

Engagement at work: A review of the literature

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Abstract

Objectives: Engagement at work has emerged as a potentially important employee performance and organizational management topic, however, the definition and measurement of engagement at work, and more specifically, nurse engagement, is poorly understood. The objective of this paper is to examine the current state of knowledge about engagement at work through a review of the literature. This review highlights the four lines of engagement research and focuses on the determinants and consequences of engagement at work. Methodological issues, as identified in the current research, and recommendations for future nurse-based engagement research are provided.

Design: A systematic review of the business, organizational psychology, and health sciences and health administration literature about engagement at work (1990–2007) was performed.

Data sources: The electronic databases for Health Sciences and Health Administration (CINAHL, MEDLINE), Business (ABI INFORM), and Psychology (PsycINFO) were systematically searched.

Review methods: Due to the limited amount of research that has examined engagement among the nursing workforce, published research that included varying employee types were included in this review. The selection criteria for this review include those studies that were: (1) written in English and (2) examined engagement at work in employee populations of any type within any work setting.

Results: The literature review identified four distinct lines of research that has focused on engagement within the employee work role. Of the 32 engagement-based articles referenced in this paper, a sample of 20 studies report on the examination of antecedents and/or consequences of engagement at work among varying employee types and work settings. Key findings suggest organizational factors versus individual contributors significantly impact engagement at work. A common implication in this body of research was that of the performance-based impact.

Conclusions: The study of nurses' work engagement and its relationship to nurses' organizational behavior, including work performance and healthcare organizational outcomes can be achieved by first building upon a conceptually consistent definition and measurement of work engagement. Future research is needed to provide nurse leaders with a better understanding of how nurse work engagement impacts organizational outcomes, including quality of care indicators.

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What is already known about the topic?

- Nurses' engagement at work is a pertinent topic of interest in the United States and internationally.
- Support for the relationship between engagement of the employee at work and organizational outcomes, including those which are performance-based, exists.

What this paper adds

- Reviews international research (from business, psychology, and health sciences and health administration literature) on engagement at work and highlights antecedent and outcome factors.
- Highlights the influential impact of organizational factors (versus individual contributors) on engagement of the employee.
- Identifies methodological issues in current research and offers recommendations for future nursing-based engagement research.

1. Introduction

Engagement at work has emerged as a potentially important employee performance and organizational management topic. A growing body of evidence supports the relationship between engagement of the employee at work and organizational outcomes, including those which are performance-based (Harter et al., 2002; Laschinger and Finegan, 2005; Laschinger and Leiter, 2006; Salanova et al., 2005; Schaufeli and Bakker, 2004). Although professions in both the academic and clinical arena tout engagement as an important work-related factor, definitions and measurements of engagement at work, and more specifically nurse engagement, are poorly understood. Clear theoretical and practical understanding of nurse engagement is needed in order to prioritize and implement interventions targeted toward bettering nurse performance, patient outcomes, and other core healthcare organizational outcomes. In order to build upon a potentially significant area of nurse performance research, a review of the literature examining the current state of knowledge about engagement at work was conducted. This review focuses on the four lines of engagement research and highlights the determinants and consequences of engagement. Methodological issues identified in the current research and recommendations for future research are also provided.

2. Background

Nurses form the largest group of healthcare professionals in the United States (American Hospital Association, 2006). Accordingly, the nature and quality of service provided to individuals within healthcare organizations may largely be dependent on nurse performance. Due to various public and private stakeholders' interest in decreasing healthcare costs

and improving healthcare quality, nurse researchers focusing on nurse performance and its impact on quality outcomes are at an important juncture. Although several nurse related factors have been identified as important predictors of patient outcomes, including nurse staffing levels (Kane et al., 2007) and educational preparation (Aiken et al., 2003; Estabrooks et al., 2005), there remain knowledge gaps. Increasing what we know about nurses' affective and motivational response at work, understood as engagement at work, may help to bridge this gap.

3. Methods

The aim of this review was to explore the current state of knowledge about engagement at work. To extract pertinent research from the published literature the electronic databases for Health Sciences and Health Administration (CINAHL, MEDLINE), Business (ABI INFORM), and Psychology (PsycINFO) were scanned prior to more detailed searches. Key words used in the literature searches included engagement, engagement at work, employee engagement, job engagement, nurse engagement, personal engagement, and work engagement. Reference lists of articles were reviewed for additional publications that may have not been indexed properly and not found via electronic searches. Internet searches of professional organizations (i.e., www.aacn.org, www.rwjf.org) and government www-sites (i.e., www.ahrq.gov) were also conducted.

