RELATIONSHIPS AMONG WORK ENGAGEMENT, DRIVERS OF ENGAGEMENT,

AND BULLYING ACTS IN REGISTERED NURSES WORKING IN

HOSPITAL SETTINGS

by

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A dissertation submitted to the Graduate School-Newark

Rutgers, The State University of New Jersey

In partial fulfillment of the requirements for

the degree of

Doctor of Philosophy

Graduate Program of Nursing

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Newark, New Jersey

January, 2016

ABSTRACT OF THE DISSERTATION

Relationships Among Work Engagement, Drivers of Engagement, and Bullying Acts in

Registered Nurses Working in Hospital Settings

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**Rationale.** This study aims to fill a gap in knowledge by analyzing the complex interrelationships of work engagement, drivers of engagement (psychological meaningfulness, psychological safety, and psychological availability), and bullying acts (personal attacks, attacks on competence and reputation, and attacks on work roles and tasks) among registered nurses (RNs) in hospital settings. No studies have been found regarding these complex psychological factors that influence nurses' professional engagement within US hospitals. Because an engaged nursing workforce is key to optimal clinical, employee, and organizational outcomes across healthcare systems, it is vital that hospital and nursing leadership address problems that arise due to psychological factors such as drivers of engagement, and bullying impacts nurses work engagement.

**Method.** Rutgers Institutional Review Board (IRB) approval was granted prior to the initiation of this study. The Utrecht Work Engagement Scale (UWES- 9), the Psychological Conditions Scale (PCS), and the Workplace Bullying Inventory (WBI) were used to explore the interrelationships between work engagement, drivers of engagement and bullying acts perceived by hospital-based RNs employed in the U.S. A descriptive, correlational survey was designed and conducted among an analytic sample

of 210 participants recruited from a randomly selected list of 500 RNs working in hospital settings.

**Results.** All three psychological drivers of engagement increased RN work engagement. Supervisory role, working more hours per week, working in an acute care hospital, and working on specialty care units (other than medical-surgical) were related to higher levels of RN work engagement. Lower levels of engagement were associated with staff nurses (as compared to nurses in supervisory/managerial roles), nurses who work on medical-surgical units, and those working in a specialty hospital. Bullying acts were related to lower levels of drivers of engagement and work engagement. Lastly, all three drivers of engagement were shown to be independent predictors of work engagement; and hours worked above fulltime per week; medical-surgical units; and hospital type were also independent predictors of RN work engagement.

**Conclusion.** Drivers of engagement and bullying acts were statistically significantly related to the degree of work engagement. These findings suggest that psychological drivers of engagement are important predictors of work engagement and bullying had a negative effect on this outcome.

Hospital and nursing administrators should determine strategies to strengthen workplace conditions that foster the psychological drivers of RN work engagement. This study contributes strong evidence that suggests more research is needed to replicate and compare these findings among hospital-based RNs and in other nurse practice settings.

## Dedication

- To my precious children, who have inspired me to achieve my professional goals.

- To the memory of my parents, Easell and Lucille Fountain.

- To my many loyal friends and relatives for their love and continual support during this period of my life.

- To the many other people who have entered my life in meaningful ways: professors, nursing leaders, mentors, colleagues, students, and patients, and especially to Linda Flynn, PhD, RN and Minnie Campbell, DNS, RN.

**Acknowledgements**

I hold the highest esteem for Dr. Charlotte Thomas-Hawkins's tutelage, and for my distinguished dissertation committee. I have grown both personally and professionally through my experience with Dr. Thomas-Hawkins. The results of our interactions were meaningful and inspiring. I have gained insightful pearls of wisdom that have taught me the benefits of taking the time to explore new ways of thinking. I thank you for always being there as a mentor, and colleague.

The presence of Dr. Edna Cadmus, Dr. Barbara Canella, and Dr. Marie Hutchinson on my committee has been instrumental. Dr. Cadmus, I appreciate your sharing expertise of hospital organizations and the nursing workforce. Dr. Canella, I thank you for your time, reassuring presence, and assistance during this journey. Dr. Hutchinson, I am grateful to you for offering your expert knowledge, encouragement, and exemplary contributions to nursing science with theory-driven research and a measure that is specific to nurse bullying. Lastly, I want to thank all of the nurses who volunteered their time and energy to participate in this study.

**Table of Contents**

**CHAPTER 1**

**The Problem**

Work engagement in the workforce is central to superior clinical performance and organizational and employee outcomes.  Schaufeli, Salanova, Gonzalez-Roma, and Bakker describes work engagement as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption of an employee's energies into their organizational work performance (2002).  The engaged employee is described as one who enjoys challenges, someone who exhibits mental resilience, and is engrossed in his or her work.  Research has shown organizations with higher employee engagement enjoy positive employee and organizational outcomes such as better employee retention and job satisfaction and overall business success (Harter, Schmidt, & Hayes, 2002).  According to Swensen and colleagues (2013) the work-engaged employee in hospital settings provides patient-centered care which increases patient satisfaction, and also promotes increased financial performance.

Despite research that has consistently shown that employees who are engaged outperform those with poor engagement, only a small percentage of workers are highly engaged in their work (Rivera, Fitzpatrick, & Boyle, 2011; Swensen, Dilling, Mc Carty, Bolton, & Harper, 2013; Towers Perrin, 2008; Wellins, Bernthal, & Phelps, 2005).  For example, in one international study of 30,000 employees from 200 organizations, only 19% of the employees were highly engaged (Wellins et al., 2005).  Similarly, in another study that examined work engagement in 10,000 employees across 16 hospitals in Canada (Lowe, 2012), only 29% of employees were highly engaged in their work, 39% were moderately engaged, and one out of three employees (33%) reported low levels of

engagement.  Importantly, a growing body of evidence reveals that low levels of work engagement in employees in healthcare organizations is associated with negative organizational, employee, and patient outcomes.  In the study of Canadian hospitals (Lowe, 2012), nearly 50% of disengaged employees reported an intention to leave their jobs; only one in five disengaged employees believed that excellent quality service was always provided on their work unit; and only 21% of disengaged employees reported they worked in a patient-centered care environment.  Similarly, a Gallup study of outcomes in more than 200 hospitals in the United States (U.S.) found that work disengagement in registered nurses was a primary predictor of mortality variance and patient complication rates among hospitals (Blizzard, 2005).  Thus, a low level of worker engagement poses a significant risk to the quality of patient care, patient outcomes, and organizational productivity and success.

Work engagement has been well-studied among employees in non-nursing work roles in various industries and occupations.  However, it has been the topic of minimal nursing investigation.  Registered nurses (RNs) form the largest group of healthcare professionals in the United States (American Hospital Association, 2014) and the largest group of employees in hospitals.  Therefore, the nature and quality of service provided to individuals within healthcare organizations may be largely dependent on the performance of nurses and their level of work engagement.  However, there is a paucity of studies that have examined the level of RN work engagement in hospitals in the U.S.  Importantly, the American Nurses Credentialing Center (ANCC, 2008) acknowledges the importance of an engaged nursing workforce as vital to organizational structure, optimal professional development, adequate staffing levels, shared governance, and transformational

leadership.  In the few studies that have examined work engagement in RNs, the level of

work engagement among nurses in these studies was low to moderate (Advisory Board

Company, 2007; Rivera et al., 2011; Salanova, Lorente, Chambel, & Martinez, 2011;

Simpson, 2009).  Thus, there is a need for research that further examines RN work

engagement and factors that enable or constrain their level of engagement in their work.

Research has shown that workers who are psychologically driven in their jobs are likely

to be engaged in their work (Kahn, 1990; May, Gilson, & Harter, 2004; Rivera et al.,

2011; Robinson, Perryman, & Hayday, 2004).  Thus psychological drivers of work

engagement may be an important antecedent or enabler of work engagement in nurses

who work in hospitals.  On the other hand, research has shown that workplace bullying

may serve as an impediment or barrier to employee work engagement.  Therefore,

workplace bullying may be associated with low levels of engagement in RNs and may

diminish the positive effects of drivers of engagement on RN levels of work engagement.

In the proposed study, drivers of work engagement and workplace bullying will be

examined as important predictors of work engagement among nurses who work in

hospitals in the U.S.

## Drivers of Work Engagement

According to Kahn (1990), a personal engagement theorist, persons in the

workforce have dimensions of themselves that, given appropriate conditions, they use in

the course of work role performance.  Succinctly stated, employees can choose whether

or not to be attracted to an organization, and having arrived, they can decide whether or

not their job continues to interest them sufficiently to stay in it and develop it.  Some

individuals rarely move beyond a transactional relationship with their employer with little

engagement in their work while others seek something more from their jobs, such as a sense of self-worth, of feeling valued, and an opportunity for success and development. Kahn (1990) refers to psychological experiences of workers that stimulate them to engage in their work as the psychological conditions of work engagement which are 1) psychological meaningfulness, 2) psychological safety, and 3) psychological availability. Psychological meaningfulness is defined as the sense of a return on the investment of the use of oneself into one's work. Kahn indicates that employees experience meaningfulness in their work when they feel worthwhile, useful, and valued. Psychological safety is defined as the employee's feelings of being able to express one's authentic self without fear of negative effects to self-image, status, or career. In health care organizations, employee psychological safety suggests a tenet of therapeutic relationships and behavioral norms that creates the contexts in which employees perceive feeling more or less safe when taking risks, such as in self-expression and engaging in change. Finally, psychological availability is the employee's sense of having the physical, emotional, and psychological resources necessary to personally engage in work at a particular moment (Kahn, 1990).

Importantly, research has shown that psychological conditions are important antecedents to work engagement. In fact, as the psychological drivers of work engagement, they are postulated as being positively related to work engagement and purported to be the levers that organizations can use to build a more engaging work environment (Advisory Board, 2007; May et al., 2004; Rivera et al., 2011; Wellins et al., 2005). For example, the findings in one empirical study revealed that psychological meaningfulness and safety were positively associated with workers level of work

engagement (May et al., 2004).  In another study, meaningfulness, operationalized as

passion for nursing, was the most important driver of work engagement among RNs who

worked in a large hospital (Rivera et al., 2011).  Thus, drivers of work engagement as

conceptualized by Kahn (1990) are likely important antecedents of work engagement in

healthcare organizations.  There is a dearth of research that has examined the

relationships between drivers of work engagement and work engagement in RNs in

hospitals.  One purpose of this study is to address this gap in knowledge.

**Workplace Bullying**

Bullying in nurses is well-recognized as a problem in healthcare organizations.

For the purpose of this study, bullying in nursing is defined as a pattern of multiple covert

and overt, persistent negative behaviors targeted at the individual(s) with an intent of

causing them harm; and thus contributing to a negative work environment (Hutchinson,

Jackson, Wilkes, and Vickers, 2008a).  Bullying is described as the relentless attack of

negative acts of hostile behaviors, such as being humiliated, harassed, tormented,

ignored, sabotaged, put down, insulted, ganged-up on, and a work-life devised to be

difficult (Hutchinson et al., 2008a).

The World Health Organization (WHO, 2008) and the Institute of Medicine

(IOM, 2010) recognize bullying as a widespread international public health dilemma.

The Workplace Bullying Institute (WBI) and the Zogby International (2007) survey of

7,740 American workers found that 37% reported having been bullied at work, 13%

reported occasional bullying, but within the polling year, 24% had previously been

bullied (Namie & Namie, 2009).  Importantly, the Joint Commission (2008) has

stipulated bullying and other negative behaviors that undermine patient care safety as a

sentinel event requiring immediate intervention and reporting by healthcare

organizations.  Despite this, bullying in nursing persists.  For example, Berry, Gillespie,

Gates, and Schafer (2012) explored workplace bullying among novice nurses which

indicated 21.3% of respondents were exposed to daily bullying, 44.7% reported being a

target of bullying, and 18.2% reported being bullied "now and then" or "several times a

week".

Of relevance to the proposed study is that workplace bullying has negative

organizational and worker consequences that can be widespread and enduring within an

organization (Hutchinson et al., 2006, 2008a, 2010a).  For example, in a study that

examined workplace bullying and its antecedents and consequences in a sample of RNs,

bullying were significant predictors of negative RN outcomes including detrimental

health effects, distress and avoidance at work, and career and work interruption

(Hutchinson et al., 2010).  Bullying may also serve to constrain the level of work

engagement in RNs who work in hospitals as it poses a negative humanistic and

organizational influence in clinical settings (ANA, 2010; 2012).  In fact, findings from

the empirical literature suggest that nurses who experience bullying may be less likely to

be engaged in the workplace.  For example, one study of 10,000 employees across 14

organizations revealed that the experience of harassment at work had a negative effect on

work engagement (Robinson et al., 2004).  In another study, Rodriquez-Munoz and

colleagues (2009) found that bullying was a workplace stressor and had a negative effect

on work engagement.  Therefore, it is important to examine these relationships in nurses

who work in hospitals in the U.S.

**Bullying as a Moderator**

An important theoretical premise of work engagement is that drivers of engagement can be negatively affected.  In this instance, the positive relationship between engagement drivers and work engagement will be diminished.  This theoretical tenant suggests that negative employee experiences in the workplace may diminish the positive effect of engagement drivers, such as psychological meaningfulness, safety, and availability on an employee's level of work engagement.  In fact, research has shown that when employees perceive an unsafe workplace characterized by ambiguous and or threatening conditions, they are more prone to disengage from their work (Chen et al. 2013; May et al, 2004).

The negative consequences of being the target of bullying may be severe social stress stemming from persistent negative behaviors and resulting psychological trauma (Hutchinson et al., 2010a).  Workplace bullying may exert a negative effect on psychological experiences of the employee who is bullied, that is, drivers of work engagement, represented as negative employee perceptions about the meaningfulness of their work, the safety of their workplace, and the availability of tangible and psychological resources which are required to fully engage in work.  For example, findings from one study of employees in a business organization revealed a significant negative relationship between workplace bullying and harassment and employee perceptions of psychological safety (Law, Dollard, Tuckey, & Dormann, 2011).  Thus, theoretical tenants and research findings indicate the potential role of bullying as a moderator of the theorized positive relationship between drivers of engagement and work engagement.  Specifically, bullying acts in the workplace may interact negatively with

drivers of work engagement for RNs, such as psychological meaningfulness and psychological safety, and lessen their positive effects on work engagement. Investigations of bullying in nursing have grown in an effort to combat potential adverse patient care outcomes (Hutchinson & Jackson, 2013) and achieve organizational goals. However, limited empirical examinations of RNs' experience of bullying in the workplace and its complex interrelationships with drivers of engagement and work engagement have been done. That is, the extent to which bullying in the workplace moderates the positive effects of drivers of engagement on work engagement is not known. This study offers an opportunity to address this gap in knowledge.

## Study Purpose

The literature suggests there is limited empirical data on work engagement, the drivers of engagement and factors that influence engagement in nursing. Most importantly, there is a paucity of research that has examined the interrelationship among bullying acts, drivers of engagement, and work engagement in RNs. The purpose of this study is to investigate the relationships among bullying acts, drivers of engagement, and work engagement within a sample of RNs working in hospital settings.

## Research Question

What are the interrelationships among bullying acts, drivers of engagement, and work engagement in registered nurses in hospital settings?

**Sub Question(s)**

1.  Is there a significant relationship between drivers of engagement and work engagement in registered nurses who work in hospital environments?

2. Is there a significant relationship between bullying acts and work engagement in registered nurses who work in hospitals?

3. Is there a significant relationship between bullying acts and drivers of engagement and work engagement in registered nurses who work in hospitals?

4. Does bullying acts moderate the relationship between drivers of engagement with work engagement in registered nurses who work in hospitals?

## Significance of the Study

Engaged employees are essential to the success of any organization.  Work engagement research has indicated that engaged employees are a benefit to healthcare organizations as evidenced by positive outcomes in these institutions such as improved job satisfaction, employee retention, worker productivity, quality of services, health outcomes of their patients, and organizational financial return.  For example, studies have shown that organizations with high employee engagement had 28% earnings per share growth rate in comparison to organizations with low engagement that had 11% earnings per share decline (Towers Perrin, 2008).  However, research has consistently shown that a majority of workers, including RNs in healthcare settings, are not highly engaged in their work.  Importantly, low levels of engagement have been shown to be significantly associated with negative organizational, worker, and patient outcomes.

Leaders in healthcare organizations can benefit from evidence-based research which identifies key factors that have an important impact on the levels of work engagement in their employees.  Psychological drivers of engagement and workplace bullying are two important antecedents that may enable or constrain the level of work engagement in nurses who work in hospital settings.  Furthermore, RNs play a critical

role in patient care which informs hospitals quality of care outcomes, such as patient

mortality as a key indicator.  In 2005, one study found that 54% of nurses believed

workplace bullying affected patient safety and 25% of nurses in the same sample

perceived bullying to affect patient mortality (Rosenstein & O'Daniel, 2005).  In another

study, which consisted of 4,539 healthcare workers, 67% indicated there was a link

between bullying and adverse events, 71% indicated bullying was linked with medication

errors, and 27% indicated bullying was linked with patient mortality (Rosenstein &

O'Daniel, 2008).

Therefore, research is needed to examine the complex interrelationships among

drivers of engagement, bullying acts, and work engagement in RNs who work in

hospitals in the U.S.  The examination of work engagement and its antecedents in nurses

is critical in the current healthcare environment that focuses on healthcare quality, work

performance, and patient and organizational outcomes.

In summary, continued research is vital for leaders in healthcare organizations to

cultivate and sustain strategies to improve the level of work engagement in their

workforce.  Little is known of the extent to which RNs in hospitals in the U.S. are

engaged in their work.  Moreover, there is a need to gain an understanding of important,

modifiable factors that lead to low levels of RN work engagement.  The empirical

literature suggests that interaction between psychological drivers of engagement and

workplace bullying acts is likely an important underlying mechanism for low levels of

engagement in nurses who work in hospitals.  The purpose of this study is to address this

important gap in knowledge.  The findings from this study will help to gain an

understanding of the complex interrelationships between drivers of engagement, bullying

acts, and work engagement in RNs.  The findings will also assist in the development and

testing of strategies designed to reduce workplace bullying and foster psychological

meaningfulness, safety, and resource availability in nurses, and ultimately, higher levels

of engagement in the hospital nursing workforce.

**CHAPTER 2**

This chapter presents a discussion of the theoretical and empirical literature as it relates to the phenomena of work engagement among RNs employed in hospital settings. First, the Framework of Work Engagement, as theorized by Schaufeli and colleagues (2002) is presented. Second, the determinants of work engagement are presented as derived from Kahn's (1990) Model of Psychological Conditions of Personal Engagement. Third, an overview of the Explanatory Model of Workplace Bullying as derived from Hutchinson, and colleagues (2008b) is discussed.

Section one presents a discussion of the theoretical frameworks that will guide this study. Section two presents a review of empirical literature relevant to the relationships that will be tested in this study, which is 1) drivers of engagement and work engagement, 2) bullying and drivers of engagement, 3) bullying and work engagement, and 4) bullying as a moderator of the relationship between drivers of engagement and work engagement. The third section, which is a discussion of gaps in the empirical literature, presents a summary of the theoretical rationale for research questions, and delineates the study hypotheses to be tested. The final section presents the theoretical and operational definitions of constructs to be tested in the proposed study.

