TESTING WORK CHARACTERISTICS AS MEDIATING FACTORS IN THE

RELATIONSHIPS AMONG NURSE LEADERSHIP,

BURNOUT, AND ENGAGEMENT

By

Heather Kaye Smith

Approved:

_____	_____
Christopher J. L. Cunningham UC Foundation Associate Professor (Thesis Chair)	Brian J. O'Leary Department Chair - Psychology (Committee Member)
_____	_____
Bart L. Weathington UC Foundation Associate Professor (Committee Member)	Herbert Burhenn Dean of the College of Arts and Sciences

_____

A. Jerald Ainsworth
Dean of the Graduate School

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Heather Kaye Smith

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ABSTRACT

Nurse staff burnout is a critical element of the quality of worklife for nurses, due to burnout's positive relationship with turnover/turnover intentions. This study attempted to bridge the gap between two areas of related research: transformational leadership and burnout/engagement, using work characteristics (i.e., areas of worklife: AWL) as mediators of the relationship between leadership and burnout/engagement. A sample (N = 142) of practicing nursing students and full-time working nurses who were recruited from a university, hospital, and social network connections completed a questionnaire that gathered their perceptions of nurse leadership, AWL, and burnout/engagement. Results suggested that transformational leadership is strongly related to AWL, and that specific AWL mediate the relationship between transformational leadership and burnout/engagement. The model used in this study is situational and its measures have the ability to locate the sources of burnout/engagement.

DEDICATION

To my parents, Wayne and Helen, for their never-ending support, advice, and love. To my best friend, Adam, for his constant encouragement, humor in times of need, and support to reach my goals.

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CHAPTER I

INTRODUCTION

The present study examined how transformational leadership among nurse supervisors may influence subordinate staff members' experiences with occupational stress and burnout/engagement. Building on the limited existing research in this area, this study also examined the role of several important positive work environment factors (manageable workload, control, reward, community, fairness, and values), known as "areas of worklife" (AWL), that may mediate this link between leadership and burnout/engagement. These are important topics to research, given the established link between burnout and nurse turnover/turnover intentions (Leiter & Maslach, 2009; Schaufeli & Enzmann, 1998; Spence Laschinger, Leiter, Day, & Gilin, 2009). In addition, a continuing global nursing shortage exists due to high succession rates (more nurses exiting the field than entering), health care budgets, and staff cuts (Patrick, 2007; Spence-Laschinger et al., 2009).

The present study was designed to gain insight into one potentially powerful predictor (i.e., nurse leadership characteristics) of nurse staff burnout/engagement. Knowledge of this relationship could have strong future implications for the development of work environments that can prevent burnout and hopefully better retain nurses. There is a vast amount of nurse literature pertaining to the work environment, which includes factors such as leader characteristics and staff quality of worklife. Few studies, however, have explicitly tied leadership characteristics and staff burnout/engagement together (Kanste, 2008). More

specifically, the present study examined AWL (e.g., workload, autonomy, fair pay) which may help to explain the process or mechanism by which leadership is linked with staff burnout/engagement. This basic set of relationships is conceptually represented by Figure 1.

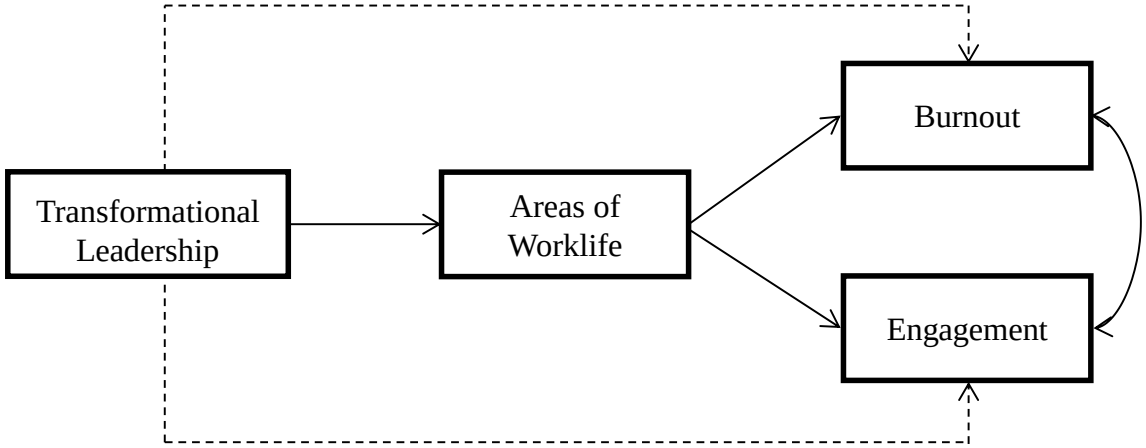


Figure 1 Fundamental Relationships under Investigation

The following sections describe, in detail, the various components of this model and provide the rationale and hypotheses around which the present study was designed.

Burnout/Engagement

The primary outcome of interest in this study is the general quality of worklife experienced by nurses, characterized as existing along a spectrum ranging from burnout to engagement (e.g., Spence-Laschinger et al., 2009). By definition, burnout is, "a psychological syndrome of exhaustion, cynicism, and inefficacy which is experienced in response to chronic job stressors" (Spence-Laschinger et al., 2009, p. 304). *Exhaustion* represents the stress experienced by the individual, and the feeling of being overworked and drained of physical and emotional resources (Leiter & Maslach, 2004). *Cynicism* represents the negative or seriously

disengaged response to different features of the job (Leiter & Maslach). *Inefficacy* refers to the feeling ineffectiveness and of lack of achievement and productivity in work (Leiter & Maslach).

In contrast, engagement is characterized by employees who are energetic, fully immersed in their work activities, and efficacious in their work efforts (Leiter & Maslach, 2009). Engagement contains the following dimensions: vigor, dedication, and absorption (Schaufeli, Bakker, & Salanova, 2006). *Vigor* occurs when employees exercise tenacity when confronted with obstacles at work, are emotionally tough, and possess a high degree of energy (Schaufeli et al., 2006). Vigor and exhaustion are polar opposites (Demerouti, Bakker, & Mostert, 2010; Maslach, Schaufeli, & Leiter, 2001). *Dedication* represents an employee's substantial involvement at his or her work along with his or her feeling of meaningfulness, "enthusiasm, inspiration, pride, and challenge" (Schaufeli et al., 2006, p.702). *Cynicism* is the opposite of *dedication* (Demerouti et al., 2010; Maslach et al., 2001). *Absorption* occurs when an employee enjoys his or her job so much they have difficulty departing from his or her tasks and duties (Schaufeli et al.). *Absorption* does not have an opposing burnout dimension (Demerouti et al.).

There is some disagreement in the literature regarding whether burnout and engagement really are opposite ends of the same spectrum. Thus, in the present study, these two outcomes were treated as separate, but related constructs (Maslach et al., 2001; Schaufeli & Bakker, 2003, 2004). A major issue at the heart of this debate over a single versus dual spectrum conceptualization of burnout is that a single spectrum perspective suggests that engagement can be operationalized as a low score on a burnout inventory (Bakker, Schaufeli, Leiter, & Taris, 2008). This supposition is challenged, however, by research that has shown that low burnout scores on the Maslach Burnout Inventory-General Scale (Schaufeli, Leiter, Maslach, & Jackson, 1996) are not necessarily indicative of high engagement (Demerouti et al., 2010; Schaufeli &

Bakker). Given this issue, Schaufeli and Bakker (2003) among others have recommended that burnout and engagement should be measured with two different instruments.

To facilitate the hypotheses testing involving both outcomes, the present study measured engagement and burnout separately. Regardless of whether burnout and engagement are directly opposing ends of a single continuum, the existing research suggests they are consistently and negatively correlated (e.g., Demerouti et al., 2010; Schaufeli et al., 2006; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). Therefore, whenever a burnout relationship is discussed in this review, the opposite relationship was also anticipated. It is also important to note that burnout has received much more research attention than engagement (Bakker et al., 2008). As such, the majority of this background review focuses on empirical burnout results, given the large amount of literature available on this construct, but with the knowledge that such findings may logically represent the opposite with respect to engagement as an outcome. Before delving into specific relationships involved in the mediational model summarized in Figure 1, it is first important to emphasize the first hypothesis to be consistent with the literature:

> *Hypothesis 1*: Burnout and engagement are separate, but related constructs that are negatively correlated.

Leadership and Burnout/Engagement

Burnout for nurses and employees in a variety of occupations is influenced by various work stressors (i.e., work-related factors that may be physical, social, or psychological in nature, and force the worker to adapt in some way in response to their presence). Even though previous research has shown an association between work stressors and burnout among nurses (Duquette, Kerouac, Sandhu, & Beaudet, 1994; Leiter & Maslach, 2009), few studies have explored the potential influence of the potentially important stressor of poor leadership on employee burnout.

The present study is designed around a transformational leadership framework because it has arguably become the most popular leadership perspective in current leadership research (Nyberg, Bernin, & Theorell, 2005), particularly within the nursing field (Sofarelli & Brown, 1998; Thyer, 2003; Welford, 2002). Also, as an inherently "positive" perspective on leadership, transformational leadership may also hold promise as a mechanism for reducing the risk of burnout and increasing engagement among nurses. Despite this potential, few studies have explicitly linked leadership of any sort with nurse staff burnout/engagement.

Thankfully, related previous research offers some guidance regarding the likely linkages between leadership-related factors and burnout. For example, it has been shown that nurse leaders have the ability to effectively mediate work stressors within the work environment for their staff (e.g., by implementing fair practices), or essentially function as an additional work stressor if they practice incivility themselves (Leiter & Maslach, 2009; Spence-Laschinger et al., 2009) and/or are highly control oriented (Stordeur, D'hoore, & Vandenberghe, 2001). Nurse leaders may also serve as a contributing factor in staff members' burnout if they fail to offer general support to their subordinates (Bakker, Killmer, Siegriest, & Schaufeli, 2000). Previous research has shown nurse leaders to be the primary influence over environmental factors, which can contribute to discrepancies between workers and their jobs, which in turn can influence workers' level of burnout (Leiter & Spence-Laschinger, 2006; Spence-Laschinger & Leiter, 2006). Similarly, it has been suggested that effective nurse leadership may contribute to engaging work environments for nurse staff (Spence-Laschinger & Leiter).

Transformational Leadership

Bass's (1985) conceptualization of transformational leadership is one of the most popular leadership theories applied to leadership research in and outside of the nursing field (Kanste,

2008; Stanley, 2008; Stordeur et al., 2001). Although Burns (1978) was the first researcher to examine transformational leadership elements, Bass (1985) further developed the concept into its popular form, defining transformational leaders as individuals who motivate their subordinates to perform above average by influencing their subordinates' values, views, and attitudes. Transformational leaders do not just obtain obedience from their subordinates, they inspire them to go the extra mile.

More specifically, Bass (1985) defined transformational leadership as involving four dimensions or elements: charisma (now referred to as idealized influence; Barbuto, 1997), inspirational motivation, intellectual stimulation, and individualized consideration. *Idealized influence* occurs when a leader's behavior encourages their subordinates to regard their leaders highly. *Inspirational motivation* relates to a leader's optimism of the organization's future. *Intellectual stimulation* occurs when a leader encourages their subordinates to resolve issues. *Individual consideration* occurs when a leader understands the unique needs and abilities of subordinates and mentors using this information (Bass, 1999).

Transformational leadership is often paired with and measured alongside transactional leadership (Bass, 1999). Transactional leadership refers to leadership that functions via gaining obedience from followers. There are three dimensions of transactional leadership: contingent reward, active management-by-exception, and passive management-by-exception (Bass). *Contingent reward* describes reward granted to followers by leaders for achieving goals set by both the followers and leaders (Bass). *Active management-by-exception* represents leaders who actively monitor the work of their followers to prevent mistakes (Bass). *Passive management-by-expection* refers to leaders who correct subordinate mistakes after the mistakes have occurred (Bass).

As discussed by Rafferty and Griffin (2004), over the years, there have been concerns about the overly broad conceptualizations of Bass' (1985) model. Rafferty and Griffin provided several emamples to support their argument. For example, it is argued that transformational leadership's charisma/idealized influence and inspirational motivation definitions have become similar over time (Barbuto, 1997). Another issue involves the common characteristics identified as reflecting individualized consideration and contingent reward (Yukl, 1999). Furthering the ambiguity, some researchers have defined contingent reward in such a way that it not only carries transactional processes, but transformational elements as well (Goodwin, Wofford, & Whittington, 2001).

For these and other reasons, there has been mixed empirical support for the traditional transformational leadership model. Research has shown that high intercorrelations exist between scores on measures of the various transformational leadership dimensions, even when adequately fitting statistical models are designed (e.g., Avolio, Bass, & Jung, 1999; Bycio, Hackett, & Allen, 1995; Carless, 1998). More recent work by Rafferty and Griffin (2004) has potentially improved Bass's (1985) theoretical model, by reconceptualizing the transformational subdimensions into more distinct elements, each based on specific characteristics.

Building on much of the material just presented, Rafferty and Griffin (2004) reconceptualized the original transformational leadership dimensions into the following. *Vision* replaced Bass's charisma/idealized influence, and was defined as, "the expression of an idealized picture of the future based around organizational values" (p. 332). *Inspirational communication* replaced inspirational motivation and is, "the expression of positive and encouraging messages about the organization, and statements that build motivation and confidence" (p. 332). *Intellectual stimulation* was not replaced and is conceptualized as, "enhancing employees'

interest in, and awareness of problems, and increasing their ability to think about problems in new ways" (p. 333). Finally, *personal recognition* took the place of the tranformational processes originally associated with contingent reward, in that personal recognition is "the provision of rewards such as praise and acknowledgement of effort for achievement of specified goals" (p. 333).

Rafferty and Griffin (2004) also re-conceptualized individualized consideration into *supportive leadership,* but further refined this in 2006, splitting individualized consideration into two components: *supportive leadership* and *developmental leadership*. Rafferty and Griffin (2006) further discussed this evolved, misinterpreted dimension. The distinction Rafferty and Griffin made was based on a theoretical shift regarding individualized consideration being less career development-oriented (Bass, 1985) and more employee support-oriented (Avolio & Bass, 1995; Bass, 1999). Initially, individualized consideration encompassed leader characteristics that encouraged subordinates to participate in training and development programs to futher their career. However, over time, individualized consideration has included supportive aspects. Stated in more simple terms by Rafferty and Griffin, supportive leadership is emotional support, as shown in terms of leaders' displayed concern for others and general consideration of others' needs and predilections during decision making activities (House, 1981). Tables 1 and 2 provide a summary of the distinctions between the original transformational leadership framework and the revised transformational leadership model that was applied in the present study.