Due to the limited amount of research that has examined engagement among the nursing workforce, published research that included varying employee types were included in this review. The sample consisted of peer-reviewed research studies published in business, organizational psychology, and nursing journals from 1992 to 2007. The selection criteria for this review include those studies that were: (1) written in English and (2) examined engagement at work in employee populations of any type within any work setting. Nearly 100 manuscripts were reviewed, of which 32 are referenced in this paper. From the body of literature reviewed, a sample of 20 studies reporting on the examination of antecedents and/or consequences of engagement at work are highlighted. The study purpose, sample and setting, method, and key findings for these 20 studies are summarized in Table 1.

4. Findings

The term engagement, understood within the context of the employee work role, began to emerge within the organizational psychology and business literature some 15 years ago and more recently is noted within the nursing workforce. To date, four lines of research characterize this study topic and include personal engagement, burnout/engagement, work engagement, and employee engagement. Engagement

Table 1
Studies of antecedents and consequences of engagement at work, 1990–2007

Author(s)	Purpose	Sample/setting	Method/analysis	Key findings
Personal engagement				
Kahn (1990)	To explore the conditions at work by which people personally engage and disengage	Two samples from two different settings: 16 employees/summer camp and 16 employees/architectural firm	In-depth interviews; grounded theory	Three psychological conditions – meaningfulness, safety, and availability – are concepts identified. These concepts help to explain the variance in people's bringing to and leaving out of themselves in their work role performances
May et al. (2004)	To examine the determinants and mediating effects of three psychological conditions (meaningfulness, safety and availability) on engagement at work	213 employees of insurance firm	Questionnaire; path analysis	Among the three psychological conditions, meaningfulness displayed the strongest relation to engagement. The relationships of job enrichment and work role fit to engagement were partially mediated by psychological safety
Work engagement/burnout				
Leiter and Maslach (2004)	To test a model examining the relationship between the six areas of work life, the three dimensions of burnout/engagement and employees' perception of general change within the organization	Time 1: 1,005 Time 2: 992 Time 3: 812 Administrative and support staff employees of a University	2-year longitudinal design; Questionnaire; Structural equation modeling	Burnout/engagement is the mediating link between the organizational context and employees' perceptions of organizational change
Laschinger and Finegan (2005)	To test a proposed model linking structural empowerment to the six areas of work life and nurses' physical and mental health	285 registered nurses employed on medical–surgical units	Questionnaire; Structural equation modeling	Three models suggest empowerment has indirect effects on burnout/work engagement through various areas of work life. Structural empowerment had a direct, positive effect on five of the six areas of work life. Emotional exhaustion had a strong direct positive effect on reports of depressive symptoms, a strong negative effect on energy levels, and moderate effect on physical symptoms

Laschinger and Leiter (2006)	To test a theoretical model of professional nurse work environments linking conditions for professional nursing practice to burnout/engagement and nurses' reports of adverse patient events	8597 hospital staff nurses	Questionnaire; structural equation modeling	Burnout partially mediates the relationship between work life factors and adverse events. A work environment with higher support for professional practice results in higher engagement and ultimately, safer patient care
Leiter and Laschinger (2006)	To test a model linking professional practice environment qualities and burnout	8597 hospital-based nurses	Questionnaire; structural equation modeling	A fundamental role for nursing leadership in influencing the quality of work life (which includes policy involvement, staffing level, support for a nursing model of care, and physician-nurse relationships) was supported. Also, a direct path from staffing to emotional exhaustion and from nursing model of care to personal accomplishment was found
Cho et al. (2006)	To test a model linking new graduate nurses' perceptions of structural empowerment and six areas of work life to work engagement/burnout and organizational commitment	226 new graduate nurses employed on acute care areas in hospital setting	Questionnaire; structural equation modeling	A direct link between structural empowerment and the areas of work life and emotional exhaustion was found. Emotional exhaustion had a direct negative effect on commitment
Greco et al. (2006)	To test a model examining the relationship between nurse leaders' empowerment behaviors, perceptions of staff empowerment, areas of work life and work engagement/burnout	322 staff nurses employed on acute care hospital units	Questionnaire; path analysis	The hypothesized model was supported. Overall leader empowering behavior indirectly impacts emotional exhaustion through structural empowerment and overall fit in the six areas of work life. This model accounted for 30% of the variance in burnout/engagement
Work engagement Schaufeli and Bakker (2004)	To test a model in which burnout and work engagement have different predictors and different consequences	1698 employees from four occupational groups: insurance company, occupational health & safety service, pension fund company, home care institution	Questionnaire; structural equation modeling	The hypothesized model is confirmed: (1) burnout and work engagement are negatively related; (2) burnout is mainly predicted by job demands and by a lack of job resources, whereas work engagement is exclusively predicted by available job resources; (3) work engagement mediates the relationship between job resources and turnover intention

Table 1 (Continued)