**Theoretical Framework**

**Work Engagement Framework**

Schaufeli and colleagues (2002) Framework of Work Engagement postulates that work engagement is the opposite of burnout. That is, engaged employees have a sense of energetic and effective connection with their work and are able to deal with the demands

of the job.  Thus, work engagement is conceptualized as a positive and fulfilling work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli, et al., 2002).  Vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest in one's work, and persistence even in the face of difficulties (Schaufeli & Bakker, 2010).  Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge (Schaufeli & Bakker, 2010).  Absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties detaching oneself from work (Schaufeli & Bakker, 2010).  Thus, engagement is conceptualized as one being immersed and happily engrossed in work. The three dimensions of work engagement, as conceptualized by Schaufeli and colleagues will be examined in this study.

**Kahn's Model of Psychological Conditions of Personal Engagement**

A tenet of Kahn's Model of Psychological Conditions of Personal Engagement (Kahn, 1990) is that people vary in their personal engagements in work roles according to their perceptions of the benefits, or meaningfulness; the guarantees, or the safety, they perceive in situations; and the resources they perceive themselves to have, which is availability.  Thus, Kahn postulates that work engagement is influenced by psychological conditions, or drivers, including 1) psychological meaningfulness, 2) psychological safety, and, 3) psychological availability which stimulates the individual to engage in his or her work role.

Psychological meaningfulness refers to the experience feeling valued, useful, and worthwhile when performing in the work role (Kahn, 1990).  This driver is determined by

the workers' anticipation of a return on the investment from the use of one's personal

cognitive, affective, and physical energies for performing work-related tasks.

Dimensions of meaningfulness include tasks, roles, and work interactions (Kahn, 1990).

When favorable, a person is free to direct these energies into his or her work role and

interactions with others, and to receive compensation.  Alternatively, when a person is

situated in a meaningless work role associated with inadequate returns, logic follows that

the opposite of work engagement is more likely to occur, namely diminished engagement

or work disengagement (Kahn, 1990; 1992).

Psychological safety refers to the person's ability to reveal the authentic self at

work without fear of a negative outcome to one's self-esteem, professional status, or

career (Kahn, 1990).  Safety is linked with an ability to risk self-expression at work.  It is

assumed to include non-threatening situations thought to have predictable boundaries of

behavioral norms.  Dimensions of psychological safety consist of interpersonal

relationships, group and intergroup dynamics, management style and process, and

behavioral norms (Kahn, 1990).  To that extent, the elements of psychological safety

relates to supportive and trusting interpersonal relationships between employees and their

supervisors, coworkers, and organizational norms and hierarchy of power.  It follows that

when an individual perceives deviations of safety at work, such as a negative threat to

one's self-esteem and or inconsistency of behavioral norms, lower degrees of work

engagement may result.

Psychological availability refers to the person's sense of having the necessary

resources to fully use their personal energies at work (Kahn, 1990).  It is assumed that the

experience of availability will fuel the individual to drive one or more of the three

personal energies into the work-related tasks.  Availability of resources may promote or impede a person's degree of work engagement.  It follows that when resources are adequate a higher level of engagement will be present.  Dimensions of psychological availability include cognitive energies, emotional energies, and physical energies (Kahn, 1990).  For instance, a person's level of psychological availability can influence his or her willingness to engage.  Importantly, experiences within an organization's social structure, such as bullying, can impede one's available psychological resources.

This model is relevant for examining factors that influences the degrees of engagement in RNs who work in hospital settings.  The three drivers of work engagement, as conceptualized by Kahn (1990), will be examined in the proposed study.

**Explanatory Model of Workplace Bullying**

The Explanatory Model of Workplace Bullying (Hutchinson et al., 2008b) will also guide this study.  Bullying is theorized as the consequence of three organizational factors which are informal organizational alliances, organizational tolerance and reward of bullying, and misuse of legitimate organizational processes and procedures (Hutchinson et al., 2008b; Hutchinson et al., 2010a).  Bullying refers to the relentless occurrence of negative acts and hostile behaviors such as humiliation, harassment, torment, disregard, sabotage, insults, and ganging-up against the target; with the intent to make work experiences difficult (Hutchinson et al., 2008a).  Specifically, bullying acts are conceptualized as a typology of bullying behaviors that is comprised of three key categories of bullying among nurses including personal attacks, erosion of professional competence and reputation, and attack through work roles and tasks (Hutchinson et al., 2010b).

Personal attacks are bullying acts that characterize a nurse's experience of feeling ignored, insulted, blamed, and put down (Hutchinson et al., 2010a). Importantly, the three psychological drivers of work engagement will likely be diminished in the face of personal attacks in the workplace. At the individual level, personal attacks may diminish one's sense of having supportive and trusting interpersonal relationships (psychological safety), a sense of feeling valued (psychological meaningfulness), and positive emotional energy (psychological availability) in the workplace.

The erosion of professional competence and reputation is a bullying act characterized by public humiliation, downgrading of skills and abilities, and tactics to undermine career advancement of the individual (Hutchinson et al., 2010b). These bullying acts may interact with the psychological drivers (meaningfulness, safety, and availability) of work engagement and diminish the positive effect of these drivers on work engagement.

Attack through work roles and tasks is a bullying act that is characterized by unfair work assignments, sabotage, withholding of information, denial of due process and use of earned benefits, and unfair economic restrictions (Hutchinson et al., 2010b). Clearly, the withholding of work incentives may diminish one's anticipated returns on the investment from one's work performance (psychological driver of meaningfulness). Moreover, the unethical withholding of information, inconsistent workplace norms, and procedures may threaten a person' self-image and career (psychological driver of safety). Lastly, economic restrictions may distract from one's ability to fully use personal resources at work (psychological driver of availability).

According to this Model of Workplace Bullying, the act of bullying leads to negative worker outcomes; specifically, distress and avoidance at work, deleterious health effects, and work and career interruption.  It is likely that bullying has a negative effect on work engagement and on the performance of the individual's work-related tasks.

In summary, the Work Engagement Framework (Schaufeli et al., 2002), Kahn's Model of Psychological Conditions of Personal Engagement (1990), and the Explanatory Model of Workplace Bullying (Hutchinson et al., 2008a) are the theoretical frameworks that will guide the examination of relationships among drivers of engagement, bullying acts, and work engagement in RNs who work in hospital settings.  For this study, the three drivers of engagement, three constructs of bullying acts, and the three dimensions of work engagement are the theoretical concepts that will be examined in a sample of hospital-based RNs.

## Literature Review

### Drivers of Engagement and Work Engagement

In this section, a synthesis and analysis of empirical research that examined the relationship between drivers of engagement and work engagement is reviewed.  An initial search of the most current literature, that is, the past five years, yielded only three articles.  Therefore, the search was expanded to literature published in the past decade (i.e., 2004 to 2014), using the subject index terms drivers of work engagement, psychological conditions of work engagement, and work engagement.  This search yielded only six studies of nurses and non-nurses populations.  Each study is summarized by author, study design, sample characteristics, and relevant conclusions in Table 1.

In five of the six studies reviewed (May et al., 2004; Oliver & Rothmann, 2007; Robinson et al., 2004; Rothmann & Rothmann, 2010; Soane et al., 2013), drivers of engagement was conceptualized according to Kahn's (1990) model, and the three psychological drivers were operationalized with the same measure in each of the studies. In two studies, all three psychological drivers of engagement were examined and indicated they were significantly and positively associated with work engagement (May et al., 2004; Olivier & Rothmann, 2007) in both bivariate and multivariate analyses. Moreover, psychological meaningfulness had the biggest effect on work engagement in both studies. The third study measured only one driver which was psychological meaningfulness (Soane et al., 2013). The fourth study measured two drivers which were psychological meaningfulness and availability (Rothmann & Rothmann, 2010). Among these two studies, a significantly positive association was found between the particular drivers and work engagement in bivariate and multivariate analyses. In the fifth study (Robinson et al., 2004), only psychological meaningfulness was measured, and it was significantly associated with work engagement and other worker outcomes (well-being and absence from work). In the sixth study (Rivera et al., 2011), the drivers of work engagement were conceptualized using both Kahn's (1990) model and Social Exchange Theory, which operationalized the drivers differently than in the prior five studies. All drivers measured were significant and positively related to work engagement in bivariate analysis. However, only one driver, a passion for nursing, was independently associated with work engagement.

Across the six studies, only one study was conducted in a sample of nurses (Rivera et al., 2011), and only two studies were conducted in the U.S. (May et al., 2004;

Rivera et al., 2011).  Moreover, none of the studies tested the complex relationships of

interest in the proposed study; which is the relationships among all three drivers of

engagement, bullying acts, and work engagement.

In summary, the theorized relationship that drivers of engagement predict work

engagement was supported in the studies reviewed.  The findings were also in the

theoretically expected direction, that is, the presence of high levels of psychological

conditions or drivers of engagement were associated in both univariate and multivariate

analyses with work engagement in the workplace.  However, only one study examined

these relationships in a sample of RNs employed in one hospital in the U.S., and no study

examined the complex relationships among psychological drivers of engagement,

bullying acts, and work engagement.  The proposed study will fill this gap in the

literature by testing these complex relationships in a national random sample of RNs in

the U.S. hospital settings.

**Table 1. Drivers of Engagement and Work Engagement: Literature Reviewed**

| Authors/Year | Design /Participants | Relevant Conclusions |
|---|---|---|
| May, Gilson, & Harter (2004). | Descriptive, correlational study among 213 employees and managers working at a large insurance company, in Midwestern, United States. | **Drivers of engagement and work engagement:**<br>1. Psychological meaningfulness was significantly associated with work engagement in the initial ($\beta = .73$, $p < .05$) and revised models ($\beta = .74$, $p < .05$).<br>2. Psychological safety was significantly associated with work engagement in the initial ($\beta = .17$, $p < .05$ and revised models ($\beta = .23$, $p < .05$).<br>3. Psychological availability and work engagement were not significantly associated in the initial model ($\beta = .01$, $p > .05$), whereas, in the revised model ($\beta = .28$, $p < .05$) this relationship was significant. |
| Olivier & Rothmann (2007). | Correlational, cross-sectional study among 171 semi-skilled and professional employees across a multinational oil company in South Africa. | **Drivers of engagement and work engagement:**<br>1. Psychological meaningfulness ($r = 0.59$, $p < .05$), psychological safety ($r = 0.17$, $p < .05$), and psychological availability ($r = 0.34$, $p < .05$) were significantly related to work engagement. |

| Authors/Year | Design /Participants | Relevant Conclusions |
|---|---|---|
| | | 2. In multivariate analysis, psychological safety accounted for 3% of the variance in work engagement.  When psychological availability was entered in the model, the variance accounted for by both predictors was 10%. Psychological meaningfulness, when entered in the model, contributed an additional 14% of variance in work engagement, thus contributing the biggest effect on work engagement ($R^2$= 0.24, $p < .05$). |
| Rivera, Fitzpatrick, & Boyle (2011). | Correlational, cross-sectional study among 510 RNs employed in a large, urban east coast university hospital in the U.S. | **Drivers of engagement and work engagement:**<br>1. Each driver of engagement was significant and positively related to the work engagement index ($p < .001$, 2-tailed test) in bivariate analysis:<br>   a. Autonomy and input ($r = 0.64$, $p < .001$),<br>   b. Manager action ($r = 0.64$, $p < .001$),<br>   c. Non-Nurse teamwork ($r = 0.55$, $p < .001$),<br>   d. Nurse teamwork, ($r = 0.60$, $p < .001$),<br>   e. Passion for nursing ($r = 0.67$, $p < .001$),<br>   f. Personal growth ($r = 0.63$, $p < .001$),<br>   g. Recognition ($r = 0.71$, $p < .001$),<br>   h. Salary and benefits, the lowest correlation coefficient, significant at ($r = 0.43$, $p < .001$), and<br>   i. Work environment ($r = 0.72$, $p < .001$).<br>2. Passion for nursing was the only independent driver<br>   ($df$ =3,479, $f = 106.58$, $p < .001$) that influenced RN work engagement. Beta coefficients were not reported. |
| Robinson, Perryman, & Hayday (2004). | Correlational cross-sectional study among 10,024 employees, employed across 14 organizations, in the United Kingdom. | **Driver of engagement and work engagement:**<br>Psychological meaningfulness was the only driver of engagement measured in this study (feeling valued and involved) which accounted for over 34% of the variation in engagement scores.  Therefore, meaningfulness was as a strong predictor of engagement. The beta coefficient was not reported. |
| Rothmann & Rothmann (2010). | Descriptive, cross-sectional study among 4,242 employees from across various organizations in South Africa. | **Drivers of engagement and work engagement:**<br>1. Psychological meaningfulness ($r = 0.43$, $p < .05$) and psychological availability ($r = 0.31$, $p < .05$,) were significantly and positively related to work engagement in bivariate analysis.<br>2. In multivariate analysis, 19.7% of the variance in employee engagement was predicted by the three psychological conditions ($F = 37.75$, $p < .01$).  However, |

| Authors/Year | Design /Participants | Relevant Conclusions |
|---|---|---|
| | | only psychological meaningfulness *(β* = 0.36, *p* <.05) and psychological availability *(β* = 0.13, *p* <.05) were independent predictors of work engagement. |
| Soane et al. (2013). | Correlational, cross-sectional study among 625 employees from a support services organization (local government, health, transport, education, and defense) in the U.K. | **Driver of engagement and engagement** <br> 1. Meaningfulness was statistically significant and positively related to engagement (*r* = 0.61, *p* <.05) and worker well-being (*r* = 0.24, *p* < .05) and negatively related to worker absence *(r* = - 0.08, *p* <.05). <br> 2. In multivariate analysis, meaningfulness was an independent predictor of engagement (*F* = $_{158.75}$, *p* < .01), *(β* = 0.69, *p* <.05) in the model. |

**Bullying and Drivers of Engagement**

There was a dearth of studies that explored the relationship between bullying and psychological conditions of drivers of engagement. A search of the most current literature yielded one study that examined this relationship. The literature search was expanded to literature published in the last decade, that is, 2004 through 2014, using the terms bullying, bullying acts, bullying and drivers of engagement, and bullying and psychological conditions of engagement, and yielded no additional studies which examined the relationship between bullying and drivers of work engagement. This study is summarized in Table 2.

Cassidy and colleagues (2014) used Psychological Capital Theory to examine the complex relationships among bullying, psychological resources (i.e., self-efficacy and resilience), social support, and the worker's mental health outcomes (well-being and job satisfaction). In bivariate and multivariate analyses, bullying had a negative effect on psychological resources as anticipated; which are high levels of bullying was associated with lower levels of psychological resources. These findings lend support to the theoretical premise that bullying acts will likely have a negative effect on, or diminish,

psychological drivers of engagement. Namely, the experience of bullying reduces one's

sense of psychological meaningfulness, safety, and availability at work.

**Table 2. Bullying Acts and Drivers of Engagement: Literature Reviewed**

| Authors/Year | Design /Participants | Relevant Conclusions |
|---|---|---|
| Cassidy, McLaughlin, & McDowell (2014). | Correlational, cross-sectional study among 2068, employees from eight organizations including manufacturing, sales, educational, public sector, and nongovernmental in the U.K. | **Bullying and psychological resources:**<br>1. Bullying was significantly and negatively correlated with resilience, ($r = -.31, p < .01$), hope, ($r = -.37$, $p < .01$), optimism, ($r = -.37, p < .01$), self-efficacy, ($r = -.36, p < .01$).<br>2. Bullying had a significant positive relationship with perceived stress ($r = .39, p < .01$) and negative mental health ($r = .53, p < .01$). |

**Bullying and Worker Outcomes**

There was a paucity of studies that examined the relationship between bullying

acts and work engagement among adult workers. The literature search was expanded to

include studies that examined relationships between bullying and broader phenomenon of

worker outcomes. The most current literature, that is, from 2008 to 2014, was searched

using the search terms nurse bullying and engagement, nurse bullying and work

environment, nurse bullying and worker outcomes, and workplace bullying in nurses.

This search yielded fourteen studies. For each study, relevant findings of the

relationships between bullying and worker outcomes, including work engagement, are

summarized in Table 3. A synthesis and analysis of the studies is presented.

Three of the fourteen studies reviewed examined the relationship between

bullying and work engagement (Chen et al., 2013; Rodriquez- Munoz, Baillien, De Witte,

Moreno-Jimenez, & Pastor, 2009; Tre´panier, Fernet, & Austin, 2013). Across the three

studies, work engagement as the dependent variable was operationalized using the

Utrecht Work Engagement Scale (UWES-9) by Schaufeli, et al. (2006).  In all of these studies, bullying was significantly associated with lower levels of work engagement. Notably, two of the three studies used longitudinal designs to examine the relationship between bullying and work engagement (Chen et al, 2013; Rodriquez- Munoz et al., 2009).  Findings in these studies revealed a longer term effect of bullying on work engagement in that bullying, measured at baseline in both studies, were significantly associated with work engagement six months after baseline.

In twelve of the fourteen studies reviewed, the relationships between bullying and worker outcomes other than work engagement were examined.  The worker outcomes across these studies differed and 1) fear of being transferred or dismissed, anxiety about new tasks (Agervold, 2009);  2) stress and well-being (Cassidy, McLaughlin & McDowell, 2014);  3) job satisfaction (Cassidy et al., 2014; Rodriguez-Munoz et al., 2009);  4) mental health (Cassidy et al., 2014; Hogh, Hoel, & Carneiro, 2011);  5) novice nurse productivity (Berry et al., 2012);  6) turnover intention (Hogh et al., 2011; Houshmand, O'Reilly, Robinson, & Wolff, 2012; Simons, 2008; Wilson, Diedrich, Phelps, & Choi, 2011);  7) vitality and somatic stress (Hogh et al., 2011);  8) self-esteem (Losa Iglesias & De Bengoa Vallejo, 2012);  9) burnout and health outcomes (Read & Laschinger, 2013; Tre'panier et al., 2013);  10) psychological distress (Demir & Rodwell, 2012);  and 11) long-term sickness absence (Ortega, Christensin, Hogh, Rugulies, & Borg, 2011).  In all of these studies, the effect of bullying on worker outcomes was in the theoretically expected direction (Table 3).

Bullying has been conceptualized differently in the literature with descriptors, such as lateral or horizontal violence, incivility, and workplace abuse, aggression,

mistreatment or violence. In the studies reviewed, bullying was also conceptualized and

operationalized differently which makes it difficult to compare across studies. For this

study, the broadest term, namely bullying was used to define and explore bullying among

nurses. For example, findings from Read and Laschinger study among newly licensed

Canadian nurses revealed that bullying was more strongly related to negative worker

outcomes than incivility (2013). Notably, only three of the fourteen studies reviewed

were conducted in the U.S. among samples of nurses (Berry et al., 2012; Simons, 2008;

Wilson et al., 2011). Therefore, the term bullying was used to obtain a broader

understanding of this phenomenon among hospital based RNs in this study.

In summary, empirical evidence supports the theorized premise that bullying has a

negative impact on worker outcomes, particularly on nurses who work in hospital

settings. However, little is known of the underlying mechanism by which bullying acts

affect worker outcomes, such as work engagement, among RNs who work in hospitals.

To date, no studies of RNs have been conducted that examines the extent to which

bullying acts interacts with the psychological drivers of engagement, and diminishes the

positive effect of these drivers on work engagement in the U.S. One aim of this study is

to fill this gap in nursing knowledge.