Table 1

Bass's (1990) Transformational Leadership Model

Transformational Dimensions	Definition
Idealized Influence	A leader's behavior encourages their subordinates to regard their leaders highly
Inspirational Motivation	A leader's optimism of the organization's future
Intellectual Stimulation	A leader encourages their subordinates to resolve issues
Individualized Consideration	A leader understands the unique needs and abilities of subordinates and mentors using this information

Table 2

Rafferty & Griffin's (2004, 2006) Revised Transformational Leadership Model

Transformational Dimensions	Definition
Vision (replaced charisma and idealized influence)	The assertion of a successful organization in the future
Inspirational Communication (replaced insprirational motivation)	Statements of optimism and promise about the organization that build self-efficacy and motivation
Intellectual Stimulation	Encourage employees to use cognitive skills to solve problems
Personal Recognition	Reward employees who succeed in agreed upon goals (i.e., contingent reward)
Supportive Leadership (replaced individualized consideration)	Show concern for others, and consider others' needs and predilections during decision making activities; emotional support
Developmental Leadership (replaced individualized consideration)	Encourage subordinates to further their skills for career growth purposes

Linking Transformational Leadership and Burnout/Engagement

Despite the lack of research examining the relationship between transformational leadership and burnout/engagement within the nurse environment, a few studies do provide a starting point for this exploration. Almost all of these limited studies in this section utilized Bass's (1985) model of transformational leadership and not Rafferty and Griffin's (2004, 2006), but parallels are likely given the theoretical similarities between these two leadership models (i.e., they are both models of transformational leadership).

In Skakon, Nielson, Borg and Guzman's (2010) review of 30 years of research in this area, transformational leadership was related to a low level of subordinate stress and high subordinate well-being in various work settings. Similar results have been found in the nursing field. As an example, Stordeur et al. (2001) studied the impact of work stressors, including nurse leaders' transformational characteristics, on the emotional exhaustion of nurse staff. Stordeur et al. found, that all four transformational leadership dimensions (i.e., inspirational leadership, idealized influence, individualized consideration, and intellectual stimulation) were significantly, negatively correlated with emotional exhaustion. Work stressors explained 22% of the variability in emotional exhaustion, whereas separately, multidimensional leadership (transformational and transactional forms) accounted for only 9% of the variability in emotional exhaustion. Yet, this finding partially supports the foundation of the present study in which work stressors are direct burnout precursors (Lee & Ashforth, 1996) and leadership characteristics may serve as indirect antecedents.

Stordeur et al. (2001) suggested that the reason for the negative correlation between transformational leadership and burnout were from the positive effect of leaders who practiced participative decision-making and two-way communication, which are typical behaviors for

transformational leaders. These behaviors are commonly expected to lead to a healthy work climate with positive interpersonal relationships. Stordeur et al. also suggested that nurse leaders should provide feedback and social support to their nurse staff. These characteristics have been shown to increase nurses' self-esteem (Bakker et al., 2000) and empowerment (Spence-Laschinger et al., 2009). Stordeur et al.'s suggestions reflect work environment characteristics that promote engagement (Bakker, 2011). In addition, transformational leadership and engagement are expected to have a positive relationship.

Along similar lines, Kanste, Kyngas, and Nikkila (2007) studied the relationship between multidimensional leadership and nurse staff burnout. Their correlation results suggested that rewarding transformational leadership (i.e., all four dimensions of transformational leadership plus transactional leadership's contingent reward) protected nurse staff from emotional exhaustion and depersonalization. The authors conclude that leaders who are passionate about their job, optimistic about the future, reward staff fairly, pursue challenges, and support common goals for their unit, help prevent their staff from burnout. These leadership characteristics are expected to have a positive relationship with engagement due to the negative relationship that was found between transformational leadership and burnout.

In a more recent study, Kanste (2008) examined the same relationships among nurse staff. All four dimensions of the transformational leadership dimensions were significantly and negatively associated with emotional exhaustion and depersonalization. Based on these results, Kanste inferred that nurse leaders are an important source of nurse staff burnout and engagement. Thus, nurse leaders possess certain characteristics that could help prevent nurse staff burnout. Kanste further suggested that nurse leaders should provide social support and feedback. In addition, nurse leaders should be considerate of each individual staff member, and

promote development opportunities for staff to enhance their knowledge, skills and abilities (Kanste). Nurse leaders with these characteristics may, therefore, have the ability to prevent their staff members from experiencing burnout and produce engagement amongst nurse staff.

The findings and characteristics discussed above reflect effective transformational leadership, which can be expected to be associated with low levels of burnout and high levels of engagement. Thus,

Hypothesis 2a: Nurse staff members' perceptions of transformational leadership among nurse leaders are negatively associated with nurse staff burnout.

Hypothesis 2b: Nurse staff members' perceptions of transformational leadership among nurse leaders are positively associated with nurse staff engagement.

Areas of Worklife and Burnout/Engagement

Leadership is an important factor within work environments, and the previous section illustrates the influence that leaders can have over their subordinates within work settings. Leader characteristics also have the ability to affect other factors in the work environment that also may influence outcomes at the subordinate worker level. As one example, the climate of a particular job position or organization may promote or prevent burnout among workers in that position. Thus, although transformational leadership can be expected to influence the experience of burnout/engagement among staff members, it is quite likely that the link between leadership and staff experiences is not completely direct (Kanste et al., 2007). In other words, the influence of transformational leadership on staff burnout/engagement may be influenced by or channeled through a variety of other factors in the work environment that could be more proximal predictors of burnout/engagement.

As one example, Leiter and Maslach (2004) reported that burnout may arise from mismatches or stressors associated with a variety of aspects of the job as perceived by the worker. Leiter and Maslach created a model of burnout based on decades' worth of organizational stressors research, taking into account the personal and situational factors that influence burnout. In this model, there are six work-related AWL elements, which may promote or prevent burnout from developing: workload, control, reward, community, fairness, and values (Maslach et al., 2001).

Workload refers to employee perception of manageable workload, indicating that more manageable workload is a positive aspect of an employee's job, while less manageable workload suggests work overload (AWL-Workload). *Control* represents employee perception of job autonomy and decision latitude (AWL-Control). *Reward* is an indication of employee effort recognition as viewed by the employee (AWL-Reward). *Community* represents the quality of social relationships within the workplace as perceived by the staff member (AWL-Community). *Fairness* represents employee perceived justification of management and organizational promotion decisions and treatment towards staff (AWL-Fairness). *Values* reflect employee and organizational alignment in regards to goals (AWL-Values). In other words, a lack of any of these elements (e.g., low reward) may promote burnout, and a sufficient amount of the element (e.g., adequate reward) may prevent that outcome. Research has shown that this AWL model can be used to identify early burnout antecedents (Maslach & Leiter, 2008).

AWL-Workload originates from the Demand-Control model of job stress (Karasek & Theorell, 1990). To be more specific, work overload refers to an individual's inability to obtain recovery due to excessive job demands that have drained the individual's energy (Maslach et al., 2001). Work overload also diminishes an individual's ability to meet job demands, given that

person's lack of opportunity to cope with and rehabilitate from the associated stress. Work overload has consistently been shown to have a strong relationship with burnout, especially the emotional exhaustion component (Cordes & Dougherty, 1993; Leiter & Maslach, 2004; Maslach et al.; Shaufeli & Enzmann, 1998). In contrast, a positive relationship is expected to exist between workload and engagement, given that employees who have a more manageable workload may have more opportunity to engage in his/her job. This being the case, it was expected that

Hypothesis 3a: Nurse staff members' perceptions of a manageable workload are negatively associated with burnout.

Hypothesis 3b: Nurse staff members' perceptions of a manageable workload are positively associated with engagement.

AWL-Control is another work characteristic that originated from the Demand-Control theory of job stress (Karasek & Theorell, 1990). This area includes employee autonomy and represents an employee's ability to influence decision-making within their work environment (Leiter & Maslach, 2004). If an individual perceives a low level of work-related control, it may be due to the lack of resources available to the individual, which may cause him or her difficulty in completing job duties (Maslach et al., 2001). A lack of perceived control may also arise from interrole conflicts and more general ambiguity (Maslach & Leiter). In contrast, organizations that practice participative decision-making may enhance perceptions of control among staff members (Leiter & Maslach). Lack of control is usually associated with feelings of inefficacy (Maslach et al.), while control has been positively associated with engagement (e.g., Koyuncu, Burke, & Fiksenbaum, 2006). Thus,

Hypothesis 4a: Nurse staff members' perceptions of control are negatively associated with burnout.

Hypothesis 4b: Nurse staff members' perceptions of control are positively associated with engagement.

AWL-Reward occurs when behavior is molded by reinforcements (Leiter & Maslach, 2009). Rewards may be intrinsic or in the form of social recognition, or money (Leiter & Maslach, 2004). A lack of reward may originate when an employee is not receiving a deserved salary, or when their hard work goes unnoticed. An employee's lack of pride in doing meaningful work efficiently refers to intrinsic rewards (Maslach et al., 2001). A lack of rewards is associated with inefficacy (Leiter & Maslach, 2004; Maslach et al.). Previous studies have shown that insufficient rewards (e.g., money, social, intrinsic) increase a person's susceptibility to burnout (Chappell & Novak, 1992; Glicken, 1983; Maslanka, 1996; Siefert, Jayaratne, & Wayne, 1991). Leiter and Maslach (2009) reported nurses who experienced unfair distribution of rewards (e.g., lack of deserved recognition or pay) were more likely to be cynical about their jobs (i.e., an indication of burnout). In addition, the area of reward was found to be a significant predictor of employee engagement in Koyuncu et al.'s (2006) study. As such, it was expected that,

Hypothesis 5a: Nurse staff members' perceptions of reward are negatively associated with burnout.

Hypothesis 5b: Nurse staff members' perceptions of reward are positively associated with engagement.

AWL-Community refers to interpersonal conflicts and support (Leiter & Maslach, 2004). A lack of community may occur if the person becomes disconnected with other co-workers

within the work environment (Maslach et al., 2001). "People thrive in community and function best when they share praise, comfort, happiness, and humor with people they like and respect" (Maslach et al., 2001, p. 415). People then share similar values, which strengthens group membership. However, social conflicts that are constant and unresolved generate hostility and decreases the chances of social support. In terms of workload, supervisor support has been associated with emotional exhaustion (Leiter& Maslach, 2004). Co-worker support has been positively associated with efficacy (Leiter& Maslach, 2004), and efficacy is a type of personal resource highly associated with engagement (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). In general, increased social support has been linked to employee engagement (Leiter & Maslach, 1988a; Schnorpfeil et al., 2002). In addition, early research showed a high association between unpleasant relationships with supervisors and burnout (Leiter & Maslach, 1988b). Therefore, it was expected that,

Hypothesis 6a: Nurse staff members' perceptions of community are negatively associated with burnout.

Hypothesis 6b: Nurse staff members' perceptions of community are positively associated with engagement.

AWL-Fairness stems from equity and social justice research (Leiter & Maslach, 2004). Fairness refers to whether organizational decisions are recognized as fair and employees are treated in a manner with reverence (Leiter & Maslach, 2004). Individuals who demonstrate fairness show respect for others, which is foundational to build the AWL-Community (Leiter& Maslach, 2004). Individuals are more concerned about the integrity of decision procedures compared to the decision outcome (Leiter & Maslach, 2004). Fairness is also determined by an individual's perception of input (e.g., effort) and output (e.g., pay) balance (Leiter & Maslach,

2004). "Unfair treatment is emotionally upsetting and exhausting" (Maslach et al., 2001, p.415), and creates a feeling of pessimism for an employee towards the workplace (Maslach et al., 2001). Employees are less likely to experience burnout if they have fair supervisors (Leiter & Harvey, 1997, 1998). In a more specific context, Leiter and Maslach (2009) found that a lack of fairness (i.e., unfair reward dissemination) was a significant predictor of burnout among nurses. Thus, it was expected that,

Hypothesis 7a: Nurse staff members' perceptions of fairness are negatively associated with burnout.

Hypothesis 7b: Nurse staff members' perceptions of fairness are positively associated with engagement.

AWL-Values involve the initial objectives and enthusiasms that appealed the applicant to the position (Leiter & Maslach, 2004). This area of worklife is the primary element of a person's relationship with their job. Engagement is most likely to occur for employees whose values are aligned with their organizations' values. When there is a lack of perceived values, employees feel as if they have to conduct work instead of wanting to (Leiter & Maslach, 2004). Based on previous research, all three burnout components have been related to a conflict in values (Leiter & Harvie, 1997). A lack of perceived values has been shown to be a significant predictor of burnout for nurses (Leiter & Maslach, 2009). Moreover, perception of values has shown to be a significant predictor of employee engagement (Koyuncu et al., 2006). Therefore,

Hypothesis 8a: Nurse staff members' perceptions of values are negatively associated with burnout.

Hypothesis 8b: Nurse staff members' perceptions of values are positively associated with engagement.

Linking Leadership and Areas of Worklife

Previous research has demonstrated that nurse leaders function as stimuli that can influence burnout among nurse staff (Leiter & Spence-Laschinger, 2006; Spence-Laschinger & Leiter, 2006). Spence-Laschinger and Leiter state that leadership is related to the reward and control areas of worklife, because nurse leaders serve as "sources of recognition, social support, and initiative" (p.138). This being the case, it was expected that,

> *Hypothesis 9a*: Nurse staff members' perceptions of transformational leadership are positively related to nurse staff members' perceptions of control.