Author(s)	Purpose	Sample/setting	Method/analysis	Key findings
Hakanen et al. (2005)	To examine the relationship between job demands, job resources, and work engagement	1919 finish dentists	Questionnaire; hierarchical regression analysis	Job resources are useful in coping with the demands of dentistry and help dentists stay engaged
Salanova et al. (2005)	To test the mediating role of service climate between the antecedents (organizational resources and work engagement) and employee performance and customer loyalty	342 employees/114 work units of 58 hotel (reception area) and 56 restaurants	Structural equation modeling	A full mediation model in which organizational resources and work engagement predict service climate which in turn predicts employee performance and customer loyalty was supported
Hakanen et al. (2006)	To test a model in which there are two parallel processes involved in work-related well-being among teachers; an energetic process and a motivational process	2308 finnish teachers	Questionnaire; structural equation modeling	Burnout mediated the effect of high job demands on ill health, work engagement mediated the effects of job resources on organizational commitment, and burnout mediated the effects of lacking resources on low work engagement
Koyuncu et al. (2006)	To examine potential antecedents and consequences of work engagement	286 women managers and professionals at Turkish bank	Questionnaire; hierarchical regression analysis	Worklife experiences (control, rewards, recognition, and value fit) predicted work engagement. Individual characteristics did not predict work engagement. Work engagement predicted job satisfaction, intent-to-quit and psychological well-being outcomes
Llorens et al. (2006)	To simultaneously test the Job Demands–Resource model in two countries using different occupational samples	654 Spanish and 477 Dutch Information and communication technology employees	Questionnaire; structural equation modeling	The hypotheses are partially supported: burnout partially mediates the effect of job demands on organizational commitment and work engagement partially mediates the effect of job resources on organizational commitment
Richardson et al. (2006)	To examine the relationship between type A personalities, job demands and job resources, and police cynicism and work engagement and work and health related outcomes	150 Norwegian police officers	Questionnaire; regression analysis	Work engagement partially mediated the effects of individual characteristics, job demands, and job resources on organizational commitment and self-efficacy

Hallberg et al. (2007)	To examine the effects of Type A behavior patterns on burnout and work engagement	329 information and communication technology managers, programmers, and consultants	Questionnaire; hierarchical regression analysis	Type A behavior and work engagement shared only 13% of common variance. No significant interactions between Type A and autonomy and Type A and work load were found
Mauno et al. (2007)	To examine the relationship between work engagement and job resources and job demands	409 Finnish health care personnel	2-year longitudinal design; questionnaire; hierarchical regression analysis	Work engagement remained stable over the 2-year time period. Job resources predicted work engagement better than job demands. Among the job resources, job control was the best predictor of the dedication component of work engagement
Xanthopoulou et al. (2007)	To examine three personal resources (self-efficacy, organizational-based self-esteem, optimism) in predicting exhaustion and work engagement	714 Dutch employees of electrical engineering company	Questionnaire; structural equation modeling	Self-efficacy, organizational-based self-esteem, and optimism mediate the relationship between job resources and work engagement and exhaustion and influence the perception of job resources
Employee engagement Harter et al. (2002)	To examine the relationship at the business-unit level between employee satisfaction-engagement and the business-unit outcomes of customer satisfaction, productivity, profit, employee turnover, and accidents	7939; Business units of 36 independent companies; 5 different industry types (2 of the 36 companies were health service industry companies)	Meta-analysis	Generalizable relationships were found between unit-level employee satisfaction-engagement and the 5 organizational outcomes: profitability, productivity, customer satisfaction, employee safety, turnover
Cathcart et al. (2004)	To investigate the relationship between nurse manager span of control and employee engagement among nursing staff	651 nursing staff work groups; one healthcare system	1-year longitudinal comparison; questionnaire; correlational analysis	Higher work engagement is related to unit nurse manager's span of control

at work research has developed in a relatively sequential manner and as summarized in Table 2, the four constructs (as listed above) are defined and measured differently. This following section begins with the study of personal engagement, the earliest of the engagement at work constructs, and proceeds through the remaining three constructs used to describe, measure, and empirically test this phenomenon.

4.1. Personal engagement

In 1990, Kahn introduced the concepts of personal engagement and personal disengagement. This introduction was based on the premise that previously conceptualized concepts, such as job involvement, organizational commitment, and intrinsic motivation, exist at too far of a distance from employees' day-to-day experiences within their work role. Kahn (1990) defines personal engagement and personal disengagement as “the behaviors by which people bring in

or leave out their personal selves during work role performances” (p. 694). Personal engagement is further described as the employing or expressing of oneself physically, cognitively, and emotionally during work role performances. When engaged, an employee is understood to be physically involved, cognitively vigilant, and emotionally connected. In contrast, personal disengagement is defined as the withdrawing or defending of oneself physically, cognitively, or emotionally during their work role performances.

In a qualitative study using grounded theory, Kahn (1990) explored the conditions at work by which people personally engage and disengage. Three psychological conditions (named meaningfulness, safety, and availability) were found to impact an individual's personal engagement and disengagement in their work. The definitions and antecedents of these psychological conditions are as follows.