**Table 3. Bullying Acts and Worker Outcomes: Literature Reviewed**

| Authors/Year | Design /Participants | Relevant Conclusions |
|---|---|---|
| Agervold (2009). | Descriptive, cross-sectional study among 898 employees, social councilors, social workers, and office workers in the public sector across 12 different government social security offices in Denmark. | **Bullying and worker outcomes:** Significant associations between being bullied and fear of being transferred was indicated ($\chi^2$ (1) = 8.07, p = .01), anxiety about new tasks ($\chi^2$ (1) = 6.7, p = .01) and fear of dismissal ($\chi^2$ (1) = 25.76, p = .001). |

| Authors/Year | Design /Participants | Relevant Conclusions |
|---|---|---|
| Berry, Gillespie, Gates, & Schafer (2012). | Descriptive, cross-sectional study among 197 new RNs (licensed less than 3 years) registered across the Ohio, Kentucky, and Indiana State Boards of Nursing, U.S. | **Bullying and worker outcomes:** Bullying was statistically significant and negatively correlated with work productivity indicated by ($F = 0.045$, $r = -.322$, $p < .01$). |
| Cassidy, McLaughlin, & McDowell (2014). | Correlational, cross-sectional study among 2068 employees, across 8 organizations including manufacturing, sales, educational, public and non-governmental sectors in the UK. | **Bullying and worker outcomes:** <br> 1. Bullying was significant and negatively correlated with positive mental health, ($r = -.43$, $p < .01$), and job satisfaction ($r = -.46$, $p < .01$). <br> 2. Bullying had a significant positive relationship with perceived stress ($r = .39$, $p < .01$) and negative mental health ($r = .53$, $p < .01$). |
| Chen et al. (2013). | Longitudinal 3-wave, study among 235 employees and their corresponding supervisors from a manufacturing company in Southern China. Study 1 Time 1: Among 334 Subordinates baseline (Incivility survey). Time 2: Among 281 Subordinates, lag time 3 months. (Work engagement survey). Time 3: Among 235 Corresponding Supervisor's, lag time 3 months. (Incivility and Work engagement surveys). | **Bullying and work engagement:** <br> 1. Incivility was significant and negatively correlated with work engagement ($r = -.26$, $p \leq .01$) at T3. <br> 2. Incivility was a significant, negative, and independent predictor of work engagement ($\beta = -.24$, $p \leq .01$) at T3. |
| Demir & Rodwell (2012). | Cross-sectional survey among 207 nurses and midwives from a large hospital in Australia. | **Bullying and worker outcomes:** <br> 1. Bullying was statistically significant and correlated with lower commitment levels [$F (1,199) = 5.76$, $p < .05$]. <br> 2. Psychological distress was statistically significant and correlated with bullying which was indicated by [$F (1,194) = 10.48$, $p < .05$]. |

| Authors/Year | Design /Participants | Relevant Conclusions |
|---|---|---|
| Hogh, Hoel, & Carneiro (2011). | Longitudinal 3-wave study among 2154 health care employees from an elderly care hospital in Denmark.<br><br>Time 1: At graduation.<br>Time 2: One year.<br>Time 3: Two years later. | **Bullying and worker outcomes**:<br>1. $T_2$ indicated a significant correlation between bullying and intention to leave ($r = - 0.16$, $p <.01$).<br>2. $T_1$ bullying significant related to mental health at $T_1$ ($r =- 0.07$, $p <.01$) and $T_3$ ($r = - 0.13$, $p <.01$).<br>3. $T_1$ bullying significantly related to vitality at $T_1$ ($r = -0.07$, $p <.01$) and $T_3$ ($r = - 0.12$, $p <.01$).<br>4. Both $T_1$ and $T_3$ had a significant positive relationship between bullying and somatic stress $T_1$ ($r = 0.07$, $p <.01$), and $T_3$ ($r = 0.10$, $p <.01$).<br>5. Frequently bullied participants [$T_2$] reported a higher risk of turn over intent at $T_3$ (OR = 3.6, 95% CI = [1.78, 7.02]). |
| Houshmand, O'Reilly, Robinson, & Wolff (2012). | Longitudinal study among 357 nurses employed across 41 units of a large health authority in Canada.<br>Time: Surveys were administered two months apart. | **Bullying and worker outcomes:**<br>A significant positive and independent relationship between work unit-level bullying and turnover intentions (controlling for direct experiences of bullying), ($\beta = .07$, $p < .05$, one-tailed). |
| Losa Iglesias & De Bengoa Vallejo (2012). | Descriptive, cross sectional study among 538 staff nurses from five primary care hospital wards and specialty areas in the Northern State of Spain. | **Bullying and worker outcome (self-esteem):**<br>Lower bullying rates was associated with higher levels of self-esteem ($\chi2 = 109$; $df = 1$; $p < 0.001$). |
| Ortega, Christensin, Hogh, Rugulies, & Borg (2011). | Longitudinal study among 9949 health care workers from an elderly care facility in Denmark. | **Bullying and worker outcomes:**<br>1. Long term sickness absence was high for workers occasionally bullied [RR = 1.40, (CI): 1.13–1.73; $P < 0.05$].<br>2. Long term sickness absence was higher for workers frequently bullied [RR = 2.27, (CI): 1.57–3.30; $P < 0.05$].<br>3. The risk of long-term sickness absence was 92% and significantly higher for those workers frequently bullied compared to those not bullied [RR = 1.92, (CI): 1.29-2.84; $P < 0.05$], after adjusting for psychosocial work characteristics. |

| Authors/Year | Design /Participants | Relevant Conclusions |
|---|---|---|
| Read & Laschinger (2013). | Descriptive, cross-sectional study among 342 new graduate nurses registered (within the last 2 years) in the College of Nurses of Ontario, Canada. | **Bullying and worker outcomes:**<br>1. Bullying was significantly correlated negatively with psychological capital ($r = -0.21$, $p < .05$), job satisfaction ($r = -0.46$, $p < .05$); career satisfaction ($r = -0.21$, $p < .05$), and work engagement ($r = -0.27$, $p < .05$).<br>2. Bullying was significantly positively correlated with job turnover ($r = 0.32$, $p < .05$), and emotional exhaustion ($r = 0.46$, $p < .05$).<br>3. Bullying was significantly correlated with higher levels of poor physical health ($r = 0.39$, $p < .05$), and poor mental health ($r = 0.32$, $p < .05$). |
| Rodriquez- Munoz, Baillien, De Witte, Moreno-Jimenez, & Pastor (2009). | Longitudinal 2- wave study among white and blue collar employees across various organizations in Belgium.<br><br>**S**tudy **1:** 312 employees (6 months, lag time).<br><br>**S**tudy **2**: 369 employees (2 years, lag time). | **Bullying and work engagement:**<br>**Study 1:**<br>1. Statistically significant and negative relationships between workplace bullying and job satisfaction was indicated ($r = -.39$, $p < .01$), vigor ($r = -.30$, $p < .01$); and dedication ($r = -.31$, $p < .01$).<br>2. SEM tests indicate a statistically significant, independent, and negative relationship between **T1** bullying and **T2** dedication ($\beta = -.19$, $p < .01$). Thus, high exposure to bullying may directly decrease dedication.<br>**Study 2**:<br>1. SEM tests indicate a statistically significant relationship between **T1** bullying as a predictor on **T2** job satisfaction ($\beta = -.09$, $p < .05$). Thus, high exposure to bullying may directly decrease job satisfaction.<br>2. Statistically significant negative relationships between workplace bullying and job satisfaction ($r = -.29$, $p < .01$), vigor ($r = -.22$, $p < .01$, and dedication ($r = -.31$, $p < .01$). |
| Simons (2008). | Descriptive, cross-sectional study among 511 newly licensed and experienced nurses employed primarily in acute care settings in Massachusetts, U.S. | **Bullying and worker outcome (intent to leave):**<br>1. In bivariate analysis, a significant correlation was found ($r = 0.51$, $P < .001$) between bullying and intent to leave.<br>2. In multivariate analysis, bullying was a significant predictor of intent to leave the organization ($\beta = 3.1$, $P < .0005$).<br>3. In sum, as workplace bullying increases, the participants' intent to leave their job increased. |

| Authors/Year | Design /Participants | Relevant Conclusions |
|---|---|---|
| Tre´panier, Fernet, & Austin (2013). | Correctional, cross-sectional study among 1179 nurse employees from the public health sector in Quebec, Canada. | **Bullying and work engagement**: SEM tests indicate a significant relationship between workplace bullying on burnout and work engagement. <br> 1. Workplace bullying was statistically significant and a positive predictor of burnout ($\beta = 0.73$, $p < .001$). <br> 2. Workplace bullying was significant and negatively related to work engagement ($\beta = -0.36$, $p < .001$). <br> 3. Workplace bullying was statistically significant and a negative predictor of satisfaction of the needs for autonomy ($\beta = -0.64$, $p < .001$), competence ($\beta = -0.30$, $p < .001$), and relatedness ($\beta = -0.47$, $p < .001$). |
| Wilson, Diedrich, Phelps, & Choi (2011). | Descriptive, cross-sectional study among 130 RNs from a community hospital in Arizona, U.S. | **Bullying and worker outcomes:** <br> 1. A statistically significant difference was indicated between intent to leave and hostility ($t_1 = -7.308$; $P = .000$), which indicated intent to leave was associated with a higher score of hostility ($4.73 \pm 1.39$), than intent to leave no group ($2.66 \pm 1.70$). <br> 2. Fear of hostility was significantly higher in intent to leave group ($0.85 \pm 0.47$) compared to that of the group with no intent to leave ($0.49 \pm 0.55$), was indicated with higher score in fear of hostility intended to leave their job ($t_1 = -0.3705$; $P = .000$). <br> 3. Hierarchical multiple regression analysis revealed hostility was a significant predictor of intent to leave ($F_{9,67} = 4.604$; $P = .000$). |

## Bullying as Moderator

In this final section, a search of the literature for the last fourteen years using the

key terms bullying and moderation yielded one study of bullying as a moderator

(Houshmand et al., 2012).  However, no studies were found that examined the

moderating effect of bullying on the relationship between drivers of engagement and

work engagement.  Houshmand and colleagues study examined the complex

relationships among individual bullying, unit-level bullying, and turnover intention in a

sample of nurses in Canada (2012).  The findings revealed a significant interactive effect

of individual and unit-level bullying on turnover intention.  That is, the relationship

between unit-level bullying and turnover intentions was weaker for those who

experienced less individual bullying, compared with those who experienced more.  Thus,

low levels of individual bullying moderated the negative effect of unit-level bullying on

turnover intention.  It is plausible then that bullying may interact with the psychological

drivers of engagement and decrease their positive effects on work engagement among

workers who experience bullying acts.  This study will address this gap in the literature

by examining the complex relationships among drivers of engagement, bullying acts, and

work engagement in RNs who work in hospital settings.

| Authors/Year | Design /Participants | Relevant Conclusions |
|---|---|---|
| Houshmand, O'Reilly, Robinson, & Wolff (2012). | Longitudinal 2-wave study among 357 nurses employed across 41 units of a large health authority in Canada.<br><br>Time: Surveys were administered two months apart. | **Bullying as moderator and worker outcomes:**<br>1. A significant association between interaction term (unit-level bullying x individual bullying) and turnover intention was found ($\beta = -.06$, $p < .05$, one-tailed).<br>2. A moderation effect of the impact of *unit-level bullying* on turnover intentions was greater for those who infrequently experienced bullying than for those who experience more frequent bullying. |

**Current State of Knowledge and Gaps**

Work engagement is a positive psychological state that is characterized by vigor,

dedication, and absorption in one's work (Schaufeli et al., 2002).  Kahn (1990; 1992)

posits that an individual's degree of work engagement is directly determined by positive

psychological conditions namely, the three drivers of engagement including

psychological meaningfulness, psychological safety, and psychological availability.

Succinctly stated, workers who report high levels of psychological conditions of

engagement will be highly engaged in their work.  All the literature reviewed supports

these theorized relationships.  Yet, only one study was found that tested similar theoretical relationships in a sample of RNs in the U.S. (Rivera et al., 2011).  Thus, there is a need to further examine the theorized relationship between drivers of engagement and work engagement among RNs in the U.S. in order to understand modifiable antecedents to the problem of low levels of work engagement in nursing.

Bullying acts among workers, including nurses, is a persistent problem, and theorists postulate that bullying is associated with negative organizational and worker outcomes.  Taken together, the empirical literature has consistently shown that bullying is associated with worker outcomes in the theoretically expected direction.  It is anticipated that, in the proposed study, bullying will be negatively associated with work engagement.  Specifically, RNs who report experiences of bullying will be less engaged in their work.

There is sparse literature that links bullying with psychological antecedents to work engagement.  Relatively few studies have examined the effect of bullying on the psychological antecedents to work engagement (Cassidy et al., 2014; Tre'panier et al., 2013).  Findings from Cassidy and colleagues' (2014) study revealed that bullying was negatively associated with psychological resources that were similar in description to characteristics of psychological drivers as theorized by Kahn (1990).  Similarly, Demir and Rodwell linked bullying with psychosocial factors using the job-demands-resources model (2012).  Thus, it is likely that bullying is also negatively associated with psychological meaningfulness, psychological safety, and psychological availability.

Lastly, there is theoretical and empirical evidence for a moderating role of bullying on the relationship between drivers of engagement and work engagement.  This

complex relationship will be tested in the proposed study.  Thus, the purpose of this

study is the examination of the relationships among drivers of engagement, bullying acts,

and work engagement in nurses who work in hospital settings in the U.S.

## Study Hypotheses

The following hypotheses will be examined among RNs working in hospital

settings.

1.  Drivers of engagement are positively associated with work engagement.

    a.  Psychological meaningfulness is positively associated with work engagement.

    b.  Psychological safety is positively associated with work engagement.

    c.  Psychological availability is positively associated with work engagement.

2.  Bullying acts are negatively associated with drivers of engagement.

    a.  Personal acts are negatively associated with psychological meaningfulness.

    b.  Personal acts are negatively associated with psychological safety.

    c.  Personal acts are negatively associated with psychological availability.

    d.  Erosion of professional competence and reputation is negatively associated
        with psychological meaningfulness.

    e.  Erosion of professional competence and reputation is negatively associated
        with psychological safety.

    f.  Erosion of professional competence and reputation is negatively associated
        with psychological availability.

    g.  Attack through work roles and tasks are negatively associated with
        psychological meaningfulness.

    h.  Attack through work roles and tasks are negatively associated with

        psychological safety.

    i.  Attack through work roles and tasks are negatively associated with

        psychological availability.

3.  Bullying acts are negatively associated with work engagement.

    a.  Personal attacks are negatively associated with work engagement.

    b.  Erosion of professional competence and reputation is negatively associated

        with work engagement.

    c.  Attack through work roles and tasks are negatively associated with work

        engagement.

4.  The interaction of bullying and drivers of engagement will be significantly associated

    with work engagement.

The hypothesized relationships between all variables in this study are diagrammed in
Figure 1.

**Figure 1. Hypothesized Theoretical Relationships between Drivers of Engagement,
Bullying Acts, and Work Engagement to be examined in the Proposed Study.**
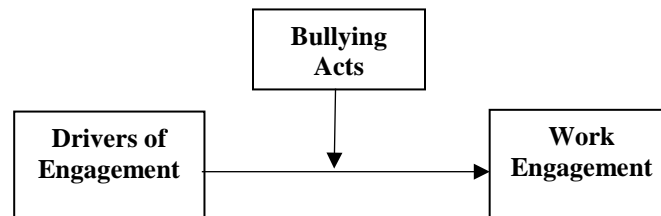
**Theoretical and Operational Definitions**

**Work Engagement**

Work engagement is defined as the individual worker's positive, fulfilling mental state associated with vigor, dedication and absorption in one's work (Schaufeli et al., 2002; Schaufeli & Bakker, 2010). Vigor is defined as the high energy and mental resilience an individual invests in his or her work related activities (Schaufeli et al., 2006). Dedication is defined as the intense sense of significance, involvement, and enthusiasm an individual has towards one's work even when faced with challenges (Schaufeli et al., 2006). Absorption is defined as being fully focused and deeply engrossed in one's work whereby blissfully losing track of time and finding it difficult to stop the work- related activities (Schaufeli et al., 2006). Work engagement is operationally defined as the individual's score on the Utrecht Work Engagement Scale (UWES-9) (Schaufeli et al., 2006).

**Drivers of Engagement**

Psychological meaningfulness is the perception of return on investment for use of the self in work-related role performance (May et al., 2004). Psychological safety is the perception of being able to reveal an authentic self without fear of negative outcomes in self-image and work role status (May et al., 2004). Psychological availability is the perception of possessing the necessary resources to employ self-in work role performance (May et al., 2004). The three psychological drivers of engagement are operationally defined as individual scores on the Psychological Conditions Scale (PCS), (May et al., 2004).

**Bullying Acts**

Bullying refers to the relentless occurrence of negative acts and hostile behaviors aimed towards an individual (Hutchinson et al., 2008b). Bullying acts are comprised of three key categories of bullying including personal attacks, erosion of professional competence and reputation, and attack through work roles and tasks (Hutchinson et al., 2010b). Personal attacks are bullying acts that characterize a nurse's experience of feeling ignored, insulted, blamed, and put down (Hutchinson et al., 2010b). The erosion of professional competence and reputation is a bullying act characterized by public humiliation, downgrading of skills and abilities, and tactics to undermine career advancement of the individual (Hutchinson et al., 2010b). Attack through work roles and tasks is a bullying act that is characterized by unfair work assignments, sabotage, withholding of information, denial of due process and use of earned benefits, and unfair economic restrictions (Hutchinson et al., 2010b). Bullying is operationally defined as the participants' individual scores on the Workplace Bullying Inventory (WBI), (Hutchinson et al., 2008a).

**Registered Nurse**

Registered Nurse (RN) is defined as a nurse professional who has graduated from an accredited school and is registered and licensed to practice by a state board of nursing (Bureau of Labor Statistics, 2014). All levels of nurses work roles such as staff, manager/supervisors, administrative, and other hospital-based registered nurses were recruited to participate in this study.

**Hospital settings**

For this study a hospital is defined as one of four types as distinguished by the

American Hospital Association including 1) Medical - Surgical Acute Care, 2) Inpatient

Rehabilitation, 3) Psychiatric, and 4) Long-Term Care Hospitals (2012).

## Chapter 3

## Methods

This chapter describes the research setting and design which includes the sampling methods, instruments and procedure for data collection and analysis in the study. This study used a descriptive, cross-sectional correlational survey design to examine the relationships among bullying acts, drivers of engagement, and work engagement among registered nurses (RNs) that work in hospitals settings.

**Research Setting**

Subjects were recruited through the use of a mailing list of actively licensed RNs that worked in hospitals in the U.S. This list of RNs was obtained from a national publishing company.

**Sampling Methods**

Lippincott Williams and Wilkins (LWW), an affiliate of Wolters Kluwer Health, is a publication company of nursing and healthcare textbooks, and educational products with more than 276 scientific journals (2014). In addition, LWW and affiliate publishes about fifty nursing journals with an estimated 1,213,871 subscribers which represents a majority of RNs, licensed practical/vocational nurses, advanced practice nurses, nursing students and nursing faculty (2014). The investigator obtained a mailing address list of 5000 randomly selected RNs from the Lippincott Publication Company's Masterfile database of an estimated 123,922 RNs that work in hospital facilities across the U.S. (LWW, 2014). This list did not include nurses that worked in other settings, such as Community/Public or Home Health Care, Hospice, Ambulatory/ Outpatient Care, Office Nurse, School Nurse and Nursing Faculty (LWW, 2014). The publishing company selected the target population sample via a computer generated random selection

mechanism. Furthermore, the investigator used an Excel software program that generated a random sample of 500 nurses from the Masterfile database that generated random numbers for each nurse that sorted them from highest to lowest, and resulted in the first 500 randomly sorted nurses that was used for this study's sample. Inclusion criteria for this study included: (a) age 18 years and older, (b) ability to read, write and speak English, (c) a registered nurse, (d) works as a RN in a hospital facility in the U.S., and (e) full-time, part-time, or per-diem work status. The exclusion criteria for this study included: (a) licensed practical/vocational nurses, student nurses, and nurse assistants/technicians. As a recruitment incentive, all participants had an optional one-time only entry to the Chance Drawing to receive one (1) $150.00 American Express gift card that was randomly drawn by the PI at the end of the participant recruitment and survey collection procedures. In addition to the mailing list requested, a copy of Rutgers University IRB approval, a description of the study purpose, methods, paper survey consent cover letter and post cards, survey instruments, and schedule of the repeated survey mailing dates accompanied Lippincott's application for the RN mailing list rental as per policy.