Lee et al. (2010) conducted a study that examined health care managers' (five levels of managers) self-assessments of leader practices, AWL, and burnout. Following an intervention to educate and improve healthcare managers' practices, Lee et al. collected post-intervention self-assessments using the same surveys distributed before the intervention. Several dimensions of transformational leadership were positively associated with AWL. More specifically, prior to the leadership intervention, the managers reported strong relationships between several dimensions of transformational leadership and areas of worklife. For example, all transformational dimensions were significantly related to the AWL elements of appropriate reward and sense of community. All of the transformational dimensions, except models the way, were related to congruence between organizational and personal values. The strength of these relationships decreased following the intervention, though, possibly due to educational knowledge and realistic awakenings of one's leadership behavior. Furthermore, negative relationships between transformational leadership and burnout were identified, supporting earlier findings. Person-organization value alignment (i.e., AWL-Values) was also shown to have a strong negative

relationship to emotional exhaustion and cynicism, which also supports previous research (Lee et al.). Based on these previous findings, it was expected that,

Hypothesis 9b: Nurse staff members' perceptions of transformational leadership among nurse leaders are positively related to nurse staff members' perceptions of reward.

Hypothesis 9c: Nurse staff members' perceptions of transformational leadership among nurse leaders are positively related to nurse staff members' perceptions of community.

Hypothesis 9d: Based on the similar qualities between fairness, community and reward (Leiter & Maslach, 2004), nurse staff members' perceptions of transformational leadership among nurse leaders are positively related to nurse staff members' perceptions of fairness.

Hypothesis 9e: Nurse staff members' perceptions of transformational leadership among nurse leaders are positively related to nurse staff members' perceptions of values.

Lee et al. (2010) did not report a significant relationship between transformational leadership and a person's ability to manage workload (the final AWL element). This could be due to many factors, including the possibility that the sample in Lee et al.'s study viewed workload as an element more directly related to the work environment rather than the leadership (quite likely, given that sample's recent experience with a large scale organizational development initiative that at one point involved a serious lack of employees and very high workload). Additionally, it is possible that another sample at a different location could perceive more of a connection between transformational

leadership with workload, if their leadership was more influential in dictating their work demands. Considering this possibility, it was expected that,

> *Hypothesis 9f*: Nurse staff members' perceptions of transformational leadership among nurse leaders are positively related to nurse staff members' perceptions of manageable workload.

The Present Study

A model linking leadership, AWL, and nurse staff burnout exists, and it is known as the Nursing Worklife Model of Burnout (Leiter & Spence-Laschinger, 2006). Neither this model, nor the various researchers who have indicated that leadership is a driving force of nurse quality of worklife have specified what perspective on or type of leadership is most appropriate or relevant to these types of investigations (e.g., Spence-Laschinger et al., 2009; Leiter & Maslach, 2009). The present study tested AWL as a partial mediator of transformational leadership and burnout/engagement. Figure 2 summarizes the hypotheses described in the preceding sections, and illustrates the expected linkages between transformational leadership and AWL, which ultimately affect burnout/engagement.

Previous research has shown and discussed the impact that leadership characteristics have on burnout, and the possible reasons for such a relationship (Kanste, 2008; Kanste et al., 2007; Leiter & Maslach, 2009; Spence-Laschinger et al., 2009; Stordeur et al., 2001). The present study included AWL for its potential to at least partially explain the mechanisms by which leadership can lead to nurse staff burnout. In addition, by integrating and testing various specific AWL (as illustrated in Figure 2), the present study represents an extension of the existing Nurse Worklife Model of Burnout (Leiter & Spencer-Laschinger, 2006).

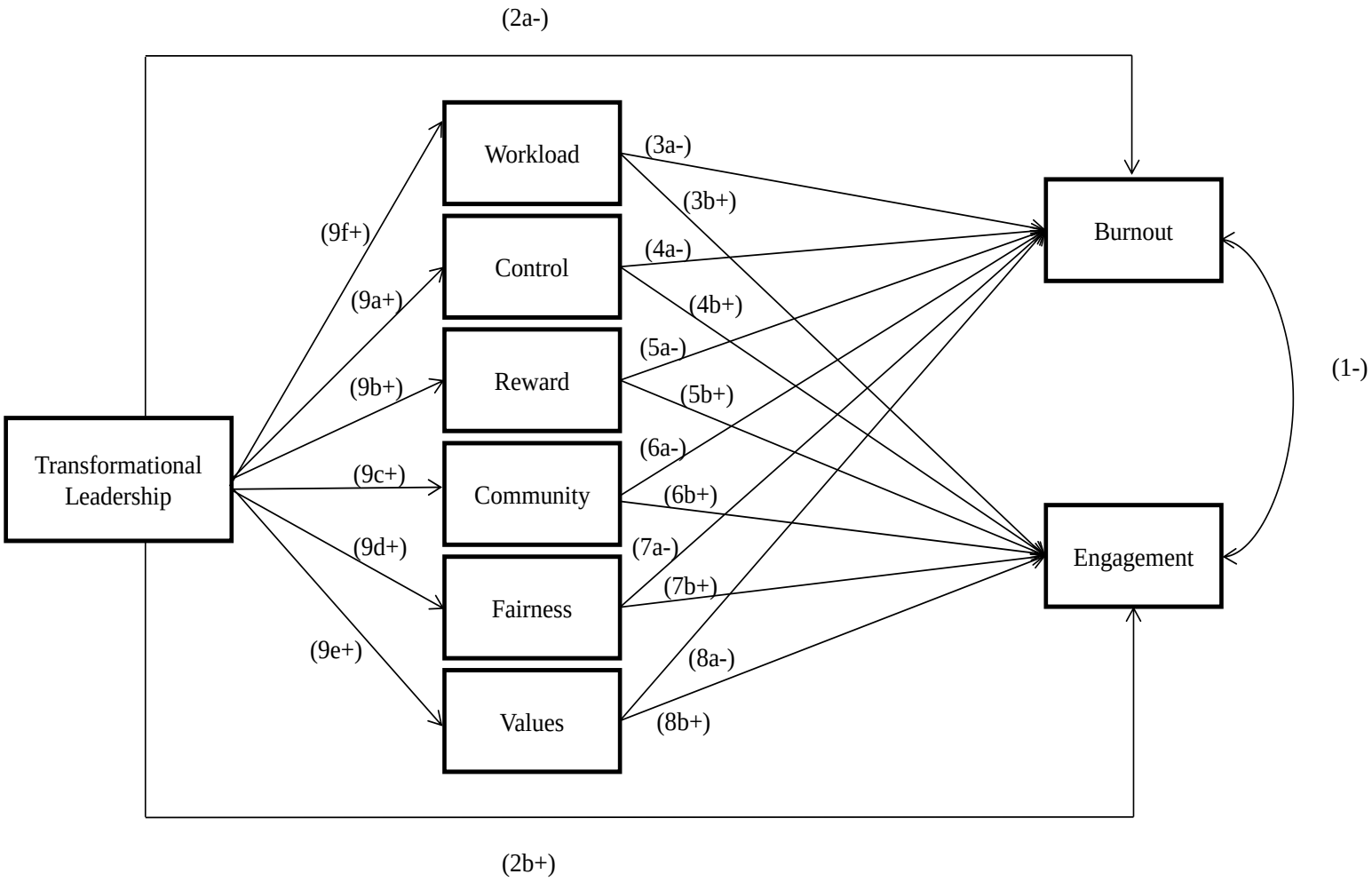


Figure 2 Partial Mediation Model of Present Study

CHAPTER II

METHOD

Participants and Procedure

Participants were nursing students, full-time nurses at a local hospital, and full-time nurses recruited via the researcher's personal network. The final overall sample of participants consisted of 142 nurses or nursing students with the majority being Caucasian (93.7%), female (90.8%), and with an average age of 38.44 years (*SD* = 14.19). The following procedures were approved by both the university and local hospital's Institutional Review Boards (Appendix A). The first page of all surveys was the formal Informed Consent letter (see Appendix B for a copy).

To ensure participant confidentiality, no responses were released to nurse supervisors under any circumstance. All data were stored anonymously and kept in the strictest confidence within the researcher's files. Participants were also free to withdraw from the study at any point in time, without penalty, and were notified of this option very early in the process. It should be noted that all participants were requested to complete a battery of questionnaires (Rafferty & Griffin, AWLS, MBI-GS, OLBI, UWES-17, Thompson Mini-Markers, & demographic information) whether it was via SurveyMonkey or mail-in hard copy. After participants responded to the complete survey, they were given the opportunity to request a summary of the final, aggregate study results.

All current nursing students (n = 120) were invited to participate via in-person appeals. Students who agreed to participate (n = 44) provided their contact information and were e-mailed a link to the survey hosted through SurveyMonkey.com. Ultimately, 22 students completed the survey; all of these students had and were continuing to gain additional significant nursing experience as a result of the clinical portions of their nursing program requirements.

Non-student participants were recruited via an arrangement made with a local healthcare system, which granted access to their nurses and hospitals based on the agreement that general results would be shared with the institution upon completion of the study. The nurses were first contacted via recruitment emails and strategically placed posters regarding the basic premise of the research. In conjunction with the posters, 100 hard-copy surveys were distributed along with pre-paid return mailing envelopes (to ensure participant confidentiality). Of the surveys disseminated, only 18 completed surveys were returned (approximately an 18% response rate).

To add to this non-student subsample, the researcher's social media connections (i.e., Facebook) were used to contact nurses within her personal network (2.6% of her total immediate contacts, or approximately 25 individuals). Utilizing an adapted snowball sampling approach, each of these 25 individuals were asked to provide email addresses for as many as 10 additional working nurses within their own networks. These additional nurses were also invited to participate. A SurveyMonkey survey link was sent to these individuals and this approach yielded an additional 102 completed surveys from working nurses in a variety of healthcare settings. Participants' employment status as a nurse was verified by considering their responses to a series of demographic questions designed to screen out those who were not actually working as nurses.

Measures

All measures are included in Appendices B - D.

Demographics. Participants were asked to provide demographic information regarding age, sex, race/ethnicity, level of education, work hours, tenure at organization, salary (personal and family or spouse if they are primary source of financial support), and number of dependents. Nurses contacted in-hospital and via personal network were also asked to indicate if they were currently enrolled in school. Students and in-hospital nurses were asked to report their current organization, work unit/department, and management level. Personal contacts were requested to provide the zip code of their current employer. All variables, if appropriate were considered as possible covariates in the descriptive statistics analyses.

Personality information was gathered to serve as potential covariates in the statistical analyses. This study utilized the International English Big-Five Mini-Markers (Thompson, 2008). The assessment consists of 40 adjectives, addressing all five facets of the Big Five model of personality. Responses were made on a five-point scale of perceived accuracy (1 = "Inaccurate" to 5 = "Accurate"). Higher scores indicated higher levels of each personality trait. Acceptable internal consistency reliabilities were identified for all Big Five scales: openness to experience (α = .82), agreeableness (α = .84), neuroticism (α = .81), conscientiousness (α = .85), and extraversion (α = .89). These Cronbach's alphas are similar to those reported originally by Thompson.

Transformational leadership. The perceived transformational leadership of participants' nursing leaders was measured with Rafferty and Griffin's (2004, 2006) measure. This instrument consists of 18 descriptive statements regarding their perceptions of the

leadership qualities of the supervisor or person they turn to for leadership. Adapting the original five-point scale to improve sensitivity, participants in this study were asked to rate their level of agreement with each item on a seven-point Likert scale (1 = "Strongly disagree" to 7 = "Strongly agree"). A higher overall score indicates a higher degree of perceived transformational leadership. Cronbach's alpha for the overall perceived transformational leadership scale was .97, which reflect Rafferty and Griffin's (2004) study (A. Rafferty, personal communication, March 14, 2012). Rafferty and Griffin's (2004) study only included 15 items. Their study in 2006 expanded individual consideration (i.e., supportive and developmental leadership), thus, the authors of the present study included the three developmental leadership items. The researchers of the present study could not locate a publication that applied all 18 items from this more complete scale. Nonetheless, the alphas found in this present research align with Rafferty and Griffin's (2004, 2006) earlier findings.

Areas of Worklife. The Areas of Worklife Scale (AWLS; Leiter & Maslach, 2002; 2004) assessed the potential mediators of this study. This 29-item assessment measures the degree to which six AWL are perceived to exist. The AWLS consists of positively and negatively worded statements to measure the absence or presence of particular aspects of worklife. The scale was adapted from a five-point to seven-point scale. Participants rated their level of agreement with each item on a Likert scale (1 = "Strongly disagree" to 7 = "Strongly agree"). Higher scores reflect a higher perceived level of each worklife area being assessed. Thus, a higher score across these dimensions indicates a more positive/healthy work environment than a lower score (Leiter & Maslach). The following Cronbach's alphas were identified for each of the six AWLS subscales: control (α = .75), reward (α = .76), values (α =

.88), community (α = .88), fairness (α = .86), and workload (α = .78). These coefficients are consistent with previous research using this measure (e.g., Leiter & Maslach; Maslach & Leiter, 2008).

Burnout. Nurse staff burnout, the dependent variable, was assessed with two instruments (i.e., the Maslach Burnout Inventory-General Scale and the Oldenburg Burnout Inventory). The Maslach Burnout Inventory - General Scale (Schaufeli et al., 1996) measure consists of 16 items that quantity the three elements of burnout for individuals in any occupation. The items are presented as statements, and responses are in a frequency format (0 = "Never feel burnout" to 6 = "daily experience burn out"). Only the two core dimensions of burnout, depersonalization and emotional exhaustion (cf., Green, Walkey, & Taylor, 1991), were used as indicators of burnout within the analyses. This was to be consistent with the present definition of burnout and also because the present self-efficacy items within this measure demonstrated low internal consistency and inconsistent relationships with the other study variables.

Higher scores on the emotional exhaustion and depersonalization subscales indicate higher burnout. Cronbach's alphas were identified for the two core dimensions: depersonalization (α = .86), and emotional exhaustion (α = .90). These Cronbach's alphas align with earlier research (e.g., Demerouti et al., 2010; Leiter & Maslach, 2004; Spence-Laschinger et al., 2009). In addition, the overall Cronbach's alpha this study found for the MBI-GS was α = .92 and only included the depersonalization and exhaustion items.