Psychological meaningfulness is understood to be a feeling that one is receiving a return on investments of self-given

Table 2
Constructs, definitions and measures of engagement at work

Construct	Definition	Measure
Personal engagement	Personal engagement is described as the employing or expressing of oneself physically, cognitively, and emotionally during work role performances. When engaged, an employee is understood to be physically involved, cognitively vigilant, and emotionally connected (Kahn, 1990)	Untitled tool: 14 item scale developed and used by May et al. (2004)
Burnout/engagement	Burnout is defined as a psychological syndrome characterized by exhaustion, cynicism, and inefficacy, which is experienced in response to chronic job stressors. Engagement is understood to be the direct opposite of burnout and exist on a continuum—with engagement on one end and burnout on the other. Exhaustion (low energy), cynicism (low involvement), and inefficacy (low efficacy) are characteristic of burnout; whereas, high energy, high involvement, and high efficacy are characteristic of engagement (Maslach and Leiter, 1997; Leiter and Maslach, 2004)	Maslach burnout inventory
Work engagement	Work engagement refers to a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. Vigor is characterized by high levels of energy and mental resilience while working. Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge. Absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work (Schaufeli et al., 2002)	Utrecht work engagement scale
Employee engagement	Employee engagement refers to the “individual's involvement and satisfaction as well as enthusiasm for work” (Harter et al., 2002, p. 269)	The Gallup Work Audit

in their work role performances. Tasks, roles, and work interactions are identified as meaningfulness influences. *Psychological safety* is defined as a sense of being able to show and employ oneself without fear of negative consequences to one's self-image or status at work. Interpersonal relationships, groups and intergroup dynamics, management styles and organizational norms influence this dimension of psychological conditions. *Psychological availability* is described as a sense of possessing the physical, emotional, and psychological resources needed for investing oneself in the work role. Influences include: physical energies, emotional energies, insecurity, and outside life.

In 1992, Kahn offered a theoretical expansion of his work. This expansion delineates the concept of psychological presence, its dimensions (attentiveness, connectedness, integration, and focus), and their impact on personal engagement. In this model, Kahn theorizes various work elements, social systems, and individual distractions as preceding the psychological conditions of meaningfulness, safety, and availability. In addition, outcomes of personal engagement are suggested to include performance quality and systemic growth and productivity. When an individual finds meaning, feels safe, and has the necessary external and internal resources in their work role, personal engagement will result and the individual is stated to be "fully present" (Kahn, 1992, p. 322). A single study was found that builds upon Kahn's (1990, 1992) empirical and theoretical work (May et al., 2004).

A field study tested a proposed model of individuals' engagement at work (May et al., 2004). Kahn's (1990) three psychological conditions and multiple hypothesized determinants of personal engagement (i.e., job enrichment, work role fit, co-worker relations, supervisor relations, resources, self-consciousness, outside activities) were investigated. Likert format questionnaires, developed by May et al., were used to measure personal engagement and its three psychological antecedents (meaningfulness, safety, and availability). Findings demonstrate employees experienced moderate levels of engagement, meaningfulness, safety, and availability. All three psychological conditions had significant positive relations with engagement—with meaningfulness having the strongest relationship.

4.2. Burnout/engagement

In 1997, Maslach and Leiter extended the conceptualization of burnout to include a lack of engagement in one's work. Stated otherwise, engagement is understood to be the direct opposite of burnout and exist on a continuum—with engagement on one end and burnout on the other. Furthermore, employees are hypothesized to be somewhere along this continuum at any given point in time. Burnout is defined as a psychological syndrome characterized by exhaustion, cynicism, and inefficacy, which is experienced in response to chronic job stressors (Leiter and Maslach, 2004). Exhaustion (low energy), cynicism (low involvement), and inefficacy (low efficacy) are characteristic of burnout; whereas, high

energy, high involvement, and high efficacy are characteristic of engagement.

Six published studies (five of which studied the nurse) that were based upon Maslach and Leiter's (1997) conceptualization of burnout/engagement were identified in the literature. In each of these studies, model testing was performed. All six studies considered work environment factors (four used Maslach and Leiter's work life model and two relied on a professional nurse practice model (Aiken and Patrician, 2000)) as the model antecedents.

Outcomes tested included employees' perceptions of organizational change (Leiter and Maslach, 2004), individual nurse outcomes (energy levels, physical symptoms) (Laschinger and Finegan, 2005), adverse patient events (Laschinger and Leiter, 2006), and commitment (Cho et al., 2006). A common conclusion drawn from these studies is the importance of the work environment context, the mediating impact of burnout/engagement on organizational outcomes, including those relative to the healthcare setting, and the mediating role of nurse empowerment (Cho et al.) and leader empowering behavior on burnout/engagement (Greco et al., 2006).