Power analysis for correlational and regression analysis was calculated to determine the appropriate sample size to yield sufficient power for these statistical techniques. For correlational analysis, using a moderate effect size ($r = .25$) based on the literature for drivers of engagement and work engagement (Olivier & Rothmann, 2007; Rothmann & Rothmann, 2010, Soane et al., 2013), bullying and drivers of engagement (Cassidy et al., 2014), and bullying and work engagement (Chen et al., 2013), a sample size of 85 subjects was required to obtain statistical power of 0.80 at a .05 significance

level (Cohen, 1988).  For regression analysis using the moderate ($f = .15$) effect size

based on the literature (May et al., 2004; Olivier & Rothmann, 2007; Rothmann &

Rothmann, 2010; Soane et al., 2013) and six independent variables, a minimum sample

size of 98 registered nurses was needed to obtain a power of .80 at a significance level of

.05 (Cohen, 1988).  Based on Dillman's estimate of response rates after repeated mailings

to 500 potential participants, a minimum sample size of 250 was anticipated to provide

more than sufficient power for correlational and regression analyses (2009).

## Instruments

**Work Engagement**

**Utrecht Work Engagement Scale.**  The Utrecht Work Engagement Scale

(UWES- 9) has been commonly used to measure work engagement across various

disciplines including registered nurses (Schaufeli et al., 2006; see also Schaufeli &

Bakker, 2004).  A self-report survey, the UWES-9 scale measures the three dimensions of

work engagement as theorized by Schaufeli and colleagues (2002): vigor (3 items),

dedication (3 items), and absorption (3 items).  The scale items are arranged on a 7-point

Likert scale ranging from zero, 0= Never (0 times per year), 1= Almost Never (A few

times a year or less), 2= Rarely (Once a month or less), 3= Sometimes (A few times a

month), 4= Often (Once a week), 5= Very Often (A few times a week), 6= Always

(Every day).  Scores on each of the nine items range from 0 to 6 with high scores

reflecting higher levels of work engagement and the total scale scores range from 0 to 54.

Sample items include "*At my work, I feel bursting with energy*" (vigor); "*I am

enthusiastic about my job*" (dedication); and "*I feel happy when I am working intensely*"

(absorption).

The psychometric properties of the UWES -9 were initially examined in a multi-national study across ten countries which included 14,521participants (Schaufeli et al., 2006).  Notably, the internal consistency of the UWES-9 scores of the entire nine-items were high, that is, the range of reliability coefficients for the total scale was from .85 to .92 (median = .92) across the countries sampled (Schaufeli et al., 2006).

Establishment of face-validity for the UWES-9 short scale (Schaufeli et al., 2006) was based on inter-item regression analysis.  The most characteristic item in each scale was selected based on the highest beta values and represent the final scale items.  Factor analysis of the UWES-9 indicated that the three-factor model was a better fit to the data than the one-factor model (Schaufeli et al., 2006).  Statistically significant coefficients were found for all items on their latent factors.

Criterion-related validity was evaluated by analyzing the relationship of the Utrecht Work Engagement Scale (Schaufeli et al., 2006) scores with scores on the Maslach Burnout questionnaire (Maslach, Jackson, & Leiter, 1996).  As hypothesized, the correlation was statistically significant and negative ($r = {}^-0.58$) (Schaufeli et al., 2006).

In another study, Chen et al. (2013) reported that the UWES-9 was an appropriate measure of work engagement, and the total reliability of the scale was .92.  A confirmatory factor analysis (CFA) was conducted to test the three-dimensional structure of the UWES-9 and the fit indexes for three first order factors plus one second-order factor resulted within a good range  ($\chi^2[24] = 40.87, p \leq .01$; RMSEA= .06; CFI = .98; TLI= .98) (Chen et al., 2013).  As hypothesized, criterion-related (discriminate) validity

was demonstrated as workplace incivility was statistically significant and negatively correlated with work engagement ($r = -.26$, $p \le .01$) (Chen et al., 2013).

The UWES-9 has been used in RN samples and reliability was adequate. Although Tre'panier and colleagues' (2013) study of 1179 nurses across Canadian healthcare settings did not report the total scale score, these authors did report reliability coefficients of .86 for the vigor scale and .94 for the dedication scale.

In summary, the psychometric properties reported among these studies indicate that the UWES-9 is a valid and reliable measure of work engagement (Schaufeli et al., 2006). Therefore, the UWES-9 was used to measure work engagement as the dependent variable in this study.

**Drivers of Engagement**

**Psychological Conditions Scale.** The Psychological Conditions Scale (PCS) (May, 2003; Spreitzer, 1995) is used to measure the drivers of engagement as theorized by Kahn (1990). The PCS is a 13-item measure comprised of three independent scales: 1) Psychological Meaningfulness (6-item) scale, 2) Psychological Safety (2-item) scale, and 3) Psychological Availability (5-item) scale. The PCS items are arranged on a 5-point, Likert scale with response choices ranging from 1= Strongly Disagree to 5 = Strongly Agree. Prior to scoring, the two items that make up the Psychological Safety Scale are reverse scored. Scale scores are computed as mean scores. The range of scores for the three scales is 1 to 5, and higher scores reflect high levels of psychological meaningfulness, safety, and availability.

Psychometric testing of the PCS was initially established by May et al. (2004) in a sample of 213 employees from a large insurance organization in the U.S. Factor analysis

was conducted to examine the construct validity of the PCS.  Using an explanatory

principal confirmatory factor analysis, findings indicated an overall 13-item scale with

three independent factors consistent with Kahn's three constructs of psychological drivers

of personal engagement.  Sample items include "*I feel that the work I do on my job is

valuable*" (psychological meaningfulness); "*There is a threatening environment at work*"

(psychological safety); "*I am confident in my ability to think clearly at work*"

(psychological availability).

The initial internal consistency reliability coefficient of 0.77 for the entire PCS

was-acceptable (Nunnally & Bernstein, 1994).  The internal consistency reliability

coefficients for the three psychological conditions scales was reported as 1) 6-item

psychological meaningfulness   (*a* =.90); 2) 2-item psychological safety (*a* =.71); and 3)

5-item psychological availability (*a* =.85) (May, 2003; Spreitzer, 1995).

In sum, the PCS is a reliable and valid instrument used to measure the

psychological conditions of engagement as theorized by Kahn (1990), in various

occupations and industries (May et al., 2004; Oliver & Rothmann, 2007; Robinson et al.,

2004; Rothmann & Rothmann, 2010; Soane et al., 2013).  To date, the PCS measurement

scale has not been used in a RN population.

**Pilot Study to Establish PCS Validity and Reliability in a Sample of RNs.**

Although the PCS scale has been used in other occupations and industries, it has

not been tested in samples of RNs.  A pilot study was conducted by the investigator to

establish reliability and validity of the PCS in a sample of RNs who worked in a Magnet

hospital in northern New Jersey.  Following Rutgers University IRB approval, all RNs

who worked across inpatient and outpatient acute care units were invited to participate in

this study.  A final sample size of 163 RN participants completed the PCS survey over a

fourteen day period.  This sample was more than sufficient to meet the recommended

sample size of one subject per item for psychometric testing (Nunnally & Bernstein,

1994).  SPSS version 21 was used for statistical analysis of the survey data (IBM [SPSS],

2012).

The results of internal consistency reliability analysis are listed in Table 1. Alpha

coefficients for the psychological meaningfulness and availability scales are acceptable.

The alpha coefficient for the psychological safety scale was modest and likely reflects the

low number of items (two) in the scale (Nunnally & Bernstein, 1994).

Table 1

*Internal Consistency Reliability for PCS Scales*

| Scale | Alpha Coefficient |
|---|---|
| Psychological Meaningfulness | 0.95 |
| Psychological Safety | 0.64 |
| Psychological Availability | 0.89 |

Factor analysis was undertaken to examine the construct validity of the PCS.

Principal component analysis (PCA) with oblique rotation was conducted on the 13

items.  A cut-off of .40 was used for factor loadings.  The factor analysis revealed three

distinct factors with Eigenvalues greater than one that explained 76% of variance and

were consistent with the three dimensions of the PCS (Table 2).  The largest factor

explained 37% of the variance and was composed of the six Psychological

Meaningfulness scale items.  All scale items loaded on one factor (loadings ranged from

0.77 to 0.89) and did not cross-load on other factors (Table 2).  The second factor

explained 12% of the variance and was composed of the two Psychological Safety scale

items.  All scale items loaded on one factor (loadings were 0.73 and 0.89) and did not

cross-load on other factors (Table 2).  Finally, the third factor explained 27% of the

variance and was composed of the five Psychological Availability scale items.  All scale

items loaded on one factor (loadings ranged from 0.57 to 0.85) and did not cross-load on

other factors (Table 2).

Table 2

*Psychological Conditions Scale Factor Loadings*

| Item | Factor 1 | Factor 2 | Factor 3 |
|---|---|---|---|
| The work I do on this job is very important to me | .83 | | |
| My job activities are personally meaningful to me | .88 | | |
| The work I do on this job is worthwhile | .84 | | |
| My job activities are significant to me | .83 | | |
| The work I do on this job is meaningful to me | .89 | | |
| I feel that the work I do on my job is valuable | .77 | | |
| I am afraid to express my opinions at work | | .89 | |
| There is a threatening environment at work | | .73 | |
| I am confident in my ability to handle competing demands at work | | | .57 |
| I am confident in my ability to deal with problems that come up at work | | | .85 |
| I am confident in my ability to think clearly at work | | | .85 |
| I am confident in my ability to display appropriate emotions at work | | | .82 |
| I am confident that I can handle the physical demands at work | | | .78 |

As a further test of construct validity, the inter-correlations among the three PCS

scales were examined (Table 3).  All three scales were significantly related to each other

as expected.  However, the magnitude of the correlations indicates the each dimension of

psychological conditions of engagement is relatively distinct from one another (Nunnally

& Bernstein, 1994).

Table 3

*Correlations between PCS Scales*

| Scale | Psychological Meaningfulness | Psychological Safety |
|---|---|---|
| Psychological Safety | .45* | |
| Psychological Availability | .62* | .35* |

*p<.01

**Bullying Acts**

**<u>Workplace Bullying Inventory.</u>**  The Workplace Bullying Inventory (WBI) was

used in this study to measure bullying acts (Hutchinson et al., 2008b) across all levels of

nursing practice, such as staff, manager/supervisory and administrative work roles.  The

content validity of the WBI was confirmed using an expert panel that pre-tested the scale

prior to the validation study of 102 Australian nurses with a majority of 80.8% in clinical

roles, and the others from non-clinical roles, such as management and administration

(Hutchinson et al., 2008b).  In the initial WBI psychometric study, Hutchinson et al.

(2008) reported internal consistency reliabilities that ranged from above 0.88 to 0.93 for

each of the three bullying acts subscales.

To examine the construct validity of the WBI, exploratory factor analysis was

conducted.  A final solution after orthogonal, oblique, and oblimin rotations yielded 3

factors with loadings of 0.40 and above.  The first factor or scale, labeled "attack upon competence and reputation, is comprised of six items and accounted for 51% of the variance.  The second factor or subscale, labeled "personal attacks" is comprised of six items and accounted for 9.4% of variance.  The third factor or subscale, labeled "attack through work tasks", is comprised of five items and accounted for 10% of the variance.

The WBI is a 16-item instrument that measures each item response arranged on a 5-point Likert scale from 1= Never, 2= A few times a year, 3= Monthly, 4= Weekly, and 5 = Daily.  The WBI measures three dimensions of bullying; that is, a) personal attacks, b) attacks upon competence and reputation, and c) attacks through work tasks.  The total scale score for the WBI is computed by sum score cut-off points as follows: no exposure to bullying (0 to 25), moderate exposure (26 to 37), and substantial exposure to bullying (greater than 38) (M. Hutchinson, personal communication, November 17, 2014).  Scores on each of the sixteen items range from 0 to 5 with high scores reflecting higher levels of exposure to bullying and the total scale scores range from 16 to 80.  Sample items include "*I was denied development opportunities*" (personal attacks), "*I was publicly humiliated*" (attacks upon competence and reputation), and "*My work was organized to inconvenience me*" (attacks through work tasks) (Hutchinson et al., 2008a).

The WBI has been subsequently used in RN samples in the U.S. (Smith, 2011), and adequate internal consistency reliability (> .80) was reported for each scale.  The WBI is an appropriate instrument for examining bullying among a sample of RNs that work in U.S. hospital settings.

**Demographic Characteristics:**

**Demographic Questionnaire.** A demographic questionnaire was used to collect data that described the RN sample characteristics and the hospital settings. Specifically, data was gathered regarding participant demographic characteristics including gender, age, race, highest degree in nursing, number of years as RN, primary role in current job, number of years in current role, average hours worked per week, certification (yes/no), work status (full- or part-time, per diem) and work specialty. Participants self-reported the characteristics about their hospital type and work setting data that included, state in which RN worked, teaching vs. non-teaching status, number of beds (< 100, 100-299, 300 or greater), and magnet status.

## Procedure for Data Collection

Participants were recruited from a list of mailing addresses of 5000 randomly selected RNs that was purchased from Lippincott Williams and Wilkins national nursing Masterfile database (LWW, 2014). The Tailored Design Method (TDM) was used to collect the survey questionnaire data via the repeated mailing, multiple contact method to maximize the participant response rate (Dillman, Smyth, & Christian, 2009). Adherence to the TDM generally has the potential to yield a mailed survey response rate of 50-70% (Dillman et al., 2009). In this study, the investigator randomly selected 500 potential participants from the Masterfile mailing list to receive the survey questionnaire via the U.S. postal service first class mail. Survey participates self-identified as a registered nurse and hospital workplace status in the demographic data form. A pre-coded, unique identifier number was assigned by the PI to each survey to ensure tracking of returned surveys and follow up mailings to non-responders.

For the first participant contact, 500 potential participants were sent a survey packet. Each packet included 1) the study instruments, 2) a paper survey consent (informational) letter from the principal investigator (PI) that provided an explanation of the study and an invitation to participate, 3) specifically, the paper survey consent letter detailed their rights as a research subject, confidentiality, their right to choose not to participate or withdraw from the study at any time, any anticipated risks and benefits to the participants, 4) advisement to seek counseling if emotional in response to bullying items (contact information provided in consent letter), 5) an explanation that completion of the survey served as their consent to participate, 6) an explanation of the recruitment incentive, optional entry for a Chance Drawing of one recipient of a $150.00 American Express gift card to be randomly drawn by the PI at the end of the participant recruitment and survey collection, and instructions to write their preferred contact information on the blank index card and place it into the security envelope provided, seal it and return it with the completed survey in the pre-stamped, self-addressed envelope via postal mail, 7) contact information for the PI and Rutgers Institutional Review Board (IRB), and 8) instructions for completed mail surveys to be placed in the self-addressed stamped envelope provided in the packet for return to the PI.

One week after the initial survey mailing, the second mailed contact was made and included a reminder/thank you card that was sent to the 500 potential participants. Two weeks later, a third contact was made to non-responders who received another survey packet. A week later, a postcard reminder/thank you was sent to the non-responder group who was mailed a second survey packet. Two weeks after the reminder

postcard was sent, a final survey packet was sent to non-responders.  The study's

repeated mail survey timeline is shown in Table 4.

Table 4

*Repeated Mail Survey Schedule*

| Type of Participant | Type of Document | Mailing Week |
|---|---|---|
| All 500 subjects | Initial Packet (paper survey consent letter, pre-coded survey, Chance Drawing index card & security envelope, return envelope /pre-stamped & addressed to PI) | 1 |
| All 500 subjects | Reminder/Thank you card | 2 |
| Non responders | Second questionnaire packet | 4 |
| Non-responders | Reminder Post card | 5 |
| Non-responders | Third questionnaire packet | 7 |

**Human Subject Protection**

　　　　This study was submitted to the Institutional Review Board of Rutgers, The State

University of New Jersey to ensure protection of human subjects prior to data collection.

Risks to participants were no greater than minimal, and harm or discomfort anticipated in

the proposed research were not greater than that which is encountered in ordinary daily

life, or during the participation in any routine psychological examination or test.

Participants may have become emotional about some of the bullying items on the survey

questionnaire.  If that occurred, the subject could stop the survey and withdraw from the

study without penalty.  That information was outlined in the paper survey consent letter

in the event that the subject became emotional upon responding to any survey items, he

or she could contact local mental health referral counseling services or their employee

assistance program.

　　　　The PI was responsible for the collection, management, security, and storage of

all data resulting from this study.  A computer list of participants' names, addresses, and

survey code numbers was maintained by the principle investigator. Destruction of the original 5,000 RN mailing addresses Masterfile database and list of the randomly selected 500 RN subject's mailing addresses occurred following data collection and data entry verification.  The computerized files were password protected, and password access was only available to the PI. All completed paper surveys were stored in a locked metal file drawer in the PI's office, and computerized data files were also password protected and stored in the PI's office.  Data was backed up onto a USB drive, which kept in a locked cabinet in the PI's office accessible only to the PI, until the termination of the research study, at which time all study files were handed over to the Co-investigator as per IRB policy.

Data collected in the study will be presented only as an aggregate, and therefore participants will remain unidentifiable.  The *Chance Drawing* sealed envelopes were stored in a separate confidential file folder that was kept separate from the study's surveys. All *Chance Drawing* data was destroyed by shredding immediately after the drawing. The PI mailed the $150.00 American Express gift card to the recipient via certified receipt mail. All surveys, computer files, and backup discs will be maintained in compliance with the mandatory six (6) years records retention IRB policy.

## Data Analysis Plan

A statistical database was created by the PI using SPSS version 21 (SPSS, 2012). Demographic data and participant responses to study instruments were entered into the SPSS database by the PI.  Data analysis included descriptive statistics, including means and standard deviations to describe the sample characteristics.  Frequency tables, histograms, and scatterplots were used to assess distribution of study variables for

normality.  Tests for skewness and kurtosis were also conducted.  Data was inspected for

inconsistencies, outliers, and wild data entry codes.  A code book which included copies

of the original data set and the cleaned data set, basic descriptive data, correlations,

regressions, syntax and output as well as PI notes were generated to document analyses.

The instrument scales were computed, and the internal consistency reliability for

each scale was determined (Nunnally & Bernstein, 1994).  Additionally, data was

examined to be sure all assumptions of parametric testing, such as normal distributions,

homoscedasticity, multicollinearity, linearity, and undue influence of outlier scores had

been met (Montgomery, Peck, & Vining, 2012).  Methods to transform data such as, log

odds transformations that do not meet these assumptions were considered and were not

indicated.  Lastly, careful examinations of missing data points were made.  Furthermore,

methods to account for missing data, such as multiple imputations were not conducted

(Waltz, Strickland, & Lenz, 2010).

