health of their followers. Therefore, another purpose of this dissertation is to address the relationship between authentic leadership and employee health in the organization.

Another variable that is incorporated into the present research is job engagement. Recently, job engagement has emerged as an important construct for both practitioners and academics. Practitioners believe that employees’ engagement in their work has a conclusive, compelling relationship with the profitability of the organization through higher productivity, sales, customer satisfaction, and employee retention (Macey & Schneider, 2008). Researchers have also been interested in job engagement, but there has been a wide variety of conceptual definitions forwarded in the literature. In order to help practitioners better recognize and understand job engagement, researchers have more recently started to focus upon building a clearer conceptual definition of job engagement.
Macey and Schneider (2008) summarized diverse definitions of job engagement and classified them into three categories: psychological state engagement, behavioral engagement, and trait engagement. Distinct from, but related to, similar constructs (e.g., absorption, satisfaction, attachment, involvement, commitment, and empowerment), psychological state engagement has received more attention because it suggests an emphasis on the relationship between individuals and jobs rather than the relationship between individuals and organizations (Macey & Schneider, 2008). Psychological engagement is thought to be state-like in the sense that it is malleable. However, compared to positive affectivity, state engagement is thought to be somewhat more stable because jobs tend to have many constant and continuing characteristics.

Although most studies have focused on the state or psychological form of job engagement, Macey and Schneider (2008) also propose that engagement can be defined as directly observable behaviors in the work context. These behaviors include innovative behaviors, demonstrations of initiative, proactively seeking opportunities to contribute, and other behaviors defined within specific frames of reference. The third type of engagement is trait engagement when engagement is regarded as a disposition, such as personality. Examples of trait engagement include positive affect, proactive personality, and conscientiousness. For the purpose of this dissertation, only state and behavioral engagement will be examined because these two types of engagement are malleable and thus more likely to be influenced by leadership.

Hereafter, I use the term “job engagement” when discussing state engagement. Job engagement will be included as a mediator variable in the hypothesized model. The
two types of behavioral engagement which will be examined in this study are proactive behavior and knowledge sharing.

Since Bateman and Crant (1993) defined the construct of proactive personality, more and more researchers have devoted a great deal of attention to proactive attributes, personalities, and behaviors in the organization (e.g. Crant, 2000; Fuller, Marler, & Hester, 2006). It has been recognized that proactive behavior is critical to competitive advantage and organizational success (Crant, 2000; Parker, 2000). Defined as behavior that involves “taking initiative in improving current circumstance or creating new ones; it involves challenging the status quo rather than passively adapting to present conditions” (Crant, 2000, p. 436), proactive behavior includes a wide variety of constructs, such as personal initiative (Frese, Kring, Soose, & Zempel, 1996), voice behavior (Van Dyne & Lepine, 1998), taking charge (Morrison & Phelps, 1999), change-oriented organizational citizenship behavior (Choi, 2007), and proactivity (Griffin, Neal, & Parker, 2007).

Proactive behavior is appropriate to be incorporated into the positive organizational field because it generally tends to focus upon initiating constructive or positive change. While previous research has examined how to stimulate proactive behavior among organizational employees (e.g., Fuller et al., 2006), there are few studies that have examined the relationship between leadership and proactive behavior (Parker & Collins, 2004). Indeed, Rank (2006) suggests more research needs to be done to examine contextual predictors of proactive behavior. House (1995) suggests that managers would be particularly successful if they demonstrated leadership behaviors conducive to subordinates’ initiative. Consequently, because of the purported link between leadership with subordinate proactive behavior and the lack of research in this area, the third
purpose of this dissertation is to examine the relationship between authentic leadership and proactive behavior.

In addition to positive employee health and proactive behavior, knowledge sharing behavior will also be included as an outcome of authentic leadership. Knowledge has been considered as a critical asset for modern organizations (Staples & Webster, 2008). Knowledge sharing refers to a flow of activities which transfers one party’s knowledge to another party. It has been recognized that knowledge sharing is not only important to the organization, but also important to individuals within the organization. McNeish and Mann (2010) propose that knowledge sharing is important to the organization because it can (1) improve alignment to the mission, vision, values, and strategy in the organization; (2) increase cooperation within the organization; and (3) reduce the time to market new products. Knowledge sharing is important to individual employees because it enhances the feeling that they have made an important positive contribution to the organization. Similar to proactive behaviors, such as voice and taking charge, knowledge sharing is largely a voluntary behavior which focuses on improving current work performance through exchanging knowledge, experience, and information with other individuals in the organization (Staples & Webster, 2008). Increasing competition in modern society raises pressure for high performance. This pressure places demands on managing information and knowledge better because it gives the organization a competitive advantage over other organizations (Søndergaard, Kerr, & Clegg, 2007). McNeish and Mann (2010) propose that trust and other psychological and social processes play important roles in knowledge sharing. Therefore, it seems likely
that authentic leadership will influence employees’ knowledge sharing behavior through increased feelings of psychological safety.

While the main purpose of this dissertation is to examine whether authentic leadership is sufficient enough to promote some positive organizational behaviors or not, it is also important to incorporate with negative behaviors to get a more comprehensive understanding of the authentic leadership construct. It is interesting to examine whether authentic leadership is functional in reducing detrimental behavior, such as workplace deviance behavior. Workplace deviance behavior is defined as the behaviors that violate significant organizational norms and have the potential to harm the organization, its employees, or both (Robinson & Bennett, 1995; Bennett & Robinson, 2003). Previous researchers (e.g. Robinson and Bennett, 1995; Aquino, Lewis, and Bradfield, 1999) have provided evidence that these kinds of behaviors are harmful to the organizations and have strong influence on employees’ well being in the organization. Previous research has suggested that leadership may have strong influence on employees’ workplace deviance behavior. For example, it has been found that abusive supervision is an antecedent of workplace deviance behavior (Mitchell & Ambrose, 2007). However, it is unclear whether positive leadership style can help to reduce deviance behavior or not. Therefore, it would be interesting to explore the question in this study.

Bennett and Robinson (2003) observed three trends in workplace deviance research: deviance as a reaction to experiences, deviance as a reflection of one’s personality, and deviance as an adaptation to the social context. Previous research (e.g. Mitchell & Ambrose, 2007) has provided evidence that supervisors’ behavior (abusive supervision) influences employees’ workplace deviance behavior. Workplace deviance
trigged by abusive supervision can be seen as a reaction to experiences. In contrast, in a trusting and safe organizational environment created by authentic leadership, people will have a more positive reaction to their experiences and perceive less of a need to perform harmful behavior as retaliation. I believe that the main characteristics of authentic leadership, balanced processing, ethical, and transparency, can help to reduce the injustice and mistreatment and then further reduce the negative emotions trigged by these two conditions.

In addition to the above mentioned purposes, this dissertation seeks to provide a better understanding of the relationship among authentic leadership, positive employee health, and behavioral engagement by examining other related variables. A review of the literature indicates that virtually all models of leader-member relationships are mediated or moderated by some other factors. For example, researchers suggest that the process by which authentic leadership influences follower attitudes and behaviors may involve a number of different cognitive mediators and moderators (Avolio, et al., 2004). Accordingly, this dissertation not only seeks to explore the linkage between authentic leadership and the aforementioned outcome variables, but also attempts to gain a greater understanding of the intervening cognitive variables (i.e., employee’s psychological safety, job engagement) and moderating variables (need for leadership, perceived organizational politics) that explain how and when authentic leadership fosters greater employee health, behavioral engagement, deviance and job performance.

To further differentiate authentic leadership from other leadership styles, this dissertation will also include another important and popular leadership style in the analysis—transformational leadership.
Statement of Problems and Contributions of Current Study

Based on the proceeding introduction, this dissertation provides the opportunity to address some important issues in positive organizational behavior studies.

It is clear that much of previous employee health literature has at least several major problems. First, there is not a clear definition of positive employee health. Previous studies have used different constructs to represent employee health in their attempts to link different organization constructs to employee health. Without a clear and consistent concept, it is very hard to understand what researchers are attempting to explain. Further, the different conceptualizations of employee health make it difficult to integrate the results of the different studies. Second, previous studies of employee health have little in the way of theoretical foundation; consequently, they neglect important aspects of positive employee health. Third, previous studies lack a valid comprehensive measure of positive employee health. Taken together, these problems suggest that there is a need for a new and better way to assess positive employee health. Therefore, this dissertation will take advantage of this opportunity by developing a theoretically-based measure of organizational employee health based on the human health research of Ryff and her colleagues.

Because researchers have not yet come to a clear definition of employee health, the development of an integrated multi-dimensional conceptual definition and a valid instrument of employee health would be a unique and valuable addition to the positive organization behavior literature. Further, this instrument should also be a practically useful tool for future research. Also, because research has shown that employee health has strong influence on employees’ performance, which consequently influences
organizational performance and efficiency, it is very important to find factors within the organizational context which can enhance the health condition of employees. Further, identifying the cognitive mechanism(s) that link leadership and employee health will provide new insights into how leaders and organizations can promote better employee health conditions in the organization.

The second contribution of this dissertation relates to Authentic Leadership theory. While there are many different theoretical arguments about why authentic leadership is important and how it could be an effective leadership style, there is a need for additional empirical research to validate authentic leadership theory. A literature review of authentic leadership studies indicates that there are only a few empirical studies which have been conducted—largely due to the lack of a valid measurement instrument. This dissertation contributes to this area by providing additional empirical evidence to the ongoing process of assessing the construct validity of Walumbwa, et al.’s (2008) new authentic leadership measurement instrument. For example, this dissertation will add new variables to the theoretical nomological network of authentic leadership (Avolio, et al., 2004). Although authentic leadership has been linked to psychological states such as hope, trust, and positive emotions, and outcomes such as job performance, extra effort, and withdrawal behaviors, no empirical studies have examined how authentic leadership is related to employee health, psychological safety, job engagement, proactive behavior, and workplace deviance behaviors. This dissertation will help to address this gap.

This dissertation has practical meaning for academics and practitioners alike. Today, global competition presents a more challenging environment for organizational managers and their employees. In order for organizations to remain competitive in
today’s more dynamic environment, organizations are asking more from employees than they have in the past—greater levels of personal initiative, greater breadth of role responsibilities, more accessibility while not at work, and faster decision making. All of these combined tend to increase the general level of job strain among employees. Accordingly, organizations need to foster and maintain both the positive emotional and physical health of its employees to remain competitive. That is, positive employee health can be considered as strategic human capital necessary for sustainability. To the extent that this is true, understanding the factors that underlie positive employee health is not only a critical area for research, but is also likely to be a critical body of knowledge for today’s managers to possess.

Additionally, while current research does indicate that authenticity is very important to today’s business success, it is unclear whether being authentic alone is sufficient to be a leader. Because authentic leadership does not fully encompass some important leadership functions, such as inspirational motivation and intellectual stimulation, the question remains as to how authentic leaders influence and motivate their followers. This dissertation should provide some answers to these and other questions.

**Statement of the Objectives of the Study**

Figure 2.1 presents the hypothesized model to be examined in this dissertation. The primary purposes of this dissertation can be summarized as follows:

1. To examine whether or not authentic leadership might be effective in promoting positive organizational behaviors, including employee health, proactive behaviors, and knowledge sharing, and in reducing detrimental behavior (i.e., deviance).
2. To develop a clear definition of positive employee health and a valid instrument to assess positive employee health by adapting Ryff's (1989, 1995) human health concept to the organizational context;

3. To examine the process by which authentic leadership is thought to influence positive outcomes. Variables such as psychological safety and job engagement are expected to be the primary mediating factors in this process;

4. To study how need for leadership and perceived organizational politics, may moderate the relationship between authentic leadership and its outcomes;

In conclusion, this dissertation adopts a positive organizational behavior approach to furthering our understanding of the process by which authentic leadership influences several important positive outcomes. However, it is not the purpose of this dissertation to deny the important role of the negative. As Luthans and Avolio (2009, p. 302) mentioned, "There has never been any intent in POB to replace the concern or diminish the importance of the negative aspects of the field." Accordingly, this dissertation includes an examination of one particular negative behavior—workplace deviance. Consequently, this dissertation will encompass both the positive and negative aspects of the field such that later work may better begin to integrate the positive with the negative perspective.
CHAPTER TWO

LITERATURE REVIEW AND HYPOTHESES

This chapter reviews literature on authentic leadership, positive employee health, behavioral engagement (i.e., proactive behavior and knowledge sharing) and workplace deviance. This chapter will be organized as follows. First, a review of authentic leadership will be presented. Theoretical differences between authentic leadership and other leadership styles, such as transformational leadership and ethical leadership will be examined. Second, a review of the positive human health literature will be presented. A definition of positive employee health which combines human health concepts with the organizational context will be proposed. Third, a review of proactive organizational behavior and knowledge sharing will be described briefly. Forth, a brief review of the deviance literature will provided. Last, a discussion of related hypotheses will be included.

Literature Review of Authentic Leadership

Defining Authentic Leadership

Presently, authentic leadership theory is relatively early in its development. As many people realized that “leaders at all levels and types of organizations are facing the challenge of declining hope and confidence in themselves and their associates” (Luthans & Avolio, 2003, p. 241), more and more researchers started to think about how leaders
might be able to restore that confidence. While most researchers continued to focus on studying the important perspectives of transformational leadership, Bass and Steidlmeier (1999) found that authenticity serves as a moral guide by which the intentions of transformational leaders can be recognized. Subsequently, other researchers (e.g., Avoilo el at., 2004) observed that some leaders are effective who do not fit neatly within a transformational leadership style and other leadership styles. Consequently, researchers started to theorize a new leadership style labeled “authentic leadership”.

Drawing from ancient Greek philosophy, authenticity is defined as “know ‘oneself’” and “to thine own self be true” (Harter, 2002; Avolio et al., 2004). Basically, there are two essential parts of authenticity: owning one’s personal experiences, such as values, thoughts, emotions, and beliefs; and behaving accordingly. Based upon this view of authenticity, several researchers have provided definitions of authentic leadership (e.g. George, 2003; Luthans & Avolio, 2003; Eagly, 2005). After the famous Enron scandal, George (2003) argued that one way leaders can help to restore confidence in business organizations is to be authentic— which means being oneself and being the person one was created to be, rather than being the image or persona of a leader. Luthans and Avolio (2003) define authentic leadership in organizations as “a process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviors on the part of leaders and associates, fostering positive self-development” (p. 243). Ilies et al. (2005) proposed a four-component model which includes self-awareness, unbiased processing, authentic behavior/acting, and authentic relational orientation.
Different from above definitions that consider only leader’s behavior, Eagly (2005) named a two-sided conceptualization of authentic leadership which includes not only leaders’ behavior, but also followers’ identification of leaders’ behavior. Eagly (2005) proposed that in order to be effective, authenticity must have two components: (1) “leaders endorse values that promote the interests of the larger community and transparently convey these values to followers”; and (2) the condition that “followers personally identify with these values and accept them as appropriate for the community in which they are joined to the leader-be that a nation, an organization, or a group” (p. 461).

While definitions of authentic leadership may vary, each draws upon a central theme which is that authentic leaders are true to themselves, behave consistently with who they are, and have strong influence on followers. Integrating all the different views of authentic leadership, Walumbwa et al. (2008) modified Luthans and Avolio’s (2003) basic definition of authentic leadership in order to form a new concept. Walumbwa et al. (2008) define authentic leadership as “a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development” (p. 94). This definition includes two distinguishing and critical components of authentic leadership theory: an inherent moral component and a development focus, which makes authentic leadership state-like and ultimately something one can develop in leaders (Walumbwa et al., 2008).
Building upon previous studies by Avolio and colleagues, Walumbwa et al. (2008) specified four distinct, but related, components of authentic leadership: (1) self-awareness, which refers to the understanding of one’s strengths, weaknesses, the multifaceted nature of self, how one derives and makes meaning of the world, and how that meaning impacts the way one views himself/herself over time; (2) relational transparency, which refers to exhibiting one’s true/authentic self to others; (3) balanced processing, which refers to objectively analyzing all relevant data before coming to a decision; and (4) internalized moral perspective, which refers to behaving consistent with who they are and having an internalized and integrated form of self-regulation.

Consistent with the measurement used in current research, Walumbwa et al.’s (2008) definition will be used in the following discussion. In order to gain a better understanding of authentic leadership, it is necessary to discuss two other leadership styles which are considered to have some degree of conceptual overlap with authentic leadership—transformational leadership and ethical leadership.

Transformational Leadership

Transformational leadership is an important leadership style that has been studied for decades. The most general characteristic of transformational leadership is that this type of leadership raises followers to higher levels of motivation and morality (Burns, 1978). There are four essential components of transformational leadership that have been defined in previous studies (Bass, 1998; Bass & Avolio, 1993): charisma or idealized influence (attributed or behavioral), inspirational motivation, intellectual stimulation, and individualized consideration.
According to Bass and Steidlmeier (1999), the charisma or idealized influence of a transformational leader comes from his/her vision, confidence, and high standards for evaluation. The second component of transformational leadership, inspirational motivation, influences followers to take challenges and to pursue shared goals and undertakings. The intellectual stimulation aspect of transformational leadership infuses “an open architecture dynamic into processes of situation evaluation, vision formulation, and patterns of implementation” (Bass & Steidlmeier, 1999; p. 188). The last component of transformational leadership, individualized consideration, emphasizes the necessity of leaders treating each follower as an individual and focuses on coaching, mentoring and growth opportunities.

Differences between Authentic Leadership and Transformational Leadership

Bass and Steidlmeier (1999) argued that transformational leadership is a complicated style of leadership, including both authentic and inauthentic behaviors. Therefore, Bass and Steidlmeier separate authentic transformational leadership from inauthentic transformational leadership. While authentic transformational leadership is characterized by behaviors which are true to oneself and others, inauthentic transformational leadership may encompass behaviors aimed exclusively at self-interested objectives. In other words, “transformational leadership is inauthentic when leaders lack commitment to altruistic values or behave in ways that are out of line with these values” (Price, 2003, p. 71). Although Bass and Steidlmeier’s (1999) concept of authentic transformational leadership may not be consistent with the definition of authentic leadership as conceptualized by Walumbwa et al. (2008), it differentiates
authentic leadership from transformational leadership by indicating that authenticity is not a necessary component of transformational leadership.

Based on a literature review of authentic leadership, the differences between authentic leadership and transformational leadership can be summarized as follows:

(1) Idealized influence, which is a focal component of transformational leadership, cannot readily be used to explain authentic leadership (Walumbwa et al, 2008); authentic leaders may not have attributed charisma. They focus on follower development toward achieving authenticity, which may not relate to a leadership role in the organization (Gardner, Avolio, and Walumbwa, 2005; Luthans and Avolio, 2003).

(2) Wood (2003) argues that relational transparency, which is a focal component of authentic leadership, is not reflected in the concept of transformational leadership described by Bass and Avolio (1993). Transparency, which means being honest and open to followers and other stakeholders, is a broadly defined behavior of authentic leadership. However, it is not an important characteristic of transformational leaders because transformational leaders may not think it is necessary to tell truth when they trying to reach a goal.

(3) Because authentic leaders are transparent, the way they influence their followers may depend more on their character, personal modeling, and dedication rather than inspirational appeals, dramatic presentation, symbolism, or other forms of impression (Gardner & Avolio, 1998).
Ethical Leadership

As in the case with transformational leadership, there is some conceptual overlap between authentic leadership and ethical leadership. Ethical leadership is defined as “the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making” (Brown, Treviño, & Harrison, 2005, p. 120). Like authentic leadership, ethical leadership has emerged in recent years as a response to the failures of Enron’s leadership and other recent scandals in business organizations. Accordingly, honesty and trustworthiness are two essential characteristics of ethical leaders. It is believed that ethical leaders care about people and broader society and behave ethically in their lives (Brown & Treviño, 2006).

There are two aspects of ethical leadership which have been identified in previous research: the moral person and the moral manager (Brown, Treviño, & Harrison, 2005). While the moral person aspect of ethical leadership refers to followers’ or observers’ perceptions of the leaders’ personal traits, character, and altruistic motivation, the moral manager aspect represents the leader’s proactive efforts to influence follower’s ethical behavior (Brown & Treviño, 2006). These proactive efforts include communicating an ethics and values message, visibly and intentionally role modeling ethical behavior, and enacting an ethical reward system.