As indicated previously, Maslach and Leiter (1997) hypothesized the three components of engagement are opposite of the three components of burnout. Consistent with this definition, the Maslach burnout inventory (MBI) (Maslach et al., 1996) can be used to measure both burnout and engagement—with the opposite scoring pattern of the three components of burnout implying engagement. In 2002, Schaufeli et al. argued burnout and engagement are distinct concepts, thereby warranting independent assessment of one another. Acknowledging that engagement and burnout are experienced as opposite psychological states, Schaufeli et al. (2002) suggests that an employee who experiences low burnout may not be experiencing high engagement. Likewise, an employee who is highly engaged may not also be experiencing low burnout. It is through the consideration of these constructs as unique and independent of one another that Schaufeli et al. defines and subsequently operationalizes work engagement separate from that of burnout.

4.3. Work engagement

According to Schaufeli et al. (2002), work engagement is defined as:

A positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. Rather than a momentary and specific state, engagement refers to a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior. Vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthu-

siasm, inspiration, pride, and challenge. Absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work (p. 74).

Schaufeli et al. (2002) suggests vigor and dedication are opposite two of the burnout dimensions (emotional exhaustion and cynicism, respectively). In addition, absorption was identified by Schaufeli and Bakker (2001) as the third component of work engagement. The Utrecht Work Engagement Scale (UWES), a self-report questionnaire first developed by Schaufeli and Bakker (2003) and further tested (Schaufeli et al., 2006) includes the three aspects of work engagement: vigor, dedication, and absorption.

Since the development of the UWES some 5 years ago, a growing body of research focusing on this construct has evolved. This line of inquiry has occurred outside of the United States with no known independent studies of work engagement among nurses. A number of studies have examined the distinction between work engagement and burnout (Schaufeli et al., 2002, 2006; Duran et al., 2004; Gonzalez-Roma et al., 2006). Also, antecedents and/or consequences of work engagement have been of significant research interest. In its study, it is the organizational factors that have been found to significantly predict work engagement, whereas, individual factors (or personal demographics) have not.

In Koyuncu et al. (2006), the demographics of age, marital and parental status, number of children, level of education, ours worked, part-time work were measured. Using hierarchical regression analysis, when personal demographics were enter as a block, no significant amount ($p < 0.05$) of variance in work engagement was accounted for. Also considered was the individual factor of type A behavior (defined as behavior that is achievement striving and irritable/impatient; Barling and Charbonneau, 1992) and its relationship to work engagement. While type A behavior and work engagement are correlated ($r = 0.36$), type A behavior and work engagement only share 13% of common variance (Hallberg et al., 2007).

Use of The Job Demands–Resources Model (JD–R) (Bakker and Demerouti, 2007; Demerouti et al., 2001) as a framework for study has predominated this particular line of engagement research. Accordingly, job resources (versus job demands) have repeatedly been identified as significant predictors of work engagement (Hakenen et al., 2006; Llorens et al., 2006; Mauno et al., 2007; Schaufeli and Bakker, 2004; Xanthopoulou et al., 2007). Similarly, employees with better work life experiences (as identified by Maslach and Leiter, 1997), particularly higher levels of control, reward, recognition, and value fit, were more engagement (Koyuncu et al., 2006).

Among the outcomes of work engagement, turnover intention (Schaufeli and Bakker, 2004), organizational commitment (Hakenen et al., 2006; Richardsen et al., 2006), and service climate and customer loyalty (Salanova

et al., 2005) have been empirically supported. Moreover, evidence for the mediating impact of work engagement on job resources and these organizational outcomes is reported.

4.4. Employee engagement

The final line of research that has considered engagement within the employee work role can be found in the work of Harter et al. (2002, 2003). Over the course of 30 years, The Gallup Organization researchers indicate thousands of investigations of successful employees, managers, and productive work groups have led to the development of their employee engagement model. While there is agreement with Kahn's personal engagement definition (1990; 1992), Harter et al. (2002, 2003) refer to employee engagement as occurring when individuals are emotionally connected to others and cognitively vigilant and is understood to be "the individual's involvement and satisfaction as well as enthusiasm for work" (Harter et al., 2002, p. 269).

In the model of employee engagement delineated by Harter et al. (2003), four antecedent elements deemed necessary for engagement to occur within the workplace include: (a) clarity of expectations and basic materials and equipment being provided, (b) feelings of contribution to the organization, (c) feeling a sense of belonging to something beyond oneself, and (d) feeling as though there are opportunities to discuss progress and grow. The measurement of employee engagement focuses on these antecedent elements. The instrument, named The Gallup Workplace Audit, is comprised of 12 items that measure employee perceptions of work characteristics (Harter et al., 2002). Harter et al. report these 12 items explain a large portion of the variance in "overall job satisfaction" and are antecedents of personal job satisfaction and other affective constructs.