To test hypotheses one through three, correlational analysis and linear regression

were used.  The correlation matrix was examined to determine if 1) drivers of

engagement (psychological meaningfulness, safety, availability) were related to work

engagement; 2) bullying acts was related to drivers of engagement; and 3) bullying acts

was related to work engagement.  For drivers of engagement and bullying variables

significantly related to work engagement, multiple linear regressions were undertaken.

All bullying and driver engagement variables significantly related to work engagement

were entered simultaneously into a regression model to determine if any of these

variables were independently associated with work engagement.

To test the moderating effect of bullying on the relationship between drivers of engagement and work engagement, Baron and Kenny's (1986) method for testing moderation effects was used.  According to Baron and Kenny (1986), the first step in testing a moderator effect requires entering two independent variables (e.g., the independent variable and the moderator) into the regression model to test their main effects on the dependent variable. In the second step, the interaction term is entered.  An interaction term is computed as the product of two independent variables and represents the joint relationship between the two independent variables that account for additional variance in the dependent variable beyond that explained by either variable alone (Baron & Kenny, 1986).  If the interaction term is significantly related to the dependent variable, a moderator effect is deemed to be present (Baron & Kenny, 1986).

Three interaction variables were created to represent the interaction between bullying acts and each driver of work engagement (bullying x psychological meaningfulness; bullying x psychological safety; bullying x psychological availability). A series of three hierarchical regressions were conducted to test the moderating effects of bullying on the relationship between the three psychological drivers of engagement and work engagement.  In the first hierarchical regression, psychological meaningfulness and bullying variables were entered into the regression model in the first step, and the interaction term was entered in the second step.  In the second regression, psychological safety and bullying variables were entered in the first step, and the interaction term (psychological safety x bullying) was entered in the second step.  A third regression was conducted in which psychological availability and bullying variables were entered in the

first step, and the interaction variable (psychological availability x bullying) was entered

in the second step.

## Chapter 4:  Data Analysis

The purpose of this study was to investigate the theorized relationships among drivers of engagement, bullying acts, and work engagement among RNs employed in hospital settings throughout the U.S.  A final analytic sample of  210 RNs who responded to all survey items and were currently licensed to work in hospitals participated in the study (LWW, 2014).

Instruments used in the analysis included (1) a demographic questionnaire to collect data on participants' age, gender, race, years of experience, state where the RN works, highest level of education, whether the hospital had a bullying policy, certification status, work setting, time in work role, number of hours worked per week, hospital size, teaching and magnet status, and hospital type; (2) the Utrecht Work Engagement Scale (UWES-9) (Schaufeli et al., 2006) to measure work engagement (vigor, dedication, and absorption); (3) the Psychological Conditions Scale (PCS) (May et al., 2004) to measure dimensions of drivers of engagement (psychological meaningfulness, psychological safety, and psychological availability); and (4) the Workplace Bullying Inventory (WBI) (Hutchinson et al., 2008b) to measure dimensions of bullying acts (personal attacks, attacks upon competence and reputation, and attacks through work roles and tasks).

The Tailored Design Method (TDM) was employed to recruit participants and collect the survey data via a repeated mailing/multiple contact method (Dillman et al., 2009).  All study participants were recruited from a randomly selected list of 500 RNs from Lippincott Publication Company's mailing list of RNs that work in hospitals.  In accordance with the modified TDM procedures, the initial and non-responder survey packets included the informational consent letter and reminder/thank you post cards were

mailed at scheduled weekly intervals (each respective Monday). Two hundred and

twenty seven (227) surveys were returned with an overall response rate of 45%. Of the

returned surveys, twelve had an unacceptable level of missing data and were not used for

hypothesis testing. Thus, twelve surveys that represented approximately 5% of the

study's sample participants were excluded from data analysis due to missing data

(Bannon, 2015). An electronic list of participants' contact information (names and

addresses) was securely stored and password protected by the PI. The computerized file

was destroyed upon data verification as per IRB mandated policies.

Data collected from each survey questionnaire were entered into the SPSS (version

21.0) database by the PI. Data management consisted of a series of data verification

procedures. The data were cleaned and verified as recommended by Polit and Beck

(2010). Data were inspected and checked for invalid and missing values, and identifiable

patterns of expectancy, such as inconsistencies in individual variable range.

Initially, raw data were reviewed for inconsistencies, invalid responses,

omissions, and outliers. Examination of the data revealed five outlier scores on the WBI

measure. The mean WBI total score for the five outliers was higher ($M = 31$) compared

to a sample mean WBI total score ($M = 24.7$). Statistical testing indicated that these five

outliers caused an undue influence on the dependent variable (work engagement). The

five outlier participants were, on average, slightly younger ($M = 46$ years) than the

sample age ($M = 52$ years), and they had higher levels of education (three out of five

were masters-prepared) compared to the sample's level of education (11% were masters-

prepared). Participant surveys with the outlier scores were also not used for data

analysis. Therefore, a total of seventeen surveys were excluded from hypothesis testing

because of twelve incomplete surveys and five WBI bullying outliers.  The final sample

size for this study, then, was 210 participants.  Item recodes were performed on the two

PCS safety items according to the reversed scoring procedure (May et al., 2004).  A

coded data set with all data transformations was stored in an electronic spreadsheet with

copies of raw and cleaned data sets, descriptive statistics, correlations, regression

analyses, and syntax/output files.  A document file was appended to the electronic

database with PI notes.

The final analytic sample size provided an acceptable level of statistical power

(0.80, $p = .05$) for hypothesis testing as per the a priori power analysis. Based on

Dillman's (2009) recommendation of the repeated mailed survey method, at least 95

subjects was needed to provide sufficient power for correlation and regression analyses.

A final study sample of 210 participants exceeded the minimum number of participant

required for a statistical power of .80.

Since the exclusion of seventeen individual survey cases of the participants did

not result in reduced statistical power for the study hypothesis testing (Tabachnick &

Fidell, 2007), a final analytic sample of 210 participants was used for hypothesis testing

in this study.  This chapter presents the data analyses conducted in this study.

### Demographics of the Study Sample

A description of the study sample is presented in Table 5.  The final demographic

sample included 210 men and women with a mean age of 52.  The average age first

licensed as an RN was 29 years.  The majority of participants were female (97%),

white/Caucasian (82%), had a baccalaureate or master's degree (56.2%), and worked as a

staff nurse (61.9%).  The most common participant response to the number of hours

worked per week was less than 40 hours (50.7%), followed by 41 to 60 hours (46.4%), and more than 60 hours (2.9%).  Most of the participants worked on medical-surgical units (82.4%) and in non-magnet designated hospitals (70.5%).  Lastly, nearly 50% of participants reported working in teaching hospitals, and most (74.3%) worked in hospitals with 100 beds or more.

Demographic data from the 2013 Survey of Registered Nurses (AMN Healthcare, April 2013) in a hospital-based sample of 3,413 RN participants was used for comparison with this study's sample demographics.  As shown in Table 5, the sample characteristics in this study were similar to the characteristics of the national sample of hospital-based RNs in the 2013 survey.

Table 5

*Sample Demographic Characteristics (n= 210)*

| Variable | Category | Mean (*SD*) | Min/Max | 2013 RNs |
|---|---|---|---|---|
| Age | | 51.89 (11.44) | 23 – 80 | **51.5** |
| Age licensed as RN | | 28.71 (9.16) | 19 – 62 | |

| Variable | Category | N | Percentage | Percentage |
|---|---|---|---|---|
| Gender | Female | 204 | 97.1 | **93** |
| | Male | 6 | 2.9 | **7** |
| Region RN works | West | 25 | 11.9 | |
| | Southwest | 15 | 7.1 | |
| | Southeast | 44 | 20.9 | |
| | Northeast | 76 | 36.1 | |
| | Midwest | 46 | 21.9 | |
| | Mixed | 4 | 1.9 | |
| Race | White | 173 | 82.4 | |
| | African American | 12 | 5.7 | |
| | Hispanic/Latino | 8 | 3.8 | |
| | Asian | 6 | 2.9 | |
| | Filipino | 5 | 2.4 | |
| | Other | 6 | 2.9 | |
| Highest RN degree | Doctorate | 2 | 1 | **1** |
| | Masters | 37 | 17.6 | **11** |
| | Baccalaureate | 81 | 38.6 | **39** |
| | Associate | 66 | 31.4 | **36** |
| | Diploma | 24 | 11.4 | **13** |
| Primary work role | Staff | 130 | 61.9 | |
| | Management/Supervisor | 44 | 21 | **6** |
| | Other | 36 | 17.1 | |
| Hospital type | Medical-surgical | 173 | 82.4 | **66** |
| | Inpatient rehabilitation | 4 | 1.9 | **2** |
| | Psychiatric | 9 | 4.3 | **4** |
| | Long term care | 12 | 5.7 | **4** |
| Teaching status | Teaching | 101 | 48.1 | |
| | Non-teaching | 97 | 46.2 | |
| Magnet status | Magnet | 48 | 22.9 | |
| | Non-magnet | 148 | 70.5 | |
| Hospital size | < than 100 beds | 45 | 21.4 | |
| | 100 - 299 beds | 88 | 41.9 | |
| | > than 300 beds | 68 | 32.4 | |
| Hours worked per wk. | < than 40 | 106 | 50.7 | **51** |

| Variable | Category | N | Percentage | Percentage |
|---|---|---|---|---|
| | | | | > **30** |
| | > than 41 - 60 | 97 | 46.4 | |
| | > than 60 | 6 | 2.9 | |

Note. **2013 RNs** = 2013 Survey of Registered Nurses, of available results (Source: AMN Healthcare, Inc., 2013).

## Description of Study Variables

Descriptive statistics (mean, standard deviation, and range) for study variables are presented in Table 6.

### Dependent Variable

**Work Engagement:** The total scores on the Utrecht Work Engagement Scale (UWES-9) range from 13 to 54 out of a possible range of zero to 54.  The total sample mean score for work engagement *(M* = 38.8, *SD* = 8.49) represents an average level of work engagement among the study participants.

### Independent Variables

**Psychological Drivers of Engagement:** Each of the three psychological drivers of engagement was measured by the Psychological Conditions Scale (PCS).  The mean score for psychological meaningfulness (*M* = 4.58, Range = 1-5) indicates that, on average, the level of this driver was high among study participants.  Similarly, the mean score for psychological availability (*M* = 4.27, Range = 1-5) indicates that, on average, the level of this driver among study participants was also high.  Lastly, the mean score for psychological safety (*M* = 3.62, Range = 1-5) revealed a moderate level of this driver among study participants.

**Bullying Acts:** The total sample mean score for bullying (*M* = 24.57, *SD* = 10.57) indicates that, on average, study participants perceived low levels of workplace bullying. The total bullying acts scores on the WBI ranged from 16 to 64 out of a possible score range of 16 to 80.  As noted in Table 6, the range of bullying scores indicate that a

majority of participants (69.5%) reported no exposure, only 21% reported moderate

exposure, and 9.5% reported substantial exposure.

Table 6

*Descriptive Statistics of the Study Variables (n = 210)*

| Dependent variable | Mean (*SD*) | Min/Max | Possible score range |
|---|---|---|---|
| Work engagement (UWES-9)* | 38.84 (8.49) | 13 - 54 | 0.00 - 54.00 |
| Independent variables | Mean (*SD*) | Min/Max | Possible score range |
| PCS Meaningfulness** | 4.58 (.50) | 2.50 – 5.00 | 1.00 - 5.00 |
| PCS safety** | 3.62 (1.05) | 1.00 – 5.00 | 1.00 - 5.00 |
| PCS availability** | 4.27 (.53) | 2.80 – 5.00 | 1.00 - 5.00 |
| Bullying acts (WBI)*** | 24.57(10.57) | 16 - 64 | 16 - 80 |
| Cutoff scores (WBI)**** | Cutoff intervals | N | Percentage |
| No exposure | 0 - 25 | 146 | 69.5 |
| Moderate exposure | 26 - 37 | 44 | 21 |
| Substantial exposure | >38 | 20 | 9.5 |

Note. *Total score of work engagement measure (UWES-9).
    **Subscale scores of each psychological drivers of engagement measure (PCS).
    ***Total score of the bullying acts measure (WBI).
    ****Cutoff scores of the amount of bullying acts measure (WBI).


**Reliability**

Internal consistency reliability coefficients for the study variables are presented in Table

7.  The reliability coefficients for each instrument were all .80 or greater, demonstrating

excellent internal consistency reliability for each study variable (Polit & Beck, 2010).

Table 7

*Alpha Coefficients for Study Instrument Reliability*

| Study instrument | Cronbach's alpha coefficient |
| --- | --- |
| Utrecht Work Engagement Scale (UWES-9) | .90 |
| Psychological Conditions Scale (PCS) | |
| *Three (3) independent subscales:* | |
| Psychological meaningfulness | .95 |
| Psychological safety | .79 |
| Psychological availability | .83 |
| Workplace Bullying Inventory (WBI) | .94 |
| *Three (3) subscales*: | |
| Personal attack | .84 |
| Attack competence & reputation | .81 |
| Attack work roles & tasks | .88 |

**Distribution of Study Variables**

The distribution of variable scores was examined for symmetry, approximation to normal distribution, and extreme skewness. The distribution of scores for all study variables were examined by examining skewness (evidence of central tendency) and kurtosis (evidence of tail heaviness relative to the total variance in the distribution) statistics. Fisher's standard z scores (skewness/standard error of skewness) were computed for each study variable to assess any skewness of variable scores. Z statistic values between +1.96 and -1.96 indicate that the distribution of scores for all study variables is not significantly different than a normal distribution (Polit & Beck, 2010). As shown in Table 8, Fisher's Z-scores for the independent and dependent variable total scores revealed that work engagement scores were negatively skewed and bullying acts were positively skewed. Data transformation could be considered for skewed scores but

was not carried out since Tabachnick and Fidell (2007) suggest that data transformation

is not universally recommended because transformed data may be more difficult to

interpret.

Table 8

*Distribution of Study Variables*

| Variable | Skewness | S.E. Skewness | Kurtosis | S.E. Kurtosis | Fisher's Skewness Coefficient (Z-scores) |
|---|---|---|---|---|---|
| Work engagement | -.517 | .168 | -.227 | .334 | 3.077 |
| PCS Meaningfulness | -1.071 | .168 | .872 | .334 | 6.375 |
| PCS Safety | -.532 | .168 | -.477 | .334 | 3.166 |
| PCS Availability | -.235 | .168 | -.629 | .334 | 1.398 |
| Bullying Acts* | 1.80 | .168 | 2.94 | .334 | 10.714 |

Note. *Bullying Acts measured represents the total score analysis (Hutchinson, et al., 2010).

## Results of Hypothesis Testing

Prior to hypothesis testing, correlational analysis was conducted to determine if

there were any demographic variables that were significantly correlated to the dependent

variable (Table 9). Significant relationships were found between staff nurse roles and

level of work engagement ($r = -.170$, $p = .010$), indicating that being in a staff nurse role

was significantly associated with lower levels of work engagement.  On the other hand,

significant relationships were found between supervisory role and work engagement ($r =$

.198, $p = .003$) in that being in a supervisory role was significantly associated with higher

levels of work engagement.  In addition, working more hours per week ($r = .209$, $p =$

.002) and in an acute care hospital $(r = .171$, $p = .013$) were significantly and positively

related to work engagement.  Lastly, working on a medical-surgical unit was significantly

associated with lower levels of work engagement ($r = -.136$, $p = .041$).  These five

demographic variables were controlled for in multivariate analysis.

Table 9

*Correlations Between Demographic Variables and Work Engagement*

| Variable | Work Engagement |
|---|:---:|
| Gender | .066 |
| Age | .128 |
| Race | -.033 |
| Age licensed as RN | .043 |
| Staff nurse primary role | -.170** |
| Supervisor primary role | .198** |
| Other primary role | .005 |
| Level of education | -.005 |
| Certifications | -.029 |
| Bullying policy in place | -.048 |
| Hours worked per week | .209** |
| Length of time in current role | .038 |
| Hospital size | .066 |
| Hospital teaching status | .021 |
| Hospital magnet status | .002 |
| Hospital type (Acute care) | .171** |
| Work setting | |
|   Cardiac | -.008 |
|   Critical Care | -.039 |
|   Emergency Room | .026 |
|   Labor/Delivery | .020 |
|   Medical-Surgical | -.136* |
|   Obstetrics/Gynecology | -.015 |
|   Oncology | -.024 |
|   Operating Room | -.021 |
|   Orthopedics | -.015 |
|   Pediatrics | -.075 |
|   Other | .061 |

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

Hypotheses one through three were tested using Pearson product moment correlation and linear regression. Two-tailed tests of significance set at the .05 level were used to test hypothesized relationships between work engagement, psychological drivers of work engagement, and bullying acts. Correlation coefficients for relationships among study variables are presented in Table 10.

Table 10

*Correlations Among Study Variables (n=210)*

| Variable | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 1. Work engagement | -- | .55*** | .33*** | .41*** | -.252*** |
| 2. PCS meaningfulness | | -- | -.27** | .40** | -.208*** |
| 3. PCS safety | | | -- | -.31** | -.574*** |
| 4. PCS availability | | | | -- | -.250*** |
| 5. Bullying acts (Total score) | | | | | -- |

Note. $*p < .05$, $**p < .01$, $***p < .001$.

## Hypothesis 1

Hypothesis 1 proposed that drivers of engagement were significantly related to work engagement. As listed in Table 10, correlation analysis revealed that all three drivers of engagement were significantly related to work engagement. Psychological meaningfulness was positively related to work engagement ($r = .55$, $p <.001$) in that higher levels of psychological meaningfulness, as reflected in higher scores, was significantly associated with higher work engagement scores. Similarly, psychological safety ($r = .33$, $p <.001$) was positively related to work engagement in that higher levels of safety as a psychological driver was significantly related to higher levels of work engagement. Lastly, psychological availability ($r = .41$, $p < .001$) was related to work engagement in the expected direction; that is, higher levels of psychological availability was significantly associated with higher levels of work engagement. Hypothesis 1 was supported.

**Hypothesis 2**

Hypothesis 2 indicated that bullying acts were negatively associated with the

three drivers of engagement.  As shown in Table 10, total scores for bullying acts was

negatively associated with each psychological driver as expected. Total scores for

bullying acts was significantly associated with lower levels of psychological

meaningfulness, lower levels of psychological safety, and lower levels of psychological

availability.  Further analysis indicated that each dimension of bullying acts (attacks,

personal, and work tasks) were also significantly and negatively related to the

psychological drivers of engagement as shown in Table 11.  Therefore, hypothesis 2 was

supported.

Table 11

*Correlations Between Independent Variables (n = 210)*

| Variable | PCS: | Meaningfulness | Safety | Availability |
|---|---|---|---|---|
| WBI:  Personal attack | | -.201** | -.534*** | -.224*** |
| WBI:  Attack competence | | -.170*** | -.532*** | -.246*** |
| WBI:  Attack work roles | | -.207** | -.530*** | -.238*** |

Note.  *p < .05, **p < .01, ***p < .001.
      PCS: Psychological Condition Scale.
      WBI: Workplace Bullying Inventory.