The Oldenburg Burnout Inventory (OLBI; Demerouti, 1999; Demerouti & Nachreiner, 1998) also assessed the level of burnout among nurse participants. Only the exhaustion and disengagement dimensions of burnout are measured with this instrument. This tool consists of

16 positively and negatively worded items. In the present study, this scale was adapted from the original four-point scale (1 = "Strongly agree" to 4 = "Strongly disagree") so that participants responded on a seven-point Likert scale (1 = "Strongly disagree" to 7 = "Strongly agree"). For this measure, higher scores on the exhaustion and disengagement sub-scales indicate higher levels burnout. The following alphas were found in this study: exhaustion (α = .62), and disengagement (α = .78). The internal consistencies corroborate with previous studies (e.g., Demerouti, Bakker, Vardakou, & Kantas, 2002; Demerouti et al., 2010). The overall Cronbach's alpha was α = .81.

Engagement. Engagement was assessed with the Utrecht Work Engagement Scale-17 (Schaufeli et al., 2006; Schaufeli et al., 2002). This survey measured the perceived level of work engagement among the nurse staff. This 17-item measure addresses three different dimensions of engagement (i.e., vigor, dedication, absorption). The items are presented as descriptive statements, and respondents indicate the frequency with which each statement applies on a seven-point scale (0 = "Never" to 6 = "Always"). Higher scores on this assessment indicate higher work engagement. Items for all dimensions demonstrated adequate internal consistency reliabilities: vigor (α = .74), dedication (α = .81) and absorption (α = .68). These reliability coefficients mirrored those identified in previous research with this measure (e.g., Schaufeli et al., 2006; 2002). The overall internal consistency reliability was α = .88.

CHAPTER III

RESULTS

Prior to hypothesis testing, missing data in the personality, leadership, AWL, burnout, and engagement scales were identified and imputed using the participant's mean scale response as long as no more than half of a dimension's items were missing responses. If the dimension had a large amount of missing responses then the data were treated as missing-not-at-random, and where necessary in the analyses, listwise deletion of cases occurred.

In addition, before testing the hypotheses, the demographic and study variables provided by participants who were student- and non-student nurses were compared to ensure that there were no significant differences across these groups that might confound the interpretation of the actual hypothesis tests. No significant differences between these two subgroups were identified, so the decision was made to combine the data from all respondents into a single sample to use when testing the hypotheses.

Descriptive statistics were used to examine the distributions of all variables, along with the internal, convergent, and discriminant validities of scale scores. Composite scores were created for the burnout and engagement outcome variables. High correlations between the exhaustion and cynicism dimensions of the MBI-GS and OLBI showed that they could be aggregated into two separate composite scores. Thus, the subdimensions for both measures were standardized and then averaged to reflect an overall MBI-Burnout and OLBI-Burnout score.

Supporting the use of this type of MBI-Burnout composite score, other researchers (e.g.,

Demerouti et al., 2002; Leiter, 1993) have argued that exhaustion and cynicism are the core dimensions of burnout. Self-efficacy has been shown to have weaker relationships with other variables compared to the core dimensions (Lee & Ashforth, 1996; Schaufeli & Enzmann, 1998), and emerges later, as an independent construct, after exhaustion and cynicism are experienced (Leiter, 1993).

A similar strategy was used for the multidimensional UWES-17 measure to create an overall composite score for engagement (labeled UWES-Engagement). Table 3 summarizes the descriptive statistics and intercorrelations for all study variables.

Table 3

Descriptive Statistics and Correlations among Study Variables

Variable	*M*	*SD*	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Student	n/a	n/a									
2. Full-time	n/a	n/a	-.33 **								
3. Dependents	n/a	n/a	-.02	-.01							
4. Education	n/a	n/a	.15	-.08	-.04						
5. Extraversion	3.70	.94	-.04	.08	-.05	.01					
6. Openness	4.00	.67	.01	.04	-.03	.05	.11				
7. Neuroticism	2.88	.83	.04	.07	-.07	-.12	-.09	-.24 **			
8. Conscientiousness	4.09	.95	.04	-.08	-.04	.10	.05	.21 *	-.14		
9. Agreeableness	4.46	.86	-.16	.00	-.14	.16	.05	.25 **	-.31 **	.50 **	
10. Transformational Leadership	4.74	1.54	-.08	-.09	-.20 *	.13	.13	-.04	-.16	.12	.17 *
11. Manageable Workload	3.38	1.21	.16	-.10	-.05	.05	.01	-.14	-.06	.13	-.01
12. Control	4.55	1.40	-.05	-.06	-.09	-.06	.18 *	-.01	-.19 *	.15	.14
13. Reward	4.63	1.21	-.08	-.04	-.21 *	.04	.15	.04	-.18 *	.14	.12
14. Community	5.14	1.36	-.07	-.06	-.15	.15	.16	-.09	-.06	.19 *	.17 *
15. Fairness	3.88	1.35	-.06	-.18 *	-.14	.04	.10	-.05	-.17 *	.07	.09
16. Values	4.87	1.44	-.06	.03	-.10	.16	.07	-.03	-.24 **	.09	.20 *
17. MBI-Burnout	.00	.91	-.01	.20 *	.20 *	-.20 *	-.12	.04	.28 **	-.11	-.07
18. OLBI-Burnout	.00	.89	.00	.17 *	.16	-.16	-.18 *	.01	.33 **	-.14	-.10
19. UWES-Engagement	.00	.86	-.02	-.11	-.16	-.02	.23 **	.19 *	-.29 **	.12	.14

Variable	*M*	*SD*	10.	11.	12.	13.	14.	15.	16.	17.	18.
11. Manageable Workload	3.38	1.21	.26 **								
12. Control	4.55	1.4	.55 **	.27 **							
13. Reward	4.63	1.21	.58 **	.32 **	.52 **						
14. Community	5.14	1.36	.59 **	.26 **	.48 **	.36 **					
15. Fairness	3.88	1.35	.70 **	.35 **	.62 **	.49 **	.62 **				
16. Values	4.87	1.44	.63 **	.25 **	.55 **	.40 **	.63 **	.58 **			
17. MBI-Burnout	0	0.91	-.55 **	-.47 **	-.48 **	-.54 **	-.46 **	-.55 **	-.47 **		
18. OLBI-Burnout	0	0.89	-.57 **	-.50 **	-.52 **	-.51 **	-.42 **	-.54 **	-.51 **	.82 **	
19. UWES-Engagement	0	0.86	.47 **	.08	.48 **	.52 **	.25 **	.31 **	.42 **	-.51 **	-.58 **

Note. $N = 142$ for all variables except #1 ($N = 140$), 2 ($N = 136$), 3 ($N = 137$), and 4 ($N = 138$); Student coded 1 = student, 0 = nonstudent; Full-time coded 1 = full-time, 0 = part-time/casual. Variables 17-19 are based on standardized z-scores. MBI-Burnout and OLBI-Burnout share similar scoring, low scores = low burnout, high scores = high burnout.
* $p < .05$; ** $p < .01$.

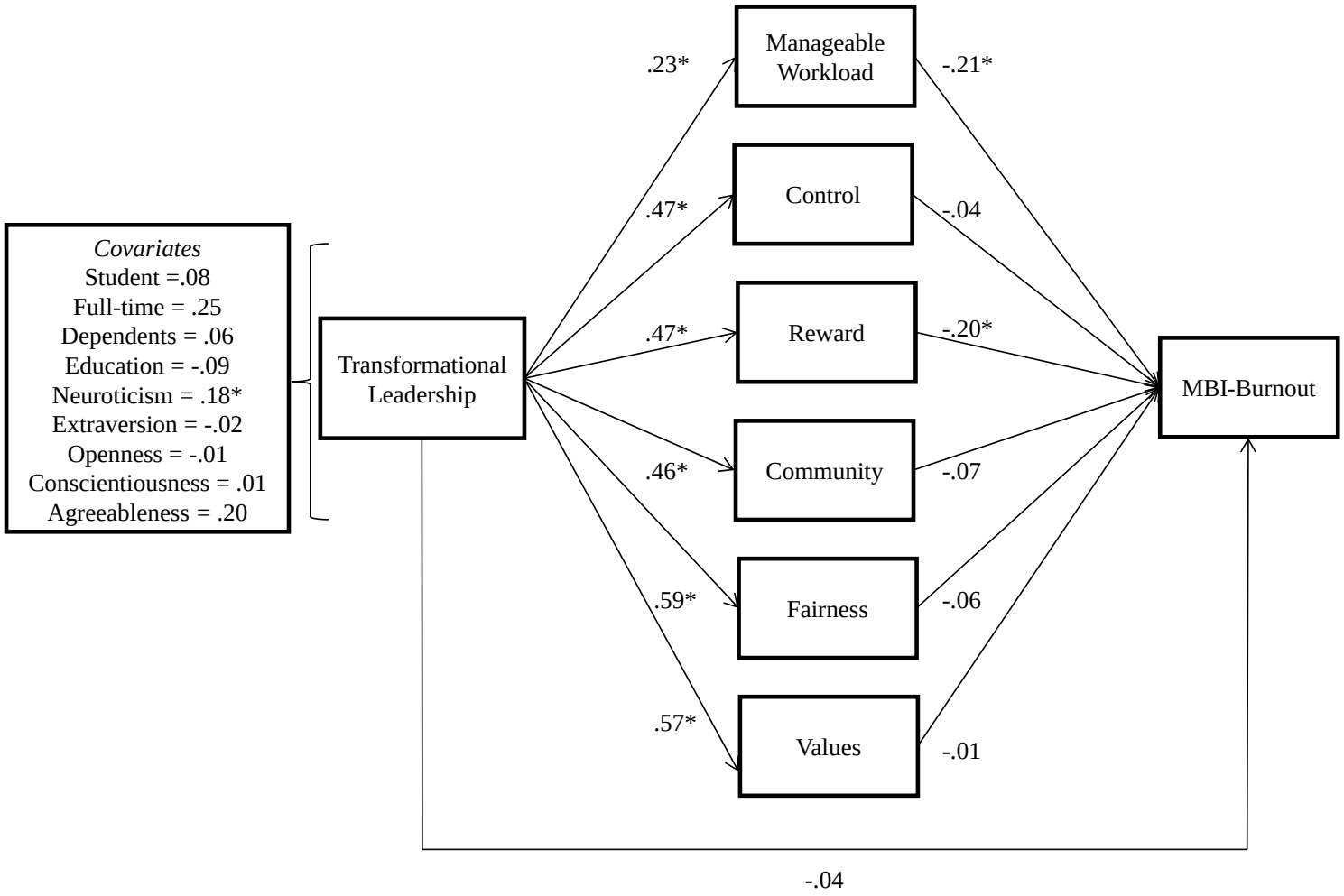
One of the first points to emphasize from Table 3 is that high convergent validity was identified for the two measures of burnout (OLBI and MBI $r = .82$, $p < .01$). Also, from this table the correlations between outcome variables, shown in Table 3, support Hypothesis 1. A significantly, negative relationship existed between burnout and engagement. Specifically, MBI-Burnout was significantly and negatively related to UWES-Engagement ($r = -.51$, $p < .01$). Also, OLBI–Burnout was significantly and negatively related to the UWES-Engagement ($r = -.58$, $p < .01$). Further support for Hypothesis 1 is found in the differential pattern of correlations between the burnout and engagement scores and other study variables (e.g., transformational leadership, control, reward), indicating that the burnout and engagement constructs are at least partially distinct from one another, in addition to being opposite in direction.

Table 3 also illustrates the demographic and personality variables to be included in the multiple mediation hypotheses testing. The following demographic variables were accounted for in the remaining hypotheses analyses: Student, Full-time, Dependents, and all personality variables. These variables displayed variance with the predictor, mediator, and/or outcome variables, with the exception of student. Student was included because many of the participants were students. Sex and race were not accounted for in the analyses given that over 90% of the sample was female and Caucasian. Because Age was not normally distributed within this sample, nor empirically linked with the core variables of interest based on previous research, it was not included as a covariate in the hypothesis tests.

The remaining hypotheses were tested using Preacher and Hayes' (2008) multiple mediation procedure. This technique allows researchers to simultaneously analyze multiple mediators and their relationships between the predictor and outcome variables. In other words, multiple mediation grants researchers the abilities to test for the total indirect effect of X on Y,

and the importance of specific mediators within a model. A bootstrapping method (with 10,000 resampling iterations) was utilized. The statistical significance criterion was set to alpha = .05, and 95% confidence intervals were used to determine the presence or absence of statistically significant indirect effects.

Pertaining to the first two hypotheses analyses, two separate instruments (i.e., MBI-GS and OLBI) measured burnout. Thus, two separate multiple mediation analyses tested burnout. Below are the direct (please see Figure 3) and indirect effects (Table 4) for MBI-Burnout, and the direct (Figure 4) and indirect effects (Table 5) for OLBI-Burnout.



Note. N = 130; Student coded 1 = student, 0 = nonstudent; Full-time coded 1 = full-time, 0 = part-time/casual. Coefficients represent unstandardized regression coefficients after covariates were added to the model. MBI low scores indicate low burnout, high scores indicate high burnout.
* $p < .05$.