It is obvious that there is some conceptual overlap between ethical leadership and authentic leadership. First, both leadership theories define a leader as a moral person of integrity who is honest and open to doing the right thing (Walumbwa et al., 2008). Both ethical and authentic leaders consider the ethical consequences of their decisions (Brown
& Treviño, 2006). Second, both theories focus on a moral manager component by which leaders promote follower's ethical behavior (Gardner et al., 2005). However, notable distinctions also exist.

**Differences between Authentic Leadership and Ethical Leadership**

As described above, a moral manager component might be the overlap between authentic leadership and ethical leadership. However, the difference between these two theories stems from the way a leader influences their followers' moral behaviors. According to ethical leadership theory, ethical leaders may use a transactional form of influence in which the reward system is used to encourage followers' ethical behavior (Brown & Treviño, 2006). In contrast, authentic leadership theory indicates leaders focus on ethical role modeling to stimulate such behaviors.

Another difference between ethical leadership and authentic leadership is reflected in the main components of authentic leadership. Specifically, the three focal components of authentic leadership (i.e., self-awareness, relational transparency, and balanced processing) are not included in operational definitions of ethical leadership (Walumbwa et al., 2008). In addition, Brown and Treviño (2006) agreed that positive attributions of authentic leaders, such as hope, optimism, and resiliency, make them "capable of judging ambiguous ethical issues, viewing them from multiple perspectives, and aligning decisions with their own moral values" (p. 599). Ethical leaders may not have these capabilities.
Summary

The literature of authentic leadership reveals that authentic leadership may have some overlap with other leadership constructs, such as transformational leadership and ethical leadership. However, the literature also indicates that authentic leadership theory has its own, unique theoretical foundation which makes it distinguishable from other leadership styles. As several researchers (e.g., May, Chan, Hodges, & Avolio, 2003; Avolio & Gardner, 2005) suggest, the conceptual overlaps among different leadership styles make authentic leadership a root construct that underlies all existing leadership theories. On the other hand, the focal components of authentic leadership, including self-awareness, transparency, and balanced processing, make it a distinguishable construct that needs to be studied. With the efforts of previous researchers, the theory of authentic leadership is making improvements: the concept of the construct is more comprehensive, a valid measurement instrument has been developed, and the basic conceptual model has been developed. To make authentic leadership theory more distinctive and useful, empirical research is needed to determine whether those distinctions exist and to determine the unique antecedents and outcomes of authentic leadership (Cooper et al., 2005). Further, a clear understanding of the mechanism by which authentic leadership influences outcomes is needed, not only due to the practical concern regarding the effectiveness of authentic leadership, but also because of the importance of determining whether or not this new construct makes a unique contribution to leadership research and practice.
Literature Review of Positive Human Health

While some people still think that health and productivity are in conflict because it costs money and time to promote employee health, other people have started to realize that health and productivity are complementary because healthy employees can be viewed as sustained advantage resources (Quick & Macik-Frey, 2007). In modern society, global competition makes jobs more stressful. By improving employee health, organizations are better poised to achieve the sustained high level of performance necessary to survive in today’s competitive environment.

Before Ryff and Singer (1998) made their appeal to study human health from a positive perspective which includes mind, body, and their interactions, most studies of human health focused almost exclusively on a simple criterion, “absence of illness.” Although health had been defined for some time as a “state of complete physical, mental, and social well-being and not merely the absence of disease of infirmity” (World Health Organization, 1948, p. 28), there was little or no research putting this view into practice. Previous research on employee health either focused upon physical aspects of bodily health (e.g., morbidity and mortality) to reduce sick leave and increase productivity (e.g., Wreder, 2007), or focused upon psychological well-being of employees as a means of promoting job satisfaction (e.g., Ryff & Keyes, 1995).

In their recent work, Macik-Frey et al. (2009) describe a story to help readers to better understand human health from a positive perspective. In this story, a manager in the retail industry was diagnosed with cancer. After several months of surgery and other treatments, this person was told she was cancer free. However, she was still feeling weak, depressed, and worried about the possibility that the cancer would return. As a result, she
did not pursue more challenging roles at work, rarely contacted co-workers, had no hobbies, and few friends. Even though this manager was free of symptoms of physical illness, Macil-Frey et al. (2009) note that this employee “does not fit the positive definition of health” (p.454) because she does not meet the criteria of human health which is comprehensively defined by Ryff and Singer (1998).

Ryff and Singer (1998) propose a comprehensive concept of human health that includes three underlying principles:

(1) Positive health is not a medical concept but rather a philosophical issue that relates to the meaning of the good life;

(2) Positive health is human wellness which includes the mind, the body, and their interaction; and

(3) Positive health is a multidimensional dynamic process rather than a discrete state.

Based on prior philosophical and ethical groundwork on the good life, such as Becker’s (1992) definition of “good” and Russell’s (1958) concept of happiness, Ryff and Singer (1998) developed four key components of positive human health: (1) leading a life of purpose; (2) quality connections to others; (3) positive self-regard and mastery; and (4) perception of negative events as paths to meaning and purpose. The details of each component will be explained in the following section.

Leading a Life of Purpose

Seeing life as purposeful and meaningful is critical to human wellness because it has emerged as the distinguishing feature between survivors and nonsurvivors (Ryff & Singer, 1998). According to philosophical and sociological theories of good and healthy
life, Ryff and Singer (1998) suggest that leading a life of purpose involves “setting and pursuing goals, finding out what one is good at, exercising such talents, and hence, realizing one’s potential” (p. 8). They believe that leading a life of purpose is a dynamic, ongoing process which relates to day-by-day, constantly unfolding phenomenon rather than an end state that is fixed. They also believe that the leading a life of purpose component of human health is not culture or time-specified, but rather a universal feature of human wellness. Ryff and Singer (1998) propose that leading a life of purpose can be related to many contexts, including the work context. While Russell (1958) thought that purpose of life at work is important to prevent boredom, improve chances of success, and provide continuity of purpose, Ryff and Singer (1998) point out that aspects of the work environment, such as job conditions and employment status, can influence human health in other ways.

Quick and Macik-Frey (2007) summarized some attributes of leading a life of purpose, including: clear mission and goals, balanced-living within one’s value system, integrity, productive purposeful work, spiritual or higher purpose, and passion or motivation to achieve for the better good.

Quality Connections to Others

People cannot have a good life without relationships with others. Relishing life relates, more than anything, to the feeling of loves or being loved (Russell, 1958). According to Maslow’s (1943) motivation theory, the third level of human needs involves feelings of belongingness. This aspect of Maslow’s hierarchy includes emotionally-based relationships in general, such as friendship, intimacy, and family. People feel loneliness, social anxiety, and clinical depression if they lack this feeling of
belongingness (Maslow, 1943). Indeed, Baumeister and Leary’s (1995) empirical study provides evidence that deficits in belongingness are negatively related to human health, adjustment, and well-being.

Quality connections to others involve connections with a wide variety of social groups, including families, friends, co-workers, bosses, or club members. Work in particular, as an important part of human life, is likely to have a very strong influence on people’s feeling of belongingness. Ryff and Singer (1998) also see quality connections to others as a dynamic, ongoing process that changes over time. They point out that quality connections to others may be different across cultures because Western cultures place more importance on individualism than Eastern cultures. However, there is consistency among different cultures in the view that good relations can affect human health because people everywhere have a need for close relationships.

Quick and Macik-Frey (2007) summarized some attributes of quality connections to others, including: interdependence (i.e., a strong, positive social support system), emotional competence, maturity, intimate connections to family and significant others, and communication competence.

Positive Self-Regard and Mastery

Ryff and Singer (1998) suggested that a purposeful life and quality connections to others can help people to build and maintain positive self-regard, a sense of self-realization, personal growth, and mastery on the one hand. On the other hand, the latter can help to enhance the pursuit of life goals and good relations with others. Therefore, Ryff and Singer concluded it is reasonable to add positive self-regard and mastery as separate components of positive human health.
Quick and Macik-Frey (2007) summarized some attributes of positive self-regard and mastery including: humor, optimism, hope, self-efficacy or confidence, self-awareness, subjective well-being/happiness, hardiness or adaptability, vigor (physical and mental energy), and personal challenge/growth goals.

**Perception of Negative Events as Paths to Meaning and Purpose**

While positive human health focuses on meaningful, positive aspects of human life, it does not mean we should exclude the negative things from the definition of human health. The reason for this is because negative events, such as difficult experiences and pain, are inevitable in life—“happiness is not an easy pursuit but a struggle” (Ryff & Singer, 1998, p. 10). Therefore, positive human health also involves how to handle the negative aspects of the human experience. Ryff and Singer (1998) argued that negative events may contribute to building a deep feeling of life purpose and may enrich experienced relations with others.

The ability to perceive negative events as paths to meaning and purpose relates to optimism and hope. The Oxford English Dictionary defines optimism as a tendency to be hopeful and confident about the future. People who are optimistic expect the best possible outcome from any given situation and explain life events in a positive way. Previous studies have shown that optimism is related to physical wellbeing (e.g., Scheier & Carver, 1985; Peterson & Bossio, 2001).

The ability to perceive negative events as paths to meaning and purpose also relates to hardiness and resilience. Generally, resilience reflects individuals’ psychological responses and adaptation to negative changes in their environment (Wilson & Ferch, 2005). Individuals who are resilient have the psychological and biological
strength to manage change in a healthy way (Wilson & Ferch, 2005). Therefore, Ryff and Singer (1998) conclude that resilience should be an important component of this dimension.

Defining Positive Employee Health in the Organization

Ryff and Singer (1998) provide a very broad and comprehensive concept of positive human health. However, as I argued at the beginning, this concept focuses on normal circumstances or life-in-general, and therefore does not account for the possibility that human health may vary across different domains of life—work in particular. For the purpose of this dissertation, the concept of positive human health will be modified to define positive employee health. Therefore, I define positive employee health as a multidimensional dynamic process by which employees in an organization can (1) lead a clear purpose in the organization; (2) build quality connections to their supervisors, coworkers, customers, and other stakeholders; (3) foster positive self-regard and mastery in the organization; and (4) perceive negative work events as paths to meaning and purpose in the organization. This definition is consistent with the previously discussed multi-dimensional concept of human health, but is focused upon the work context.

Following Quick and Macik-Frey (2007) and Ryff and Singer (1998), the definitions and attributes relate to each dimension of positive employee health can be summarized as follows:

(1) Leading a purposeful work life.

Leading a purposeful work life refers to the extent to which employees have clear goals in the organization and knows their direction; feel their job is meaningful; and believe they have a good future or career in the organization. It involves a dynamic,
ongoing process in which employees can set and pursue clear goals, know job responsibilities, find out and use strengths, explore future potential, and develop a balance between their individual value system and the organization’s value system. The major components of this dimension include:

- Knowing the mission and goals of the organization,
- Knowing one’s job responsibilities in the organization,
- Knowing one’s future potential and purpose in the organization,
- Balance between one’s value system and organization’s value system,
- Integrity, productivity, and passion or motivation to achieve better work results.

(2) Quality connections to others.

Quality connection to others refers to the extent to which the employee has satisfying, trusting relationships with others in the organization (e.g. coworkers, supervisors, and customers). It is being concerned about the welfare of others encountered in the workplace and having both strong emotional and communication competence. Quality connections to others require an understanding of the give-and-take necessary to develop good interpersonal relationships at work. The major components of this dimension include:

- Interdependence, perceived strong positive organizational support,
- Emotional competence,
- Good communication competence,
- Good relations and connections to others at work.

(3) Positive self-regard and mastery.
Positive self-regard and mastery refers to the extent to which the employee has a sense of mastery, self-realization, and competence in managing his/her work environment; controls job activities; makes effective use of organizational resources; and is able to create suitable contexts for his/her job. The major components of this dimension include:

- Self-efficacy and confidence about one’s job,
- Self-awareness about one’s work-related strengths and weaknesses.
- Perception of negative events as paths to meaning and purpose.

This dimension refers to the extent to which an employee has a positive attitude toward job performance; acknowledges and accepts multiple aspects of consequences of the job, including good and bad results; feels past work experience are paths to continued development; sees improvement in his/her job over time; and adapts to change in the work environment. Physical and mental energy, happiness, resilience, and optimism will underlie this dimension. The major components of this dimension include:

- Optimism and hope,
- Subjective well-being and happiness at work,
- Hardiness and resilience,
- Acceptance of challenging tasks,
- Vigor—physically and mentally energized at work.

A Summary of the Relation between Authentic Leadership and Positive Employee Health

In this dissertation, I predict that authentic leadership will be positively related to employee health through specific mediating variables. One of the important implications of authentic leadership theory is that authentic leaders are realizable, accessible and
tangible (George, 2003). Because authentic leadership is built upon strong self-awareness of leaders’ strengths and weaknesses, high moral standards, relational transparency to others, and balanced processing ability, authentic leaders should have a strong influence on followers’ attitudes and behaviors, as well as positive employee health.

According to Gardner and Schermèrhorn (2004), authentic leaders help to build employees’ confidence (self-efficacy), create hope, raise optimism, and strengthen resilience. They propose that authentic leaders help to build employees’ confidence by expressing confidence and trust in associates, persuading subordinates to recognize their capabilities, and providing them important support. Authentic leaders can create hope in employees by matching individual talents with job requirements, providing support, allowing participation in goal setting, and training and teaching employees to develop contingency plans for goal attainment. Based on Seligman’s (1991, 2002) theory of optimism, Gardner and Schermerhorn (2004) further argue that realistic optimism, a situation where someone takes credit for success while recognizing others’ contribution, is an important factor influencing employees’ performance in the organization. They believe that authentic leaders can foster realistic optimism by helping followers to identify cases of adversity, recognize self-defeating beliefs, and realize the consequences of such beliefs and low performance expectations. Finally, because resilience involves factors such as cognitive and self-regulation skills, feelings of self-efficacy, intrinsic motivation, and positive views of the self, authentic leaders can strengthen employees’ resilience by anticipating potential adversity or strains, making alternative plans, and showing their support. Avolio et al. (2004) proposed that authentic leadership is positively related to followers’ hope, positive emotion, and optimism. This is particularly
important for the present study as hope, self-confidence, positive emotion, optimism, and resilience are important components of positive employee health as defined in the present study.

Toor and Ofori's (2009) empirical study found that authentic leadership is positively related to leaders' psychological well-being because of self-awareness and unbiased processing. I propose that authentic leadership should positively relate to employees' health as well because leaders are role models in the organization. Previous studies of transformation leadership have shown that transformational leaders affect their followers through a role modeling process wherein follower's self-concepts, values, and beliefs become more similar to those of the leader (e.g., Kark, Shamir, & Chen, 2003). Authentic leadership and transformational leadership are similar in this manner because both leadership styles have idealized influence over followers. Quinn, Spreitzer, and Brown (2000) indicate that leaders who are open can influence others more effectively. Because authentic leaders are transparent to their followers, their beliefs, values, and self-concepts are observable to the followers. Thus, I expect authentic leaders to enhance employees' health when they lead from the front, are open to their followers, and spread their positive attitudes in the organization.

**Literature Review of Behavioral Engagement**

In Macey and Schneider's (2008) job engagement model, behavioral engagement refers to a broad range of directly observable behaviors, including organizational citizenship behavior, proactive behavior, role expansion, and adaptive behavior. Macey and Schneider (2008) propose that behavioral engagement, as well as state engagement, is more likely to be influenced by work conditions within which people perform their
tasks and by the leadership under which people are supervised. Since behavioral engagement involves performance that is adaptive, innovative, and atypical, it is useful to understand potential antecedents of those affective behaviors. Two types of behavioral engagement, proactive behavior and knowledge sharing, will be discussed in the following section.

Proactive behavior has been defined as “taking initiative in improving current circumstances or creating new ones; it involves challenging the status quo rather than passively adapting to present conditions” (Crant, 2000, p. 436). Proactive behavior has been studied as future-oriented, goal-directed, self-starting behaviors which can benefit the organization for the long term (Parker, 2000). It is believed that proactive behavior is critical to organizations because it is anticipatory action taken by employees to positively influence the organization or the environment (Bateman & Crant, 1993; Parker, Williams, & Turner, 2006; Grant, Parker, & Collins, 2009). That is, proactive behavior is not simply adaptive or reactive to change, it causes change to occur. Researchers also believe that competitive advantage and organizational success depend upon personal initiative and proactive behavior (Fuller, Marler, & Hester, 2006). Affiliative and reactive behaviors, such as helping and compliance, may help organizations to lubricate interpersonal relationships, complete tasks, and promote productivity. However, with increasing competition in the global business environment, those behaviors are not sufficient for improving performance (Choi, 2007). Today, employees are increasingly required to be more proactive, flexible, and innovative in dealing with the quickly changing competitive environment (Bettencourt, 2004).
While forms of proactive behaviors may vary, Crant (2000) integrates them into two basic categories: general actions which reflect broad categories of proactive behavior, such as challenging the status quo and creating favorable conditions; and context-specific behaviors which emphasize particular behaviors that occur in a limited domain or a narrow context, including socialization, feedback seeking, innovation, and issue selling. For the purpose of this dissertation, I will largely focus on a general form of proactive behavior as defined by Griffin et al (2007) because these are more broadly applicable to every organization.

Griffin et al. (2007) classified work role performance into nine sub-dimensions across three levels within the organization—individual, team, and organization behaviors. Each of these levels has three different orientations: proficiency, adaptivity, and proactivity. This classification captures a broad range of activities which contribute to effectiveness in the organization. Among nine sub-dimensions, the three dimensions related to proactively will be the focus of the current study because when combined, they constitute a broad measure of proactive behavior.

Griffin et al. (2007) defined proactivity at three levels of the organization, including individual, team member, and organization level. According to Griffin et al. (2007), Individual task proactivity refers to the extent to which an employee dedicates him/herself to behaviors that are self-starting, future-oriented and intended to constructively change individual work situations, individual work roles, and/or himself/herself. Team member proactivity focuses on similar behaviors that are intended to change a team’s situation or the way the team works. Organizational member
proactivity focuses upon the similar behaviors that are intended to change the organization or the way the organization works.

As Crant (2000) and others (e.g., Parker & Collins, 2004) have noted, while proactive behavior has been studied under different forms and different labels, there are overlaps among many of the different proactive behavior concepts. Griffin et al. (2007) propose that proactivity includes related constructs, such as proactive behavior (Crant 2000), personal initiative (Frese et al, 1996), task revision (Staw & Boettger, 1990), voice (Van Dyne & LePine, 1998), innovation behavior (Scott &Bruce, 1994; Welbourne, Johnson, & Erez, 1998), and taking charge (Morrison & Phelps, 1999). This dissertation employs Griffin et al.’s (2007) broad conceptualization of proactivity for several reasons.

First, Griffen et al.’s (2007) conceptualization of proactivity integrates several important general forms of proactive behaviors, including taking charge, voice, and innovation. Morrison and Phelps (1999) define taking charge as “voluntary and constructive efforts, by individual employees, to effect organizationally functional change with respect to how work is executed within the contexts of their jobs, work units, or organizations” (p. 403). LePine and Van Dyne (2001) defined voice behavior as “constructive change-oriented communication intended to improve the situation” (p. 326). Also, people who play an innovator role in the organization contribute to the effectiveness and adaptability for the organization as a whole as well as for themselves (Welbourne et al., 1998). These three similar but still distinct constructs have been widely studied as proactive behaviors and been shown to have strong influence on firm performance (Crant, 2000; Fuller et al., 2007). More recently, Parker and Collins (2004) have found that a common factor underlies these types of proactive behaviors.
Second, the purpose of this dissertation is to study the relationship between authentic leadership and outcomes beneficial to the organization. Utilizing a general measure of proactivity that combines innovation, voice, and taking charge behaviors can provide a broader, more general assessment of that relationship than any more specific measure of general proactivity. Further, because Griffen et al.’s (2007) conceptualization of proactivity assesses three different foci of proactivity (i.e., task, team, and organization), this will allow more insight into the breadth of an authentic leader’s influence (i.e., does it extend outside of the individual’s task to encompass constructive change aimed at team and organization function). Although many studies of proactive behavior have been done in the past decade, only a few studies have considered the influence of supervisors or leaders on employees’ proactive behaviors and none has studied the relationship between authentic leadership and employees’ proactive behaviors. Previous studies provided evidence that leaders’ reactions to the proactive behaviors have influence on employees’ performance. For instance, Walumbwa and Schaubroeck (2009) found that leader personality traits and ethical leadership influenced follower’s voice behavior. Grant, Parker, and Collins (2009) proposed that proactive behavior is not always appreciated by supervisors. They found that supervisor’s perception of the motivation behind the proactive behavior will influence their attributions about employee’s credit. Further, it has been suggested that employees try to identify ways to improve their jobs or organizations under their own initiative without relying on supervisors’ initiative (Crant, 2000; Parker, 1998; Griffin et al., 2007). It is important to examine whether a leadership style like authentic leadership which does not
have an inspirational motivation component can promote proactive behaviors by providing a certain type of organizational environment.