**Hypothesis 3**

Hypothesis 3 indicated that bullying acts were negatively associated with work

engagement.  As shown in Table 10, bullying acts total scores and dimensions were

significantly and negatively associated with work engagement.  Bullying total scores was

significantly associated with low levels of work engagement (*r* = -.252, *p* = .000).  All

three dimensions of bullying, that is, personal attacks (*r* = -.222, *p* = .001), erosion of

professional competence (*r* = -.215, *p* = .001), and attacks on work roles and tasks (*r* = -

.285, *p* = .000) were significantly associated with low levels of work engagement.

Therefore, hypothesis 3 was supported.

### Independent associations between independent and dependent variables

To determine independent associations between the three psychological drivers of

engagement and bullying acts and work engagement, multiple regressions were

conducted.  A two-step regression was conducted.  In the first step, to control for the

effects of the five demographic variables (i.e., staff nurse role, supervisor role, hours

worked/week, acute care hospital type, and medical-surgical unit) that were significantly

associated with the dependent variable; these variables were entered in the regression

model.  In the second step, psychological meaningfulness, psychological safety,

psychological availability, and bullying acts total mean scores were entered into the

regression model simultaneously to determine the associations between each independent

variable (IV) with the dependent variable (DV) when the effects of the other IVs and

covariates in the model on work engagement (DV) were controlled for.  As shown in

Table 12, nurse role (staff and supervisory) was no longer significantly related to work

engagement in the both models, but the three hospital characteristics were independent

predictors of work engagement in both Model 1 and Model 2.  In addition, findings

revealed that psychological meaningfulness ($\beta$ = .406, *p* = .000), psychological safety ($\beta$

= .155, *p* = .026) and psychological availability ($\beta$ = .182, *p* = .003) remained

significantly and independently associated with work engagement when all IVs and

covariates were in the model.  However, bullying acts ($\beta$ = -.065, *p* = .332) was not

independently and directly associated with work engagement when all IVs and covariates

were in the model.  Taken together, the covariates accounted for only 10% of variance in

work engagement, and the four independent variables contributed an additional 38% of

variance in work engagement.  Thus, 48% of the variance in work engagement was

explained by variables significantly related to this outcome in this study.

Table 12

*Independent Associations Between Independent Variables and Work Engagement*

| Model 1 | Standard β | $R^2$ change | Sig. |
|---|---|---|---|
| | | .098 | .959 |
| Staff nurse role | -.051 | | .223 |
| Supervisor role | .116 | | .035 |
| Hours worked per week | .152 | | .048 |
| Medical-surgical unit | -.135 | | .057 |
| Hospital type | .132 | | |
| Model 2 | | .377 | |
| Staff nurse role | -.004 | | .955 |
| Supervisor role | .051 | | .494 |
| Hours worked per week | .146 | | .010 |
| Medical-surgical unit | -.137 | | .011 |
| Hospital type | .131 | | .015 |
| Psychological meaningfulness | .406 | | .000 |
| Psychological safety | .155 | | .026 |
| Psychological availability | .182 | | .003 |
| Bullying acts total scores | -.065 | | .332 |

**Hypothesis 4**

Hypothesis 4 indicated that the interaction of bullying acts and drivers of

engagement will be significantly associated with work engagement; that is, bullying acts

will moderate the positive effects of psychological drivers of engagement on nurses'

reported levels of work engagement.  According to Baron and Kenny, to test for

moderation, an interaction term for the two IVs should be created (1986).  To avoid

multicollinearity that can occur when using interaction variable terms in regression, first,

bullying acts and the psychological driver variables were mean centered respectively

(raw score for each variable minus variable mean score), and second, the interaction

terms (bullying x psychological driver) were computed using the mean centered

variables.

**Moderation**

Three tests of moderation were conducted for each psychological driver of

engagement.  For each test, a two-step regression was used as shown in Table 13.  Both

independent variables (IVs) (bullying acts and each psychological driver of engagement)

were entered together in the first step in the regression model.  In the second step, the

interaction term was entered.  Baron and Kenny (1986) suggest that moderation exists if

the interaction variable is significantly related to the dependent variable (DV) and

contributes additional variance above that contributed by the two IVs.  For each test,

bullying was not a moderator.  That is, bullying did not moderate the relationship

between psychological meaningfulness and work engagement (bullying acts x

psychological meaningfulness $\beta$ = -.092, $p$ = .111); bullying did not moderate the

relationship between psychological safety and work engagement (bullying acts x

psychological safety $\beta$ = -.021, $p$ = .778); and bullying did not moderate the relationship

between psychological availability and work engagement (bullying acts x psychological

availability $\beta$ = -.087, $p$ = .165).  Therefore, hypothesis 4 was not supported.

Table 13

*Moderating Effect of Bullying Acts on Work Engagement by Drivers of Engagement*

| Moderating Effect of Bullying Acts x Psychological Meaningfulness | | | |
|---|---|---|---|
| **Model 1** | | $R^2$ change | Sig. |
| Bullying acts, Psychological meaningfulness | | .347 | .000 |
| **Model 2** | Standard. $\beta$ | $R^2$ change | Sig. |
| Bullying acts x Psychological meaningfulness | -.092 | .008 | .111 |
| Moderating Effect of Bullying Acts x Psychological Safety | | | |
| **Model 1** | | $R^2$ change | Sig. |

| | Standard. β | $R^2$ change | Sig. |
|---|---|---|---|
| Bullying acts, Psychological safety | | .114 | .000 |
| **Model 2** | Standard. β | $R^2$ change | Sig. |
| Bullying acts x Psychological safety | -.021 | .000 | .788 |

| Moderating Effect of Bullying Acts x Psychological Availability | | | |
|---|---|---|---|
| **Model 1** | | $R^2$ change | Sig. |
| Bullying acts, Psychological availability | | .234 | .000 |
| **Model 2** | Standard. β | $R^2$ change | Sig. |
| Bullying acts x Psychological availability | -.087 | .007 | .165 |

In sum, four research hypotheses were tested. Hypotheses 1 through 3 were supported. Of importance, for hypothesis one, all three psychological drivers of engagement were positively significantly related to work engagement. For hypothesis 2, bullying acts were negatively significantly related to drivers of engagement. Hypothesis 3 testing has shown that bullying acts and work engagement was negatively and significantly related. Further analysis revealed that the three psychological drivers of engagement were significantly and independently associated with work engagement when they were entered in regression models when controlling for covariates. Bullying acts was not independently associated with work engagement in the multivariate model. However, hypothesis 4 tests for bullying as a moderator of the positive relationship between psychological drivers and work engagement.

**Ancillary Analysis**

In correlational analysis, bullying acts was related to the three psychological drivers of engagement and work engagement. Furthermore, the drivers of engagement were significantly related to work engagement. Together, these associations meet Baron and Kenny's criteria for tests of mediation (1986). That is, the independent variable must be significantly related to the mediator; second, the independent variable must be significantly related to the dependent variable; and third, the mediator must be

significantly related to the dependent variable.  Since these relationships existed among

bullying acts, psychological drivers, and work engagement, ancillary testing was

conducted to examine if psychological meaningfulness, psychological safety, and

psychological availability mediated the relationship between bullying acts and work

engagement.  Per Baron and Kenny's method for mediation testing, a series of three

linear regressions were undertaken to determine the role of each psychological driver of

engagement as mediator in the relationship between bullying acts (IV) and work

engagement (DV).  Mediation exists when the relationship between the independent

variable (i.e., bullying acts) and dependent variable (i.e., work engagement) is no longer

significant or is lessened when the mediator is in the model in the third regression (1986).

**Psychological meaningfulness as a mediator**

Three linear regressions were conducted to determine if psychological

meaningfulness mediated the relationship between bullying acts and work engagement.

This first linear regression was conducted to determine if the independent variable,

(bullying acts) predicted the mediator (psychological meaningfulness).  Analysis showed

that bullying acts significantly predicted the mediator ($\beta = -.208$, $p = .002$).  A second

linear regression was performed to determine if the IV (bullying acts) predicted the DV

(work engagement).  Analysis showed that bullying acts significantly predicted work

engagement ($\beta = -.252$, $p = .000$).  A third regression was performed to determine if

psychological meaningfulness mediated the relationship between bullying acts and work

engagement.  Analysis showed that when both the IV and mediator were in the model

together, psychological meaningfulness partially mediated the relationship between

bullying acts and work engagement ($\beta = -.138$, $p = .015$).  Taken together, the effect of

bullying acts on work engagement lessens and is less significant with the mediator in the

model as shown in Table 14. Therefore, the criterion for mediation of psychological

meaningfulness and work engagement was supported.

Table 14

*Multiple Regression for Mediation of Meaningfulness and Work Engagement*

| Regression | Mediator | IV | DV | β | P-Value |
|---|---|---|---|---|---|
| 1 | Meaningfulness | Bullying acts | | - .208 | .002 |
| 2 | | Bullying acts | Work engagement | -.252 | .000 |
| 3 | Meaningfulness | Bullying acts | Work engagement | -.138 | .015 |

**Psychological Safety as a Mediator**

Three linear regressions were conducted to determine if psychological safety

mediated the relationship between bullying acts and work engagement. The first

regression was performed to determine if the IV (bullying acts) predicted the mediator

(psychological safety). Analysis indicated that bullying acts significantly predicted the

mediator ($\beta = -.574$, $p = .000$). The second regression was conducted to determine if the

IV (bullying acts) predicted the DV (work engagement). Analysis indicated that bullying

acts significantly predicted work engagement ($\beta = -.252$, $p = .000$). The third regression

was conducted to determine if psychological safety mediated the relationship between

bullying acts and work engagement. Analysis revealed that when both the IV (bullying

acts) and the mediator (psychological safety) were entered in the model together,

psychological safety fully mediated the relationship between bullying acts and work

engagement ($\beta = -.094$, $p = .229$). Together, the significant effect of bullying acts on

work engagement disappears with the mediator in the model as shown in Table 15.

Therefore, the criterion for mediation of psychological safety and work engagement was

supported.

Table 15

*Multiple Regression for Mediation of Safety and Work Engagement*

| Regression | Mediator | IV | DV | β | P-Value |
|---|---|---|---|---|---|
| 1 | Safety | Bullying acts | | - .574 | .000 |
| 2 | | Bullying acts | Work engagement | -.252 | .000 |
| 3 | Safety | Bullying acts | Work engagement | -.094 | .229 |

**Psychological Availability as Mediator**

In the final series of three linear regressions, psychological availability was

examined as a mediator in the relationship between bullying acts and work engagement,

as presented in Table 16. The first regression was performed to determine if the IV

(bullying acts) predicted the mediator (psychological availability). Analysis revealed that

bullying acts significantly predicted psychological availability *(β* = -.250, *p* = .000). The

second regression was performed to determine if the IV (bullying acts) predicted the DV

(work engagement). Analysis revealed that bullying acts significantly predicted work

engagement (*β* = -.252, *p* = .000). The third regression was performed to determine if

psychological availability mediated the relationship between bullying acts and work

engagement. Analysis revealed that when both the IV and mediator were entered in the

model, psychological availability partially mediated the relationship between bullying

acts and work engagement (*β* = -.145, *p* = .019). Together, the effect of bullying acts on

work engagement lessens and is less significant with the mediator in the model.

Therefore, the criterion for mediation of psychological availability and work engagement

was supported.

Table 16

*Multiple Regression for Mediation of Availability and Work Engagement*

| Regression | Mediator | IV | DV | β | P-Value |
|---|---|---|---|---|---|
| 1 | Availability | Bullying acts | | - .250 | .000 |
| 2 | | Bullying acts | Work engagement | -.252 | .000 |
| 3 | Availability | Bullying acts | Work engagement | -.145 | .019 |

## Chapter 5: DISCUSSION OF THE FINDINGS

The purpose of this study was to investigate the interrelationships among drivers of engagement, bullying acts, and work engagement in a sample of RNs that work in hospital settings. This investigation of these theorized relationships was based on theories of work engagement (Schaufeli et al., 2002), psychological conditions of personal engagement (Kahn, 1990), and workplace bullying (Hutchinson et al., 2008b). To date, no study has been conducted on drivers of engagement, bullying acts, and work engagement as theorized in this study. However, the dynamics of bullying supported the notion that this destructive act may have a negative effect or influence on the positive nature of drivers of engagement and actual levels of work engagement among workers.

The findings from this study were derived with descriptive, correlational, and regression analyses. The findings support the work engagement theoretical model, revealing that all three drivers of engagement (psychological meaningfulness, safety, and availability) are significant predictors of work engagement. Furthermore, this study proposed that the negative bullying acts may diminish the positive psychological drivers of engagement, and blunt the positive effect of these drivers on work engagement. Study findings indicate that the experience of bullying acts lessens the impact of the drivers of engagement on work engagement. Thus, bullying acts can erode the positive effect of the drivers of engagement on work engagement.

### Work Engagement

For this study, work engagement was defined as a positive construct that describes the employee's mental state of fulfillment at work that is characterized by vigor, dedication, and absorption (Schaufeli, et al., 2002). Vigor refers to a high level of

energy and mental resilience while working, and the willingness to invest in one's work

with perseverance during difficult times (Schaufeli & Bakker, 2010).  Dedication refers

to feeling strongly involved in one's work and experiencing a sense of significance,

enthusiasm, pride, and challenge (Schaufeli & Bakker, 2010).  Absorption means being

fully concentrated and engrossed in one's work, whereby time passes quickly and it is

difficult to detach from one's work activities (Schaufeli & Bakker, 2010). The findings in

this study revealed a moderate level of overall work engagement ($M = 38.84$) among

nurse participants in the study sample.  Similarly, levels of vigor ($M = 4.21$), dedication

($M = 4.10$), and absorption ($M = 4.39$) were also moderate among the nurse participants.

These findings are similar to moderate levels, on average, of work engagement found in

other samples of nurses in the U.S. (Palmer, Quinn Griffin, Reed & Fitzpatrick, 2010;

Rivera et al., 2011; Simpson, 2009) and internationally (Adriaenssens et al., 2011;

Bamford, Wong & Laschinger, 2013; Brunetto et al., 2013; Swensen et al., 2013;

Trinchero, Burnetto, & Borgonovi, 2013).

        Interestingly, correlational analysis revealed a positive relationship between

particular nurse roles, work settings, and work engagement, suggesting that nurses who

work in roles and work settings may be more highly engaged in their work than other

groups of nurses.  The nurses who reported higher levels of work engagement tended to

work in supervisory roles, longer hours in a week, and in acute care hospitals (See table

9).  The association between supervisory roles and higher levels of work engagement in

this study is consistent with findings in other studies (Adkins, 2015; Advisory Board

Company, 2007; Bakker & Schaufeli, 2003; Warshawsky, Havens, & Knaft, 2012).  It is

plausible that nurse supervisors or managers in hospitals may have a higher level of

professional status, more autonomy, and an increase in access to job resources than

subordinates (staff) that may account for a higher level of engagement in work.

Similarly, the positive association between working long hours and work engagement in

this study is consistent with Simpson's study (2009) that revealed as hours worked per

week increased, work engagement increased for staff nurses. Of note, a supervisory role

was positively correlated with number of hours work in this study ($r = .330$, $p = .000$)

and, conversely, the staff nurse role was negatively related to number of hours worked ($r = -.332$, $p = .000$). Thus it is plausible that the positive relationship between number of

hours worked and work engagement may be a proxy for the higher levels of work

engagement in supervisors, who reported working longer hours. Given that a highly

engaged workforce is central to superior clinical performance and positive organizational

and employee outcomes, the level of work engagement among nurses in this study

supports the need to further understand modifiable antecedents to work engagement

among nurses. Descriptive findings in this study revealed that staff nurses, those nurses

who work on medical/surgical units and those who work in non-acute hospital settings

had lower levels of work engagement (See table 9). Therefore, efforts taken should target

these nurses and hospital settings to improve their work engagement levels. In addition,

work engagement research reveals that this phenomenon is operationalized differently

across studies, making it difficult to compare the meaning of work engagement findings

across research samples. Thus, there is also a need for a more uniform operationalization

and measurement of work engagement across studies in order to draw meaningful

conclusions about this phenomenon among the U.S. nursing workforce.

**Drivers of Engagement**

Kahn (1990) postulates three psychological conditions that stimulate individuals to engage in their work role. These psychological drivers are 1) psychological meaningfulness: the experience of feeling valued, useful, and worthwhile when performing in the work role; 2) psychological safety: the ability to reveal an authentic self at work without fear of harm to one's self-esteem, professional status, or career; and 3) psychological availability: the sense of having the necessary resources to fully use one's personal energies at work. This is the first study to conceptualize and test Kahn's model in a sample of RNs who work in US hospitals.

The findings from this study revealed that the RN participants perceived a high level of psychological meaningfulness in their work ($M = 4.58$) indicating that nurses in this study, on average, experienced feeling valued, useful, and worthwhile in the performance of their work role. Similarly, the level of psychological availability among study participants was moderately high ($M = 4.26$) and suggests that nurses who work in hospitals, on average, may feel that they have the necessary resources to fully use their personal energies at work. These findings are consistent with high levels of psychological meaningfulness and availability among workers in previous research (Fountain, 2014; Kahn, 1990; May et al., 2004; Soane et al., 2013). On the contrary, nurses in this study reported a moderate level of psychological safety, suggesting modest beliefs about their ability to reveal their authentic self at work without fear of harm to one's self-esteem, professional status, or career. Interestingly, in a pilot study conducted by this researcher (Fountain, 2014), nurses reported an even lower level of psychological safety compared to nurses in the present study. However, this pilot study was conducted

in one magnet hospital, and this finding may reflect some unique characteristic of that hospital and its RN sample population that might explain less psychological safety.

In general, the nurses in this study were moderately to highly psychologically driven. These findings suggest that U.S. hospitals may have the structures, processes, and resources that enable nurses to find meaningfulness in their work, feel safe at work, and feel that the needed resources are available in the workplace.  Since this is the first study to examine drivers of work engagement as conceptualized by Kahn (1990) in a sample of RNs, there is a need for more research to replicate and validate these findings.

### Bullying Acts

Hutchinson and colleagues theorized bullying in nursing as a pattern of multiple covert and overt, persistent negative behaviors and tactics targeted towards an individual with an intent of causing them harm; and thus contributing to a negative work environment (2008b).  In this study, bullying acts are based on Hutchinson's typology of bullying behaviors that consists of three key categories: 1) personal attacks: refers to a nurse's experience of feeling ignored, insulted, blamed, and put down, 2) erosion of professional competence and reputation: refers to public humiliation, downgrading of skills and abilities, and tactics to undermine the career advancement of the individual nurse, and 3) attack through work roles and tasks: refers to unfair work assignments, sabotage, withholding of information, denial of due process and use of earned benefits, and unfair economic restrictions (2010a; 2010b).