Figure 3 Partial Multiple Mediation with MBI-Burnout as Outcome

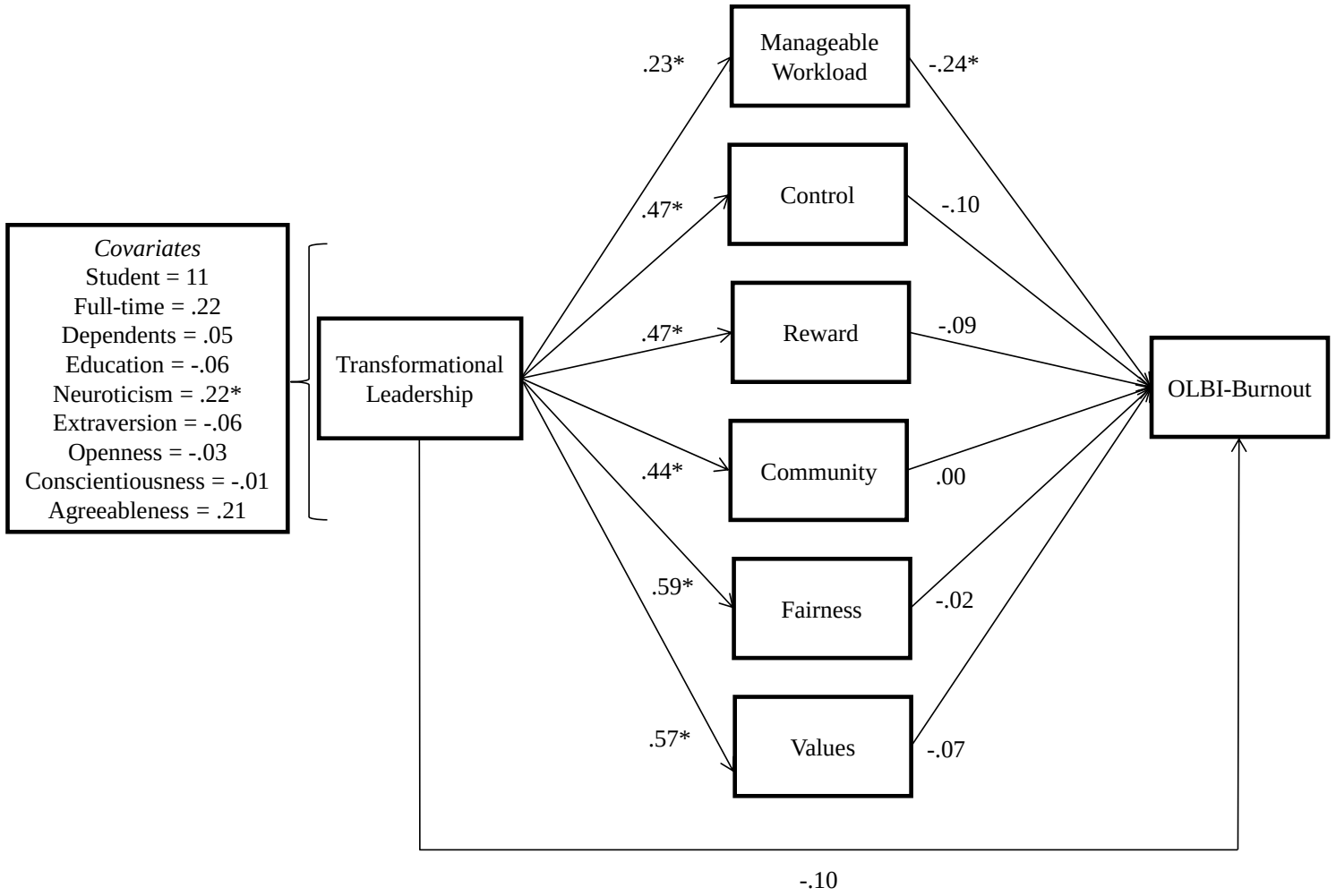
Table 4

Indirect Effects between Transformational Leadership, AWL, and MBI-Burnout

			BC 95% CI	
	Point estimate	SE	Lower	Upper
Manageable Workload	-0.0472 *	0.0185	-0.0882	-0.0164
Control	-0.0207	0.0289	-0.0760	0.0400
Reward	-0.0951 *	0.0306	-0.1596	-0.0402
Community	-0.0302	0.0327	-0.0964	0.0348
Fairness	-0.0328	0.0454	-0.1263	0.0513
Values	-0.0026	0.0377	-0.0750	0.0738
TOTAL	-0.2287 *	0.0563	-0.3449	-0.1228
Workload vs. Control	-0.0265	0.0344	-0.0995	0.0384
Workload vs. Reward	0.0479	0.0389	-0.0261	0.1261
Workload vs. Community	-0.0170	0.0364	-0.0886	0.0540
Workload vs. Fairness	-0.0145	0.0519	-0.1131	0.0914
Workload vs. Values	-0.0446	0.0440	-0.1345	0.0367
Control vs. Reward	0.0743	0.0473	-0.0114	0.1752
Control vs. Community	0.0095	0.0442	-0.0741	0.1005
Control vs. Fairness	0.0120	0.0601	-0.0988	0.1394
Control vs. Values	-0.0182	0.0516	-0.1198	0.0849
Reward vs. Community	-0.0648	0.0467	-0.1586	0.0253
Reward vs. Fairness	-0.0623	0.0503	-0.1599	0.0392
Reward vs. Values	-0.0925 *	0.0454	-0.1829	-0.0066
Community vs. Fairness	0.0025	0.0633	-0.1205	0.1308
Community vs. Values	-0.0277	0.0600	-0.1459	0.0915
Fairness vs. Values	-0.0302	0.0579	-0.1505	0.0756
Full model Adj R^2 =.521 F (16, 113) = 9.79, p < .05				

Note. These estimates were generated using a procedure from Preacher and Hayes (2008); CI = confidence interval; BC = bias corrected; based on 10,000 bootstrap resamples. MBI-Burnout low scores indicate low burnout and high scores indicate high burnout. N = 130.

* p < .05.



Note. $N = 130$; Student coded 1 = student, 0 = nonstudent; Full-time coded 1 = full-time, 0 = part-time/casual. Coefficients represent unstandardized regression coefficients after covariates were added to the model. OLBI low scores indicate low burnout, high scores indicate high burnout.
* $p < .05$.

Figure 4 Partial Multiple Mediation with OLBI-Burnout as Outcome

Table 5

Indirect Effects between Transformational Leadership, AWL, and OLBI-Burnout

			BC 95% CI	
	Point estimate	SE	Lower	Upper
Manageable Workload[a]	-0.0548 *	0.0216	-0.1064	-0.0197
Control	-0.0478	0.0286	-0.1121	0.0037
Reward	-0.0401	0.0294	-0.1073	0.1000
Community	-0.0002	0.0325	-0.0588	0.0696
Fairness	-0.0094	0.0500	-0.1130	0.0928
Values	-0.0372	0.0373	-0.1130	0.0354
TOTAL	0.1895 *	0.0607	-0.0755	-0.3133
Workload vs. Control	-0.0070	0.0346	-0.0726	0.0662
Workload vs. Reward	-0.0147	0.0409	-0.0915	0.0723
Workload vs. Community	-0.0545	0.0367	-0.1339	0.0114
Workload vs. Fairness	-0.0454	0.0574	-0.1603	0.0662
Workload vs. Values	-0.0175	0.0468	-0.0952	0.0739
Control vs. Reward	-0.0077	0.0460	-0.0935	0.0879
Control vs. Community	-0.0476	0.0460	-0.1452	0.0356
Control vs. Fairness	-0.0384	0.0604	-0.1637	0.0762
Control vs. Values	-0.0105	0.0520	-0.1183	0.0872
Reward vs. Community	-0.0399	0.0404	-0.1292	0.0312
Reward vs. Fairness	-0.0307	0.0563	-0.1461	0.0769
Reward vs. Values	-0.0028	0.0475	-0.0949	0.0933
Community vs. Fairness	0.0091	0.0665	-0.1158	0.1468
Community vs. Values	0.0370	0.0570	-0.0616	0.1655
Fairness vs. Values	0.0279	0.0622	-0.0934	0.1545

Full model Adj R^2 =.522 F (16, 113) = 9.81, p < .05

Note. These estimates were generated using a procedure from Preacher and Hayes (2008); CI = confidence interval; BC = bias corrected; based on 10,000 bootstrap resamples. OLBI-Burnout low scores indicate low burnout and high scores indicate high burnout. N = 130.

* p < .05.

The first multiple mediation model tested the first set of mediational hypotheses with MBI-Burnout as the outcome. In support of Hypothesis 2a, transformational leadership had a significant total direct effect on burnout, $b = -.27$, $p < .05$. Thus, leadership and burnout were significantly, negatively related. However, when the AWLS mediators were added to the model, this significant relationship between leadership and burnout was reduced to nonsignificance, indicating full mediation by the set of AWLS mediators, $b = -.04$, $p > .05$.

Pertaining to the MBI analysis, the above results show support for Hypotheses 3a and 5a; manageable workload (i.e., AWL-Workload) and AWL-Reward had a direct and significantly, negative relationship with burnout. Also, AWL-Workload and AWL-Reward indirectly and significantly influenced the relationship between leadership and burnout (please see Table 4). Table 4 also shows that AWL-Reward is a stronger predictor of burnout than AWL-Values. Thus, the indirect effect of leadership on burnout through AWL-Reward was stronger than the indirect effect of leadership on burnout through AWL-Values. Hypotheses 4a, 6a, 7a, and 8a were not supported. Moreover, the total indirect effect showed that the mediators did have a strong overall influence in the model. Figure 3 illustrates the multiple mediation model for MBI-Burnout as the outcome.

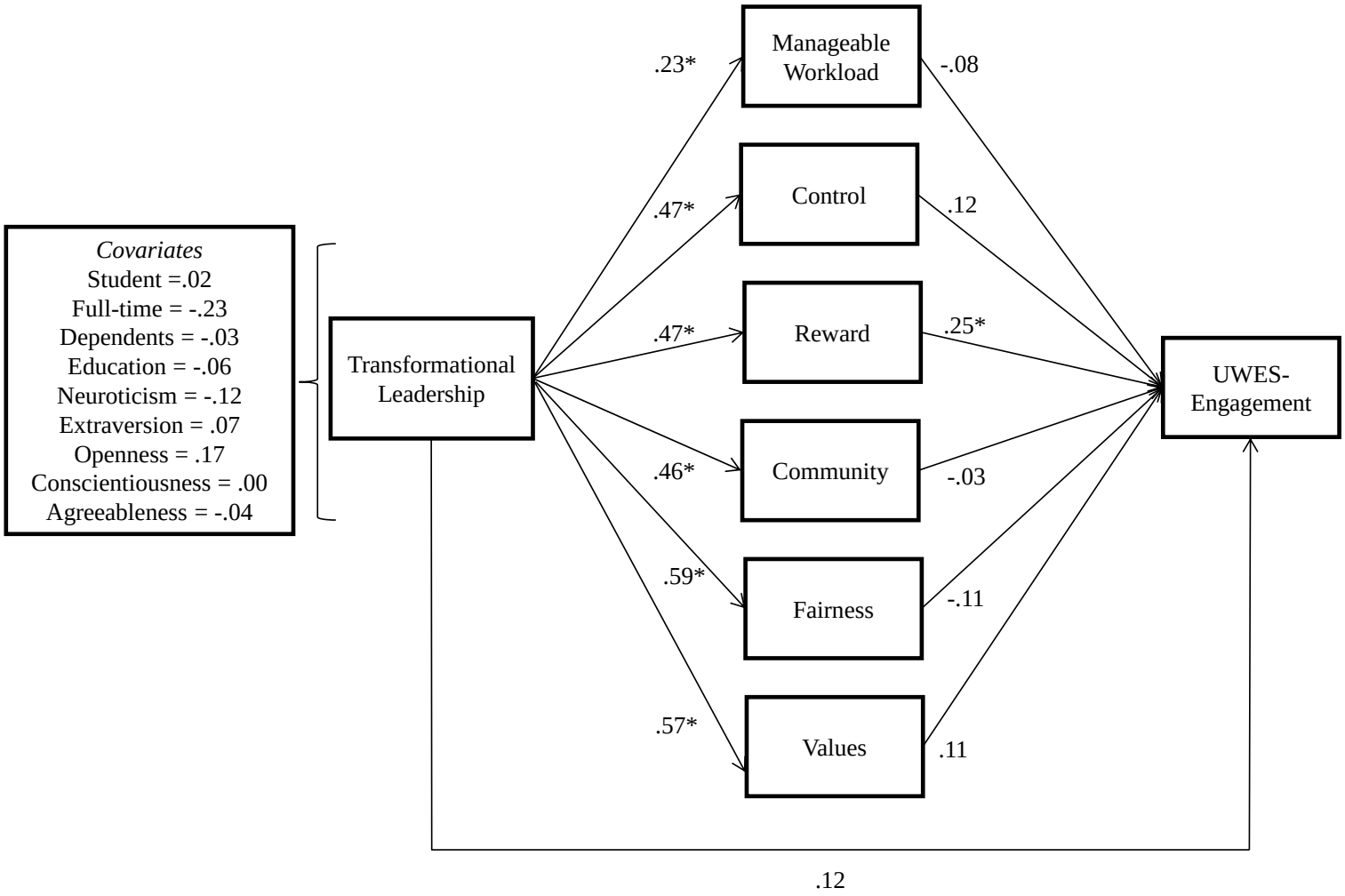
The second multiple mediation analysis observed the same predictor and mediator variables, but with OBLI-Burnout as the outcome. Transformational leadership was significantly and negatively related to burnout, $b = -.29$, $p < .05$. This result supports Hypothesis 2a. Mirroring the MBI analysis, when the AWL mediators were added to the model, leadership was no longer significant with the outcome, $b = -.10$, $p < .05$, indicating full mediation in this analysis. The results for this analysis showed that only AWL-Workload was a significant and negative direct effect on OLBI-Burnout (please see Figure 4). This finding supports Hypotheses

3a. AWL-Workload indirectly and significantly affected the relationship between leadership and burnout (please see Table 5). Hypotheses 4a, 5a, 6a, 7a, and 8a were not supported. Furthermore, the AWL mediators had a significant, total indirect effect between transformational leadership and burnout. Specifically, transformational leadership had a strong relationship with AWL-Workload that influenced OLBI-Burnout.

To summarize the two burnout analyses, both burnout analyses supported Hypothesis 3a. AWL-Workload was a significant and negative, direct and indirect influence on MBI-Burnout and OLBI-Burnout. For MBI-Burnout, AWL-Reward was also a significant and negative direct effect on burnout. AWL-Reward was not significant in the OLBI-Burnout analysis. In this model, only AWL-Workload was the significant and negative direct effect on OLBI-Burnout. Neither burnout model found AWL-Control, AWL-Community, AWL-Fairness, and AWL-Values to be significant influences.

Both burnout models only found Neuroticism to be a significant and positive covariate (please see Tables 4 and 5). The MBI-Burnout and OLBI-Burnout produced results that indicated a full mediation model. The MBI-Burnout and OLBI-Burnout models showed that the predictor, mediators, and covariates accounted for significant proportions of the variance in burnout scores (both were Adj $R^2 = .52$, $p < .05$).

Below are the results from the multiple mediation analysis with UWES-Engagement as the outcome. The direct effects (Figure 5) and indirect effects (Table 6) displayed in are presented.



Note. N = 130; Student coded 1 = student, 0 = nonstudent; Full-time coded 1 = full-time, 0 = part-time/casual. Coefficients represent unstandardized regression coefficients after covariates were added to the model. UWES low scores indicate low engagement, high scores indicate high engagement.
* $p < .05$.