Ilies et al. (2005) suggested that authentic leaders are likely to have a positive influence on followers’ behaviors because such leaders provide support for followers’ self-determination, which should result in intrinsic worker motivation. Although inspirational motivation is not a component of authentic leadership, authentic leaders can provide an organizational climate within which employees do not worry about the negative consequences of risky innovative or change-oriented actions.

Uncertainty influences the extent to which a work role can be formalized and hence determines whether an individual can be effective by simply complying with the requirements of a work role or can be effective by adapting to and initiating change (Griffin, Neal, & Parker, 2007). Employees weigh their possible actions and the potential risks associated with those actions before they perform behavior (Edmondson, 2003). If they perceive that there are potential risks, they may withdraw from engaging in certain actions. Psychological safety introduced by authentic leadership can help employees overcome anxiety and defensiveness. For example, Kark and Carmeli (2009) found that psychological safety induces feelings of vitality which then further impact one’s involvement in creative work. Since high self-awareness and transparency of the authentic leader reduces uncertainty in the work environment and enhance employees’ psychological safety, it seems likely that authentic leadership should ultimately lead to increased proactive behaviors.

Third, using proactivity is more appropriate for the current study because it is expected that this construct will be closely related to the cognitive constructs in the
model—job engagement and psychological safety. Previous research suggests that job engagement and psychological safety are likely to be positively related to innovation in the organization (Saks, 2006; Baer & Frese, 2003). Therefore, a positive relationship between those constructs is expected.

In addition to the general form of proactive behavior, this dissertation also seeks to test another form of behavioral engagement—knowledge sharing. Knowledge sharing is a very important process by which people share task-relevant ideas, information, and suggestions with other people, such that individuals’ knowledge can be translated into organizational capability (Srivastava, Bartol, & Locke, 2006). Knowledge sharing can be defined as behavioral engagement because it is individual initiated behavior which is intended to enhance the intellectual capital of other employees and their groups, thereby improving performance. It is consistent with Macey and Schneider’s (2008) definition of behavioral engagement. Knowledge sharing is a voluntary behavior with which the holder of the knowledge typically decides whether or not to impart new information or knowledge with others (Staples & Webster, 2008). Normally, knowledge sharing associates with risks, such as free-riding and opportunistic behavior (Lam & Lambermont-Ford, 2009). Also, knowledge sharing behavior has uncertain rewards because the individual’s effort to share their knowledge is neither directly measurable nor sanctionable (Lam & Lambermont-Ford, 2009). Therefore, it is important to study why do individuals share their knowledge in the organization and what makes individuals share their knowledge.

Siemsen, Roth, Balasubramaniam, and Anand (2009) found that leadership consideration was positively related with knowledge sharing, although this relationship
was mediated by psychological safety. They suggested that leaders can influence employees’ concerns for other employees through cooperative or competitive lenses. Leaders also have strong influence on the degree of comfort their employees’ experience in the organization. In a safe environment, people are not afraid of a loss of status, power, respect, or confidence when they speak up, report mistakes and errors, and share their knowledge with others (Kark & Carmeli, 2009). Therefore, effective leadership can help employees overcome barriers of knowledge sharing. This dissertation will examine whether or not authentic leadership is positively related with employees’ knowledge sharing behavior and the extent to which this relationship is mediated by the psychological safety created by this type of leadership.

In summary, the main purpose of this dissertation is to study the aforementioned positive organizational constructs and to provide empirical evidence to support the relationships among those constructs as well as attempting to establish a negative relationship between these positive organizational constructs and deviance. The model depicted in Figure 2.1 indicates how authentic leadership is linked to the different outcome variables. General research hypotheses will be addressed in the next section of this chapter. Other related constructs will be explained in the next section as well.

Avoilo et al, (2004) propose a theoretical model of authentic leadership (see Figure 2.2). This theoretical model provides a better understanding of the process by which authentic leaders are thought to influence their followers.
Figure 2.1 Hypothesized Research Model
Figure 2.2 Proposed Framework Linking Authentic Leadership to Follower’s Attitudes and Behaviors

(Avoilo, Gardner, Walumbwa, Luthans, & May (2004))
This dissertation goes beyond Avolio et al.'s (2004) theoretical model by: (1) adding several important outcome constructs which have not been studied in previous studies, including positive employee health, proactivity, knowledge sharing behaviors, and deviance; (2) incorporating several new mediation and moderation variables, such as psychological safety, job engagement, employees' need for supervision, and perceived organizational politics; and (3) testing the incremental predictive validity of authentic leadership over and above transformational leadership with regard to these new variables.

**General Research Hypotheses**

**Authentic Leadership and Psychological Safety**

Research has shown that there is a strong relationship between leader attitudes/behaviors and employees’ attitudes/behaviors. According to leader-member exchange theory (e.g., Liden, Sparrowe, & Wayne, 1997), leaders play an important role in determining followers’ attitudes and behaviors in the organization. Settoon, Bennett, and Liden (1996) suggest that desired work behaviors, both in-role (i.e., those that conform to the employment contract) and extra-role (i.e. those that extend beyond what is required), are associated with the nature of the supervisor-subordinate relationship. The more that the relationship between the leader and the subordinate is based on mutual trust and loyalty, interpersonal affect, and respect for each other, the better the subordinate’s performance. In addition to influencing followers’ behaviors, leaders also can influence followers’ psychological status (e.g., trust, safety, and psychological well-being) through creating a positive organizational climate and role modeling. Leaders can foster a positive and supportive work environment by displaying concern for employees’ needs and feelings, and by providing positive feedback and encouragement (May et al., 2003). Such
positive and supportive actions may create a positive climate within which employees experience a sense of self-determination and interest in their work.

In Avolio et al.'s (2004) model, trust is an important outcome of authentic leadership. However, the psychological condition of safety, a construct which is very closely related to trust, has received limited attention (May, Gilson, & Harter, 2004). Psychological safety is defined as “feeling able to show and employ one’s self without fear of negative consequences to self-image, status, or career” (Kahn, 1990, p. 708). Psychological safety reflects an individual’s perception of the consequences of taking interpersonal risks in the work environment (Edmondson, 1999; Kark and Carmeli, 2009). Kahn (1990) suggested that people feel safe when they trust that there will not be negative consequences for their behaviors. Accordingly, psychological safety is closely related to trust. However, according to Edmondson (1999), psychological safety goes beyond trust and describes a blend of interpersonal climate which includes interpersonal trust, respect for each other’s competence, and caring about each other as people. Therefore, people are comfortable being themselves when they believe they are in a safe environment.

There are only a few studies which have examined the antecedents and outcomes of psychological safety. Research has shown that some organizational factors, such as organizational climate, leader traits, and leader characteristics may influence employees’ perception of the safety within the organization. For example, Baer and Frese (2003) proposed that organizational practices and procedures which support open and trustful interaction within the work environment can enhance employees’ psychological safety which then enhances company performance. Edmondson (2003) found that effective
team leaders are able to facilitate learning and promote innovation by creating a climate of psychological safety. Nembhard and Edmondson (2006) found that leader inclusiveness is positively related to psychological safety. Leader inclusiveness involves a leader using words and deeds to express their invitation and appreciation for others’ contribution. Walumbwa and Schaubroeck’s (2009) research indicates that psychological safety mediates the relationship between leader personality traits and employee voice behavior.

Building upon the aforementioned insights, I propose a positive relationship between authentic leadership and employee’s psychological safety. As previously stated, authentic leaders have great self-awareness, high internalized moral perspective, unbiased processing, and are transparent to other people (Walumbwa et al., 2008). According to positive psychology, authenticity involves understanding one’s own inner thoughts, beliefs, and emotions, and behavior consistently to reflect one’s true self (Gardner & Schermerhor JR., 2004). Consequently, an authentic leader’s behaviors and thoughts are transparent and predictable to his/her subordinates. The support, openness, and transparency of an authentic leader helps to build a trusting relationship with followers, reduces the uncertainty of the organizational environment, and further enhance followers’ feeling of safety. Because authentic leaders are also guided by a series of values that focus on doing “what is right and fair” for the leader as well as for their followers (Luthans & Avolio, 2003), they can facilitate a positive work climate within which employees do not fear of negative consequences to their self-image, status, or career.

Accordingly, I hypothesize the following:

**H1: Authentic leadership will be positively related to psychological safety.**
Authentic Leadership and Job Engagement

Job engagement in this section refers to state engagement. While the intention of this study is to examine the relationship between authentic leadership and behavioral engagement, state engagement should be included as an important mediation factor because engagement as behavior is the manifestation of a psychological state (i.e., state engagement) (Macey & Schneider, 2008). Kahn (1990) also suggests that critical psychological states influence people’s internal motivation and then shape behaviors.

While definitions of state job engagement may vary, there are some common elements (Zhu, Avolio, & Walumbwa, 2009). Most of previous definitions have their roots in Kahn’s (1990) definition of cognitive and emotional engagement. Kahn (1990) defines engagement as “the simultaneous employment and expression of a person’s preferred self in task behaviors that promote connections to work and to others, personal presence (physical, cognitive, and emotional) and active, full performance” (p. 700). Kahn suggests that role engagement has two basic components-- attention and absorption in a role. Jones and Harter (2005) propose another definition, defining work engagement as “the individual’s involvement and satisfaction with, as well as enthusiasm for their work” (p. 80). Schaufeli, Salanova, González-Romá, and Bakker (2002) propose still another definition, defining engagement as “a motivational construct which is positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (p. 295). Drawing from Kahn (1990), Rich, Lepine, and Crawford (2010) suggest that job engagement should be constructed as a multidimensional motivational concept which reflects the simultaneous investment of an individual’s physical, emotional, and cognitive energy in his/her work. This dissertation will use Rich’s (2010)
measure of job engagement because it reflects Kahn’s (1990) conceptualization and includes three dimensions (physical, cognitive, and emotional) of job engagement construct.

It has been shown that leadership quality is one of the single most influential factors on workforce engagement (Buckingham & Coffman, 1999). For example, Chughtai and Buckley (2008) proposed that trust in top management plays an important role in influencing employees’ job engagement. However, Chughtai and Buckley (2008) only gave limited attention to the relationship between different leadership styles and work engagement. More recently, Zhu, Avolio, and Walumbwa (2009) studied the relationship between transformational leadership and follower work engagement. They found that transformational leadership is positively related to follower work engagement, but also found this relationship to be moderated by follower characteristics.

It also seems likely that authentic leadership will be related to follower work engagement. Kahn (1990) identified three psychological conditions as antecedents to personal engagement, including psychological meaningfulness, psychological availability and psychological safety. Psychological meaningfulness refers to the positive feeling arising from an individual’s investment in work tasks (Zhu et al., 2009). Authentic leadership should make a strong contribution to subordinates’ perceived job meaningfulness. Gardner et al., (2005) predicted that authentic leaders would foster internalized regulation processes among followers through positive modeling. This positive modeling process would, in turn, contribute to enhanced follower well-being, engagement, and performance. Macey and Schneider (2008) suggest that employees are likely to be engaged in their job to the extent that they believe the energy, time, effort, or
personal resources (e.g., knowledge and experience) they devote to the job will be rewarded in some meaningful way. Authentic leaders should promote psychological meaningfulness among their followers because the values they transparently endorse promote the interests of the larger community. That is, followers of authentic leaders are likely to feel that the resources they devote to the job contribute to the greater good of the organization. This, in turn, makes their job meaningful.

The second precondition for personal engagement suggested by Kohn (1990) is psychological availability. Psychological availability reflects an employee’s belief that they have the necessary resources to do their job when they engage themselves at work (Zhu et al., 2009). These resources include physical, emotional, and cognitive resources. Authentic leadership should contribute to a subordinate’s psychological availability by creating expressing confidence in the subordinate’s ability to do the job and by persuading followers to recognize their own capabilities. Couple these actions with authentic leader’s optimism, followers should be psychologically available to actively be engaged in their work. Therefore, authentic leaders should foster high levels of job engagement because they increase followers’ psychological meaningfulness, availability, and safety.

**H2: Authentic leadership will be positively related to job engagement.**

While I proposed a variety of mechanisms by which authentic leaders foster high levels of job engagement among followers, I am primarily interested in investigating only one of these mechanisms—psychological safety. Consequently, because authentic leaders should increase follower job engagement through influencing follower cognitive/motivational states other than psychological safety, I expect that psychological
safety will only partially mediate the relationship between authentic leadership and job engagement.

**H3: Employees’ psychological safety will partially mediate the relationship between authentic leadership and job engagement.**

**Job Engagement and its Outcomes**

While some practitioners believed that employees’ engagement of their work has a compelling relationship with profitability of the organization (Macey & Schneider, 2008), there are only a few empirical studies have examined the outcomes of job engagement. Generally, practitioners believe that engaged employees will (1) have high levels of productivity and innovation, (2) tend to stay with the company longer than disengaged employees; and (3) have a deep insight into their own future and into the organization’s mission and goals (employee engagement report, 2008). Since scholars started to explore the real meaning of work engagement, more and more research on this topic has emerged in the academic literature. For instance, Salanova, Agut, and Peiró (2005) found that employee engagement positively enhanced service climate, and then further increased customer loyalty. Saks (2006) found that job satisfaction, organizational commitment, intention to quit, and OCB are outcomes of job engagement. As most previous research provided evidence for a positive relationship between job engagement and organizationally-relevant results, it is important to note that engagement is an individual level construct which means it must influence individual outcomes first before it can impact organizational level outcomes (Saks, 2006). In this dissertation, I propose a positive relationship between job engagement and employee health when the latter is operationalized.
As previously noted, positive employee health involves four components, (1) leading a life of purpose; (2) quality connections to others; (3) positive self-regard and mastery; and (4) perception of negative events as positive paths. Previous research has provided theoretical connection between job engagement and these components. Shaufeli, Taris, and Rhenen (2008) investigated the difference between workaholism and work engagement and found that work engagement is positively related to quality of social relationships. They did not find a significant relationship between work engagement and employee health when the latter was assessed by negative psychological symptoms such as distress and anxiety. However, their study indicates that the two underlying subdimensions of job engagement, vigor and dedication, showed weak to moderate correlations with employee health. Schaufeli et al. (2008) proposed that “engaged employees have a sense of energetic and effective connection with their work activities and they see themselves as able to deal well with the demands of their job” (p. 176). Because engaged employees are intrinsically motivated, they have clear purposes in the organization and really enjoy doing the work. Unlike workaholics, engaged employees enjoy doing other things as well as their own jobs (Schaufeli et al., 2008). They are likely to spend time on social activities and pay more attention to building quality connections to others in the organization. As a result of favorable reciprocal exchanges experienced by employees with their leaders, engaged employees are likely to build trust, loyal relationships, and report positive attitudes towards themselves and the organization (Saks, 2006). Macey and Schneider (2008) proposed that job engagement (i.e. state engagement) is associated with “the feelings of persistence, vigor, energy, dedication, absorption, enthusiasm, alertness, and pride” (p. 24). Therefore, it seems
logical to suggest that job engagement will have a positive relationship with positive employee health.

**H4: Job engagement will be positively related to positive employee health.**

Knowledge sharing is a very important process by which people share task-relevant ideas, information, and suggestions with other people, whereby the individual’s knowledge can be translated into organizational capability (Srivastava, Bartol, & Locke, 2006). Knowledge sharing is important in modern society because knowledge represents a fundamental asset necessary for organizations to develop dynamic competitive capabilities (Staples & Webster, 2008). However, previous research indicates there are some barriers which make knowledge sharing a difficult task. The central barrier to knowledge sharing is the individual’s willingness to share and integrate their knowledge with others (Lam & Lambermont-Ford, 2009). There are two main reasons why people do not want to share their knowledge. Usoro, Sharratt, Tsui, and Shekhar (2007) summarize these reasons as follows. The first reason relates to ‘the fear of losing face’ because people are afraid of criticism or ridicule that they may receive when they publicly share their knowledge. Another reason relates to the possible opportunistic behaviors and free-riding in the organization that may occur when one shares knowledge with other employees who may benefit without cost (Lam & Lambermont-Ford, 2009). It costs effort and time for individuals to gain and share their knowledge with other people. Also, these people may lose their own opportunities for advancement because of sharing knowledge with others. Because of these reasons, most previous studies examined trust as an antecedent to knowledge sharing.
Authentic leadership creates a positive organizational climate in which employees feel safe and confident that they will be rewarded for their sharing behavior. Employees do not feel afraid of free riding behaviors because they believe they will receive fair recognition from authentic leaders for their contributions of knowledge. When employees are motivated by authentic leadership to put more energy, time, and effort towards their work, engaged employees may exhibit a “passion to practice” and show their competence by sharing their knowledge experience, and skill (Usoro, Sharratt, Tsui, & Shekhar, 2007). Because engaged employees tend to focus on how to find the best way to do different job-related tasks and they are not afraid of losing face or of not being recognized for contributing their knowledge, they are likely to help other people and share their knowledge with others. Therefore, I propose job engagement will relate to employee knowledge sharing behavior in the organization.

**H5: Job engagement will be positively related to employees’ knowledge sharing behavior.**

Macey and Schneider (2008) proposed that “behavioral engagement follows from state engagement” (p. 24). They also mentioned that behavioral engagement can further be broadly defined as adaptive behavior which describes a range of behaviors, including behaviors that support organizational effective and behaviors that are not typically prescribed and defined in one’s job. Proactivity is one type of behavioral engagement. Employees who are emotionally or cognitively engaged in their jobs will have high motivation to pursue better ways to accomplish their jobs and make changes. Sonnentag (2003) suggested that engaged employees are dedicated to their work and enthusiastic about it. Therefore, it seems likely that engaged employees will take proactive steps to
constructively change the way work is done. Sonnetag (2003) also argued that engaged employees are more like to perceive opportunities for proactive behavior and engage in that type of behavior when they are engrossed in their work. Therefore, I expect job engagement will translate into proactive behaviors which focus on constructively changing the way work is accomplished in the organization.

**H6: Job engagement will be positively related to employees’ proactive behaviors.**

As previously noted, both practitioners and researchers believe that job engagement leads to enhanced job performance. Empirical studies (e.g. Salanova, et al., 2005) that have examined this relationship have reported statistically significant positive relationships. Rich et al. (2010) found that job engagement is positively related to task performance. While I expect to replicate this finding in the present study, this study will be the first to examine the extent to which authentic leadership is related to employee performance through the mediation roles of psychological safety and job engagement.

**H7: Job engagement will be positively related to employees’ overall performance in the organization.**

As most previous study of job engagement focused on positive outcomes of job performance, there is no direct evidence of whether job engagement can reduce detrimental behavior in the organization. Researchers (i.e., Rich et al., 2010) have found that job engagement play a significant role in mediating relationships among its antecedents and job performance. It is possible that more engaged employees will pay more attention to performing their job and also will feel more positive emotions on the job. Therefore, it is logical to conclude that engaged employees are less likely to perform
deviance behavior. Thus, I propose that authentic leadership has negative influence on workplace deviance behavior through its influence on job engagement.

**H8: Job engagement will be negatively related to employees’ workplace deviance behavior in the organization.**

**Moderators**

While the aforementioned hypotheses suggest that authentic leadership has an impact on followers’ cognitive/motivational states, behaviors, positive health, and job performance, it is also important to note that the process by which leaders influence their followers determined by both leaders and followers (Zhu et al., 2009). Especially in modern society, the followers’ role in the leader-member exchange relationship is becoming more and more critical to organizational success. Several studies have explored the degree to which follower differences moderated the relationship between leadership style and work outcomes. For instance, Avolio, Zhu, Koh, and Bhatia (2004) found that structural distance between the leader and follower moderated the relationship between transformational leadership and employees’ organizational commitment. However, there has been relatively little attention placed on examining moderation roles of individual need states in leadership-work outcome relationships.