The findings in this study indicate that a majority of nurses (69.5%) perceived no exposure to bullying.  This finding is consistent with another hospital study that found lower levels of bullying among early career nurses (Budin, Brewer, Chao, Ying-Yu, &

Kovner, 2013). On the contrary, 30.5% of nurse participants in this study reported

moderate or substantial exposure to workplace bullying. These findings are inconsistent

with other studies that have found higher levels of bullying among samples of nurses who

work in U.S. hospitals (Berry et al., 2012; Etienne, 2014; Simons, 2008; Smith, 2011;

Vessey, DeMarco, Gaffney, & Budin, 2009; Wilson et al., 2011). Moreover, findings of

this study revealed no significant differences in total mean bullying scores by age ($<$ 36

years vs. 36 years or greater), race (white vs. non-white), primary work role (staff vs.

non-staff), presence of bullying policy (yes vs. no), work setting (medical-surgical vs.

specialty), time in current role (5 yrs. or $<$ vs. $>$ 5 yrs.), hospital teaching status (teaching

vs. non-teaching), and hospital magnet status (magnet vs. non-magnet). Over the last

decade, healthcare organizations have focused on bullying and workplace violence

prevention. It is plausible that the lower level of bullying among the RN respondents of

this study may be a reflection of hospital settings creating cultures of zero bullying

tolerance (ANA, 2015; Budin et al., 2013; Ceravolo, Schwartz, Foltz-Ramos & Castner,

2012; Roberts, 2015). Conversely, for those nurses who reported the existence of a

bullying policy in their hospital, the level of bullying among these participants differed

by their perceptions of the extent to which the policies were effective. Only one-half ($n =$

54) of the RNs in this study sample that reported the presence of a bullying policy in their

workplace indicated that they thought that the existing policy was effective. The mean

total bullying score for nurses who reported the presence of a bullying policy in their

hospital differed significantly ($F = 21.3$, $t = 6.6$, $p = .000$) by their perceptions of the

policy effectiveness. Nurses who reported that ineffective bullying policies were in place

in their hospitals had a higher mean bullying score ($M = 31.6$) compared to nurses who

reported effective policies ($M = 20.1$).  Clearly, more research is needed to examine

bullying in the presence and absence of workplace bullying policies.  In addition,

intervention strategies targeted at improving and evaluating the effectiveness of existing

hospital-based bullying policies is also warranted (Roberts, 2015).  Moreover, bullying

education programs can be incorporated into the hospital's quality improvement plan.

For example, nursing leadership and hospital human relations personnel can collaborate

to increase employees understanding and recognition of the existence of a bullying policy

and ensure that systematic reporting, resolution, and follow up procedures are available.

### Psychological Drivers of Engagement and Work Engagement

Hypothesis one stipulated that drivers of engagement were positively associated

with work engagement.  Consistent with the theoretical premise of this study, high levels

of all three drivers of engagement were significantly associated with higher levels of

work engagement.  This finding is congruent with prior research in non-nurse samples

(May et al., 2004; Olivier & Rothmann, 2007) that found a positive and significant

association between drivers of work engagement (psychological meaningfulness, safety,

and availability) and work engagement.  Similarly, in one hospital study of RNs that used

a different theory of work engagement, findings also revealed that high levels of

engagement drivers were positively significantly related to high levels of work

engagement (Rivera et al., 2011).  In Rivera's study, meaningfulness, operationalized as

passion for nursing, was the most important driver of work engagement among the RN

sample population from a large U.S. hospital.  Similarly, in this study psychological

meaningfulness had the largest independent effect ($\beta = .41$, $p$ .000) on work engagement

compared to the independent effects of psychological safety ($\beta = .155$, p $= .026$) and

psychological availability (β = .102, p = .003) on this outcome. Together, findings from this study and others (Adkins, 2015; Blessing White, 2013; Crabtree, 2013) point to the importance of psychological drivers for workers being engaged in their work. They are the essential levers that organizations can use to build a more engaging work environment (Advisory Board, 2007; May et al., 2004; Rivera et al., 2011; Towers Perrin, 2008; Wellins et al., 2005). There is also a need for intervention research that tests strategies designed to create work environments that foster employees' meaningfulness and value in the workplace, build and sustain feelings of safety among workers, and provide tangible support that nurtures the individual's availability of physical, cognitive, emotional, and psychological resources needed to personally engage in their work activities.

### Bullying Acts and Drivers of Engagement

Associations between bullying acts and drivers of work engagement was also tested in hypothesis two, and findings revealed negative and significant associations, as postulated, between all three psychological drivers and workplace bullying in bivariate analysis. Moderate associations were found between bullying and psychological meaningfulness ($r = -.208$, $p < .001$) and psychological availability ($r = -.250$, $p < .001$), and a large association was found with psychological safety ($r = -.574$, $p < .001$). Thus, reports of bullying acts by nurses in the study were significantly associated with lower levels psychological drivers. Even though this is the first study that has examined bullying in the context of psychological drivers of work engagement, these findings are important and merit replication. The premise that the negative experience of bullying in the workplace may diminish one's sense of value, meaningfulness, safety, and

resourcefulness was supported in this study.  A logical assumption, that is, bullying in the

workplace likely interferes with the worker's mental state and hampers one's choice to

fully use personal resources and energies needed to focus on work-activities/tasks,

accomplish a sense of value and self-worth, and experience freedom of self-expression

without fear of retaliation, even during challenges at work.  The associations between

bullying and psychological drivers of work engagement revealed in this study underscore

an important need to 1) effectively address workplace bullying, 2) determine effective

methods for strengthening and fostering psychological drivers that increase personal

engagement in work, 3) create and implement a bullying policy that builds a culture of no

tolerance, and 4) conduct research to replicate and validate these associations in diverse

work settings.

## Bullying Acts and Work Engagement

One theoretical premise of this study was that experiences of bullying acts, such

as personal attacks, erosion of professional competence and reputation, and attack

through work roles and tasks (Hutchinson et al., 2008a; 2010b) may negatively influence

nurses' engagement in their work engagement.  Consistent with hypothesis three, reports

of workplace bullying among nurses in this study was found to be significantly associated

with lower levels of work engagement in bivariate analysis but did not have an

independent effect on this outcome when psychological drivers were in the regression

model, suggesting that the effect of bullying on work engagement, in the presence of

these drivers, may be indirect.  Attacks on work roles and tasks dimension of bullying

acts was found to have the largest effect on work engagement ($r = -.285$, $p = .000$) in

bivariate analysis, a finding consistent with Hutchinson and colleagues (2008b) who

found that workplace attacks on one's reputation and competence dimension of bullying

acts had the largest effect of the multidimensional bullying factors during the initial

testing of the WBI.  Although workplace bullying was not an independent predictor of

work engagement in this study, the significant bivariate association of bullying with work

engagement in the theoretically expected direction suggests a need for hospital

administrators and nursing leaders to cultivate a culture of accountability to resolve,

reduce, and prevent bullying behaviors and tactics in U.S. hospital settings.

### Interactions among Bullying, Drivers of Engagement, and Work Engagement

Hypothesis four postulated that bullying moderates the positive effects of drivers

of engagement on work engagement.  However, this hypothesis was not supported by the

data. According to Bennett (2000), sometimes it is difficult to determine whether a

variable is theoretically proposed to be a mediator or moderator.  Although determining

whether a variable is a mediator or moderator is based on theory, these relationships,

however, may depend on the researcher's interpretation of the theory.  While theoretical

premises indicate that bullying may moderate or offset the positive effects of

psychological drivers of engagement on work engagement, it is plausible that the

underlying or operant mechanism for the negative effect of bullying on work engagement

maybe through its negative effect on psychological drivers of engagement.  Therefore,

the mediating role of psychological drivers of work engagement in the negative

relationship between bullying acts and work engagement was tested.

Mediation testing revealed that psychological drivers of engagement served as full

or partial mediators of the relationship between bullying and work engagement.  This

finding highlights the important role of psychological drivers of engagement as a

pathway or mechanism for bullying to exert a negative effect on work engagement.

Bullying is modifiable in work settings, and these findings point to an important need to address the problem of workplace bullying. In this study, the Workplace Bullying Scale (WBI) was used as a broad measure of bullying among RNs and it does not distinguish between lateral or vertical bullying (Hutchinson et al., 2008b).  Further research can focus on distinguishing these types of bullying.  Notably, the nurses in this study that reported effective bullying policies in their workplace also reported lower levels of bullying compared to nurses who reported ineffective bullying policies. These findings suggest reduced levels of bullying may be enhanced through the implementation of effective workplace bullying policies and leadership in hospitals.  Lastly, more research is needed to fully understand 1) psychological drivers of engagement in employees who work in non-hospital health care settings, 2) intervention strategies that enhance or support these drivers of work engagement in hospital employees, and 3) the extent to which these drivers serve as negative or positive pathways for other phenomena, such as work unit or work role, to exert an effect on the level of work engagement in employees who work in U.S. hospitals.

**Utility of the Theoretical Frameworks for Explaining Relationships Tested**

Findings from this study supported the relationships, as theorized, among bullying, psychological driver of engagement, and work engagement.  Thus, the theories that guided this study demonstrated empirical adequacy in explaining 38% of the variance in work engagement in hospital-based nurses was contributed by bullying acts and psychological drivers of engagement.  Moreover, the theoretical approach in this study provided on explanation for *how* bullying acts leads to low levels of work engagement among hospital-based nurses; that is, through the negative effect of bullying

acts on the nurses' psychological conditions or drivers of engagement.  Importantly,

study findings suggest that Kahn's (1990) psychological drivers of engagement are likely

an important theoretical pathway between workplace bullying, as theorized by

Hutchinson and colleagues (2008b), and work engagement, as theorized by Schaufeli et

al. (2002).  More research is needed to test and validate this theoretical pathway.

## CHAPTER 6: SUMMARY, CONCLUSIONS, IMPLICATIONS,

## AND RECOMMENDATIONS

Utilizing the theoretical frameworks of Work Engagement, (Schaufeli et al., 2002), Kahn's Model of Psychological Conditions of Personal Engagement (1990), and the Explanatory Model of Workplace Bullying (Hutchinson et al., 2008a), this study tested the relationships among drivers of engagement (psychological meaningfulness, psychological safety, and psychological availability), bullying acts (personal attacks, erosion of professional competence and reputation, and attack through work roles and tasks), and work engagement in registered nurses who worked in hospital settings.  The following hypotheses were examined:

- Drivers of engagement (psychological meaningfulness, psychological safety, and psychological availability) are positively associated with work engagement.

- Bullying acts (personal attacks, erosion of professional competence and reputation, and attack through work roles and tasks) are negatively associated with drivers of engagement.

- Bullying acts are negatively associated with work engagement.

- The interaction of bullying and drivers of engagement will be significantly associated with work engagement.

The purpose of this study was to investigate the complex interrelationships among drivers of engagement, bullying acts, and work engagement in RNs that work in US hospital settings.  As intended, a descriptive, correlational design was used.

Participant recruitment for this study originated from a national RN mailing list of 5000 randomly selected nurses who worked in U.S. hospitals.  Therefore, a confidential RN mailing list was purchased from Lippincott (LWW, 2014).   Furthermore, this

researcher randomly selected a final sample of 500 potential RN participants to receive

the paper surveys mailed to their home.  Data was collected via self-report mailed

surveys to recipients using the modified Taylor Design Method (Dillman et al., 2009).

The demographic study sample consisted of 210 participants who met the following

inclusion criteria: (a) age 18 years and older, (b) ability to read, write and speak English,

(c) a registered nurse, (d) worked as a RN in a hospital facility in the U.S., and (e) full-

time, part-time, or per-diem work status.  The analytic sample for hypothesis testing

consisted of 210 participants; of the 227 returned survey data from 17 participants were

not used for hypothesis testing because of incomplete and outlier data.  The mean age of

the sample was 52 years ($SD$ = 11.44).  On average, the participants reported that the age

first licensed as an RN was 29 years.  The sample was 97% female and 3% male.  Most

study participants were white/Caucasian (82%), had a baccalaureate or master's degree

(56.2%), and worked as a staff nurse (61.9%).  A slight majority of participants (51%)

reported that they worked a total of 40 hours or less per week, followed by 47% that

reported 41 to 60 hours per week, and 3% indicated that they worked more than 60 hours.

Eighty two percent worked in medical-surgical units, 71% worked in non-magnet, 48%

worked in teaching hospitals, and 74% worked in a hospital with > 100 beds.

The following study instruments were used: (1) a demographic questionnaire for

the collection of data regarding participants' individual characteristics (age, gender, race,

years of experience, state where the RN works, highest level of education, certification

status, work setting, time in work role, number of hours worked per week) and hospital

characteristics (presence of a bullying policy, number of beds, teaching and magnet

status, hospital type); (2) the Utrecht Work Engagement Scale (UWES-9) (Schaufeli et

al., 2006); (3) the Psychological Conditions Scale (PCS) (May et al., 2004); and (4) the Workplace Bullying Inventory (WBI) (Hutchinson et al., 2008b).

Hypotheses one through three were tested using Pearson product moment correlation and linear regression. Inferential statistics revealed 1) drivers of engagement (psychological meaningfulness, psychological safety, and psychological availability) were significantly related to work engagement; 2) bullying acts (total score) was significantly related to the three drivers of engagement; 3) bullying acts (erosion of professional competence and reputation, personal attacks, and attack through work roles and tasks) were significantly related to the psychological drivers of engagement; and 4) bullying acts (total score) was significantly related to work engagement.

Independent associations between the three psychological drivers of engagement, bullying acts, and work engagement were tested using a two-step, multiple regression models. In model 1, five demographic variables (i.e., staff nurse role, supervisor role, hours worked/week, acute care hospital type, and medical-surgical unit) that were significantly related to work engagement were entered into the model. Taken together, these demographic covariates accounted for 10% of the variance in work engagement. When drivers of engagement and bullying acts total mean scores were entered into the regression model in step 2 simultaneously, all three drivers of engagement remained significantly and independently associated with work engagement. However, bullying acts was not independently related to work engagement when drivers of engagement and covariates were in the model. Taken together, drivers of engagement and bullying acts contributed an additional 38% of variance in work engagement above that contributed by the demographic covariates. In addition, the findings revealed that psychological

meaningfulness was the strongest predictor of work engagement in this RN sample

population.

The role of bullying as a moderator was tested using Baron and Kenny's two-step

multiple linear regression method (1986). Bullying was not found to serve as a moderator

of the positive relationship between each psychological driver of engagement on work

engagement. Thus, bullying as moderator was not supported.  Further tests of

psychological drivers as a mediator in the relationship between bullying and work

engagement revealed that psychological meaningfulness and availability partially

mediated the inverse relationship between bullying acts and work engagement and

psychological safety fully mediated the inverse relationship between bullying acts and

work engagement.

In summary, all three drivers of engagement and bullying acts dimensions are

significantly related to work engagement.  Importantly, the results of this study support

the theoretical framework of work engagement (Schaufeli et al., 2002), psychological

conditions of personal engagement drivers of engagement (Kahn, 1990), and the

explanatory model of workplace bullying (Hutchinson et al., 2008b) as hypothesized to

describe and explain the interrelationships among the study variables.  In addition,

ancillary analyses revealed that drivers of engagement are an important operant

mechanism for bullying to exert its negative effects on work engagement.

**Limitations**

This cross-sectional, correlational study limits the extent to which the findings can

be generalized to the nursing population.  In statistical analysis, correlation does not

prove causation.  Thus, this study was limited by its cross-sectional design and reliance

on power analysis based on a paucity of literature regarding the relationships among

bullying acts, psychological drivers of engagement, and work engagement.  Further, a

cross-sectional design does not allow the examination of a sequence of events, such as

bullying acts, and longitudinal analysis of change in phenomenon examined in this study

over time (Hulley, Cummings, Browner, Grady, & Newman, 2007).  Finally, the

recruitment sample was obtained using a self-reported, mailed survey to a population of

nurses listed by a nursing journal publisher, posing a self-selection bias and limiting

generalizability of findings (Dillman et al., 2009).

### Conclusions

Study findings revealed that work engagement among hospital-based nurses in

this study was moderate to high; these nurses were psychologically driven to engage in

their work roles; and some experienced bullying in the workplace.  Hypothesis testing

revealed significant relationships among bullying, the three drivers of engagement, and

work engagement in the study sample.  Importantly, the effect of bullying acts on work

engagement was not independent or direct when the drivers of engagement and covariates

were controlled.  In addition, bullying acts did not reveal a significant moderator effect

on the relationship between drivers of engagement and work engagement.  However,

drivers of engagement were found to be either partial or full mediators of the negative

relationship between bullying acts and work engagement.

In summary, theoretical claims by Schaufeli et al. (2002), Kahn (1990), and

Hutchinson et al. (2008b) were supported by the study findings.  This study builds on the

theoretical premises tested in this study in that an indirect pathway, that is, the effect of

bullying on work engagement was found through the relationship between bullying and

psychological drivers.  More research is needed to validate the complex interrelationships found in this study.

## Implications for Nursing Practice

The study findings reveal that drivers of engagement are important antecedents of work engagement among U.S. nurses in hospital settings.  Bullying acts among RNs, particularly the attacks through work role and tasks, in this study is congruent with prior research (Hutchinson, et al., 2008b).  Because of the hidden nature of bullying acts, its influence and negative impact often goes unnoticed.  Thus, bullying among hospital-based nurses continues to be an issue.  Participants in this study that reported the presence of a hospital workplace bullying policy indicated that the policy was ineffective.  To date, the literature is void of evidence-based bullying intervention research in nursing (Roberts, 2015).  Hospital organizations and nursing administrators should create and sustain a "no tolerance for bullying" culture for all employees through the development, distribution, and implementation of effective bullying policies and procedures.  Workplace bullying and incivility policies and interventions, such as the ANA's position statement entitled Incivility, Bullying, and Workplace Violence (2015) can be used as a roadmap to navigate the complexities of this problem for nurses, organizations, and patient care outcomes.  Realistic *zero tolerance* bullying policies that are consistently enforced across all hospital employees can also be effective.  For example, *zero tolerance* policies could describe appropriate workplace conduct, define abusive and bullying behaviors, articulate that bullying will not be tolerated, and list the employee consequences for inappropriate workplace bullying behaviors.  Of equal importance is that clear expectations are set in regard to RNs responsibility and accountability for compliance with their hospital's

bullying policies. Furthermore, to ensure the effectiveness of existing bullying policies, nurse leaders and hospital administrators must design systematic strategies that enhance and evaluate these anti-bullying policies. Findings from this study also suggest that nurse leaders must raise awareness of bullying (Ceravolo et al., 2015) and help create meaningful work, and the investment of time and resources into nursing staff to facilitate employee engagement levels. Additional research is needed to determine the relationship between bullying and patient care outcomes (Hutchinson & Jackson, 2013) and employee outcomes, and organizational outcomes.

The findings from this study suggest that psychological drivers of engagement are important antecedents to work engagement and an operant mechanism for the negative effect of bullying on this outcome. Determining and strengthening workplace conditions that foster psychological drivers of worker engagement should be an important goal for hospital administration. Clearly, research is needed to determine and test strategies that strengthen employees' psychological drivers to attain this goal.

Descriptive findings in this study revealed that staff nurses, those who work on medical/surgical units, and those who work in specialty hospitals units including psychiatric, rehabilitation, and long-term care facilities experienced lower levels of work engagement compared to nurses in supervisory/managerial roles, and those who worked in general acute care hospital settings. These findings suggest that efforts should be targeted toward these particular nursing subgroups to increase their work engagement levels. Because hospital organizations are typically based on hierarchical structures, such as employee work roles and tasks, senior nurse leaders and managers are in the ideal position to create more engaging work settings (Advisory Board Company, 2007;

Brunetto et al., 2013; Jenaro et al., 2010; Rivera et al., 2011).  Moreover, the routine

assessment of RN work engagement levels by nursing administrators may serve as an

important strategy to improve work engagement levels among hospital-based RNs.  For

instance, research have shown that effective nurse manager leadership styles, such as

transformational leadership, and positive interpersonal relationships are linked with

higher levels of nurses' work engagement (Salanova, et al., 2011; Warshawsky et al.,

2012).  Thus, fostering effective nursing leadership and supportive administrative-staff

nurse work relationships (Simpson, 2009) can be used to improve levels of work

engagement among U.S. hospital RNs.  Likewise, hospital administrators and nurse

leaders can provide proactive education programs and promote team building initiatives

(Agency for Healthcare Research and Quality, AHRQ, 2003) to enhance work

engagement.  Finally, in academic and hospital settings, nurse educators are responsible

for teaching and modeling professional behaviors and standard of practice to

undergraduate and graduate students (Billings & Halstead, 2012; Bowllan, 2015).  In the

academic setting, faculty can incorporate anti-bullying education across the baccalaureate

and graduate nursing curricula.).  In hospital settings, nurse managers, advance practice

nurses, clinical nurse specialist, and nurse researchers can demonstrate a culture of

civility, collegiality, and multidisciplinary team efforts in the provision of quality patient-

centered care (ANA, 2015).