Figure 5 Partial Multiple Mediation with UWES-Engagement as Outcome

Table 6

Indirect Effects between Transformational Leadership, AWL, and UWES-Engagement

			BC 95% CI	
	Point estimate	SE	Lower	Upper
Manageable Workload	-0.0191	0.0143	-0.0523	0.0053
Control	0.0553	0.0325	-0.0019	0.1273
Reward	0.1143 *	0.0363	0.0547	0.2007
Community	-0.0144	0.0382	-0.0952	0.0562
Fairness	-0.0663	0.0502	-0.1640	0.0340
Values	0.0624	0.0403	-0.0161	0.1440
TOTAL	0.1322 *	0.0671	0.0028	0.2665
Workload vs. Control	-0.0744 *	0.0360	-0.1518	-0.0084
Workload vs. Reward	-0.1334 *	0.0405	-0.2312	-0.0662
Workload vs. Community	-0.0047	0.0408	-0.0815	0.0799
Workload vs. Fairness	0.0472	0.0519	-0.0605	0.1459
Workload vs. Values	-0.0815	0.0448	-0.1738	0.0052
Control vs. Reward	-0.0590	0.0558	-0.1786	0.0437
Control vs. Community	0.0697	0.0499	-0.0266	0.1712
Control vs. Fairness	0.1216	0.0665	-0.0096	0.2493
Control vs. Values	-0.0071	0.0557	-0.1133	0.1106
Reward vs. Community	0.1287 *	0.0507	0.0338	0.2315
Reward vs. Fairness	0.1806 *	0.0558	0.0703	0.2915
Reward vs. Values	0.0520	0.0531	-0.0437	0.1655
Community vs. Fairness	0.0519	0.0649	-0.0759	0.1813
Community vs. Values	-0.0767	0.0677	-0.2128	0.0532
Fairness vs. Values	-0.1287	0.0695	-0.2626	0.0086
Full model Adj R^2 =.401 F (16, 113) = 6.39, p < .05				

Note. These estimates were generated using a procedure from Preacher and Hayes (2008); CI = confidence interval; BC = bias corrected; based on 10,000 bootstrap resamples. UWES-Engagement low scores indicate low engagement and high scores indicate high engagement. N = 130.

* p < .05.

The above multiple mediation analysis results showed that transformational leadership was significantly and positively related to UWES-Engagement, $b = .25$, $p < .05$. This finding supports Hypothesis 2b. This relationship was no longer significant though when the AWL mediators were added to the model, $b = .11$, $p > .05$. AWL-Reward was the only mediator to have a significant and positive, direct effect on UWES-Engagement (please see Figure 5). This result supports Hypothesis 5b. Hypotheses 3b, 4b, 6b, 7b, and 8b were not supported. Moreover, no covariates were found to be significant. In addition, the predictor, mediators, and covariates accounted for significant proportion of the variance in engagement scores (Adj $R^2 = .40$, $p < .05$).

Table 6 shows that the total indirect effect the AWL mediators had on the model was significant. In other words, reward was a significant indirect effect between transformational leadership and work engagement. Table 6 also displays specific AWL mediators that had stronger indirect effects between leadership and engagement in comparison to other mediators. AWL-Control and AWL-Reward had stronger indirect effects between leadership and engagement than AWL-Workload. Additionally, AWL-Reward had a stronger indirect effect between the predictor and outcome compared to both AWL-Community and AWL-Fairness.

All three multiple mediation analyses supported Hypotheses 9a, 9b, 9c, 9d, 9e, and 9f (please see Tables 3, 4, or 5). In other words, transformational leadership was significantly and positively related to AWL-Workload, AWL-Control, AWL-Reward, AWL-Community, AWL-Fairness, and AWL-Values.

CHAPTER IV

DISCUSSION

The purpose of this study was to investigate the relationships between transformational leadership, AWL, with burnout and engagement amongst nurses. Previous research has examined the relationship between transformational leadership and burnout/engagement (Kanste, 2008; Kanste et al., 2007; Stordeur et al., 2001), or AWL and burnout/engagement (Leiter & Maslach, 2009; Spence-Laschinger et al., 2009). These studies indicated that leadership is a driving force that influences AWL, which in turn affects burnout/engagement. Another purpose of this study was to identify a specific leadership model that is not incorporated in the existing Nursing Worklife Model of Burnout (Leiter & Spence-Laschinger, 2006). This study applied the transformational leadership model because it is arguably one of the most popular models of leadership (Nyberg et al., 2005; Sofarelli & Brown, 1999; Thyer, 2003; Welford, 2002). The results from this study supported many of the hypotheses under investigation.

In support of Hypothesis 1, burnout and engagement were significantly and negatively related. This result indicates that burnout and engagement are opposite outcomes and supports previous studies (e.g., Schaufeli & Bakker, 2003, 2004; Schaufeli et al., 2002). The correlations between burnout/engagement and several study variables (e.g., transformational leadership) showed that these outcomes are negatively related too as indicated by the opposing relationships in Table 3. Supporting the notion that burnout and engagement may be distinct constructs (Maslach et al., 2001; Schaufeli & Bakker, 2003, 2004), correlation and multiple mediation

results suggest that these two outcomes may have at least slightly different sets of antecedents. For instance, AWL-Reward was the only mediator significantly related to engagement (keep in mind AWL-Reward was related to MBI-Burnout), while AWL-Workload and influenced burnout.

There was partial support for both Hypotheses 2a and 2b. Transformational leadership was significantly, negatively, and directly related to burnout without the presence of AWL mediators (c.f., Kanste, 2008; Kanste et al., 2007; Stordeur et al., 2001). In addition, transformational leadership had a significant and positive, direct relationship with work engagement without the inclusion of AWL mediators. Hence, the results from all three models (i.e., MBI-Burnout, OLBI-Burnout, and UWES-Engagement) suggest that nurse transformational leadership, as perceived by nurse staff, strongly influences nurse staff burnout and engagement.

Hypothesis 3a was fully supported in the MBI-Burnout and OLBI-Burnout models. The results show that a nurse with a more AWL-Workload (i.e., manageable workload) was less likely to experience burnout, and vice versa. This finding supports early research exploring the subject (e.g., Cordes & Dougherty, 1993; Leiter & Maslach, 2004; Shaufeli & Enzmann, 1998). Moreover, AWL-Workload significantly and indirectly influenced the relationship between transformational leadership and burnout. In other words, transformational leadership affected AWL-Workload, which in turn impacted burnout. Hypothesis 3b was not supported. More AWL-Workload was not significantly related to work engagement. In fact, the results reported a negative relationship. Perhaps this implies that nurse staff with more manageable workloads exert their energies elsewhere and engage in other activities more intrinsically appealing (i.e., family). This lack of significance also implies that other AWL have a stronger and more direct

influence on engagement, and that burnout and engagement are somewhat independent from one another.

Hypothesis 4a was not supported (c.f., Leiter & Maslach, 2004; 2009). However, the MBI-Burnout and OLBI-Burnout models did report an expected negative relationship between AWL-Control and burnout. Pertaining to Hypothesis 4b, AWL-Control was positively related to work engagement, but not significantly (c.f., Koyuncu et al., 2006). These unsupportive findings could be due to relationships between the mediators (i.e., high collinearity). More on this issue will be discussed shortly.

Hypothesis 5a was partially supported. AWL-Reward was significantly and negatively related to burnout, but only for the MBI-Burnout model (c.f., Leiter & Maslach, 2009). For the OLBI-Burnout model, AWL-Reward was negatively related to burnout, yet was not significant (please see Table 5). For the MBI-Burnout model, AWL-Reward significantly and indirectly influenced the relationship between transformational leadership and burnout. Thus, transformational leadership of nurse leaders, as perceived by nurse staff, strongly affects AWL-Reward (e.g., recognition), which in turn strongly influenced nurse staff burnout. Hypothesis 5b was also supported. AWL-Reward was significantly and positively associated with work engagement (c.f., Koyuncu et al., 2006). AWL-Reward also indirectly and significantly impacted the relationship between transformational leadership and work engagement. In other words, nurse leadership, as perceived by nurse staff, strongly affected AWL-Reward, which in turn strongly impacted nurse staff work engagement.

In a similar fashion to the tests of Hypotheses 4a and 4b, Hypotheses 6a, 6b, 7a, 7b, 8a, and 8b were not supported. AWL-Community, AWL-Fairness, and AWL-Values were not of direct significance to burnout or work engagement (c.f., Koyuncu et al., 1006; Leiter & Maslach,

2004; 2009). As briefly mentioned earlier, there is a strong possibility that these nonsignificant results were due to the mediators being highly correlated with one another (i.e., high collinearity). Table 3 illustrates high, positive and significant correlations between all the mediators. Due to these relationships, a partial correlation matrix was performed on all study variables while controlling for the demographic and personality variables used in the hypotheses testing. Table 7 displays the high, positive and significant correlations among the mediators.

Table 7

Descriptive Statistics and Partial Correlations Among Study Variables

Variable	*M*	*SD*	10.	11.	12.	13.	14.	15.	16.	17.	18.
10. Transformational Leadership	4.78	1.55									
11. Manageable Workload	3.37	1.20	.29 **								
12. Control	4.63	1.35	.53 **	.27 **							
13. Reward	4.60	1.22	.59 **	.34 **	.51 **						
14. Community	5.21	1.28	.54 **	.27 **	.39 **	.33 **					
15. Fairness	3.93	1.32	.70 **	.35 **	.55 **	.47 **	.56 **				
16. Values	4.95	1.43	.61 **	.28 **	.53 **	.42 **	.62 **	.57 **			
17. MBI-Burnout	-.06	.90	-.50 **	-.51 **	-.43 **	-.55 **	-.41 **	-.49 **	-.42 **		
18. OLBI-Burnout	-.04	.91	-.52 **	-.52 **	-.48 **	-.48 **	-.37 **	-.48 **	-.46 **	.79 **	
19. UWES-Engagement	.03	.85	.48 **	.12	.45 **	.54 **	.27 **	.29 **	.43 **	-.51 **	-.55 **

Note. N = 130; Student, Full-time, Dependents, Education, and Personality Variables were partialled out. Variables 17-19 are based on standardized z-scores. MBI-Burnout and OLBI-Burnout share same scoring, low scores = low burnout, high scores = high burnout.

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

Preacher and Hayes (2008) discussed that high collinearity among mediators is a potential drawback for their multiple mediation analysis, because mediators that are highly correlated may incorrectly cancel out or promote indirect relationships. Preacher and Hayes suggested that researchers should choose to study mediators that represent very distinct constructs to avoid the consequences of high collinearity. However, they also imply that mediators are expected to be somewhat related because they are most likely based on similar

theories. In the case of the present study, all mediators exist within the work environment for nurses and some mediators may influence others, which leads to the other potential reason for the nonsignificant results. In addition, because of their theoretical justification in the present study, the decision was made to include them together as a set, despite their strong interrelatedness.

Another option to avoid collinearity, and more specific to this study, is that it is possible that a more detailed (i.e., latent variable) mediation model would accurately capture the indirect relationships under investigation. The present research is based on a simplified version of Leiter and Maslach's (2004) Areas of Worklife model where AWL-Control is at the forefront of the path analysis, so that this AWL influences all other mediators directly (e.g., AWL-Workload, AWL-Reward, AWL-Community, and AWL-Fairness) or indirectly (e.g., AWL-Value through AWL-Reward, AWL-Community, and Fairness). In addition, this model is a specific version of Leiter and Spence-Laschinger's (2006) Nursing Worklife Model of Burnout. The Nursing Worklife Model of Burnout encompasses a generalized version of the AWL mediators that operate in a latent multiple mediator pathway from leadership to burnout. The present study applied a simpler model given that the above models are relatively new and have not acquired much empirical support.

Yet, the findings from the present study are not necessarily out of the range of the possibilities. Indeed, there is reason for testing alternative models that link transformational leadership with the various AWL mediators and burnout/engagement outcomes. The present model considers each as simultaneous mediators, when it may be the case that transformational leadership influences AWL-Control before influencing AWL-Workload and AWL-Reward, and eventually other outcomes (i.e., more similar to Leiter & Maslach, 2004).

The findings from all three multiple mediation analyses supported Hypotheses 9a, 9b, 9c, 9d, 9e, and 9f. In other words, transformational leadership was significantly and positively related to AWL-Workload, AWL-Control, AWL-Reward, AWL-Community, AWL-Fairness, and AWL-Values. Thus, transformational leadership strongly influenced the work environment for nurse staff and might be a driving force that affects the work environment, especially in the case of AWL-Workload. AWL-Workload significantly influenced the relationship between transformational leadership and burnout for both burnout analyses. Transformational was the driving force in this relationship. Similar implications may be formulated for reward with both burnout and engagement as the outcomes.

Limitations and Future Research

One potential limitation to this study was the sample size. Given the statistical complexity of the model, a larger sample would have allowed more advanced multiple mediation analyses using structural equation modeling, and also allowed for some additional factor analytic or measurement model work with the various scales and their items. However, the present sample did represent various geographic regions, organizations, and education status (i.e., student or non-student), suggesting that the present results do have the potential to generalize to a broader population of working nurses. Nevertheless, future research should attempt to gather data from larger samples of nurses from additional sources.

Two additional limitations were that the data were collected at only one time point and only in the form of nurse staff self-report. In the future, researchers should collect data from nurses over at least two time periods, to help establish the causal connections implied by mediational hypotheses. Further, it is important for future research to gather information on work environment characteristics and leadership qualities from sources other than the nurse staff

members themselves. Yet, perception-based responses fit the nature the present study the best. The views of nurse staff were of significance for this study, not information from other sources in their work environment (e.g., views and performance appraisals of leaders). Thus, depending on the purpose of the future research, perceptions from nurse staff might be the only and best option in terms of data type.

Future research should use Leiter and Maslach's (2004) latent variable mediation model of AWL to test whether that model fits the data the best (i.e., structural equation modeling) and provides more results that are significant. The results from the present study offer evidence that serves as a starting point to investigate the detail between transformational leadership, AWL, and burnout/engagement. In addition, future studies should test for other outcomes (e.g., Organizational Citizenship Behaviors) to gather insight as to what impact the transformational leadership-AWL relationships have on the work environment. For example, AWL have been linked to turnover intentions (e.g., Leiter & Maslach, 2009), transformational leadership may have an effect on these relationships as well.