Motowidlo, Borman, and Schmit (1997) mentioned two types of individual difference variables which may influence employee’s performance in the organization. These two types of variables are: (1) fundamental capacities and dispositions that describe differences between individuals, such as learning ability, verbal ability and personality traits (e.g. the big five) and (2) characteristic adaptations which are the concrete expressions of abstract basic tendencies and take the form of specific skills,
habits, preferences, attitudes, and patterns of behavior that people learn as their basic tendencies interact with their environments over time, such as general knowledge, language competencies, social skills, technical skill, habits, etc;

According to previous research, dispositions (psychological characteristics of individuals), such as personality characteristics, need states, attitudes, preferences, and motive, will not only influence individual's behavior but also have the tendency to influence how individuals respond to situations or classes of situations (Motowidlo et al., 1997). This dissertation will study individual's need for leadership as one type of disposition which may influence how individuals' respond to authentic leadership.

De Vires, Roe, and Tailieu (1998) argue that individuals' “need for leadership” can offer insight into the extent leadership can or cannot affect subordinate behavior. That is, need for leadership may moderate the relationship between different leadership styles and the purported outcomes of these different leadership styles. De Vires, Roe, and Tailieu (1998) define need for leadership as “the contextual perception by an employee of the relevance of the leader’s legitimate acts of influence toward an individual or a group of individuals” (de Vires et al., 1998, p. 487). De Vires et al. (1998) found that need for leadership moderates the relationship between task-oriented leadership and work stress. According to De Vires et al. (1998), there are two reasons why need for leadership may be a moderator. The first reason is that when employees do not need a leader, it is less likely the power of the leader will have a strong influence on the employees. The second reason is the byproduct of the first reason and indicates that when employees do not perceive leadership to be effective because they do not need a leader, they will question
the legitimacy of the leader. Accordingly, the leadership-employee outcome relationship will be weak when there is low perceived need for leadership among employees.

In this dissertation, I expect that need for leadership will moderate the effect of authentic leadership on psychological safety. Employees will have low perceived need for leadership when they have substantial work experience, expertise, organizational tenure, autonomy, task feedback, self-efficacy, and when they participate in cohesive teams (de Vries et al., 1998). Under this condition, it is less likely that employees would depend on leaders to supervise their jobs and provide “cover” for their actions. When employees are autonomous, they tend to be capable and self-motivated and have little contact with their supervisors. When employees have substantial experience and tenure in the organization, they have their own reputation and standing within the organization and are less dependent upon their supervisor to “protect” them. Therefore, authentic leadership may be less of a factor in determining the psychological safety of an employee with low need for leadership. However, when employees have a high need for leadership, they expect leaders to help them to solve problems and to guide their behaviors. Further, high need for leadership employees may feel they do not have the standing within the organization or the expertise to take risks unless they have a leader who is open to new ideas and change. In addition, employees who have high need for supervision normally have more contact with the leader and have more opportunity to observe leaders’ behaviors and attitudes. Therefore, for high need for leadership subordinates, authentic leadership may have strong influence upon their psychological safety.

**H9: Need for leadership will moderate the relationship between authentic leadership and Psychological safety.**
The second moderator studied in this dissertation is perceptions of organizational politics. It fits into the second category of Motowidlo et al.'s (1997) individual difference variables which may influence person's performance in the organization. It is the expression of attitudes that employees learn as they interact with their organization over time. Ferris and Kacmar (1992) proposed that organizational politics refers to activities which use influential tactics to improve personal or organizational interests. Previous research (e.g. Ferris & Kacmar, 1992; Kacmar and Ferris, 1991) has shown that employees respond negatively to their perceptions of organizational politics because employees see organizational politics as illegitimate, self-serving behaviors that are not accepted by the organization. Witt, Kacmar, Carlson, and Zivnusks (2002) summarized three ways with which high levels of perceived politics may influence employees' behaviors negatively. First, employees may feel the organizational environment is inequitable because political activity violates the 'social contract' between the employer and employee. Second, employees may engage in behavioral self-management by reducing their contextual performance when they perceive high level of politics. Third, employees may withdraw their contextual performance when they believe their core tasks may be ignored or rejected in a politically charged environment. Previous studies have examined perceived organizational politics as a direct antecedent of employee performance (e.g. Hochwarter, Kacmar, Perrewé, & Johnson, 2003) or as a mediator which mediates the relationship between organizational factors, such as leadership, and work outcomes (e.g. Vigoda-Gadot, 2007). However, some researchers argued that perceived organizational politics could be a moderator which influences the leader-member relationship. For example, Poon (2006) found that a high
level of organizational politics weakens the positive relationship between trust in supervisor and employee willingness to help coworkers. Poon (2006) suggested that trust in supervisor is not significantly related to employees' helping behavior under conditions of high perceived politics because employees consider that it is more important to invest their time and effort in self-promotional activities rather than in helping others. Witt, Kacmar, Carlson, and Zivnusks (2002) found that organizational politics interact with employee personality (i.e., the Big Five) to influence employees' contextual performance.

In this study, I propose that perceived organizational politics may moderate the relationship between authentic leadership and employees' perceived psychological safety. Ferris and Kacmar (1992) suggested that there are three sub-dimensions of perceived organizational politics construct, including supervisor behavior, coworker and clique behavior, and organization politics and practices. This conceptualization implicitly acknowledges that the supervisor is not the only influence upon a source for employees' perception of organizational politics. While authentic leadership may mitigate the possible feeling of politics with regard to one's supervisor, political behavior in other arenas of the organizational environment (i.e., behaviors of coworkers and organizational procedures) may cause the employee to believe political action is the only way to advance within the organization and get things done. When employees perceive high levels of politics from these sources, it is less likely they will feel comfortable taking risks or speaking out. Although authentic leadership is important in influencing employee expectations that they would be rewarded for their efforts and they can trust their supervisors, this may not offset the expected threaten of a high level of politics from other sources. Therefore, it is possible that the positive relationship between authentic
leadership and employees' psychological safety is vulnerable to high levels of perceived politics in other realms of the organization.

**H10: Perceived politics of the organization will moderate the relationship between authentic leadership and psychological safety.**
CHAPTER THREE

METHOD

The purpose of this chapter is to present information regarding the participants and procedures that were used to collect and analyze data for the dissertation. This chapter includes information relating to the dissertation samples, survey data collection procedures, and the measures that were used to assess study variables. Further, this section will discuss the statistical techniques used in the analyses subsequent to the collection of data.

Measures of Main Constructs

Listed below are all of the variables and measures that were used in the current study and selected sample items. See Appendix A for a full listing of items for each scale.

Authentic Leadership

Authentic Leadership was assessed using Walumbwa et al.’s (2008) 16-item measure. The scale demonstrated an acceptable level of reliability in their initial studies (Cronbach’s alpha for each dimension is: self-awareness, .91; relational transparency, .86; internalized moral perspective, .87; and balanced processing, .79). The items used a 5-point Likert-type scale ranging from 0 = “Not at all” to 5 = “Frequently, if not always.” Sample items for this measure include “says exactly what he or she means” and “demonstrates beliefs that are consistent with actions.”
Psychological Safety

Psychological safety was measured using Edmondson’s (1999) 6-item measure. This measure has been used in previous studies, including Baer and Frese (2003, α=0.82), Carmeli and Gittell (2009, α=0.70), and Kark and Carmeli (2009, α=0.73). Example items are: “Members of this organization are able to bring up problems and tough issues” and “It is safe to take a risk in this organization.” Respondents’ agreement (1=strongly disagree, 7=strongly agree) with these items formed a single scale with Cronbach’s alpha .81.

Job Engagement

Job Engagement has been defined as a construct which has three sub-dimensions. These three dimensions are: physical, cognitive, and emotional. Job engagement was assessed by Rich, et al.’s (2010) 18 item measure which has six items for each dimension. Inter-correlations (Cronbach’s alpha) among the three scales ranged from .88 to .94. Example items are: “I work with intensity on my job” (physical); “I am enthusiastic in my job” (emotional); “at work, my mind is focused on my job” (cognitive). Participants indicate their response on a five-point Likert-type scale with anchors (1) strongly disagree to (5) strongly agree.

Knowledge Sharing

Knowledge Sharing was adapted from a measure used by Srivastava et al. (2006). This measure has seven items which was generated by combining Faraj and Sproull’s (2000) 4-item scale and Durham’s (1997) 3-item scale.

Faraj and Sproull’s (2000) four-item scale was developed in a field study of software project teams and measured individual perceptions of the extent of knowledge
sharing by team members. A sample item from the scale is, “People in our team share their special knowledge and expertise with one another.” A sample item from Durham (1997)’s scale is, “Managers in our team share lot of information with one another.” Cronbach’s alpha for the combined scale was .94 in Srivastava et al.’s (2006) study. In this study, Cronbach’s alpha was .86.

Proactivity

Griffin, Neal, and Parker’s (2007) 9-item measure of proactivity was used in this dissertation. Supervisors were asked to rate how often their subordinates have engaged in proactive behavior over the past month on a scale ranging from 1 (“very little”) to 5 (a “great deal”). This measure has three dimensions with three items for each dimension. Three dimensions measure how often employees perform proactive behaviors related to individual tasks, team tasks, and organizational-level tasks. Sample items are: “Initiated better ways to changes in core tasks” and “suggested ways to make your work unit more effective.” The coefficient alpha for this construct was .96 in the current study.

Overall Performance

Overall performance was rated by the respondent’s direct supervisor. This construct was assessed using a slightly modified version of Motowidlo and Van Scotter’s (1994) 3-item measure. Reliability for this measure was .97. Items use a 7-point Likert-scale with 1= “low”, 4= “Average”, and 7= “High.” An example item is: “How would you rate this employee on his/her overall performance?”

Workplace Deviance Behavior

I assessed this construct with 19 items from Bennett and Robinson (2000). This construct has two subdimensions, interpersonal deviance and organizational deviance.
Sample items of interpersonal deviance include: “Made fun of someone at work,” and “Cursed at someone at work.” Sample items of organizational deviance include: “Taken property from work without permission”, and “Littered your work environment.” Respondent answer these items on 7-point Likert scales ranging from 1=never to 7=daily to indicate the extent they were involved in each of the behaviors in the last year. Cronbach’s alpha was .83 for this construct.

Need for Leadership

Need for leadership was assessed using a measure adapted from De Vires et al. (1998). This construct has five items and uses a 5-point Likert-type response format ranging from 1= “disagree completely” to 5= “agree completely.” Example items are: “In this organization, the role of a supervisor is absolutely indispensable” and “For my job-related activities, it does not really matter whether I have a supervisor or not.” Cronbach’s alpha was 0.80 in the current study.

Perceived Organizational Politics

Ferris and Kacmar (1992)’s measure of perceived organizational politics has three dimensions, supervisor behavior, coworker and clique behavior, and organizational politics and practices. For the purpose of this dissertation, two dimensions (coworker and organizational politics) were used to assess perceived organizational politics. 10 items from these two dimensions were used and the response format was a 5-point Likert-type scale where 1= “disagree completely” to 5= “agree completely.” Example items are: “My co-workers help themselves, not others” and “pay and promotion policies are generally communicated in this company (reversed scale)”. The coefficient alpha was .79 in the current study.
Variables Used to Examine Construct Validity
of Positive Employee Health

Job Satisfaction

Job satisfaction was measured using Brayfield and Rothe, (1951) 5-item measure. Example items are: “I feel fairly satisfied with my present job” and “I find real enjoyment in my work.” The response format is a 5-point Likert-type scale where 1=strongly disagree and 5=strongly agree. The coefficient alpha was .83.

Life Satisfaction

Life satisfaction was measured using Diener, Emmons, Larsen & Griffin (1985), 5-item measure. Example items are: “In most ways my life is close to my ideal” and “I am satisfied with my life.” The response format was a 5-point Likert-type scale where 1=strongly disagree and 5=strongly agree. The coefficient alpha was .81.

Psychological Well-Being

Psychological Well-Being was measured using Ryff’s (1995) scales with 18-item. Example items are: “In general, I feel I am in charge of the situation in which I live” and “for me, life has been a continuous process of learning, changing and growth.” The response format is a 6-point Likert-type scale where 1=strongly disagree and 6=strongly agree. This construct has six subdimensions including self-acceptance, environmental mastery, positive relations, purpose in life, personal growth, and autonomy. According to Ryff (1995), a second-order, singly super-factor can be used for the research purpose. The coefficient alpha of this construct was .83.

Negative Affect

Negative affect was measured using Watson, Clark and Tellegen’s (1988) scales with 10 items. Respondents were asked to indicate to what extent they generally feel
about distressed, upset, guilty, etc. The response format is a 5-point Likert-type scale where 1=very slightly and 5=extremely. The coefficient alpha of negative affect was .83.

Social Desirability

Because the measures of the second study were self-reported, social desirability was included in the analysis as a check for potential response bias. A short form of the Marlowe-Crowne social desirability scale was used (Ballard, 1992). Respondents were asked to read 13 statements and decide whether the statement is “True” or “False” as it pertains to them personally. Example items are: “I sometimes feel resentful when I don’t get my way” and “I can remember ‘playing sick’ to get out of something.” The coefficient alpha of this construct was .76.

Vigor

Shirom-Melamed (2003) vigor measure (SMVM) was used in the second study because it potential high correlation with positive employee health. Respondents were asked to read a number of statements that describe different feelings that they may fell at work in the past 30 workdays. There are three subscales of the SMVM, Physical Strength, Emotional Energy, and Cognitive Liveliness. Example items are: “I feel I have physical strength” and “I feel I am able to contribute new ideas.” The coefficient alphas of each subscales were, .93 (Physical Strength), .94 (Emotional Energy), and .86 (Cognitive Liveliness). In order to simplify the structure equation modeling analysis, a single one factor structure of vigor was employed for the confirmatory factor analysis based on high correlations among three subscales. The Croanbach’s alpha of a one factor vigor scale was .94.
Control Variables

Several control variables will be included in this study because they may explain additional variance of the outcome variables.

Ethnicity

Ethnicity information for each respondent was collected for sample because of the large degree of variation within this population. Also, according to Hofstede (1984), cultural differences may influence the people’s perception of power distance which refers to the extent to which people in a country accept unequal distribution of power in the organization.

Gender

Employee gender was included in the survey because literature suggests that male employees may be more likely to engage in proactive behavior and workplace deviance behavior than female employees do (e.g., LePine & Van Dyne, 2001). Also, Rothbard (2001) found strong gender differences for job engagement. Gender was measured as a dichotomous variable (coded 1 for male and 0 for female).

Leader gender also was collected because Eagly (2005) suggested that obtaining legitimate identification from followers is more challenging for female leaders than male leaders.

Organizational Tenure

Research demonstrates that it is important to include tenure as a control variable when predicting need for leadership (e.g., de Vries et al., 1998) and general proactive behavior (e.g., Fuller et al., 2006). In this study, both supervisor tenure and employee tenure were collected. It has been suggested that employees will have low perceived need
for leadership when they have much work experience, expertise, more years of service in
the organization, autonomy, adequate task feedback, cohesive teams (de Vries et al.,
1998). Also, researchers think tenure reflects work domain expertise (Kark & Carmeli,
2009). Therefore, authentic leadership may have small impact on related outcomes for
employees who have long tenure in the organization.

Supervisor tenure was also included because it might influence the level of
familiarity and interaction among employees (Srivastava, et al., 2006). However, this
variable will be measured by asking employee how long he/she has been working with
the supervisor.

Education

Previous studies (e.g., LePine & Van Dyne, 2001; Fuller et al., 2006)) have
included education as a control variable because knowledge attained from education may
provide employees the confidence to share their knowledge and perform proactive
behavior.

Age

Age was included because age may also indicate people’s confidence to share the
knowledge or their need for leadership. Older people may have more experience and
more confidence that they can work on their own.

Organizational Status

Respondent’s status in the organization is collected because some job
characteristics, such as job control, may influence employees’ job engagement in the
organization (Schaufeli et al., 2008).
Organizational status can reflect this information. This variable was assessed by asking if employees’ job responsibility include management function.

Leader’s Span of Control

Leader span of control indicates how many subordinate reports to the leader. It has been suggested that larger spans of control can mitigate a leader’s ability to influence followers (Walumbwa & Schaufbroeck, 2009).

Transformational Leadership

Transformational leadership was included to further test the validity of authentic leadership. Sixteen items from the MLQ (Bass & Avolio, 2004) was used to measure four dimensions of transformational leadership including idealized influence, individual consideration, inspirational motivation, and intellectual stimulation. Cronbach’s alpha for this measure ranged from .89 to .93 for four sub-dimensions. Consistent with common practice in the literature, these four subdimensions were aggregated into a single dimension for some analyses. A 5-point Likert-type scale will be used with 1= “not at all” and 4= “frequently, if not always”. A sample item is “Articulates a compelling vision of the future.”

Positive Employee Health Item Generation

A deductive approach was used for item generation of positive employee health. According to Hinkin (1995), this approach requires an understanding of the phenomenon to be investigated and a comprehensive review of the literature to develop the theoretical definition of the construct. The second step of this approach is to develop items based on the definition. Researchers can derive items based on previously defined theoretical
perspectives and an extensive review of the literature. Researchers can then utilize a research group consisting of faculty and doctoral students to do content analysis.

Accordingly, initial content specification of positive employee health was developed based on following steps: (1) an extensive review of the literature on positive employee health theory and development were conducted. The definitions of positive employee health were examined in the literature review and served as the basis for item generation; (2) based on literature review, several positive employee health items were adapted from Ryff and Singer's (1998) psychological well-being instrument and other related constructs, such as Vigor (Shirom, 2003), workplace spirituality (Duchon & Plowman, 2005), hardiness (Carmeli, et al., 2009), and psychological capital (Luthans, Avolio, & Youssef, 2007); A total of 75 items were generated from this step; (3) a focus group discussion was conducted. An open-end questionnaire was distributed to people who are working or who have work experience. Six focus group participants were asked to name some behaviors, physical or psychological status which can reflect employees' positive health condition; 54 items were generated by the focus group discussion. ten items which were considered different from items generated from literature review were used for next step; (4) following the development of multiple items for each dimension of positive employee health, items were reviewed by several management professors who are subject matter experts; and then (5) nine business doctoral students were contacted to help with content validity assessment. Anderson and Gerbing (1991) suggested two ways to examine substantive validity for a new construct. The first one is the substantive agreement index (SAI) which is defined as the proportion of respondents who assign a particular item to its intended construct. The SAI ranges from 0-1. The second approach
is the substantive-validity coefficient (SVC) which is defined as the degree to which raters are able to correctly match items with constructs. According to these two approaches, each rater was provided with a brief description of the four dimensions of positive employee health previously described. Doctoral students were asked to classify each randomly ordered item to one of five categories, the four dimensions plus an ‘other’ category; and (6) items that were assigned to the proper category more than 80% of the time will be retained for use in the questionnaire. SVC will be calculated as content validity ratio (CVR) which is defined as follows (Lawshe, 1975, p. 567):

\[
\text{CVR} = \frac{(n_e - N/2)}{(N/2)}
\]

where \( n_e \) is the number of panelists judging an item to be essential and \( N \) is the total number of panelists. CVR ranges from -1.0 to 1.0, with larger values indicating greater substantive validity for an item. The proper value of CVR for this study can be found from a table of critical values provided by Lawshe (1975). A total of 45 items were remained for the next analysis accordingly to CVR calculated from this step (please see appendix B for these 45 items and CVR).

After the initial set of 45 items is generated for four dimensions of positive employee health, the next step is to test validity and reliability of this construct. The process for this purpose will be addressed in following section of this chapter.

**Participants and Procedures**

There are three studies were conducted in this dissertation. Prior to collecting data, an approval for survey procedures and survey instrument from the Human Use Committee was obtained.
Study One

The purpose of Study One is to eliminate poor performing items using exploratory factor analysis. The participants of Study One were recruited from an online survey panel. They are full-time employees from different organizations. An online surveying company (Qualtrics) was used to conduct the survey. Because of the major strength of the online survey, such as global reach, convenience, speed and timeliness, and easy of data entry and analysis (Evans & Mathur, 2005), the online survey has been accepted as a reliable research tool by academy researchers. As the online survey has been widely used by marketing researchers, more and more psychologists and management researchers started to notice this survey tool and began to use it for examining certain general phenomena in the society (Kraut, et al., 2004). With the development of internet access and savvy, one major problem for the online survey research-the lack of representativeness—is eliminated (Evans & Mathur, 2005). Online survey firms can provide access to demographically balanced and specified panels for researchers. Since the online survey firms can provide specified respondents according to researchers’ requests, it is appropriate to use online panel for this dissertation.