In 2002, Harter et al. reported the results of a meta-analysis that includes Gallup data from 42 studies conducted in 36 independent companies. This meta-analysis provides empirical evidence for the relationship between employee engagement and several organizational outcomes. Employee turnover, customer satisfaction-loyalty, and safety resulted in the strongest relationships to employee engagement ($r = 0.30$; $r = 0.33$; $r = 0.32$, respectively). Productivity and profitability also demonstrated positive correlations ($r = 0.25$; $r = 0.17$, respectively) (but of a lower magnitude) to engagement. In relation to the composite business performance (which included customer satisfaction-loyalty, profitability, productivity, and employee turnover outcomes) within a given company, "the business units above the company median on employee satisfaction-engagement realized 0.43 standard deviation higher performance in comparison to business units below the median" (Harter et al., 2002, p. 274). In addition, while there can be no causal claims made from these findings, the variation in unit performance within an organization points to those factors that are most proximal to the employee. Employees' satis-

faction with the manager or leader of the unit is cited as one such proximal factor.

A single study investigating employee engagement among nurses, as measured by The Gallup Work Audit, is found in Cathcart et al. (2004). In this study, the relationship between nurses' employee engagement and nurse manager span of control was investigated. Study results suggest nurses' employee engagement is higher when unit managers' span of control is lower. By decreasing four managers' span of control by 30–50%, positive increases in employee engagement scores were found. While means and number of employees per work group were provided, statistical analysis was absent from this report. The authors do acknowledge the quantitative effects of the changes made to nurse managers' span of control may not be fully realized; however, they indicate the qualitative effects are evident within the health system these changes occurred.

5. Discussion

5.1. Limitations

There are limitations to this review of the literature. The key words used to describe engagement may have led to missing published research. Research was also limited to peer-reviewed business, organizational psychology, and nursing journals to identify the state of the science of engagement at work and to identify antecedents and consequences of engagement at work. Additional research reports that could have met the inclusion criteria may have been available in other nursing or non-nursing publications.

5.2. Summary of key findings

This purpose of this review was to identify and synthesize the engagement at work research in the nursing, business, and organizational psychology literature so as determine the state of the science of engagement at work. The 20 studies of antecedents and/or consequences of engagement at work included in this review occurred within multiple work settings and among various employee types—with 7 targeting the nurse. Six of the nursing-based studies relied on the burnout/engagement construct and one study utilized that of employee engagement. The review highlighted four engagement models. The four models range from Kahn's (1992) broader Model of Personal Engagement, which includes individual, work context, and outside of work engagement antecedents, to less broad, as identified in Maslach and Leiter's Work Life Model (1997), The Job-Demands Resource Model (Bakker and Demerouti, 2007; Demerouti et al., 2001), Harter et al. (2003) Employee Engagement model. The three latter models narrow the focus and include only work-based antecedents and consequences.

The syntheses of the 20 studies of antecedents and/or consequences of engagement at work provide consistent

findings—with organizational predictors (versus individual factors) significantly impacting engagement at work. Moreover, a common implication in this body of research was that of the performance-based impact. These findings are in line with the on-going research attention of nurses' work environment and of additional importance, its relationship to quality of healthcare (McClure and Hinshaw, 2002; Institute of Medicine, 2004).

5.3. Methodological issues in current research

Engagement, as a predictor of performance of the employee, is supported by various researchers' theoretical and empirical work (Kahn, 1990, 1992; Harter et al., 2002; Leiter and Maslach, 2004; Schaufeli et al., 2002). When considered in its entirety, the literature offers important findings on which to base future engagement research. However, a closer look suggests several methodological issues be considered prior to proceeding in this area of study.

The first issue pertains to the four varying engagement at work construct definitions, measurements, and subsequently, their distinct lines of study. A clear and consistent delineation of the concept of nurses' engagement at work is imperative to developing both theory and evidence-based interventions. The present body of research highlights two conceptual issues surrounding the engagement at work definition. These include: (1) a construct's defining characteristics differentiates it from similar constructs and (2) there is a distinction between a construct's defining characteristics and its antecedents (Rodgers, 2000).

As it relates to the first issue, burnout and work engagement have been conceptualized to be on the same continuum (Maslach and Leiter, 1997) and as bipolar opposites (Schaufeli et al., 2002). There is substantial empirically support for the latter conceptualisation—that is, burnout and work engagement have unique defining characteristics and while related, they are independent of one another (Duran et al., 2004; Gonzalez-Roma et al., 2006; Schaufeli et al., 2002, 2006).

Of equal importance is the potential necessity to differentiate a construct's defining characteristics from that of its antecedents. Factors that precede a construct are distinct from the characteristics that define the construct. However, this conceptual overlap is noted in the work of Harter et al. (2002). As stated by Harter et al., the 12 items used to measure employee engagement are understood to be its antecedents. When attempts are made to identify and predict the factors that impact the variable of interest (i.e., employee engagement), the conceptual overlap between the construct itself and the factors that precede it limits our understandings.