Finally, it is possible that an alternate model could be used to explain the linkages tested in the present study. It is possible that AWL has a moderating effect between transformational leadership and burnout/engagement instead of a mediating one. However, this study chose to test a mediation model to corroborate with the mediating nature of the Nursing Worklife Model of Burnout (Leiter & Spence-Laschinger, 2006).

Implications and Conclusions

Previous research has stated that the relationship between transformational leadership and burnout/engagement to be complex with various elements affecting the relationship between the variables (Kanste, 2008; Kanste et al., 2007). Other research has shown what these elements are,

and suggested that leadership influences these work elements and as a result influence burnout/engagement (Leiter & Maslach, 2004; 2009). The present study bridged these two areas of previous research by testing a mediational model that linked transformational leadership to burnout/engagement via a set of work characteristics (AWL). In doing so, the present study extended the Nursing Worklife Model of Burnout (Leiter & Spence-Laschinger, 2006) by specifying the type of nurse leadership that relates to AWL and burnout/engagement. Findings suggest that transformational leadership can strongly impact all positive AWL and burnout/engagement, but that only certain AWL have a mediational impact on burnout/engagement.

Researchers and practitioners interested in preventing burnout and promoting occupational health within healthcare organizations can benefit from the results of this study. Specifically, the expanded Nursing Worklife Model of Burnout (Leiter & Spence-Laschinger, 2006) that has been tested here can be useful as a guide for future research and intervention efforts. Also, the measures used in the present study may also be helpful as evaluative tools. Ultimately, it may be possible for healthcare organizations to utilize this model and these methods to better identify nurse leaders who can create and sustain nurse work environments that present a low risk for nurse staff burnout.

In a broader sense, the surveys (with the possible addition of other outcomes variables) used in the present study could be useful to measure perceived organizational change and development (Leiter & Maslach, 2004), and by extension, the climate and culture of a health care system or other industry. In other words, this measure has the potential ability to provide insight into the climate (e.g., daily policies, practices, and procedures) and ultimate the culture (e.g.,

beliefs and values of workplace perceived by subordinate), and whether or not employees perceive that the organization is ready for change and development.

The above inference is due to the resembling features the multiple mediation model used in the present study has with early organizational development research. As discussed by Schneider, Brief, and Guzzo (1996), Kurt Lewin stated that leadership affected group organizational climates that in turn influenced employee production. This notion is a generalization of the present study. Leadership impacted AWL, then burnout/engagement, and those outcomes have been shown to have relationships with nurse performance, such as patient safety outcomes (e.g., Aiken, Clarke, & Sloane, 2002).

Schneider et al., (1996) reported four dimension of organizational climate that highly reflect the transformational leadership and AWL. *The nature of interpersonal relationships* corresponds with transformational leadership and AWL-Community, *The nature of the hierarchy* reflects transformational leadership, AWL-Fairness, AWL-Control, and somewhat AWL-Values. *The nature of work* to some extent resembles AWL-Control and AWL-Workload. *The focus of support and rewards* directly relates to AWL-Rewards. Thus, the survey used in the present study may be used to measure the climate of the organization that will allow the practitioner or researcher to understand the culture, before implementing organizational change. Organizational change is more likely to sustain if the culture is ready for it (Schneider et al.),

In conclusion, the findings from the present study offer practitioners and researchers tools to test for various organizational outcomes, not just burnout and engagement. The instruments from this study may be of value at a departmental and organizational level for health care systems and other industries. The surveys could be used to select effective nurse leaders or develop leadership skills for appropriate nurse managers. The surveys could also be used to

assess whether a unit is experiencing a serious staff shortage, and/or if staff feel that they are eligible for a promotion (i.e., pay raise). The assessments may be of use at an organizational level as well, to test the climate and ultimately culture of the organization to assess if the company is ready for an organizational change. Overall, the distal goal of the instrument presented in this study is to help retain nurses and protect them from burning out as a result of their caring for those in need. The various avenues of assessment discussed above integrated with the present findings can help to support this goal.

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APPENDIX A

IRB APPROVAL LETTERS

CATHOLIC HEALTH INITIATIVES®

Memorial Hospital

November 23, 2011

Heather Smith
900 Mountain Creek Rd. Apt O-210
Chattanooga, TN 37405

RE: Study number 11.11.02: Testing "Areas of Worklife" as Mediating Factors in the Relationships between Nurse Leadership, Nurse Burnout, and Engagement. (University of Tennessee at Chattanooga)

Dear Smith:

I have reviewed your request for expedited approval of the new study listed above. Your study is eligible for expedited review under FDA and DHHS (OHRP) 7-Individual or group behavior designation.

This is to confirm that I have approved your application. The protocol is approved through Protocol Version 1 dated November 23, 2011. The Informed Consent Form dated November 23, 2011 was also approved as submitted.

You are granted permission to conduct your study as described in your application effective immediately. The study is subject to continuing review on or before 11/23/2012, unless closed before that date.

Please note that any changes to the study as approved must be promptly reported and approved. Some changes may be approved by expedited review; others require full board review. Please contact Sherry Baierl at 423.495.6022; fax 423.495.7874, or by e-mail at sherry_baierl@memorial.org if you have any questions or require further information.

Sincerely,

Kent Grotefendt, MD
IRB Chairperson

MEMORANDUM

TO: Heather K. Smith **IRB # 11-148**
Dr. Chris Cunningham

FROM: Lindsay Pardue, Director of Research Integrity
Dr. Bart Weathington, IRB Committee Chair

DATE: October 21, 2011

SUBJECT: IRB # 11-148: Testing "Areas of Worklife" as Mediating Factors in the Relationship between Nurse Leadership, Nurse Burnout, and Engagement

The Institutional Review Board has reviewed and approved your application and assigned you the IRB number listed above. You must include the following approval statement on research materials seen by participants and used in research reports:

The Institutional Review Board of the University of Tennessee at Chattanooga (FWA00004149) has approved this research project # 11-148.

Please remember that you must complete a Certification for Changes, Annual Review, or Project Termination/Completion Form when the project is completed or provide an annual report if the project takes over one year to complete. The IRB Committee will make every effort to remind you prior to your anniversary date; however, it is your responsibility to ensure that this additional step is satisfied.

Please remember to contact the IRB Committee immediately and submit a new project proposal for review if significant changes occur in your research design or in any instruments used in conducting the study. You should also contact the IRB Committee immediately if you encounter any adverse effects during your project that pose a risk to your subjects.

For any additional information, please consult our web page http://www.utc.edu/irb or email instrb@utc.edu

Best wishes for a successful research project.

APPENDIX B

SURVEY MEASURES GIVEN TO PARTICIPANTS

1. Welcome!

Informed Consent Form

Purpose of the Study

This study is being conducted by Heather Smith, a graduate student at the University of Tennessee at Chattanooga, under the supervision of Dr. Chris Cunningham. The purpose is to examine the quality of worklife of nurse staff. It will also be used to help examine the relationship between nurse supervision, the nature of the organization, and quality of worklife of nurse staff.

What will I have to do?

If you agree to participate you will be asked to respond to one 20-30 minute online surveys that include questions about your perceptions of your nurse leadership, organization, burnout/engagement levels, personality, and a few demographic questions to help us describe the final group of respondents in general terms.

What are the risks to me?

There are very few risks to you if you participate in this study. If any question makes you uncomfortable, you can skip that question or withdraw from the study completely. If you decide to quit at any time before you have finished the survey, your answers will NOT be recorded. We really need complete surveys, though, so we greatly appreciate your full cooperation.

Confidentiality

Your responses will be kept completely confidential and anonymous (no one will know your name or identity and your answers will only be viewed by the researchers). The researchers will remove all personally identifiable information (e.g., name) for all participants by randomly assigning all participants with a participant ID. The participant ID will help the researches manage the survey responses and demographic information while ensuring participant confidentiality. Both the survey responses and demographic information will be kept under lock and key in two separate locations in the UTC Psychology Department. All data will only be accessible by the researchers.

Voluntary participation

Your participation in this study is completely your choice. You may stop or withdraw at any time.

How the findings will be used

After the completion of this study, all data will remain under lock and key free from all participant information that could identify the participant. In the future, the data will only be used to run statistical analyses to gain insight into the nurse perspectives of that particular sample, and only if there is a research project that could benefit from this insight. Furthermore, the results of the study will be used to understand the impact of leadership and aspects of the work environment on quality of worklife for nurses like you. Eventually this information can be used to improve the quality of worklife for nurses in your organization and to educate other professionals in educational settings or professional conferences, and in professional journals.

Contact Information

If you have any concerns or questions about this study, please contact Heather Smith at Heather-K-Smith@mocs.utc.edu or Dr. Chris Cunningham at Chris-Cunningham@utc.edu or 423-425-4264. You may also contact the chair of the UTC IRB committee, Dr. Weathington at 423-425-4289. By completing and returning this survey, you acknowledge that you have read this information and agree to participate in this research, with the knowledge that you are free to withdraw your participation at any time without penalty. Thank you in advance for your assistance and participation.

Sincerely,
Heather K. Smith
Christopher J. L. Cunningham, Ph.D.
The University of Tennessee at Chattanooga
Department of Psychology
350 Holt Hall, Department 2803
615 McCallie Avenue
Chattanooga, TN 37403

The Institutional Review Board of the University of Tennessee at Chattanooga (FWA00004149) has approved this

research project # 11-148.

***1. I acknowledge that I have reviewed the information on the previous page and that I consent to participate in this research. (Please indicate below if you would like to participate in this study).**

- ◯ Yes, I'd like to participate and take this survey.
- ◯ No, thank you.

2. Your Nurse Leader

Please respond to the following statements to the best of your ability.
Your honest and full responses are appreciated.

2. Think about your current nursing experience. Please respond to the following items regarding the direct leader/manager of your work unit, which is the group of nurses that you interact with on a daily basis.

My nurse supervisor...

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
1. Has a clear understanding of where we are going.	◯	◯	◯	◯	◯	◯	◯
2. Has a clear sense of where he/she wants our unit to be in 5 years.	◯	◯	◯	◯	◯	◯	◯
3. Has no idea where the organization is going.	◯	◯	◯	◯	◯	◯	◯
4. Says things that make employees proud to be a part of this organization.	◯	◯	◯	◯	◯	◯	◯
5. Says positive things about the work unit.	◯	◯	◯	◯	◯	◯	◯
6. Encourages people to see changing environments as situations full of opportunities.	◯	◯	◯	◯	◯	◯	◯
7. Challenges me to think about old problems in new ways.	◯	◯	◯	◯	◯	◯	◯
8. Has ideas that have forced me to rethink some things that I have never questioned before.	◯	◯	◯	◯	◯	◯	◯
9. Has challenged me to rethink some of my basic assumptions about my work.	◯	◯	◯	◯	◯	◯	◯
10. Considers my personal feelings before acting.	◯	◯	◯	◯	◯	◯	◯
11. Behaves in a manner which is thoughtful of my personal needs.	◯	◯	◯	◯	◯	◯	◯
12. Sees that the interests of employees are given due consideration.	◯	◯	◯	◯	◯	◯	◯
13. Commends me when I do a better than average job.	◯	◯	◯	◯	◯	◯	◯
14. Acknowledges improvement in my quality of work.	◯	◯	◯	◯	◯	◯	◯
15. Personally compliments me when I do outstanding work.	◯	◯	◯	◯	◯	◯	◯
16. Encourages staff to improve their job-related skills.	◯	◯	◯	◯	◯	◯	◯
17. Suggests training to improve my ability to carry out my job.	◯	◯	◯	◯	◯	◯	◯
18. Coaches staff to help them improve their one-the-job performance.	◯	◯	◯	◯	◯	◯	◯

3. Your Work Environment

Please respond to the following statements to the best of your ability.
Your honest and full responses are appreciated.

3. Think about the environment in which you are serving as a nurse. Please rate your level of agreement with each of the following descriptive statements about your nursing work experience.

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Hard to Decide	Slightly Agree	Moderately Agree	Strongly Agree
1. I do not have time to do the work that must be done.	◯	◯	◯	◯	◯	◯	◯
2. I work intensely for prolonged periods of time.	◯	◯	◯	◯	◯	◯	◯
3. After work I come home too tired to do the things I like to do.	◯	◯	◯	◯	◯	◯	◯
4. I have so much to do on the job that it takes me away from my personal interests.	◯	◯	◯	◯	◯	◯	◯
5. I have enough time to do what's important in my job.	◯	◯	◯	◯	◯	◯	◯
6. I leave my work behind when I go home at the end of the workday.	◯	◯	◯	◯	◯	◯	◯
7. I have control over how I do my work.	◯	◯	◯	◯	◯	◯	◯
8. I can influence management to obtain the equipment and space I need for my work.	◯	◯	◯	◯	◯	◯	◯
9. I have professional autonomy/independence in my work.	◯	◯	◯	◯	◯	◯	◯
10. I receive recognition from others for my work.	◯	◯	◯	◯	◯	◯	◯
11. My work is appreciated.	◯	◯	◯	◯	◯	◯	◯
12. My efforts usually go unnoticed.	◯	◯	◯	◯	◯	◯	◯
13. I do not get recognized for all the things I contribute.	◯	◯	◯	◯	◯	◯	◯
14. People trust one another to fulfill their roles.	◯	◯	◯	◯	◯	◯	◯
15. I am a member of a supportive work group.	◯	◯	◯	◯	◯	◯	◯
16. Members of my work group cooperate with one another.	◯	◯	◯	◯	◯	◯	◯
17. Members of my work group communicate openly.	◯	◯	◯	◯	◯	◯	◯
18. I don't feel close to my colleagues.	◯	◯	◯	◯	◯	◯	◯
19. Resources are allocated fairly here.	◯	◯	◯	◯	◯	◯	◯
20. Opportunities are decided solely on merit.	◯	◯	◯	◯	◯	◯	◯
	◯	◯	◯	◯	◯	◯	◯

21. There are effective appeal procedures available when I question the fairness of a decision.	◯	◯	◯	◯	◯	◯	◯
22. Management treats all employees fairly.	◯	◯	◯	◯	◯	◯	◯
23. Favoritism determines how decisions are made at work.	◯	◯	◯	◯	◯	◯	◯
24. It's not what you know but who you know that determines a career here.	◯	◯	◯	◯	◯	◯	◯
25. My values and the organization's values are alike.	◯	◯	◯	◯	◯	◯	◯
26. The organization's goals influence my day to day work and activities.	◯	◯	◯	◯	◯	◯	◯
27. My personal career goals are consistent with the organization's career goals.	◯	◯	◯	◯	◯	◯	◯
28. This organization is committed to quality.	◯	◯	◯	◯	◯	◯	◯
29. Working here forces me to compromise my values.	◯	◯	◯	◯	◯	◯	◯

4. How You Feel About Your Work

Please respond to the following statements to the best of your ability.
Your honest and full responses are appreciated.