In study one, organizational employees were recruited through an online survey firm (Qualtrics) as the sample for exploratory factor analysis. Online survey was completed with a nationwide cross-section of employed adults. A total of 693 responses were received from the people who are currently employed or have work experience. I added several filter questions like “this question is for research purpose only, please leave it blank (do not circle any answer)” to identify the respondents who did not answer the survey carefully. After removing respondents who did not complete the major part of the
survey and who did not answer the filter question correctly, a sample size of 440 was used for the exploratory factor analysis.

The average age of this group was 47 and the sample was 43% males and 56% females with about 1% not indicating gender. Responses in the final data set were obtained from employees at various levels (i.e., lower, middle, upper) with 40.7% involving management job and a diverse group of occupations including office managers, accountants, police officers, teachers, cashers, etc. Of the 440 respondents, 84.1% were Caucasian, 5.9% were African American, 1.1% were Native American, 2.5% were Hispanic, 3.2% were Asian, and 3.2% did not indicate their race. Respondents were asked to report the highest level of education they had completed; 17.5% reported having completed high school, 31.8% reported having attended some college, 33.6% reported having earned a 4-year college degree, 15.9% reported having earned an advanced degree, and 0.2% did not respond. Employees also reported organizational tenure which ranged from 0 to 40 years (MN = 9.27, SD = 8.19). Years employee work in present job were ranged from 0 to 40 years with mean 8.56 and standard deviation 7.9. The average of total work experience was 23.45 years ranged from 0 to 69.

**Study Two**

In a subsequent study, Study Two, a different sample was used to perform a confirmatory factor analysis of the measure developed in Study One and to provide an initial examination for construct validity and the nomological network of positive employee health as a necessary part of construct validation (Hinkin, 1995). The participants of Study Two were students attending a large university in the Southern United States. These students were asked to find two or three working people to fill out
the survey. An online surveying company (Qualtrics) was used to conduct the survey. A small amount of extra credit was offered to the student who completed the survey based on the discretion of the instructor of that class. In order to get extra points for the class, students or respondents recruited by students were requested to enter an identification code assigned by researcher. The identification code was only used to identify which students should be given extra credit for completing the survey.

A total of 210 responses were received from the people who were currently employed or who had work experience. After deleting responses from those who did not complete the most of the survey or who did not answer the filter question correctly, a sample size of 158 was reached. A listwise missing value technique was used for confirmatory factor analysis (CFA) because there was only a small amount missing values (8). Therefore, study two ended up with 150 observations for CFA analysis.

The average age of this group was 30 and the sample was 43.7% males and 50% females with 6.3% not indicating gender. Responses in the final data set were obtained from employees at various organizational levels (i.e., lower, middle, upper) with 44.3% involving management job and a diverse group of occupations including office managers, accountants, police officers, teachers, cashers, etc. Of the 158 respondents, 60.8% were Caucasian, 19% were African American, 1.9% were Native American, 5.1% were Hispanic, 2.5% were Asian, and 9.5% did not indicate their race. Respondents were asked to report the highest level of education they had completed; 8.9% reported having completed high school, 46.8% reported having attended some college, 30.4% reported having earned a 4-year college degree, 5.7% reported having earned an advanced degree, and 7.6% did not respond. Employees also reported organizational tenure which ranged
from 0 to 39 years (MN = 5.46, SD = 6.99). Number of years the employee worked in their present job ranged from 0 to 35 years, with mean 5.02 and standard deviation 6.29. The average of total work experience was 12.70 years and ranged from 0 to 40.

Study Three

Study Three was used to the test hypothesized model. The participants for the hypothesis testing portion of the dissertation were recruited from a large health organization in the United States with over 500 employees. It is a comprehensive, private, Non-Profit community mental health center which provides a full range of services to residents in 13 counties.

Data were collected from both employees and their direct supervisors at a single location. First, a master employee list was used to randomly assign an identification number to each employee. Next, a code was placed on each employee survey and given to each employee. Supervisors received the supervisor survey and copies of the subordinate survey from Human Resources. They filled out the supervisor survey and distributed the employee survey to their direct subordinates. Each employee that completed a survey gave it back either directly to the researcher or put it in a sealed envelope which was given to the researcher directly. Both supervisors and employees were provided time during their regular work hours to complete the survey. Supervisors were allowed approximately five days to complete their surveys before employees were given their surveys. This allowed supervisors with multiple subordinates enough time to complete their surveys. All employees were given the informed consent form and a short instruction of the survey which gave the employees a chance to read and understand the survey before they showed up to fill out the survey. Employees were informed that
participation in the survey was voluntary and confidential. They were required to only put their survey ID not their name on the survey. Subsequently, the researcher matched supervisor and subordinate surveys after surveys were received from parties.

The supervisor survey included measurement of supervisor self-rated leadership style, supervisors’ organizational status, supervisors’ tenure, supervisors’ evaluation of employees’ proactive behavior and overall performance. The employee survey contained the measure of authentic leadership as well as measures for psychological safety, job engagement, positive health, knowledge sharing, need for leadership, perceived organizational politics, transformational leadership, deviance behavior, and demographic information.

The organization has multiple sites. The survey was conducted on one site with about 200 employees. A total of 124 responses were received from employees, which represented a 62% response rate. However, after deleting two surveys which did not indicate employee survey ID and 15 surveys which did not have a supervisor rating, 107 matching pairs remained for use in testing the hypotheses.

The average age of this group was 40 and the sample was 34% males and 62% females with 4% missing data. Responses were obtained from employees at various levels within the organization (i.e., lower, middle, upper) with 34% involving management jobs and a diverse group of health-related occupations including physician, therapist, nurse, program director, office assistant, etc. Of the 124 respondents, 68.5% were Caucasian, 18.5% were African American, 1.6% were Native American, 1.6% were Asian, <1% were Middle Eastern, and 8.1% did not indicate their race. For education, 16.1% reported having completed high school, 28% reported having attended some
college, 37% reported having earned a 4-year college degree, 31% reported having earned an advanced degree, and 5.6% did not respond. Employees also reported organizational tenure which ranged from 0 to 31 years (MN = 6.7, SD = 6.6). Years in present job ranged from 0 to 31 years with a mean of 6 and standard deviation 6.5. The average of total work experience was 12.70 years ranged from 0 to 45.

Analysis

Several statistical tools were used to analyze the data. Each data set was examined to check for violations of assumptions of multivariate analysis and other potential problems. Outliers were deleted from the data set. Cases with missing values were either deleted from the data using listwise deletion or substituted with means of that variable in different studies. For study 1, exploratory factor analysis using SPSS was conducted to determine the initial dimensionality of the newly created scales and to reduce items that exhibited low inter-item correlations. Structural Equation Modeling (SEM) was used to conduct confirmatory factor analysis and to test the hypotheses in the model. Moderated multiple regression as suggested by Baron and Kenny (1986) was employed to test moderation hypotheses. Further, Cohen, Cohen, West, and Aiken’s (2003) recommendation to center the main effects variables prior to creating the interaction term was followed in order to reduce the effects of non-essential ill-conditioning. Details about the methodologies used in this study will be addressed in the results section according to each step of the study.
CHAPTER FOUR

RESULTS

The purpose of this chapter is to present the results of the data analysis described in the previous chapter. Specifically, the results include a discussion of the factorial scaling process used for the positive employee health items, reliability of measures, correlations, and hypothesis testing.

Results of Study One

After following a rational approach to item generation as described above, items which were developed to capture manifestations of positive employee health were administered to current employees who were recruited by the online survey company. SPSS was used for exploratory factor analysis. The 440 responses to the 45 items were subjected to a principal components factor analysis (Eigenvalues over 1) with orthogonal rotation according to a varimax criterion. After deleting items with nonsignificant loadings (factor loadings lower than .50) and items with crossing loadings (i.e. cross loadings less than .30), five factors were identified from initial factor analysis (the fifth factor only had three items with significant loadings). To determine the most interpretable solution, the data were reanalyzed with a fixed four factor model based on theory. The results indicate that the factor structure for the remaining items was well defined, representing four distinct groups of factors which were identified by the positive
employee health theory. The items and their loadings on the appropriate factor are presented in Table 4.1. Table 4.2 reports Descriptive Statistics of Scales of Positive Employee Health.

Table 4.1 Factor Loadings for the Positive Employee Health Scale from Study One

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1 (Cronbach’s α=.94) Leading a purposeful worklife</th>
<th>Factor 2 (Cronbach’s α=.92) Quality connection</th>
<th>Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I think I have a good future in this organization.</td>
<td></td>
<td>.763</td>
</tr>
<tr>
<td>2.</td>
<td>I have a sense of direction and purpose in the organization.</td>
<td></td>
<td>.768</td>
</tr>
<tr>
<td>3.</td>
<td>I enjoy making plans for the future and working to make them a reality in this organization.</td>
<td></td>
<td>.690</td>
</tr>
<tr>
<td>4.</td>
<td>There is a good match between my values and the values of this organization.</td>
<td></td>
<td>.884</td>
</tr>
<tr>
<td>5.</td>
<td>My values are very similar to the values of this organization.</td>
<td></td>
<td>.893</td>
</tr>
<tr>
<td>6.</td>
<td>I think that my values fit very well with the values of this organization.</td>
<td></td>
<td>.868</td>
</tr>
<tr>
<td>7.</td>
<td>Maintaining close relationships with other people in this organization has not been difficult at all.</td>
<td></td>
<td>.725</td>
</tr>
<tr>
<td>8.</td>
<td>I rarely feel lonely at work because I have good relationships with many coworkers.</td>
<td></td>
<td>.778</td>
</tr>
<tr>
<td>9.</td>
<td>I enjoy having personal conversations with other people in this organization.</td>
<td></td>
<td>.756</td>
</tr>
<tr>
<td>10.</td>
<td>I feel like I get a lot out of my relationships with other people in this organization.</td>
<td></td>
<td>.807</td>
</tr>
<tr>
<td>11.</td>
<td>I generally have warm and trusting relationships with my coworkers.</td>
<td></td>
<td>.836</td>
</tr>
<tr>
<td>12.</td>
<td>People in this organization would describe me as a giving person, willing to share my time with others.</td>
<td></td>
<td>.652</td>
</tr>
<tr>
<td>13.</td>
<td>I know that I can trust my coworkers, and they know they can trust me.</td>
<td></td>
<td>.723</td>
</tr>
<tr>
<td>14.</td>
<td>In this job, I feel able to show warmth to others.</td>
<td></td>
<td>.694</td>
</tr>
<tr>
<td>15.</td>
<td>At work, I generally succeed when I try.</td>
<td></td>
<td>.644</td>
</tr>
<tr>
<td>16.</td>
<td>I am capable of coping with most of the problems I encounter at work.</td>
<td></td>
<td>.643</td>
</tr>
<tr>
<td>17.</td>
<td>I make effective use of the resources I control at work.</td>
<td></td>
<td>.651</td>
</tr>
</tbody>
</table>
Table 4.1 (Continued)

18. I am good at juggling my time so that I can fit everything in that 
needs to get done at work. .719
19. My job-related knowledge goes beyond what is required by my 
job. .617
20. I feel I can handle many things at a time at this job. .774
21. I believe that I can solve problems assigned to me with 
reasonable effort. .787

Factor 4(Cronbach’s α=.76)

Perception of negative events

22. I feel my ability has improved over the years because I have to 
deal with some negative events. .794
23. I feel I can handle conflict at work much better now than in the 
past. .767
24. Good and bad experience has both contributed to my 
development. .696

Table 4.2 Descriptive Statistics of Scales of Positive Employee Health from Study One

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Leading a purposeful worklife</td>
<td>α=.94</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Quality connection</td>
<td>.60**</td>
<td>α=.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Positive self-regard and mastery</td>
<td>.36**</td>
<td>.36**</td>
<td>α=.84</td>
<td></td>
</tr>
<tr>
<td>4. Perception of negative events</td>
<td>.46**</td>
<td>.45**</td>
<td>.59**</td>
<td>α=.76</td>
</tr>
<tr>
<td>Mean</td>
<td>3.73</td>
<td>3.58</td>
<td>4.18</td>
<td>3.96</td>
</tr>
<tr>
<td>SD</td>
<td>.78</td>
<td>.96</td>
<td>.53</td>
<td>.57</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
Cronbach alpha reliabilities appear in the diagonal.
N=440
Results of Study Two

In Study Two, a different sample was used to perform a confirmatory factor analysis of the measure developed in Study One and to provide an initial examination of the nomological network of positive employee health. As previously described, four dimensions of positive employee health were well defined and each dimension was operationalized with three to nine items which showed high internal consistency. A confirmatory factor analysis (CFA) using AMOS and a maximum likelihood procedure was conducted with the second sample for the first order positive employee health model. Several fit indexes including comparative fit index (CFI), root mean square error of approximation (RMSEA), and chi-square ($\chi^2$) with degrees of freedom (DF), were used to assess model fit. The initial CFA based on the 24 items developed in the first study had the following fit indicators; CFI=.81, RMSEA=.1 with a 95% confidence interval between .9 to .11, and $\chi^2=613$ with DF=245. Four items (items 2, 3, 18, and 19 in Table 4.1) from the first study had standardized factor loadings below 0.5 and were deleted from the model for the following test. After deleting those four items, the fit index indicate a considerable improvement with CFI=.95, RMSEA=.06 with 95% confidence interval between .04-.07, and $\chi^2=246$ with DF=163. The estimated internal consistency alphas (Cronbach’s alpha) for each of the measures were also at acceptable levels: leading a purposeful worklife, .89; quality connection, .86; Positive self-regard and mastery, .84, and Perception of negative events, .74. Table 4.3 reports the factor loadings of remaining factors.
Validation of the Higher Order Positive Employee Health Model

In order to test whether a second-order positive employee health factor exists or not, the fit of three alternative factor structures were compared. The first model tested was a one factor model with all 21 items loaded on one large positive employee health factor. The second model tested was a first-order four factor model in which items were allowed to load onto their respective factors developed in the first study. The third model tested was a second-order factor model in which items were loaded onto their respective factors and then those four factors were assigned to load onto a second-order latent

Table 4.3 Factor Loadings for the Positive Employee Health Scale from Study Two

<table>
<thead>
<tr>
<th>Item*</th>
<th>Leading a purposeful worklife ($\alpha=.89$)</th>
<th>Quality connection ($\alpha=.86$)</th>
<th>Positive self-regard and mastery ($\alpha=.84$)</th>
<th>Perception of negative events ($\alpha=.74$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.521</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>.917</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>.943</td>
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<td></td>
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<tr>
<td>6</td>
<td>.929</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td></td>
<td>.588</td>
<td></td>
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<tr>
<td>8</td>
<td></td>
<td>.686</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>.661</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>.785</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>.752</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>.568</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>.716</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>.533</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td>.828</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td></td>
<td>.687</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td></td>
<td>.811</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td></td>
<td></td>
<td>.586</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td></td>
<td>.642</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td>.603</td>
</tr>
<tr>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td>.734</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td>.760</td>
</tr>
</tbody>
</table>

*See the Table 4.1 for item texts.
positive employee health factor (Hair et al., 2006). According to Bollen (1989), the second-order model is mathematically equivalent to the first-order model. However, I tested it in order to see whether a more parsimonious model can be used for further hypothesis testing. Table 4.4 reports the fit statistics for the three models. Figure 4.1 represents the model for the second order confirmatory factor analysis. Figure 4.2 represents the nomological network of positive employee health.

Table 4.4 Comparison of Different Positive Employee Health Factor Structures

<table>
<thead>
<tr>
<th>Structure</th>
<th>( \chi^2 )</th>
<th>df</th>
<th>( \chi^2/df )</th>
<th>( \Delta \chi^2 )</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>One-factor model (all 20 items)</td>
<td>847</td>
<td>169</td>
<td>5</td>
<td></td>
<td>.55</td>
<td>.16</td>
</tr>
<tr>
<td>First-order factor model</td>
<td>246</td>
<td>163</td>
<td>1.51</td>
<td>601.3**</td>
<td>.95</td>
<td>.06</td>
</tr>
<tr>
<td>Second-order factor model</td>
<td>269</td>
<td>165</td>
<td>1.63</td>
<td>578**</td>
<td>.93</td>
<td>.07</td>
</tr>
</tbody>
</table>

Note: All chi-square values are significant at \( p < .001 \); the \( \Delta \chi^2 \) is in relation to one-factor model. CFI = comparative fit index; RMSEA = root mean square error of approximation. \( n = 150 \). **\( p < .01 \) (two-tailed).

The results illustrate that the best-fitting model is the first-order model. The fit statistics of the first-order and second-order factor structures represent a significant improvement over the one factor model. Both two factor structures received a moderately good fit at this point and can be used for further analysis. However, the fit index of the second-order factor structure does not indicate a better fit over the first-order model.
Note: $y^1$-$y^{24}$ represent the positive employee health items from 1 to 24 as shown in Table 4.1. Standardized Regression Weights were reported. All parameters are significant at .001 level.

Figure 4.1 Results of Second-Order Confirmatory Factor Analysis
Negative Affect

Psychological Well-being

Vigor

Positive Employee Health
Leading a Purposeful Worklife
Quality Connections
Positive Self-regards and Mastery
Perception of Negative Events

Job Satisfaction
Life Satisfaction
Social Desirability

Figure 4.2 Nomological Network of Positive Employee Health for Construct Validation
Although the second-order measurement model can provide a more parsimonious analysis, there are some disadvantages of this type of model, such as: it is conceptually more complicated, difficulty in adequately describe its meaning, potential for being unidentified, and its assumption that all indicators of the second-order factor move together and influence other factors in the same way (Hair, et al., 2006). Because theoretically the four factors of positive employee health may not affect other constructs in the same way, it is more appropriate to use first–order factor model in the next step.

Testing Construct Validity

To test construct validity of positive employee health, I need to examine face, convergent, discriminate, and nomological validity (predict validity). Face validity, as noted above, was established based on the content of the corresponding items developed previously according to related theories. Next step is to examine other type of construct validity.

Table 4.5 reports the mean, standard deviation, and Pearson correlations among the constructs in the study two. The convergent validity of the first order measurement model was supported by the evidence that all factor loadings exceed .5 and internal consistencies (Cronbach’s alpha) of all four factors exceed .7. Also, as we can see from Table 4.5 that all four dimension of positive employee health are significantly related to the overall measure of positive employee health which is computed as the average of all 21 positive employee health items. According to Campbell and Fiske (1959), convergent validity can be tested by examining the covariance between a measure and other measures which purported to measure the same or similar constructs.
Table 4.5 Mean, Standard Deviation, and Pearson Correlations among the Constructs in Study Two

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Leading a purposeful  worklife</td>
<td>3.57</td>
<td>.91</td>
<td>(.89)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Quality connection</td>
<td>3.92</td>
<td>.63</td>
<td>.50**</td>
<td>(.86)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Positive self-regard and mastery</td>
<td>4.2</td>
<td>.55</td>
<td>.37**</td>
<td>.40**</td>
<td>(.84)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Perception of negative events</td>
<td>4.17</td>
<td>.62</td>
<td>.10</td>
<td>.18*</td>
<td>.46**</td>
<td>(.74)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Job satisfaction</td>
<td>3.49</td>
<td>.85</td>
<td>.55**</td>
<td>.48**</td>
<td>.21*</td>
<td>.09</td>
<td>(.83)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Life satisfaction</td>
<td>3.48</td>
<td>.79</td>
<td>.35**</td>
<td>.33**</td>
<td>.15</td>
<td>-.04</td>
<td>.39**</td>
<td>(.81)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Psychological well being</td>
<td>4.87</td>
<td>.66</td>
<td>.35**</td>
<td>.37**</td>
<td>.57**</td>
<td>.35**</td>
<td>.31**</td>
<td>.32**</td>
<td>(.83)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Social desirability</td>
<td>7.25</td>
<td>3.25</td>
<td>.11</td>
<td>.21**</td>
<td>.10</td>
<td>-.13</td>
<td>.20*</td>
<td>.28**</td>
<td>(.76)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Negative Affect</td>
<td>1.83</td>
<td>.60</td>
<td>-.13</td>
<td>-.12</td>
<td>-.30**</td>
<td>-.11</td>
<td>-.21*</td>
<td>-.24**</td>
<td>-.41**</td>
<td>-.41**</td>
<td>(.83)</td>
<td></td>
</tr>
<tr>
<td>10. Vigor</td>
<td>5.14</td>
<td>.99</td>
<td>.40**</td>
<td>.37**</td>
<td>.39**</td>
<td>.14</td>
<td>.39**</td>
<td>.40**</td>
<td>.42**</td>
<td>.11</td>
<td>-.36**</td>
<td>(.94)</td>
</tr>
<tr>
<td>11. Positive employee health</td>
<td>3.97</td>
<td>.48</td>
<td>.74**</td>
<td>.84**</td>
<td>.74**</td>
<td>.45**</td>
<td>.51**</td>
<td>.33**</td>
<td>.56**</td>
<td>.15</td>
<td>-.22**</td>
<td>.48**</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
N=150
Cronbach’s alpha reliabilities are provided in parentheses.
Two constructs, psychological well-being (Ryff, 1995) and vigor (Shirom, 2003), were used for this purpose. These two constructs are conceptually similar to positive employee health. Evidence for convergent validity would be demonstrated if psychological well-being and vigor are highly correlated with positive employee health. It was expected that psychological well-being would correlate with all dimensions of positive employee health because it is a multi-dimensional construct which defines a relatively wide range of human health issues. However, Vigor was expected to correlate with some dimensions of positive employee health more strongly than others since it is more narrowly defined.