Due to the current state of development around the engagement at work concept—particularly its varying definitions and measurements, it is suggested here that work engagement, as defined by Schaufeli et al. (2002), be used in the study of engagement among the nursing workforce.

Work engagement hinges in on the affective nature of employees' perception of themselves and their experience with work and is conceptually characterized by vigor, dedication, and absorption. Its measurement is consistent with its defining characteristics, and consequently, its antecedents and consequences can be independently measured and identified.

The complexity of the work environment variable lends itself to its own methodological challenge. This review identified three useful models for conceptualizing and measuring an employee's work environment. The Work Life Model (Maslach and Leiter, 1997) and Job Demands–Resources Model (Bakker and Demerouti, 2007) are more generalizable and can be used in varying populations of employees working in different work contexts, while the Professional Practice Model was developed specifically for use among the nurse population (Aiken and Patrician, 2000). Although either of these models may help to identify the key factors impacting engagement of the nurse, several important work environment variables are not included (i.e., length of work shift, staffing level, skill mix). Therefore, it is important that nurse researchers not limit the work environment to what these established models offer.

The remaining methodological issues identified include study design, mode of data collection, and unit of analysis. The majority of the studies in this review were cross-sectional in nature and relied on self-administered questionnaires for data. Obtaining measures of predictor and organizational outcome variables from different sources (versus sole reliance on self-administered questionnaires) would aid in controlling common method bias (Podsakoff et al., 2003). In addition, a longitudinal design would improve the ability to predict what factors enhance engagement and what outcomes are dependent on engagement. Finally, most studies considered the individual employee as the unit of analysis. When work unit was targeted as the unit of analysis (Harter et al., 2002), differences in employee engagement were found. More attention to the work group of the nurse may yield useful findings for improving engagement.

5.4. Recommendations for future research

To provide useful and generalizable evidence regarding the antecedents and consequences of nurses' engagement at work, future nurse research should consider the methodological challenges presented here. Aside from addressing the methodological issues, it is also recommended the scope of engagement-based nursing research be broadened to include various work settings (i.e., acute care, long-term care) and types of nursing staff (i.e., RNs, LPNs, CNAs). Further research is required to provide nurse leaders with better understanding of the antecedents and consequences of nurses' work engagement. Further exploration of nurses' work environment, particularly the impact of nurse leader

behaviors, is important. Of equal importance is the need to examine the consequences of nurses' work engagement, including performance-based healthcare quality outcomes. Finally, the study of nurses' work engagement as an important moderator or mediator between nurses' educational preparation and staffing ratios and patient outcomes should be considered.

6. Conclusion

As we continue to search for ways to improve healthcare quality and decrease healthcare costs the identification of additional nurse work-related factors that are predictive of nurse performance and patient and organizational outcomes is needed. Work engagement may be one such factor. The study of nurses' engagement at work and its relationship to work performance and healthcare organizational outcomes can be best achieved by addressing current research methodological limitations—the first of which involves building upon a conceptually consistent definition and measurement of this construct.

Conflict of interest

None.

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None.

Ethical Approval

- 1) University of Wisconsin Institutional Review Board approval:12/28/2007: IRB# 08.192.
- 2) Approved by Extencicare: 12/2007 by Barb Haag-Heitman, PhD, RN, Steve Biondi, RN, NHA: no reference number provided by individuals providing ethical approval.

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References

- Aiken, L.H., Clarke, S.P., Cheung, R.B., Sloane, D.M., Silber, J.H., 2003. Educational levels of hospital nurses and surgical mor-