**Recommendations for Future Research**

Recommendations for future research based on the findings of this study include:

- Qualitative study to explore the nurses' perceptions of the nature and effectiveness of workplace bullying policies in order to determine what works and does not work in addressing nurse bullying.

- Intervention studies designed to test strategies designed to lower bullying; strengthen psychological drivers; and increase work engagement among nurses across patient-care settings.

- Replication of the study among nurses, since there is limited research that has tested the complex interrelationships examined in this study.

- Replication of this research across multiple nurse practice areas, such as outpatient clinics, community/public health agencies, nursing homes, and academia to improve the generalizability of study findings.

- Qualitative study to explore strategies to build/strengthen psychological drivers of engagement and increase work engagement among nurse employees.

- Examination of the impact of work engagement on quality patient outcomes (e.g., adverse patient events, patient morbidity and mortality rates, and missed or delayed care).

- Longitudinal research to examine changes in study variables and these relationships over time.

- Design an instrument to measure psychological drivers of engagement for registered nurse sample populations.

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Appendix A Rutgers IRB

| RUTGERS THE STATE UNIVERSITY OF NEW JERSEY | eIRB ELECTRONIC INSTITUTIONAL REVIEW BOARD | **Institutional Review Board - New Brunswick** | **Institutional Review Board - Newark** |
| --- | --- | --- | --- |
| | | 335 George Street Suite 3100, 3rd Floor New Brunswick, NJ 08901 Phone: 732-235-9806 | 65 Bergen Street Suite 511, 5th Floor Newark, NJ 07107 Phone:973-972-3608 |

This is an auto-generated email. Please do not reply to this email message. The originating e-mail account is not monitored. If you have questions, please contact your local IRB Office above.

**DHHS Federal Wide Assurance Identifier:** FWA00003913

**IRB Chair Person:** Robert Fechtner

**IRB Director:** Carlotta Rodriguez

**Effective Date:** 1/7/2015

# eIRB Notice of Approval

### STUDY PROFILE

| | |
| --- | --- |
| **Study ID:** | Pro20140000993 |
| **Title:** | Dissertation Proposal: Relationships among Work Engagement, Drivers of Engagement, and Perceived Bullying Tactics in Registered Nurses Working in Hospital Settings |

| | | | |
| --- | --- | --- | --- |
| **Principal Investigator:** | Donna Fountain | **Study Coordinator:** | Donna Fountain |
| **Co-Investigator(s):** | Charlotte Thomas-Hawkins | | |
| **Sponsor:** | Department Funded | **Approval Cycle:** | Twelve Months |
| **Risk Determination:** | Minimal Risk | | |

| | | | |
| --- | --- | --- | --- |
| **Review Type:** | Expedited | **Expedited Category:** | 7 |
| **Subjects:** | 500 | | |

### CURRENT SUBMISSION STATUS

| | | | |
| --- | --- | --- | --- |
| **Submission Type:** | Research Protocol/Study | **Submission Status:** | Approved |
| **Approval Date:** | 12/19/2014 | **Expiration Date:** | 12/18/2015 |

| **Pregnancy Code:** | No Pregnant Women as Subjects | **Pediatric Code:** | No Children As Subjects | **Prisoner Code:** | No Prisoners As Subjects |
| --- | --- | --- | --- | --- | --- |

| **Protocol:** | Pro993 Protocol Clean V1 12_2_14.docx | **Consent:** | PRO 993 Consent Form_PaperSurvey _ V4_ 12_23_14.doc | **Other Materials:** | Pro993 Survey Instrument Modified V4_12-23-14.docx Pro 993 RN Post Card V1_ 12-5 |
| --- | --- | --- | --- | --- | --- |

14.pdf

**\* Study Performance Sites:**

RBHS         Rutgers School of Nursing

**ALL APPROVED INVESTIGATOR(S) MUST COMPLY WITH THE FOLLOWING:**

1. Conduct the research in accordance with the protocol, applicable laws and regulations, and the principles of research ethics as set forth in the Belmont Report.

2. **Continuing Review:** Approval is valid until the protocol expiration date shown above. To avoid lapses in approval, submit a continuation application at least eight weeks before the study expiration date.

3. **Expiration of IRB Approval:** If IRB approval expires, effective the date of expiration and until the continuing review approval is issued: **All research activities must stop unless the IRB finds that it is in the best interest of individual subjects to continue. (This determination shall be based on a separate written request from the PI to the IRB.) No new subjects may be enrolled and no samples/charts/surveys may be collected, reviewed, and/or analyzed.**

4. **Amendments/Modifications/Revisions**: If you wish to change any aspect of this study, including but not limited to, study procedures, consent form(s), investigators, advertisements, the protocol document, investigator drug brochure, or accrual goals, you are required to obtain IRB review and approval prior to implementation of these changes unless necessary to eliminate apparent immediate hazards to subjects.

5. **Unanticipated Problems**: Unanticipated problems involving risk to subjects or others must be reported to the IRB Office  (45 CFR 46, 21 CFR 312, 812) as required, in the appropriate time as specified in the attachment online at: http://rbhs.rutgers.edu/hsweb

6. **Protocol Deviations and Violations**: Deviations from/violations of the approved study protocol must be reported to the IRB Office (45 CFR 46, 21 CFR 312, 812) as required, in the appropriate time as specified in the attachment online at: http://rbhs.rutgers.edu/hsweb

7. **Consent/Assent**: The IRB has reviewed and approved the consent and/or assent process, waiver and/or alteration described in this protocol as required by 45 CFR 46 and 21 CFR 50, 56, (if FDA regulated research). Only the versions of the documents included in the approved process may be used to document informed consent and/or assent of study subjects; each subject must receive a copy of the approved form(s); and a copy of each signed form must be filed in a secure place in the subject's medical/patient/research record.

8. **Completion of Study:** Notify the IRB when your study has been stopped for any reason. Neither study closure by the sponsor or the investigator removes the obligation for submission of timely continuing review application or final report.

9. The Investigator(s) did not participate in the review, discussion, or vote of this protocol.

Appendix B Informed Consent

Appendix E

# RUTGERS
THE STATE UNIVERSITY
OF NEW JERSEY

**Informed Consent Form**

Study Title: Relationships among Work Engagement, Drivers of Engagement, and Perceived Bullying
Tactics in Registered Nurses Working in Hospital Settings.

You are being asked to participate in a non-experimental research study that is being conducted
by myself, the Principal Investigator, (PI) Donna M. Fountain, APRN, a doctoral candidate at the
Rutgers University, in collaboration with faculty advisor and Co-investigator, Charlotte Thomas-
Hawkins RN, PhD.

This survey study is being conducted independently of your workplace and no information about
your current employment is being requested.

The purpose of this study is to gain an understanding of factors affecting work engagement among
registered nurses who work in hospitals. You are one of 500 nurses who has been randomly selected from
a mailing list to receive a paper survey.

## What will be done?

You are asked to complete a one-time paper survey which will take about 15 minutes to complete.  The
survey includes questions about 1) your personal thoughts of how you feel about your job, such as how
you feel about the meaningfulness of your job, safety, and resources available to you at work; 2)
your perception of bullying tactics over the last year; and 3) questions about yourself such as your age,
your race, and how long you have worked in your current job. Your completion of the survey will serve
as your consent to participate in this study.

You are asked to place the completed survey into the pre-stamped envelope and return it to the
investigator via the U.S. postal service.  One week after you have received the survey, you will receive a
thank you card if you have completed the survey and a reminder to complete it if you have not.

If you have not completed the survey two weeks after you receive the reminder postcard, you will receive
another survey in the mail. A week later, you will receive a thank you card if you have completed the
survey and a reminder to complete it if you have not.

If you have not completed the survey in two weeks after the second reminder postcard you will receive a
final survey packet in the mail. A reminder postcard will be sent to you one week after you have received
the final survey packet. Participation in this study is voluntary.  Instead of being in the study, your
alterative is to choose not to participate.

**Risks or discomforts:**

1

Version # 4
Date: 12/23/14

There are no anticipated risks to you for participation in this study. By this I mean that the questions that you will be asked should pose no more than minimal risk that you encounter in your daily life. As an alternative you can stop the survey and withdraw from the study without penalty.
Some of the questions about perceived bullying tactics may be emotionally upsetting. If this occurs, you can contact a local referral counseling service of a licensed mental health professional, your own private health insurance carrier, or other affordable health care counseling services, such as HealthCare.gov, website: https://www.localhelp.healthcare.gov/ or call toll free, Consumer Information: 1(800) 318-2596.

However, reporting perceived bullying tactics, may cause you detriment in the workplace in the form of retaliation. To obtain assistance, you may consider contacting your Employee Assistance Program (EAP) if available from your employer. Additional workplace resources may include: labor union representation, human resources, affirmative action departments, the federal governments' Equal Employment Opportunity Commission (EEOC) Area Office: 1-800-669-4000, available at http://www.eeoc.gov/contact/index.cfm, and the American Nurses Association (ANA) available at http://www.nursing world.org/MainMenuCatergories/WorkplaceSafety.

**Benefits of this study:**

There is no direct benefit to you for participating in this study. However, you will be contributing to knowledge gained about factors at work that influence work engagement among registered nurses who work in hospital settings.

**Confidentiality:**

Your participation in this study is confidential. Confidential means that I have assigned a pre-coded, unique identifier number to your survey to ensure tracking of your survey return and any follow up mailings. You are being asked **not to write any personal identifying** information about yourself on the survey documents. All of your individual responses to survey questions will be **kept strictly confidential.**

I will be responsible for the collection, management, security, and storage of all data resulting from this study. I will maintain a computer list of participants' names, addresses, and survey code numbers. This computerized list will be password protected, saved in a separate computer file that will be destroyed after survey answers from all study participants are entered into a computerized database. Your personal identifying information (*such as name, address*) will not be stored with your answers to the survey questions. All study files will be password protected, and password access will only be available to myself. All completed paper surveys will be stored in a locked metal file drawer in my office. Computerized data will be backed up onto a USB drive, which will be kept in a locked cabinet in my office accessible only to me.

Data collected in the study will be presented in group form and individual participants will be unidentifiable. All surveys, Chance Drawing entries, computer files, and backup discs will be destroyed in compliance with IRB policy.

**Compensation:**

No compensation is provided for this study.

2

Version # 4
Date: 12/23/14

All survey participants will have the opportunity to enter a *Chance Drawing to receive an American Express gift card valued at $150.00.*

To enter the Chance Drawing, please complete write your name, address, telephone number and email address on the blank index card in the survey packet. Place the index card into the small security envelope provided and seal it. Place the sealed envelope into the designated pre-stamped and addressed envelope to be mailed back to me with your completed survey. The sealed Chance drawing envelopes will be stored separately from the surveys in a confidential locked metal file drawer in my office until the scheduled random drawing. Your *Chance Drawing* information will not be linked to your answers on the survey questionnaire. If you are the randomly drawn recipient you will be notified and the gift card will be sent via U.S. postal certified mail.

**Withdrawal:**

Your participation is voluntary. You are free to withdraw your participation from this study at any time with no penalty to you.

**How the findings will be used:**

The results of the study will be used for reporting study findings. If the results of this study are published in scholarly journals, or presented at professional conferences, only group results will be reported.

**Contact information:**

If you have concerns or questions about this research study, please contact the PI, Donna M. Fountain M.A., M.S.N., APRN, PHCNS-BC at (908) 380-8462.

If you have questions about your rights as a research subject, please contact the IRB Director at (973) 972-3608 Newark.

By beginning the 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.

3

Version # 4
Date: 12/23/14

RUTGERS APPROVED
THE STATE UNIVERSITY OF NEW JERSEY
IRB ID: Pro20140000993
Approval Date:    12/19/2014
Expiration Date:  12/18/2015

Appendix C Survey Tool

#_____

Principal Investigator: Donna Fountain, RN, Doctoral Candidate

Rutgers, The State University of New Jersey

# REGISTERED NURSE SURVEY

We are interested in your personal thoughts of how you perceive or experience factors that are important for your engagement in your work.  Your return of the questionnaire acknowledges your consent to participate in this study. Your responses to this questionnaire are anonymous.  Do not enter your name or other identifiers onto the questionnaires.

Please mark an (X) to indicate how much you agree or disagree with the following statements about meaningfulness, safety, and availability:

|  | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|---|---|---|---|---|
| 1. The work I do on this job is very important to me. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 2. My job activities are personally meaningful to me. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 3. The work I do on this job is worthwhile. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 4. My job activities are significant to me. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 5. The work I do on this job is meaningful to me. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 6. I feel that the work I do on my job is valuable. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 7. I am afraid to express my opinions at work. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 8. There is a threatening environment at work. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 9. I am confident in my ability to handle competing demands at work. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 10. I am confident in my ability to deal with problems that come up at work. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 11. I am confident in my ability to think clearly at work. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 12. I am confident in my ability to display the appropriate emotions at work. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|---|---|---|---|---|
| 13.   I am confident that I can handle the physical demands at work. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |

The following 9 statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job.

If you have never had this feeling, check the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by checking the number (from 1 to 6) that best describes how frequently you feel that way.

| | Never<br><br>(0 times per year) | Almost never<br><br>(1-3 times per year) | Rarely<br><br>(4 times per year to once per month) | Some-times<br><br>(2-3 times per month) | Often<br><br>(Once per week) | Very often<br><br>(2-3 times per week) | Always<br><br>(Every-day) |
|---|---|---|---|---|---|---|---|
| 1.   At my work, I feel bursting with energy. | 0. ☐ | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ | 6. ☐ |
| 2.   At my job, I feel strong and vigorous. | 0. ☐ | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ | 6. ☐ |
| 3.   I am enthusiastic about my job. | 0. ☐ | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ | 6. ☐ |
| 4.   My job inspires me. | 0. ☐ | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ | 6. ☐ |
| 5.   When I get up in the morning, I feel like going to work. | 0. ☐ | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ | 6. ☐ |
| 6.   I feel happy when I am working intensely. | 0. ☐ | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ | 6. ☐ |
| 7.   I am proud of the work that I do. | 0. ☐ | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ | 6. ☐ |
| 8.   I am immersed in my work. | 0. ☐ | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ | 6. ☐ |
| 9.   I get carried away when I'm working. | 0. ☐ | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ | 6. ☐ |

This and subsequent instruments are here for scholarly and research purposes only.

We are interested if you have experienced the various items listed below. Please place an (X) next to the number that indicates how often you had this experience **over the last year**.

Certain questions refer to a **bully**, which refers to a person in your work environment **who you feel uses bullying tactics toward you**. If a person such as this exists please answer the item accordingly. If such a person does not exists, please select the **Never** response within the answer key.

| | Never | A few times a year | Monthly | Weekly | Daily |
|---|---|---|---|---|---|
| 1. My reputation was damaged by false allegations. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 2. My achievements and contributions were ignored. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 3. My abilities were questioned. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 4. I was given work above my skill level and refused help. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 5. I was denied development opportunities. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 6. I was ignored. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 7. I was belittled in front of others. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 8. I was watched and followed. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 9. I was blamed. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 10. I was publicly humiliated. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 11. I was threatened. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 12. My work was excessively scrutinized. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 13. My work was organized to inconvenience me. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |

| | Never | A few times a year | Monthly | Weekly | Daily |
|---|---|---|---|---|---|
| 14.  My work life was made difficult. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 15.  I was excluded from receiving information. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |
| 16.  My work was organized to isolate me. | 1. ☐ | 2. ☐ | 3. ☐ | 4. ☐ | 5. ☐ |

**Please Check or Fill in the Blanks to indicate your response to the following sixteen (16) items:**

1. What is your gender?          Male $\Box_0$    Female $\Box_1$

2. What is your age? _____

3. What is the State that you work in as a RN? _____

5. To which category do you self-identify? (Check one)

American Indian                    $\Box_1$

Alaskan Native                     $\Box_2$

Asian                              $\Box_3$

Black or African American          $\Box_4$

Filipino                           $\Box_5$

Hispanic or Latino                 $\Box_6$

Mixed race                         $\Box_7$

Native Hawaiian                    $\Box_8$

Guamanian/Samoan                   $\Box_9$

Other Pacific Islander             $\Box_{10}$

White                              $\Box_{11}$

Other                              $\Box_{12}$

6. What was your age when you first became licensed as an RN? _____

7. What is your primary work role?  (Check one)

Staff RN with Direct patient care       $\Box_1$

Staff RN without Direct patient care    $\Box_2$

Supervisory with Direct patient care    $\Box_3$

Supervisory / Management                $\Box_4$

Administrative/ Executive               $\Box_5$

Educational with Direct patient care    $\Box_6$

Educational only                        $\Box_7$

Other                                   $\Box_8$

8. What is the highest degree you hold in nursing? (Check one)

RN Diploma $\square_1$

Associate Degree $\square_2$

Baccalaureate Degree $\square_3$

Master's Degree $\square_4$

Doctoral Degree $\square_5$

10. Does your hospital have employee policies or educational program(s) on Workplace Bullying?

(Check one):          No $\square_0$    Yes $\square_1$

   If yes, do you think that they are effective? (Check one)        No $\square_0$     Yes $\square_1$

10. Do you currently hold any certifications? (Check one)     No $\square_0$     Yes $\square_1$

   If yes, which certification(s) do you hold? Specify: _____

11. What best describes your work setting? (Check all that apply)

Cardiac                              $\square_1$

Critical Care                        $\square_2$

Emergency room                      $\square_3$

Labor/Delivery                       $\square_4$

Medical/Surgical                     $\square_5$

Obstetrics/ Gynecology               $\square_6$

Oncology                             $\square_7$

Operating room                       $\square_8$

Orthopedic                           $\square_9$

Pediatrics                           $\square_{10}$

Other                                $\square_{11}$

12. How long have you work in your current role? (Check one)

Up to 6 months                       $\square_1$

Greater than 6 months to 2 years     $\square_2$

Greater than 2 years to 5 years      $\square_3$

Greater than 5 year to 10 years      $\square_4$

Greater than 10 years                    $\square_5$

13.  How many hours per week do you work? (Check one)

   Less than 40                    $\square_1$

   41 – 60                    $\square_2$

   More than 60                    $\square_3$

14.  How many beds does your hospital have? (Check one)

   Less than 100 patient beds    $\square_1$

   100 – 299 patient beds        $\square_2$

   300 or more patient beds      $\square_3$

14. What is the teaching status of your hospital? (Check one)

   Non‑teaching hospital            $\square_0$

   Teaching hospital                $\square_1$

15. Does your hospital have Magnet Status Accreditation? (Check one)

   No            $\square_0$

   Yes            $\square_1$

16. What is your hospital type? (Check one)

Medical-Surgical Acute Care    $\square_0$

Inpatient Rehabilitation        $\square_1$

Psychiatric                    $\square_2$

Long-Term Care Hospital        $\square_3$