As Table 4.5 reveals, the relationships between positive employee health and above two constructs are consistent with expectations. All four dimensions of positive employee health are significantly related to psychological well-being and three out of four dimensions are significantly related to vigor. Psychological well-being was closely related to positive self-regard and mastery with $r=.57$, $p<.01$, leading a purposeful worklife with $r=.35$, $p<.01$, quality connection with $r=.36$, $p<.01$, and perception of negative events with $r=.35$, $p<.01$. Vigor was closely related to leading a purposeful worklife with $r=.40$, $p<.01$, quality connection with $r=.37$, $p<.01$, and positive self-regard and mastery with $r=.39$, $p<.01$.

Next, nomological validity was examined by demonstrating that the construct is related to other constructs that may relate to positive employee health construct. At this early stage of construct development, a complete nomological network of positive employee health has not been developed. Based on related psychological well-being theories and human health theories (i.e. Ryff & Singer, 1998, and Ryff & Keyes, 1995),
three constructs were included which may correlate with the positive employee health construct. In this partial nomological network, negative affect, job satisfaction and life satisfaction was predicted to be related to positive employee health. Social desirability was included to test for potential response bias. The relationships between positive employee health and above three constructs were expected to be moderate. It was also expected that there would be no significant relationship between positive employee health and social desirability.

As Table 4.5 reveals, three out of four dimensions and the overall measure of positive employee health are related to job satisfaction and two out of four dimensions and the overall measure of positive employee health are related to life satisfaction. This provides general support for the nomological validity of the construct. Job satisfaction was found to be associated with leading a purposeful worklife (r=.55, p<.01), quality connection (r=.48, p<.01), and positive self-regard and mastery (r=.21, p<.01). Life satisfaction was found to be correlated with leading a purposeful worklife (r=.35, p<.01) and quality connection (r=.32, p<.01). The relationship between negative affect and positive employee health did not show up as strongly as expected as only one significant correlation between negative affect and positive self-regard and mastery (r=-.30, P<.01) was found. As hoped, social desirability was found to be largely unrelated to positive employee health. The fact that only one out of four dimensions of positive employee health has modest correlation with social desirability indicates that socially desirable responding is unlikely to be problematic. All these findings provide some evidence of discriminant validity which refers to the degree to which the construct is not similar to other constructs that it theoretically should not be similar to (Campbell & Fiske, 1959).
In conclusion, all the findings in study two provide initial support for the construct validation of positive employee health scales. However, it also suggests the need for continued work on theoretical development. Study Three will provide further examination for this purpose.

**Results of Study Three**

As mentioned previously, the purpose of this study was to examine the hypothesized model and provide further evidence of construct validity for the newly developed positive employee health measure. Table 4.6 includes the means, standard deviations, zero-order correlations, and internal reliabilities for all the measures used in Study Three. Table 4.10 also reports zero-order correlations among the first order constructs. The theoretical model shown in Figure 2.1 was examined using the structural equation modeling program AMOS 17.0 (Arbuckle 2008). The two-step process of examining separate measurement and structural models (Anderson & Gerbing 1988) was followed. A discussion of this process is provided in the next sections. There are three different types of hypotheses in the theoretical model, general linear relationship hypotheses, a partial mediation hypothesis, and moderation hypotheses.

**Testing Linear Relationship Hypotheses**

Confirmatory Factor Analysis (CFA Model)

Anderson and Gerbing (1988) suggest SEM researchers to test the measurement model underlying a full structural equation model first to see whether the fit of the measurement model is acceptable or not. And then proceed to the second step of testing the structural model when the fit of the measurement model is acceptable.
Table 4.6 Means, Standard Deviations, and Pearson Correlations among the Constructs in Study Three

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Authentic Leadership</td>
<td>3.20</td>
<td>.72</td>
<td>.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Psychological Safety</td>
<td>4.65</td>
<td>1.26</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Job Engagement</td>
<td>4.30</td>
<td>.57</td>
<td>.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Positive Employee Health</td>
<td>4.03</td>
<td>.50</td>
<td>.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>5. Knowledge Sharing</td>
<td>3.82</td>
<td>.71</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Proactivity</td>
<td>3.33</td>
<td>.95</td>
<td>.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Performance</td>
<td>3.82</td>
<td>.96</td>
<td>.96</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Workplace Deviance Behavior</td>
<td>1.45</td>
<td>.48</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Need for Leadership</td>
<td>2.01</td>
<td>.77</td>
<td>.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Organizational Politics</td>
<td>2.55</td>
<td>.69</td>
<td>.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Transformational Leadership</td>
<td>2.95</td>
<td>.86</td>
<td>.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
N=107.

Cronbach’s alpha reliabilities are provided in parentheses.
With the relatively small number of observations collected for this study and the large number of items in the survey, scales of the sub-dimensions (computed as the mean of the items of each sub-dimension) were used to substitute for the individual items in order to simplify the structural models.

In other words, a combination of individual items and composite scales were selected to form hypothesized model in which the second order constructs were predicted by the mean of the items of each sub-dimension while unidimensional constructs were predicted by observed items. This method has been used in many other research, such as Spreitzer (1995)’s article published in *Academy of Management Journal* and Aquino, Lewis, and Bradfield (1999)’s article published in *Journal of Organizational Behavior*. Parcel indicators were used for several reasons. First, some SEM software is limited in its ability to calculate model estimates with large numbers of indicators and it is difficult to use models with more than 30 manifest indicators (Bentler & Chou, 1987). Second, some researchers suggest that parcels are particularly beneficial when sample sizes are relatively small because it requires fewer parameters when defining a construct (e.g., Bagozzi & Edwards, 1998; Bagozzi & Heatherton, 1994). Third, using sub-dimensions as grouping criteria is better because it keeps the multidimensional nature of the construct (Litter, Cunningham, & Shahar, 2002).

The mean substitution missing value technique was used to replace missing data because none of variables has missing value larger than 3% (Roth & Switzer, 1995). Also, theory and prior empirical research suggest that the outcome variables are likely to be significantly correlated rather than functioning as orthogonal variables. Therefore, some residuals within the outcome variables were allowed to correlate.
The initial CFA model exhibited the following statistics: $\chi^2$ of 637.07 with DF=434, $\chi^2$/df=1.5, CFI=.90, and RMSEA=.066 with a 90% confidence interval .055-.077. While acceptable, these fit indices suggest that there is room for improvement in the fit of the model. Several items (i.e., one item from knowledge sharing, two items from psychological safety) exhibited standardized regression weights less than 0.60 and were removed from further analysis. One dimension (perception of the negative events) of positive employee health exhibited low regression weight on the second order of this construct. However, it was retained in the model for exploratory purposes. The standardized residual covariance matrix was also analyzed to assess other potentially problematic items within the model according to Bagozzi and Yi (1988). No serious problem was found from this analysis. The final CFA model exhibited a moderate fit with $\chi^2$ of 504.26 (DF=347), $\chi^2$/df=1.45, CFI=.92, and RMSEA=.065 with a 90% confidence interval .053-.078. All remaining factor loadings are above the 0.60 cutoff value except items related to positive employee health, and all constructs represented internal consistency with Cronbach’s alphas larger than .70. As a caveat, two constructs, performance and proactivity, exhibited high correlations ($r=.76$) in the CFA model which may give rise to concerns about the discriminant validity of these two scales. Average Variance extracted (AVE) was calculated to assess this problem. Despite the magnitude of this correlations, AVE of these two variables (AVE performance=.92 and AVE Proactivity=.77) are greater than the squared correlation estimate indicating it is not a problem to keep the constructs separate (Hair et al., 2006).
Given the complexity of the model, the proceeding measurement validation process provided an acceptable baseline for the following hypotheses testing with a structural model.

**Structural Equation Modeling (SEM Model)**

The initial SEM received model fit indices as follows: $\chi^2$ of 666.92 (DF=368), $\chi^2$/df=1.81, CFI=.84, and RMSEA=.088. The reduction in fit indications when compared with the measurement model is normal because a structural model could not fit any better than a measurement model (Hair, et al. 2006). The fit indices are not ideal for the structural model. After examining the model output, examination of modification indices suggests that allowing performance and proactivity to be related would result in a significant improvement of the model. Based on proactive behavior theories (i.e. Crant, 2000), a path from proactivity to performance was added to the model because employees’ proactive behavior should be positively related to their performance in the organization. After adding this path, the SEM model received fit indices as: $\chi^2$ of 581.42 (DF=367), $\chi^2$/df=1.58, CFI=.89, and RMSEA=.074. Given the complexity of the model and the small sample size, this model still can provide adequate information for the hypotheses testing. Standardized parameter estimates are shown in Figure 4.3.

Hypothesis 1 proposed that authentic leadership will be positively related to the psychological safety. This hypothesis was supported ($\gamma=.53$, $p<.001$). From Table 4.6, it can be seen that Hypothesis 2 was supported because authentic leadership was significantly related to job engagement ($r=.39$, $P<.01$).
Figure 4.3 Structural Model Results
Hypothesis 4, predicting that job engagement will be positively related to positive employee health, was supported because evidence from the correlation Table 4.6 ($r=.60$, $P<.01$) and the SEM model ($\beta=1.01$, $P<.01$) supported this proposal. Hypothesis 5, which predicts a positive relationship between job engagement and employees’ knowledge sharing behavior was supported by correlations ($r=.29$, $P<.01$) and the SEM model ($\beta=.69$, $P<.01$). Hypothesis 8, indicating a negative relationship between job engagement and workplace deviance behavior, was supported too ($r=-.30$, $P<.01$ and $\beta=-.38$, $P<.05$).

However, Hypothesis 6 which predicted positive relationships between job engagement and supervisor rated proactivity was not supported by structural equation modeling because there is no evidence to show a significant relationship between these two variables. However, the first order correlation Table 4.10 indicates that one dimension of job engagement, physical engagement, has significant relationship with individual task proactivity and team member proactivity. Thus, Hypothesis 6 is partially supported. Hypothesis 7, which predicted a positive relationship between job engagement and supervisor rated performance was partially supported. Table 4.6 reports a significant correlation of $r=.21$ ($P<.05$). Table 4.10 also reveals a significant correlation between physical engagement and performance. However, no statistically significant relationship between these two variables was found in the SEM model ($\beta=.052$, $P=.44$).

In sum, Table 4.6 and the theoretical SEM model provided the magnitude and direction of the parameter estimates which supported five of the seven predicted linear relationships and partially supported one pathway between job engagement and supervisor rated performance.
A closer look at the standardized regression weight reported in Figure 4.3 indicates that the regression weight between positive employee health and job engagement is larger than one (1.103). According to Jöreskog’s (1999) “How large can a standardized coefficient be?” a coefficient larger than one does not necessarily indicate any problem, although it may suggest there is multicollinearity problem in the data. To examine this problem, I conducted a post hoc multicollinearity test with SPSS linear regression. Results of this test show that the variance inflation factors (VIF) are about 1.3 and Tolerances are about .78. Therefore, there is no evidence of multicollinearity problem. Grewal, Cote, and Baumgartner (2004) suggest that multicollinearity can cause problems in structural equation modeling. However, they also suggest that when reliability improves, explained variance R\(^2\) reaches 0.75, or sample becomes relatively large, the problem becomes negligible. Accordingly, further data need to be collected to deal with this issue.

Testing the Mediation Hypothesis

Hypothesis 3 proposed that the relationship between authentic leadership and job engagement would be at least partially mediated by psychological safety. This hypothesis was tested by comparing several alternative models. One path between authentic leadership and job engagement was added to the previous model to see whether there is a significant change of \(\chi^2\). Table 4.7 reports the results of comparison of alternative models.
Table 4.7 Results of Structural Equation Modeling from Study Three

<table>
<thead>
<tr>
<th>Models</th>
<th>( \chi^2 )</th>
<th>Df</th>
<th>( \chi^2/df )</th>
<th>( \Delta \chi^2 )</th>
<th>RMSEA</th>
<th>CFI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null Model</td>
<td>2317</td>
<td>406</td>
<td>5.71</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Measurement Model</td>
<td>504</td>
<td>347</td>
<td>1.45</td>
<td>.07</td>
<td>.92</td>
<td>.89</td>
</tr>
<tr>
<td>Hypothesized (Fully-mediated)</td>
<td>581</td>
<td>367</td>
<td>1.58</td>
<td>.07</td>
<td>.89</td>
<td>.89</td>
</tr>
<tr>
<td>Alternative Models(partially-Mediated)</td>
<td>574</td>
<td>366</td>
<td>1.57</td>
<td>7</td>
<td>.07</td>
<td>.89</td>
</tr>
</tbody>
</table>

Note: Partially mediated model was created by adding a path from authentic leadership to job engagement. \( \Delta \chi \) is calculated comparing partially-mediated model with fully-mediated model. CFI = comparative fit index; RMSEA = root mean square error of approximation. n = 150.

The results of the comparison of the partially-mediated model with the fully-mediated model indicate that both models received about same fit indices, although the change in chi-square when a direct pathway between authentic leadership and job engagement is added to the model is statistically significant at the 0.05 level with one degree of freedom. Therefore, the partially mediated model represents an improvement over the fully mediated model, which makes the partially mediated model the preferred model. Also, the relationship between authentic leadership and job engagement (\( \beta=.26, p=.01 \)) is significant in the partially mediated model. In the partially mediated model, the relationship between authentic leadership and psychological safety is \( \beta=.46, p<.010 \) and the relationship between psychological safety and job engagement is \( \beta=.67, p<.01 \). Thus, Hypothesis 3 was supported.

Testing the Moderation Hypotheses

As previously noted, moderated multiple regression was used to test hypotheses 9 and 10, which propose that the relationship between authentic leadership and psychological safety would be moderated by need for leadership and perceptions of
organizational politics. SPSS 16.0 was used as a tool to do this analysis. Before forming the interaction term, the dependent, independent, and moderator variables were centered (i.e. the raw scores of those variables were calculated into deviation scores with means equal to zero) to reduce the potential multicollinearity problem as suggested by Cohen et al. (2003). The variance inflation factor (VIF) scores associated with each regression coefficient ranging from 1.2 to 2.6, indicating that there is no problem of multicollinearity in the test.

Table 4.8 reports the results of the hierarchical regression analysis-conducted separately for need for leadership and perceived politics of the organization. The standardized beta coefficients represented in Table 4.3 are the values calculated for the variables in each step as each step is added to the analysis. The results show that the interaction terms did not add significant amount of incremental variance ($\Delta R^2$ range from 0 to 0.01) to the antecedent variables. Also, the interaction terms were not significant in the model. Therefore, hypotheses 9 and 10 were not supported. In other words, there is no evidence to show that need for leadership and perceived organizational politics moderate the relationship between authentic leadership and psychological safety.
Table 4.8 Hierarchical Regression Results for Moderators

<table>
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<tr>
<th>Step 1: Control Variable</th>
<th>Moderators</th>
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<td></td>
<td></td>
<td>Need for Leadership</td>
<td>Perceived Organizational Polities</td>
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<tr>
<td></td>
<td>β</td>
<td>β</td>
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<tr>
<td>Employee Gender</td>
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<td>-.35***</td>
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<td>-.28*</td>
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<td>Employee Work Experience</td>
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<td>Supervisors Span of Control</td>
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<td>.01</td>
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<tr>
<td>Employee Ethic</td>
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<td>-.04</td>
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<tr>
<td>R²</td>
<td>.50***</td>
<td>.50***</td>
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</table>

<table>
<thead>
<tr>
<th>Step 2: main effects</th>
<th>Moderators</th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Need for Leadership</td>
<td>Perceived Organizational Polities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authentic Leadership</td>
<td>.16</td>
<td>.18*</td>
<td></td>
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</tr>
<tr>
<td>Moderator</td>
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<td>-.48***</td>
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<tr>
<td>R²</td>
<td>.67***</td>
<td>.51***</td>
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<table>
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<th>Step 3: Interaction Effects</th>
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<tbody>
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<td></td>
<td>Need for Leadership</td>
<td>Perceived Organizational Polities</td>
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<td></td>
</tr>
<tr>
<td>Authentic Leadership</td>
<td>.16</td>
<td>.23**</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Moderator</td>
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<td>-.47***</td>
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<tr>
<td>Authentic Leadership</td>
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<td></td>
</tr>
<tr>
<td>R²</td>
<td>.67***</td>
<td>.52***</td>
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<tr>
<td>Total Adjusted R²</td>
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<td>.44***</td>
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</tr>
<tr>
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<td>72</td>
<td>72</td>
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</tbody>
</table>

Note: * significant at the 0.10 level (2-tailed); ** Significant at the 0.05 level (2-tailed); *** Significant at the 0.01 level (2-tailed); N=107
Testing the Discriminant Validity of Authentic Leadership

Since Authentic leadership is a newly developed construct in the organizational leadership area, one additional purpose of this dissertation is to further validate this construct. Figure 4.4 exhibits a model which was used for this purpose. I examined a measurement model to assess the relationships between selected variables. The results of this model produced an acceptable fit to the data: $\chi^2$ of 504 (DF=332), $\chi^2$/df=1.52, CFI=.90, and RMSEA=.07.

![Diagram comparing Authentic Leadership and Transformational Leadership](image)

Discriminant validity can be examined by using confirmatory factor analysis as the basis for two different procedures (Hair et al. 2006). First, if the average variance extracted value of the factor in question is greater than the squared correlation estimate
between those two factors, discriminant validity is evidenced. In current study, the average variance extracted are .64 (authentic leadership) and .76 (transformational leadership) which are equal or larger than their squared correlation estimate .64. These results provide a relatively strong indication that authentic leadership is distinct from transformational leadership. Second, discriminant validity is evidenced if the unconstrained measurement model fits the data better than the constrained model. A “constrained” model refers to the model within which the correlation between two factors in question is specified as equal to one. An “unconstrained” model refers to the model within which the correlation between two factors is allowed to be estimated. After the correlation between authentic leadership and transformational leadership was constrained to be equal to one, the constrained model produced the following fit indices: $\chi^2 = 530$ (DF=333), $\chi^2$/df=1.59, CFI=.88, and RMSEA=.075. Therefore, compared to constrained model, the unconstrained model received a significantly lower chi-square value, indicating that the authentic leadership can be differentiated from transformational leadership even though they are positively related.

In addition, a stepwise regression analysis was used to predict four outcome variables (i.e., psychological safety, job engagement, positive employee health, and knowledge sharing) in order to test the incremental predictive power of authentic leadership beyond what transformational leadership offers. In step one, seven employee’s demographic variables (i.e., gender, age, tenure, work-experience, span of control, ethic, and education) were added. In step 2, either authentic leadership or transformational leadership was added separately as a single main effect. In step 3, both authentic leadership and transformational leadership were included in the model. Change in
significance level of these two variables and the corresponding change in $R^2$ were used to determine the result. Results from this analysis were reported in Table 4.9.

Table 4.9 reveals that both authentic leadership and transformational leadership predicted all four outcome variables when there was only one main effect variable in the regression model. However, when both authentic leadership and transformational leadership were both included in the model, authentic leadership accounted for a statistically significant increment in variance over transformational leadership for one outcome variable—job engagement ($\beta=.38$, $p<.05$). When both authentic leadership and transformational leadership were added as the main effects in the regression model, the authentic leadership construct did not show the incremental predictive power over transformation leadership the other three outcomes: psychological safety ($\beta=.00$ $p>.10$), positive employee health ($\beta=.12$, $p>.10$), and knowledge sharing ($\beta=.03$, $p>.10$).