4. The following 16 statements are about how you feel at work. Carefully read and decide if you ever feel this way about your job. If you have never had this feeling, select the option under the "Never" column, after the statement. If you have had this feeling, indicate how often you felt it by selecting the appropriate frequency (from "A few times a year or less" to "Every day") that best describes how frequently you feel that way.

	Never	A few times a year or less	Once a month	A few times a month	Once a week	A few times a week	Every day
1. I feel emotionally drained from my work.	◯	◯	◯	◯	◯	◯	◯
2. I feel used up at the end of the workday.	◯	◯	◯	◯	◯	◯	◯
3. I feel fatigued when I get up in the morning and have to face another day on the job.	◯	◯	◯	◯	◯	◯	◯
4. Working all day is really a strain for me.	◯	◯	◯	◯	◯	◯	◯
5. I can effectively solve the problems that arise in my work.	◯	◯	◯	◯	◯	◯	◯
6. I feel burned out from my work.	◯	◯	◯	◯	◯	◯	◯
7. I feel I am making an effective contribution to what this organization does.	◯	◯	◯	◯	◯	◯	◯
8. I've become less interested in my work since I started this job.	◯	◯	◯	◯	◯	◯	◯
9. I have become less enthusiastic about my work.	◯	◯	◯	◯	◯	◯	◯
10. In my opinion, I am good at my job.	◯	◯	◯	◯	◯	◯	◯
11. I feel exhilarated when I accomplish something at work.	◯	◯	◯	◯	◯	◯	◯
12. I have accomplished many worthwhile things in this job.	◯	◯	◯	◯	◯	◯	◯
13. I just want to do my job and not be bothered.	◯	◯	◯	◯	◯	◯	◯
14. I have become cynical about whether my work contributes to anything.	◯	◯	◯	◯	◯	◯	◯

15. I doubt the significance of my work.	○	○	○	○	○	○	○
16. At my work, I feel confident that I am effective at getting things done.	○	○	○	○	○	○	○

5. How You Feel About Your Work

Please respond to the following statements to the best of your ability.
Your honest and full responses are appreciated.

5. Below you will find a series of statements with which you may agree or disagree. Using the scale, please indicate the degree of your agreement by selecting the option that corresponds with each statement (from "Strongly Agree" to "Strongly Disagree").

	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree
1. I always find new and interesting aspects in my work.	◯	◯	◯	◯	◯	◯	◯
2. There are days when I feel tired before I arrive at work.	◯	◯	◯	◯	◯	◯	◯
3. It happens more and more often that I talk about my work in a negative way.	◯	◯	◯	◯	◯	◯	◯
4. After work, I tend to need more time than in the past in order to relax and feel better.	◯	◯	◯	◯	◯	◯	◯
5. I can tolerate the pressure of my work very well.	◯	◯	◯	◯	◯	◯	◯
6. Lately, I tend to think less at work and do my job almost mechanically.	◯	◯	◯	◯	◯	◯	◯
7. I find my work to be a positive challenge.	◯	◯	◯	◯	◯	◯	◯
8. During my work, I often feel emotionally drained.	◯	◯	◯	◯	◯	◯	◯
9. Over time, one can become disconnected from this type of work.	◯	◯	◯	◯	◯	◯	◯
10. After working, I have enough energy for my leisure tasks.	◯	◯	◯	◯	◯	◯	◯
11. Sometimes I feel sickened by my work tasks.	◯	◯	◯	◯	◯	◯	◯
12. After my work, I usually feel worn out and weary.	◯	◯	◯	◯	◯	◯	◯
13. This is the only type of work that I can imagine myself doing.	◯	◯	◯	◯	◯	◯	◯
14. Usually, I can manage the amount of my work well.	◯	◯	◯	◯	◯	◯	◯
15. I feel more and more engaged in my work.	◯	◯	◯	◯	◯	◯	◯
16. When I work, I usually feel energized.	◯	◯	◯	◯	◯	◯	◯

6. How You Feel About Your Work

Please respond to the following statements to the best of your ability.
Your honest and full responses are appreciated.

6. The following 17 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, select the "never" option next to the corresponding statement. If you have had this feeling, indicate how often you felt it by selecting the appropriate option (from "A few times a year or less" to "Every Day") that best describes how frequently you feel that way.

	Never	A few times a year or less	Once a month	A few times a month	Once a week	A few times a week	Every day
1. At my work, I feel bursting with energy.	◯	◯	◯	◯	◯	◯	◯
2. I find the work that I do full of meaning and purpose.	◯	◯	◯	◯	◯	◯	◯
3. Time flies when I am working.	◯	◯	◯	◯	◯	◯	◯
4. At my job, I feel strong and vigorous.	◯	◯	◯	◯	◯	◯	◯
5. I am enthusiastic about my job.	◯	◯	◯	◯	◯	◯	◯
6. When I am working, I forget everything else around me.	◯	◯	◯	◯	◯	◯	◯
7. My job inspires me.	◯	◯	◯	◯	◯	◯	◯
8. When I get up in the morning, I feel like going to work.	◯	◯	◯	◯	◯	◯	◯
9. I feel happy when I am working intensely.	◯	◯	◯	◯	◯	◯	◯
10. I am proud of the work that I do.	◯	◯	◯	◯	◯	◯	◯
11. I am immersed in my work.	◯	◯	◯	◯	◯	◯	◯
12. I can continue working for very long periods at a time.	◯	◯	◯	◯	◯	◯	◯
13. To me, my job is challenging.	◯	◯	◯	◯	◯	◯	◯
14. I get carried away when I am working.	◯	◯	◯	◯	◯	◯	◯
15. At my job, I am very resilient, mentally.	◯	◯	◯	◯	◯	◯	◯
16. It is difficult to detach myself from my job.	◯	◯	◯	◯	◯	◯	◯
17. At my work, I always persevere, even when things do not go well.	◯	◯	◯	◯	◯	◯	◯

7. Your Personality

Please respond to the following statements to the best of your ability.
Your honest and full responses are appreciated.

7. Please use the below list of common human traits to describe yourself as accurately as possible. Describe yourself as you really are compared to other people you know of the same age and sex, not as you wish to be. Please respond on a range of accuracy (from "Inaccurate" to "Accurate") of how accurate each statement is about you.

So, generally, is it accurate or inaccurate that you are:

	Inaccurate	Slightly Inaccurate	Neither	Slightly Accurate	Accurate
1. Shy	◯	◯	◯	◯	◯
2. Talkative	◯	◯	◯	◯	◯
3. Energetic	◯	◯	◯	◯	◯
4. Quiet	◯	◯	◯	◯	◯
5. Extraverted	◯	◯	◯	◯	◯
6. Outgoing	◯	◯	◯	◯	◯
7. Reserved	◯	◯	◯	◯	◯
8. Untalkative	◯	◯	◯	◯	◯
9. Creative	◯	◯	◯	◯	◯
10. Intellectual	◯	◯	◯	◯	◯
11. Unimaginative	◯	◯	◯	◯	◯
12. Artistic	◯	◯	◯	◯	◯
13. Intelligent	◯	◯	◯	◯	◯
14. Philosophical	◯	◯	◯	◯	◯
15. Deep	◯	◯	◯	◯	◯
16. Uncreative	◯	◯	◯	◯	◯
17. Envious	◯	◯	◯	◯	◯
18. Emotional	◯	◯	◯	◯	◯
19. Anxious	◯	◯	◯	◯	◯
20. Unworried	◯	◯	◯	◯	◯
21. Jealous	◯	◯	◯	◯	◯
22. Unenvious	◯	◯	◯	◯	◯
23. Moody	◯	◯	◯	◯	◯
24. Unanxious	◯	◯	◯	◯	◯
25. Efficient	◯	◯	◯	◯	◯
26. Disorganized	◯	◯	◯	◯	◯
27. Careless	◯	◯	◯	◯	◯
28. Untidy	◯	◯	◯	◯	◯

29. Neat	◯	◯	◯	◯	◯
30. Inefficient	◯	◯	◯	◯	◯
31. Systematic	◯	◯	◯	◯	◯
32. Organized	◯	◯	◯	◯	◯
33. Kind	◯	◯	◯	◯	◯
34. Sympathetic	◯	◯	◯	◯	◯
35. Harsh	◯	◯	◯	◯	◯
36. Cooperative	◯	◯	◯	◯	◯
37. Unkind	◯	◯	◯	◯	◯
38. Warm	◯	◯	◯	◯	◯
39. Rude	◯	◯	◯	◯	◯
40. Inconsiderate	◯	◯	◯	◯	◯

APPENDIX C

DEMOGRAPHIC MEASURES GIVEN TO STUDENTS AND IN-HOSPITAL PARTICIPANTS

1. Thank you!

1. Please indicate your sex:

- ◯ Male
- ◯ Female

2. Please provide your age:

3. What is your primary ethnicity/race? (Please select all that apply)

- ☐ Hispanic or Latino
- ☐ Black or African American (Not Hispanic or Latino)
- ☐ Asian (Not Hispanic or Latino)
- ☐ White (Not Hispanic or Latino)
- ☐ Native Hawaiian or Other Pacific Islander (Not Hispanic or Latino)
- ☐ American Indian or Alaskan Native (Not Hispanic or Latino)

4. What is your employment status?

- ◯ Full-time
- ◯ Part-time
- ◯ Casual

5. What is the name of the Department of where you primarily work? (Example: Emergency Department)

6. What hospital or healthcare organization is your primary affiliation (Where do you work the most)? (Example: Erlanger)

7. Please enter the number of months you have been with your organization:

8. Please indicate your most complete education level:

- ◯ Freshmen
- ◯ Sophomore
- ◯ Junior
- ◯ Senior
- ◯ Graduate

9. Please select your management level:

- ◯ Staff
- ◯ Supervisor
- ◯ Management (First Level)
- ◯ Management (Intermediate)
- ◯ Management (Senior)

10. Please type in the number of people who you currently support (i.e., dependent children and/or older adults):

11. Approximately how much money do you earn in a typical year?

12. If your family and/or partner/spouse primarily supports you financially, what is their approximate annual income?

13. Are you currently enrolled in school?

- ◯ No
- ◯ Yes

Thank you for your time and energy!

With your support, the results from this study may provide further insight into a potentially powerful predictor, ineffective leadership, of nurse burnout. The results could possibly help health care organizations select and develop appropriate nurse leaders. Hopefully, the results will be able to offer the same organizational services for other occupations where burnout is a critical work outcome, as well. If you would like to receive a summary of the results when the study is complete, please select the option below. If not, then thank you again for your time and input!

***14. Please indicate whether or not you would like to receive a summary of the results via e-mail when the study is completed.**

- ◯ Yes, I would like to receive an e-mail with the summary of the results when the study is finished.
- ◯ No, thank you.

APPENDIX D

DEMOGRAPHIC MEASURES GIVEN TO SOCIAL NETWORK PARTICIPANTS

1. Your Information

Please respond to the following questions to the best of your ability.
Your honest and full responses are appreciated.

1. Please indicate your sex:

◯ Male ◯ Female

2. Please provide your age:

3. What is your primary ethnicity/race? (Please select all that apply)

☐ Hispanic or Latino
☐ Black or African American (Not Hispanic or Latino)
☐ Asian (Not Hispanic or Latino)
☐ White (Not Hispanic or Latino)
☐ Native Hawaiian or Other Pacific Islander (Not Hispanic or Latino)
☐ American Indian or Alaskan Native (Not Hispanic or Latino)

4. What is your employment status?

◯ Full-time (> = 35 hours per week) ◯ Part-time (< 35 hours per week) ◯ Casual (limited hours on an irregular basis)

5. What is the name of the Department of where you primarily work? (Example: Emergency Department)

6. What is the zip code of the facility in which you primarily work as a nurse?

7. Please enter the number of months you have worked as a nurse with this organization.

8. Are you currently enrolled in school?

◯ No
◯ Yes

9. Please indicate your most complete education level:

◯ < Bachelor's ◯ Master's Level
◯ Bachelor's ◯ Doctorate Level

10. Please type in the number of people who you currently support (i.e., dependent children and/or older adults):

11. Approximately how much money do you earn in a typical year from your nursing work?

12. If your family and/or partner/spouse primarily supports you financially, what is their approximate annual income?

2.

13. If you would like to support this study, please provide the e-mail addresses of other nurses who may be interested in taking this survey.

A.
B.
C.
D.
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G.
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I.
J.

3. Thank you!

Thank you for your time and energy!

With your support, the results from this study may provide further insight into a potentially powerful predictor, ineffective leadership, of nurse burnout. The results could possibly help health care organizations select and develop appropriate nurse leaders. Hopefully, the results will be able to offer the same organizational services for other occupations where burnout is a critical work outcome, as well. If you would like to receive a summary of the results when the study is complete, please select the option below. If not, then thank you again for your time and input!

***14. Please indicate whether or not you would like to receive a summary of the results when the study is completed.**

- ◯ Yes, please send me the results when the study is finished.
- ◯ No, thank you.

VITA

Heather Kaye Smith is from Augusta, Georgia. She graduated from Georgia College & State University in 2008 with a Bachelor of Science in Psychology. During her undergraduate career, she was involved in a faculty's developmental research project. In addition, she worked at a campus favorite restaurant. After graduation, Heather spent two years working at a research institute apart of a teaching hospital in Augusta, Georgia. Heather began graduate studies in August 2010 at The University of Tennessee at Chattanooga. She worked as a graduate research assistant for a psychology faculty member in in support of a School of Nursing grant. Heather worked as a graduate assistant by teaching an Introduction to Statistics Psychology lab. She fulfilled her practicum at a prestigious car manufacturing organization in Chattanooga, Tennessee. Heather graduates in May 2012 with a Master of Science in Psychology: Industrial – Organizational.