Table 4.9 Results of Stepwise Regression to Compare Authentic Leadership and Transformational Leadership

<table>
<thead>
<tr>
<th>Step 2: One main effect</th>
<th>Psychological Safety</th>
<th>Job Engagement</th>
<th>Positive Employee Health</th>
<th>Knowledge Sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Employee Gender</strong> $^a$</td>
<td>-.28$^<em>$ // -.28$^</em>$</td>
<td>.02 // -.01</td>
<td>-.11 // -.12</td>
<td>-.15 // -.15</td>
</tr>
<tr>
<td><strong>Employee Age</strong> $^a$</td>
<td>-.13 // -.20</td>
<td>.14 // .06</td>
<td>.02 // -.06</td>
<td>-.15 // -.21</td>
</tr>
<tr>
<td><strong>Employee Tenure</strong> $^a$</td>
<td>-.21 // -.21</td>
<td>-.13 // -.15</td>
<td>-.13 // -.13</td>
<td>-.32$^*$ // -</td>
</tr>
</tbody>
</table>
Table 4.9 (Continued)

<table>
<thead>
<tr>
<th></th>
<th>.27* / .27*</th>
<th>.13 / .12</th>
<th>.05 / .05</th>
<th>.15 / .16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Work</td>
<td>.03 / .00</td>
<td>.03 / -.02</td>
<td>-.01 / -.05</td>
<td>-.02 / -.05</td>
</tr>
<tr>
<td>Supervisors Span of</td>
<td>-.24** / -.16</td>
<td>-.06 / .03</td>
<td>-.20 / -.10</td>
<td>-.24** / -.17</td>
</tr>
<tr>
<td>Employee Ethic a</td>
<td>-.09 / -.08</td>
<td>-.09 / -.07</td>
<td>-.01 / .00</td>
<td>.15 / .15</td>
</tr>
<tr>
<td>Authentic Leadership</td>
<td>.32***</td>
<td>.49***</td>
<td>.43***</td>
<td>.29***</td>
</tr>
<tr>
<td>R²</td>
<td>.34***</td>
<td>.25***</td>
<td>.29***</td>
<td>.37***</td>
</tr>
<tr>
<td>Transformational</td>
<td>.41***</td>
<td>.43***</td>
<td>.49***</td>
<td>.35***</td>
</tr>
<tr>
<td>R²</td>
<td>.41***</td>
<td>.21**</td>
<td>.34***</td>
<td>.41***</td>
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</table>

Step 3: Two main effects

<table>
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<tr>
<th></th>
<th>-.28**</th>
<th>.02</th>
<th>-.11</th>
<th>-.15</th>
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<tr>
<td>Employee Gender</td>
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<td>-.05</td>
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<tr>
<td>Employee Age</td>
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<td>-.13</td>
<td>-.12</td>
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<td>.13</td>
<td>.05</td>
<td>.16</td>
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<tr>
<td>Supervisors Span of</td>
<td>-.01</td>
<td>.02</td>
<td>-.04</td>
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<td>Authentic Leadership</td>
<td>.00</td>
<td>.38**</td>
<td>.12</td>
<td>.03</td>
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<td>.41**</td>
<td>.14</td>
<td>.40**</td>
<td>.33**</td>
</tr>
<tr>
<td>R²</td>
<td>.41***</td>
<td>.26**</td>
<td>.59***</td>
<td>.41***</td>
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<td>Total Adjusted R²</td>
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<td>.16</td>
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<td>2.54</td>
<td>3.83</td>
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Note: * significant at the 0.10 level (2-tailed); ** Significant at the 0.05 level (2-tailed); *** Significant at the 0.01 level (2-tailed);

N=107

Table 4.10 reports zero-order correlations among the first order constructs, and Table 4.11 provides a summary of the results for all of the hypotheses in Study 3.
Table 4.10 Pearson Correlations among the First Order Constructs in Study Three

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<th>2</th>
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<th>4</th>
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<th>22</th>
<th>23</th>
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<th>25</th>
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<tbody>
<tr>
<td>1 ALTRANS</td>
<td>(.80)</td>
<td></td>
<td></td>
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<tr>
<td>2 ALMORAL</td>
<td>61&quot; (74)</td>
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<td>67&quot; 65&quot; 67&quot; (87)</td>
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<td>5 PS</td>
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<td>65**</td>
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Note 1 ALTRANS Authentic Leadership Transparency, 2 ALMORAL Authentic Leadership Moral/Ethical, 3 ALBP Authentic Leadership Balanced Processing, 4 ALSA Authentic Leadership Self Awareness, 5 PS Psychological Safety, 6 JEPE Job Engagement Physical Engagement, 7 JEEE Job Engagement Emotional Engagement, 8 JECJE Job Engagement Cognitive Engagement, 9 PEHQQC Positive Employee Health Quality Connection, 10 PEHLPP Positive Employee Health Leading a Purposeful Worklife, 11 PEHPSM Positive Employee Health Positive Self-regard and Mastery, 12 PEHPN Positive Employee Health Perception of Negative Events, 13 KS Knowledge Sharing, 14 WDBIND Workplace Deviance Behavior towards Individual, 15 WDBORG Workplace Deviance Behavior towards Organization, 16 TLI Transformational Leadership Idealized Influence, 17 TLIIM Transformational Leadership Inspirational Motivation, 18 TLIS Transformational Leadership Intellectual Stimulation, 19 TLIIC Individual Consideration, 20 PROIT Individual Task Proactivity, 21 PROTM Team Member Proactivity, 22 PROOM Organizational Member Proactivity, 23 PERFORMANCE Performance, 24 NL Need for Leadership, 25 POP Perception of Organizational Politics

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)
N=107

Cronbach’s alpha reliabilities are provided in parentheses
Table 4.11 Summary of the Results

<table>
<thead>
<tr>
<th>Hypothesis (H)</th>
<th>Correlations Analysis</th>
<th>Regression Analysis</th>
<th>Structural Equation Modeling</th>
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</thead>
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<td>H1: Authentic leadership will be positively related to psychological safety;</td>
<td>Fully Supported</td>
<td>N/A</td>
<td>Fully Supported</td>
</tr>
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<td>H2: Authentic leadership will be positively related to job engagement;</td>
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<td>Fully Supported</td>
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<tr>
<td>H3: Employees’ psychological safety will partially mediate the relationship</td>
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<td>N/A</td>
<td>Fully Supported</td>
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<td>between authentic leadership and job engagement;</td>
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<tr>
<td>H4: Job engagement will be positively related to positive employee health;</td>
<td>Fully Supported</td>
<td>N/A</td>
<td>Fully Supported</td>
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<tr>
<td>H5: Job engagement will be positively related to employees’ knowledge sharing</td>
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<td>N/A</td>
<td>Fully Supported</td>
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<td>behavior;</td>
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<tr>
<td>H6: Job engagement will be positively related to employees’ proactive behaviors.</td>
<td>Partially Supported</td>
<td>N/A</td>
<td>Not Supported</td>
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<tr>
<td>H7: Job engagement will be positively related to employees’ overall performance in the organization.</td>
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<td>N/A</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H8: Job engagement will be negatively related to employees’ workplace deviance behavior in the organization.</td>
<td>Fully Supported</td>
<td>N/A</td>
<td>Fully Supported</td>
</tr>
<tr>
<td>H9: Need for leadership will moderate the relationship between authentic</td>
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<td>Not Supported</td>
<td>N/A</td>
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<td>leadership and psychological safety;</td>
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<tr>
<td>H10: Perceived politics of the organization will moderate the relationship</td>
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<td>Not Supported</td>
<td>N/A</td>
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<td>between authentic leadership and psychological safety</td>
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CHAPTER FIVE

DISCUSSION

The purpose of this chapter is to provide a general discussion of the findings of this dissertation and their contributions to the existing literature. Limitations and future research directions will also be addressed at the end of this chapter.

Research Findings

As stated at the beginning, this dissertation research was driven by four main objectives: (1) to develop a clear definition of positive employee health and a valid instrument to assess positive employee health; (2) to examine whether or not authentic leadership might be effective in promoting positive organizational behaviors, including employee health, proactive behaviors, and knowledge sharing; (3) to examine the process by which authentic leadership is thought to influence positive outcomes; and (4) to study the extent to which need for leadership and perceived organizational politics may moderate the relationship between authentic leadership and its most proximal outcome. To accomplish these objectives, three independent samples were employed--one was recruited from online survey company, one from a university setting, and one from a large health organization with a multi-sources data set. The use of such diverse samples provides a solid baseline for positive employee health theory buildings and enhances the potential generalizibility of the findings.
The first primary purpose of the dissertation was to develop a positive employee health measure which can be used in the future research. This purpose is accomplished by using all three samples to go through the basic steps needed for measurement development, including exploratory factor analysis, confirmatory factor analysis, and construct validation. After the initial extensive review of related theories, a definition of positive employee health was developed. Next, the 75 items that were generated from the literature review and the 10 items that were generated from focus group discussion were submitted to nine experts for content validity analysis. Following this process, 45 items were retained for exploratory factor analysis. A factorial scaling approach resulted in four factors underlying positive employee health: leading a purposeful worklife, quality connections with others, positive self-regard and mastery, and the perception of the negative events. Twenty four items remained to form the four underlying factors.

Six items loading on the leading a purposeful worklife factor relate to the extent to which employee has clear goals in the organization and knows his/her direction, feels their job is meaningful, and believes they have a good future or career in the organization. It is also a dynamic, ongoing process in which the employee can explore one’s future potential, and develop a balance between one’s value system and organization’s value system. Eight items loading on the quality connections factor relate to the extent to which the employee has satisfying trusting relationships with others in the organization. Items of this dimension explain the major components of this dimension, including perceived organizational support, good communication, and good relations and connections to others at work. Seven items loading on the positive self-regard and mastery factor relate to the extent to which an employee has a sense of mastery, self-
realization, and competence in managing work environment, reflecting employees' abilities to solve problems, use resources, and control job activities. The three items of the perception of the negative events factor relate to the extent to the employee has a positive attitude toward job performance and his/her ability to accept multiple aspects of consequences of the job, including good and bad results.

The results of the study two (college students) demonstrated that the four factors of positive employee health were well-defined and 21 of the previously developed items loaded onto the appropriate factors and these factors retained high internal consistency. Results of study two indicated that the four factors of positive employee health are positively related to each other and they all significantly related to a single second-order construct of positive employee health. However, the results of confirmatory factor analysis did not show a better fit for a second-order construct over four first order constructs. Moreover, an initial test for nomological validity of positive employee health suggested that four dimensions of positive employee health construct may have different relationships with different variables. Therefore, it might be better to use a four dimension measure in the future research.

In order to test construct validity for the newly developed positive employee health construct, its relationships with several existing variables were examined in study two. Evidence for convergent validity would be demonstrated because two theoretical related variables, psychological well-being and vigor, are highly correlated with positive employee health. The nomological validity of the construct was supported generally because three out of four dimensions and the overall measure of positive employee health were found to be related to job satisfaction and two out of four dimensions and the
overall measure of positive employee health were found to be related to life satisfaction. A nonsignificant relationship between positive employee health and social desirability indicates discriminant validity as well as low possibility of response bias. However, the relationship between positive employee health and negative affect was not significant as predicted. Study two also revealed that one dimension of positive employee health, perception of the negative events, did not show strong convergent and nomological validity as did the other three dimensions. It suggests that a further modification of the construct may be needed in the future research.

Objectives two, three, and four were accomplished in study three. The results of study three indicate that authentic leadership was effective in promoting employees’ positive organizational outcomes including positive employee health and knowledge sharing behavior. Authentic leadership was positively related to employees’ health and knowledge sharing behavior through the predicted psychological mechanisms—psychological safety and job engagement. This finding highlights the potential value of leader authenticity and confirms the proposals found in authentic leadership theory (Gardner & Schermehorn, 2004; Walumbwa et al., 2008) which suggest that authentic leaders should have a strong influence on followers’ attitudes and behaviors, as well as positive employee health because authentic leaders can help to build employees’ confidence (self-efficacy), create hope, raise optimism, and strengthen resilience. This study also found that authentic leadership can influence employees’ job engagement directly or through a mediated effect from psychological safety.

In contrast to Walumbwa et al.’s study, this study did not find a significant relationship between authentic leadership and proactive behavior when the later was rated
by employees’ direct supervisor. The positive relationship between authentic leadership and performance is not supported. However, a positive relationship between job engagement and performance was partially supported by positive correlations between these two variables. These results point to the value of understanding the extent to which authentic leadership influences key psychological mechanisms such as job engagement.

Although this dissertation did not find a direct relationship between authentic leadership and workplace deviance behavior, results from SEM model revealed that authentic leadership is likely to influence employees’ negative behavior through its’ strong influence on psychological safety and job engagement.

The last purpose of this dissertation was to study the extent to which need for leadership and perceived organizational politics may moderate the relationship between authentic leadership and its most proximal outcomes. The results of study three indicate that authentic leadership exhibited direct relationship with psychological safety rather than a moderated relationship with need for leadership and perceived organizational polities as moderators. My initial purpose was to examine how dispositions, such as personality characteristics, need states, attitudes, preferences, and motive, influence individuals respond to authentic leadership style. Some researchers (i.e. Motowidlo et al., 1997; De Vires et al., 1998) suggested that individuals’ need states or preferences can offer insight into the extent leadership can or cannot affect subordinate behavior. However, evidence obtained from the current study did not support this view. A negative, significant relationship between authentic leadership and need for leadership (need for leadership items were worded as higher value related to lower need for leadership) indicate that authentic leadership may influence employees’ judgment whether they need
help and support from their supervisors or not. This possibility seems logical because authentic leadership theory suggests that authentic leaders promote employees’ trust of their supervisor. Employees are more likely to seek help and support from their supervisor because they believe their authentic supervisor can add value on the job and they also feel safe to do so.

Perception of organizational politics has been used as both mediator and moderator in past studies of organizational behaviors. This dissertation proposed a moderated relationship between authentic leadership, perception of organizational politics, and psychological safety. The underlying reason is that it is less likely employees will feel comfortable taking risks or speaking out when they perceive high levels of politics from other sources although authentic leadership exists. The organizational politics construct implies that the supervisor is not the only influence upon a source for employees’ perception of organizational politics. Political behavior in other arenas of the organizational environment other than supervisors may influence the employees’ action. However, the results of study three did not support this proposal. Although only two dimensions (coworker and organizational politics) of perception of organizational politics were employed in this study for the purpose of moderation effect, it is still very hard to differentiate organizational politics from coworker political behavior, supervisor behavior, or behavior thought to characterize the whole organization. Therefore, it is possible that items used to measure perceived politics from other arenas of the organizational environment actually measured politics from supervisors as well. Thus, it would be logical to treat perception of organizational politics as a direct outcome of authentic leadership rather than a moderator.
As a byproduct of this dissertation, relationship between authentic leadership and transformational leadership was tested. The results of the test indicate a positive relationship between authentic leadership and transformational leadership. In addition, the CFA confirmed that the authentic leadership construct is distinct from the transformational leadership construct. Thus, further evidence of construct validity of authentic leadership was found. However, when transformational leadership exists, authentic leadership measure only accounts for additional significant variance in one outcome variable--job engagement. This result is not consistent with what was found in Walumbwa et al.'s (2008) study. Walumbwa et al. (2008) suggest that their findings do not necessarily indicate that authentic leadership will be a better predictor of performance across all organizational domains and the extent of their findings should await further confirmation. Actually, this dissertation confirmed above statement by showing that authentic leadership may have incremental predict power on some organizational related outcomes, but not all of them. Research in different organizational domains or with other outcome variables may need in the future to provide a more comprehensive pattern. Even so, these results still provide some indication that authentic leadership may indeed provide a valuable addition to the leadership literature in that it does appear to provide new insights into aspects of leadership that underlie key psychological constructs such as job engagement.

It also would be interesting to take a close look at Table 4.10 which reports correlations among the first order constructs in Study Three. This table includes correlations for each sub-dimension of those constructs. Findings from this table may give us hints for future research. For example, psychological safety is more strongly
related to self awareness and balanced processing of authentic leadership than to other two dimensions. One underlying reason might be that items used to measure self-awareness and balanced processing involve the interaction between supervisors and subordinates. Therefore, they may have stronger influence on employees’ feelings than other dimensions. Also, psychological safety is most strongly related to emotional engagement, but less so to physical and cognitive engagement. This result may partially explain why psychological safety only partially mediated the relationship between authentic leadership and job engagement. Other interesting findings include physical engagement is positively related to both individual and group proactivity but not organizational proactivity; knowledge sharing is positively related to emotional and cognitive engagement but not physical engagement; workplace deviance behavior is negatively related to emotional and cognitive engagement but not physical engagement. The results involving positive employee health are also interesting in that they indicate that leading a purposeful worklife is even more strongly related to individual deviance than job engagement. Further, the relationship between job engagement and leading a purposeful worklife was particularly strong. Although discussion of these findings is beyond the scope of this dissertation, it seems like it would be worth exploring the theoretical meaning of these findings in future research.

Theoretical Contributions

This dissertation offers several contributions that merit discussion. The development of the positive employee health measurement has implications for future research on employee health in the organization. Although there has been considerable attention focused on the topic of employees’ health in past decades, there was limited
research that addressed the positive aspects of the health. Previous research either employed a negative measure of the employee health which focuses on the physical or psychological illness of the human body or used other alternative measures, such as psychological well-being and happiness, to represent the employee health in their attempts to link different organization constructs to employee health. The problem of this approach is that it did not provide a comprehensive view of the employee health in the organizational domain. Also, the different conceptualizations of employee health make it difficult to integrate the results of the different studies. Based on Raff’s (1998) positive human health concept, this dissertation developed a relatively clear definition of positive employee health with four underlying dimensions—leading a purposeful worklife, quality connection with others, positive self-regard and mastery, and positive perceptions of negative events. This definition includes multiple positive health related aspects and focuses on organizational domains. Therefore, the initial effort reported here provides a comprehensive and suitable concept and vehicle for future research.

On the basis of the preliminary findings, a theory-driven positive employee health measure was offered that has initial evidence to support its reliability and validity. At this early stage in the development of the positive employee health concept, exploring the validity of the construct also demonstrated an initial pattern of relationships with other constructs. The results of this dissertation suggest that it is possible to use positive employee health measure to predict some related outcomes, such as job satisfaction and life satisfaction. Further, this instrument should also be a practically useful tool for future research.
The second contribution of this dissertation relates to the authentic leadership literature. While there has been much theoretical discussion about authentic leadership, this dissertation is among those few empirical studies which help to validate the authentic leadership theory. This dissertation examined new variables beyond the existing theoretical nomological network of authentic leadership suggested by Avolio, et al., (2004). The results show that authentic leadership has positive relationship with employee health, and knowledge sharing behavior through the mediation effect of psychological safety and job engagement. Authentic leadership also exhibited a negative, non-direct impact on workplace deviance behavior through the mediation effect of psychological safety and job engagement. It confirms that authentic leadership is a powerful means of empowering subordinates to make a difference by enhancing high-quality relationships based on the principles of social exchange (Ilies, et al., 2005). The indirect relationships among authentic leadership, performance, and deviance behavior also serve to emphasize the importance of understanding the psychological mechanisms that drive the more distal outcomes of leadership behavior.

Findings from the Study Three also increased our understanding the role leadership may play in developing positive employee health. At this early stage of theory development, it is very important to find factors within the organizational context which can enhance the health condition of employees. Study Three provides new insights into the cognitive mechanisms that link leadership and employee health. It indicates that leadership can promote employees’ health condition in the organization by helping to establish an interpersonal climate where it is safe to act in accordance with one’s “self” and by promoting enthusiastic mental and physical involvement in one’s work.
Further testing the validity of authentic leadership construct also provides the contribution to the leadership theory field. While authentic leadership is becoming an important construct in the leadership field, it is important to demonstrate and test its nomological network and incremental predictability. The findings from this dissertation revealed that authentic leadership can be differentiated from transformational leadership although it does not always provide incremental predictability over transformational leadership. As admitted by researchers in authentic leadership field, there is some conceptual overlap between authentic leadership and transformational leadership as well as some differences (Walumbwa et al., 2008). The overlap between these two leadership concepts is evidenced by the fact that authentic leadership did not relate to positive employee health, knowledge sharing, and psychological safety when controlling for transformational leadership. However, the significant relationship between authentic leadership and job engagement in the hierarchical regression model did provide evidence of differentiation. Being different from what was found in other studies, these findings also indicate the added value of exploring how different leadership measures predict a range of difference organizational variables across organizational contexts and culture.

The practical contributions of this dissertation include that it not only provided a valid measure of positive employee health but also provide the conditions which may help to foster or maintain the employee health. This dissertation helps practitioners to learn what the components of positive employee health are and why positive employee health is important for the organizations. It provides the guidelines for employers to pay more attention to positive side of the employee health rather than the negative side, such
as illness. It also helps practitioners to understand why and how leadership can promote the positive employee health and other organizational related variables.

Limitations and Future Research Directions

As many other studies, this dissertation study has several limitations. This dissertation developed a measurement for positive employee health construct. Although the overall findings are encouraging, it should be noted that they only represent the first step of theory development which provided initial evidence of construct validity. Because scale development is a continuous process, additional research is necessary to further assess the discriminant, convergent, and predictive validity of positive employee health scales with a much broader range of samples and organizational contexts. As noted previously, the second order positive employee health model did not show a better fit than the first order model in the study two. Also, in the Study Three, the parceled four dimensions of employee health did not load onto a second order factor very well. These results lead to questions about the conceptualization of this construct. While previous research about positive human health focused on developing a reflective factor model, it is possible that the second order positive employee health is actually a formative factor model. It is logical to think that each sub-dimension of this construct cause the second order construct because purposeful life and quality connection with others may help to foster employee health. Also, according to human health theory (Ryff and Singer, 1998), different dimensions of human health construct may have different relationships with other variable. In study two, four dimensions of positive employee health exhibited different relations with other variables. Therefore, it indicates the potential of developing a formative measurement model. Testing a formative indicator model is beyond the scope.
of the current study. However, it is important to examine this possibility in both theory development and empirical testing in future research. Future research may also need to consider testing the extent to which positive employee health may differ across organizational contexts and cultures.

The second limitation relates the samples used in this study. Although three different samples were used in this dissertation, which can provide some indication of the generalizability of the present research findings, cross-sectional data prohibits researchers from inferring causality among the constructs in conceptual models. The small sample size of Study Three may have caused the potential problem of the multicollinearity in SEM model which reduces the reliability of study findings. Moreover, using parceled variables in the SEM model may have reduced the ability of the structural model to disclose true relationships and make it is more difficult to interpret findings. To overcome this problem, additional data will be collected from the same organizational after the defense of this dissertation. It would be also useful to adopt different measure of individual performance and proactive behavior. It would be interesting for future research to include archive information, such as annual performance appraisal, in the study to see whether authentic leadership has an impact on the actual performance measures used by the organization.

**Conclusion**

Overall, given the recent attention being paid to positive organizational behavior, this dissertation integrated the theory of authentic leadership as well as psychological safety and job engagement to help explain the process by which several important employee-related outcome variables, such as positive health, knowledge sharing,
deviance behavior, and performance, are fostered or enhanced. An initial measurement instrument for positive employee health with 24 items was developed with strict attention to the validation process. Findings from this study would provide useful information for researchers as well practitioners. This dissertation could also be used as the basis for further study in related areas.
REFERENCES


APPENDIX A

SURVEY INSTRUMENT
Survey Instrument

Note that (R): reverse scored item.

Authentic Leadership (Avolio, Gardner, & Walumbwa, 2008)
0=Not at all, 4=frequently if not always

My Leader:

Transparency:
1. Says exactly what he or she means
2. Admits mistakes when they are made.
3. Encourages everyone to speak their mind.
4. Tells you the hard truth.
5. Displays emotions exactly in line with feelings.

Moral/Ethical:
6. Demonstrates beliefs that are consistent with actions.
7. Makes decisions based on his or her core values.
8. Asks you to take positions that support your core values.
9. Makes difficult decisions based on high standards of ethical conduct.

Balanced Processing:
10. Solicits views that challenge his or her deeply held positions.
11. Analyzes relevant data before coming to a decision.
12. Listens carefully to different points of view before coming to conclusions.

Self Awareness:
13. Seeks feedback to improve interactions with others.
14. Accurately describes how others view his or her capabilities.
15. Knows when it is time to reevaluate his or her positions on important issues.
16. Shows he or she understands how specific actions impact others.

Because of copyright restrictions, I cannot include the entire instrument of authentic leadership in my final version of dissertation. Please do not copy or cite this instrument for any reason.

Psychological Safety (Edmondson, 1999)
1=strongly disagree, 7=strongly agree

1. Members of this organization are able to bring up problems and tough issues
2. People in this organization sometimes reject others for being different (R)
3. It is safe to take a risk in this organization
4. It is difficult to ask other members of this organization for help (R)
5. No one in this organization would deliberately act in a way that undermines my efforts
6. Working with members of this organization, my unique skills and talents are valued and utilized
1= strongly disagree; 5= strongly agree.

Physical engagement
1. I work with intensity on my job
2. I exert my full effort to my job
3. I devote a lot of energy to my job
4. I try my hardest to perform well on my job
5. I strive as hard as I can to complete my job.
6. I exert a lot of energy on my job.

Emotional engagement
7. I am enthusiastic in my job.
8. I feel energetic at my job.
9. I am interested in my job.
10. I am proud of my job.
11. I feel positive about my job.
12. I am excited about my job.

Cognitive engagement
13. At work, my mind is focused on my job.
14. At work, I pay a lot of attention to my job.
15. At work, I focus a great deal of attention on my job.
16. At work, I am absorbed by my job.
17. At work, I concentrate on my job.
18. At work, I devote a lot of attention to my job.

Knowledge Sharing (Srivastava, Bartol, & Locke, 2006)
1= strongly disagree; 5= strongly agree.
1. People in my organization share their special knowledge and expertise with one another;
2. If someone in my organization has some special knowledge about how to perform the team task, he or she is not likely to tell the other member about it (R).
3. There is virtually no exchange of information, knowledge, or sharing of skills among members of my organization (R).
4. More knowledgeable organizational members freely provide other members with hard-to-find knowledge or specialized skills.
5. People in my organization helped others develop strategies.
6. People in my organization shared lot information with one another.
7. People in my organization did not offer suggestions to others (R).
Overall performance (Motowidlo & Van Scotter, 1994)
1= low, 4= Average, and 7= High.

1. How would you rate this employee on his/her overall performance?
2. How does this subordinate perform compared with others of the same rank?
3. How much does this subordinate contribute to unit effectiveness compared to most members of the work unit?

Need for Leadership (de Vries, Roe, & Tailieu, 1998)
1= disagree completely, 5= agree completely

1. In my organization, the role of a manager is absolutely indispensable.
2. My supervisor cannot teach me anything (R).
3. For my job-related activities it does not really matter whether I have a supervisor or not (R).
4. I cannot see much added value of the supervisor on my work (R).
5. The supervisor has a marked influence on my performance.

Perceived Organizational Politics (Ferris & Kaemar, 1992)
1= disagree completely, 5= agree completely

1. If a co-worker offers to lend some assistance, it is because they expect to get something out of it (e.g., makes them look good, you own them a favor now, etc.), not because they really care.
2. My co-workers help themselves, not others.
3. Connections with other departments are very helpful when it comes time to call in a favor.
4. I have seen people deliberately distort information requested by others for purposes of personal gain, either by withholding it or by selectively reporting it.
5. There are “cliques” or “in-groups” which hinder the effectiveness around here.
6. People in this organization often use the selection system to hire only people that can help them in their future or who see things the way they do.
7. Pay and promotion politics are generally communicated in this company (R).
8. Overall, the rules and politics around here concerning promotion and pay are specific and well defined (R).
9. You can usually get what you want around here if you know the right person to ask.
10. Favoritism rather than merit determines who gets ahead around here.
Proactivity (Griffin, Neal, & Parker, 2007)
1= very little; 5= a great deal

Supervisor rates how often employee had carried out the behavior over the past month

*Individual task proactivity*
1. Initiated better ways of doing your core tasks.
2. Come up with ideas to improve the way in which your core tasks are done.
3. Made changes to the way your core tasks are done.

*Team member proactivity*
4. Suggested ways to make your work unit more effective.
5. Developed new and improved methods to help your work unit perform better.
6. Improved the way your work unit does things.

*Organization member proactivity*
7. Made suggestions to improve the overall effectiveness of the organization (e.g., by suggesting changes to administrative Procedures).
8. Involved yourself in changes that are helping to improve the overall effectiveness of the organization.
9. Come up with ways of increasing efficiency within the organization.

Workplace Deviance Behavior (Bennett & Robinson, 2000)
1=Never; 7=Daily

Please indicate how often over the last year you have engaged in the following behaviors at work. (There is no right or wrong answers, please be as honest as possible).

1. Made fun of someone at work.
2. Said something hurtful to someone at work.
3. Made an ethnic, religious, or racial remark at work.
4. Cursed at someone at work.
5. Played mean pranks on someone at work.
6. Acted rudely toward someone at work.
7. Publicly embarrassed someone at work.
8. Took property from work without permission.
9. Spent too much time fanaticizing or daydreaming instead of working.
10. Falsified a receipt to get reimbursed for more money than is spent on business expenses.
11. Took an additional or longer break than is acceptable at the workplace.
12. Came in late to work without permission.
13. Littered the work environment.
14. Neglected to follow the boss' instructions.
15. Intentionally worked slower than could be worked.
16. Discussed confidential company information with an unauthorized person.
17. Used an illegal drug or consumed alcohol on the job.
18. Put little effort into work.
19. Drug out work in order to get overtime.
### Job Satisfaction (Brayfield & Rothe, 1951)
1 = strongly disagree; 5 = strongly agree

1. I feel fairly satisfied with my present job.
2. Most days I am enthusiastic about my work.
3. Each day at work seems like it will never end (R).
4. I find real enjoyment in my work.
5. I consider my job to be rather unpleasant (R).

### Life Satisfaction (Diener, Emmons, Larsen & Griffin, 1985)
1 = strongly disagree; 5 = strongly agree

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

### Psychological Well-being (Ryff, 1995)
1 = strongly disagree; 6 = strongly agree

1. I tend to be influenced by people with strong opinions (R).
2. In general, I feel I am in charge of the situation in which I live.
3. I think it is important to have new experiences that challenge how you think about yourself and the world.
4. Maintaining close relationships has been difficult and frustrating for me (R).
5. I live life one day at a time and don’t really think about the future (R).
6. When I look at the story of my life, I am pleased with how things have turned out.
7. I have confidence in my opinions, even if they are contrary to the general consensus.
8. The demands of everyday life often get me down (R).
9. For me, life has been a continuous process of learning, changing and growth.
10. People would describe me as a giving person, willing to share my time with others.
11. Some people wander aimlessly through life, but I am not one of them.
12. I like most aspects of my personality.
13. I judge myself by what I think is important, not by the values of what others think is important.
14. I am quite good at managing the many responsibilities of my daily life.
15. I gave up trying to make a big improvements or changes in my life a long time ago (R).
16. I have not experienced many warm and trusting relationships with others (R).
17. I sometimes feel as if I’ve done all there is to do in life (R).
18. In many ways, I feel disappointed about my achievements in life (R).
Social Desirability (Ballard, 1992. Short forms of the Marlowe-Crowne social desirability scale)
1= True; 2= False

1. I sometimes feel resentful when I don't get my way. (F)
2. On a few occasions, I have given up doing something because I thought too little of my ability. (F)
3. There have been times when I felt like rebelling against people in authority even though I knew they were right. (F)
4. No matter who I'm talking to, I'm always a good listener. (T)
5. I can remember "playing sick" to get out of something. (F)
6. There have been occasions when I took advantage of someone. (F)
7. I'm always willing to admit it when I make a mistake. (T)
8. I sometimes try to get even rather than forgive and forget. (F)
9. I am always courteous, even to people who are disagreeable. (T)
10. I have never been irked when people expressed ideas very different from my own. (T)
11. There have been times when I was quite jealous of the good fortune of others. (F)
12. I am sometimes irritated by people who ask favors of me. (F)
13. I have never deliberately said something that hurt someone's feelings. (T)

Negative affect (Watson, Clark & Tellegen’s ,1988)
1=Very slightly or not at all; 5=extremely

1. Irritable
2. Distressed
3. Ashamed
4. Upset
5. Nervous
6. Guilty
7. Scared
8. Jittery
9. Hostile
10. Afraid
Vigor (Shirom, 2003)
1=Never or almost never; 7=Always or almost always

1. I feel full of pep [Phys]
2. I feel I have physical strength [Phys]
3. Feeling vigorous [Phys]
4. I feel energetic [Phys]
5. Feeling of vitality [Phys]
6. I feel I can think rapidly [CL]
7. I feel I am able to contribute new ideas [CL]
8. I feel able to be creative [CL]
9. I feel able to show warmth to others [EE]
10. I feel able to be sensitive to the needs of coworkers and customers [EE]
11. I feel I am capable of investing emotionally in coworkers and customers [EE]
12. I feel capable of being sympathetic to co-workers and customers [EE]

Notes: Phys = Physical Strength; EE= Emotional Energy; and CL= Cognitive Liveliness
Control Variables

Ethnicity

(1) Asian/Pacific Islander  (4) Caucasian
(2) African American      (5) Latino/Hispanic
(3) Middle Eastern        (6) Native American
(7) Other, please specify:

Gender

1 = male and 0 = female.

Organizational Tenure

Number of years in present job: Years
How many years have you worked at your current organization?

Education

How many years of formal education did you complete (starting with 1st grade)?
(1) Less than high school  (4) College degrees
(2) High school diploma    (5) Advanced college degrees (Masters, JD, Ph.D., etc.)
(3) Some college

Age

Organizational status

Job title:

Does your job description include management duties? Yes No

Leader’s span of control

How many people are there under the supervision of the same leader?
Transformational Leadership (Bass & Avolio, 2004)
0 = Not at all, 4 = Frequently if not always

Judge how frequently each statement fits the person you are describing

Idealized influence:
1. Talks about their most important values and beliefs.
2. Instills pride in me for being associated with him/her.
3. Specifies the importance of having a strong sense of purpose.
4. Goes beyond self-interest for the good of the group.
5. Acts in ways that builds my respect.
6. Considers the moral and ethical consequences of decisions.
7. Displays a sense of power and confidence.
8. Emphasizes the importance of having a collective sense of mission.

Inspirational Motivation:
9. Talks optimistically about the future.
10. Talks enthusiastically about what needs to be accomplished.
11. Articulates a compelling vision of the future.
12. Expresses confidence that goals will be achieved.

Intellectual Stimulation:
13. Seeks differing perspectives when solving problems
14. Gets me to look at problems from many different angles.
15. Suggests new ways of looking at how to complete assignments.

Individual Consideration:
16. Spends time teaching and coaching.
17. Treats me as an individual rather than just as a member of a group.
18. Considers me as having different needs, abilities, and aspirations from others.
19. Helps me to develop my strengths.

Because of copyright, I cannot include the entire instrument of transformation leadership in my final version of the dissertation. Please do not copy or use this instrument for other studies.
APPENDIX B

ORIGINAL ITEMS OF POSITIVE EMPLOYEE HEALTH AND CRV FOR SUBSTANTIVE VALIDITY
### Original Items of Positive Employee Health and CRV for Substantive Validity

<table>
<thead>
<tr>
<th>NO.</th>
<th>Items</th>
<th>CVR</th>
<th>Csv</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Maintaining close relationships with other people in this organization has not been difficult at all.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>2</td>
<td>I rarely feel lonely at work because I have good relationships with many coworkers.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>3</td>
<td>I enjoy having personal conversations with other people in this organization.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>4</td>
<td>It is important to me to be a good listener when other people in this organization talk to me about their problems.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>5</td>
<td>I am genuinely concerned about the welfare of my coworkers.</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td>6</td>
<td>I feel like I get a lot out of my relationships with other people in this organization.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>7</td>
<td>I generally have warm and trusting relationships with my coworkers.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>8</td>
<td>People in this organization would describe me as a giving person, willing to share my time with others.</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td>9</td>
<td>I know that I can trust my coworkers, and they know they can trust me.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>10</td>
<td>I find it difficult to really open up when I talk with others in this organization (R).</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td>11</td>
<td>In this job, I feel able to show warmth to others.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>12</td>
<td>I feel good when I think of what I’ve done in this organization and what I hope to do in the future.</td>
<td>.56</td>
<td>.56</td>
</tr>
<tr>
<td>13</td>
<td>I think I have a good future in this organization.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>14</td>
<td>I have a sense of direction and purpose in the organization.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>15</td>
<td>My daily job activities rarely seem trivial or unimportant.</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td>16</td>
<td>I have a good sense of what it is I'm trying to accomplish at work.</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td>17</td>
<td>I enjoy making plans for the future and working to make them a reality in this organization.</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td>18</td>
<td>I am actively engaged in carrying out the plans I have made for myself in my organization.</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td>19</td>
<td>Some people wander aimlessly in this organization, but I am not one of them.</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td>20</td>
<td>I sometimes feel as if I've done all there is to do in the organization (R).</td>
<td>.33</td>
<td>.56</td>
</tr>
<tr>
<td>21</td>
<td>There is a good match between my values and the values of this organization.</td>
<td>.56</td>
<td>.67</td>
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<td>-----------------------------------------------------------------</td>
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</tr>
<tr>
<td>22</td>
<td>My values are very similar to the values of this organization.</td>
<td>.56</td>
<td>.67</td>
</tr>
<tr>
<td>23</td>
<td>I think that my values fit very well with the values of this</td>
<td>.56</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td>organization.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>At work, I generally succeed when I try.</td>
<td>.56</td>
<td>.67</td>
</tr>
<tr>
<td>25</td>
<td>I do not feel in control of my success at work (R).</td>
<td>.56</td>
<td>.67</td>
</tr>
<tr>
<td>26</td>
<td>I am capable of coping with most of the problems I encounter at</td>
<td>.56</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td>work.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>I make effective use of the resources I control at work.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>28</td>
<td>I am good at juggling my time so that I can fit everything in</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>that needs to get done at work.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>In general, I feel I am in charge of the situation in which I</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>work.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>My job-related knowledge goes beyond what is required by my</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>job.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>I feel I can handle many things at a time at this job.</td>
<td>-.77</td>
<td>-.67</td>
</tr>
<tr>
<td>32</td>
<td>I believe that I can solve problems assigned to me with</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td></td>
<td>reasonable effort.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>If I were unhappy with a situation at work, I can generally</td>
<td>-.33</td>
<td>-.33</td>
</tr>
<tr>
<td></td>
<td>change things to make it better.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>If I receive any criticism at work, I generally just take it as</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td></td>
<td>an opportunity to do better.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>There are lots of ways around any problem at work.</td>
<td>.55</td>
<td>.56</td>
</tr>
<tr>
<td>36</td>
<td>I usually manage difficulties one way or another at work.</td>
<td>.55</td>
<td>.56</td>
</tr>
<tr>
<td>37</td>
<td>I usually take stressful things at work in stride.</td>
<td>.55</td>
<td>.56</td>
</tr>
<tr>
<td>38</td>
<td>I can get through difficult times at work because I’ve</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td></td>
<td>experienced difficulty before.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>When things are uncertain for me at work, I usually expect the</td>
<td>.78</td>
<td>.78</td>
</tr>
<tr>
<td></td>
<td>best.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>If something can go wrong for me work-wise, it will.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>41</td>
<td>I always look on the bright side of things regarding my job.</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>42</td>
<td>I’m optimistic about what will happen to me in the future as it</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>pertains to work.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43</td>
<td>I feel my ability has improved over the years because I have to</td>
<td>.55</td>
<td>.56</td>
</tr>
<tr>
<td></td>
<td>deal with some negative events.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>I feel I can handle conflict at work much better now than in the</td>
<td>.55</td>
<td>.56</td>
</tr>
<tr>
<td></td>
<td>past.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Good and bad experience has both contributed to my development.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: 1. CVR=(n_e-N/2)/(N/2) where n_e is number of people assigned the item to the designed dimension-total of response. N is the total responses. (Lawshe, 1975).
2. Csv=(n_e-n_o)/N; where n_o is the highest number of assignment of the item to any other dimensions.