- tality. *Journal of the American Medical Association* 290 (12), 1617–1623.
- Aiken, L., Patrician, P., 2000. Measuring organizational traits of hospitals: the revised nursing work index. *Nursing Research* 49 (3), 146–153.
- American Hospital Association, 2006. Appendix 5: supplementary data tables workforce. In: *Trendwatch Workbook*, The Lewin Group, Virginia.
- Bakker, A.B., Demerouti, E., 2007. The job demands–resources model: state of the art. *Journal of Managerial Psychology* 22 (3), 309–328.
- Barling, J., Charbonneau, D., 1992. Disentangling the relationship between the achievement striving and impatient-irritability dimensions of type A behavior, performance and health. *Journal of Organizational Behavior* 13, 369–377.
- Cathcart, D., Jeska, S., Karnas, J., Miller, S.E., Pechacek, J., Rheault, L., 2004. Span of control matters. *Journal of Nursing Administration* 34 (9), 395–399.
- Cho, J., Laschinger, H.K.S., Wong, C., 2006. Workplace empowerment, work engagement and organizational commitment of new graduate nurses. *Nursing Leadership* 19 (3), 43–60.
- Demerouti, E., Bakker, A.B., Nachreiner, F., Schaufeli, W.B., 2001. The job demands–resources model of burnout. *Journal of Applied Psychology* 86, 499–512.
- Duran, A., Extremera, N., Rey, L., 2004. Engagement and burnout: analyzing their association patterns. *Psychological Reports* 94, 1050–1084.
- Estabrooks, C.A., Midodzi, W.K., Cummings, G.G., Ricker, K.L., Giovannetti, P., 2005. The impact of hospital nursing characteristics on 30-day mortality. *Nursing Research* 54 (2), 74–84.
- Gonzalez-Roma, V., Schaufeli, W.B., Bakker, A., Lloret, S., 2006. Burnout and engagement: independent factors or opposite poles? *Journal of Vocational Behavior* 68 (1), 165–174.
- Greco, P., Laschinger, H.K.S., Wong, C., 2006. Leader empowering behaviors, staff nurse empowerment and work engagement/burnout. *Nursing Leadership* 19 (4), 41–56.
- Hakanen, J., Bakker, A.B., Demerouti, E., 2005. How dentists cope with their job demands and stay engaged: the moderating role of job resources. *European Journal of Oral Sciences* 113, 487–497.
- Hakanen, J.J., Bakker, A.B., Schaufeli, W.B., 2006. Burnout and work engagement among teachers. *Journal of School Psychology* 43, 495–513.
- Hallberg, U., Schaufeli, W.B., Johansson, G., 2007. Type A behavior and work situation: associations with burnout and work engagement. *Scandinavian Journal of Psychology* 48, 135–142.
- Harter, J.K., Schmidt, F.L., Hayes, T.L., 2002. Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: a meta-analysis. *Journal of Applied Psychology* 87 (2), 268–279.
- Harter, J.K., Schmidt, F.L., Keyes, C.L.M., 2003. Well-being in the workplace and its relationship to business outcomes: a review of the Gallup studies. In: Keyes, C.L., Haidt, J. (Eds.), *Flourishing: The Positive Person and the Good Life*. American Psychological Association, Washington, DC, pp. 205–224.
- Institute of Medicine, 2004. *Keeping Patients Safe: Transforming the Work Environment of Nurses*. National Academies Press, Washington, DC.
- Kahn, W.A., 1990. Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal* 33 (4), 692–724.
- Kahn, W.A., 1992. To be fully there: psychological presence at work. *Human Relations* 45 (4), 321–349.
- Kane, R.L., Shamliyan, T.A., Mueller, C., Duval, S., Wilt, T.J., 2007. The association of registered nurse staffing levels and patient outcomes: systematic review and meta-analysis. *Medical Care* 45 (12), 1126–1128.
- Koyuncu, M., Burke, R.J., Fiksenbaum, L., 2006. Work engagement among women managers and professionals in a Turkish bank: potential antecedents and consequences. *Equal Opportunities International* 25, 299–310.
- Laschinger, H.K.S., Finegan, J., 2005. Empowering nurses for engagement and health in hospital settings. *Journal of Nursing Administration* 35 (10), 439–449.
- Laschinger, H.K.S., Leiter, M.P., 2006. The impact of nursing work environments on patient safety outcomes: the mediating role of burnout/engagement. *The Journal of Nursing Administration* 36 (5), 259–267.
- Leiter, M.P., Maslach, C., 2004. Areas of worklife: a structured approach to organizational predictors of job burnout. In: Perrewe, P.L., Ganster, D.C. (Eds.), *Emotional and Physiological Processes and Positive Intervention Strategies*, Research in Occupational Stress and Well Being, 3. Elsevier, Oxford, pp. 91–134.
- Leiter, M.P., Laschinger, H.K.S., 2006. Relationships of work and practice environment to professional burnout: Testing a casual model. *Nursing Research* 55 (2), 137–146.
- Llorens, S., Bakker, A.B., Schaufeli, W.B., Salanova, M., 2006. Testing the robustness of the job demands–resources model. *International Journal of Stress Management* 13, 378–391.
- Maslach, C., Jackson, S.E., Leiter, M., 1996. *Maslach Burnout Inventory: Manual*, 3rd ed. Consulting Psychologists Press, Palo Alto, CA.
- Maslach, C., Leiter, M., 1997. *The Truth About Burnout*. Jossey-Bass, San Francisco.
- Mauno, S., Kinnunen, U., Ruokolainen, M., 2007. Job demands and resources as antecedents of work engagement: a longitudinal study. *Journal of Vocational Behavior* 70, 149–171.
- May, D.R., Gilson, R.L., Harter, L.M., 2004. The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology* 77 (1), 11–37.
- McClure, M.L., Hinshaw, A.S., 2002. *Magnet hospitals revisited: attraction and retention of professional nurses*. American Nurses Publishing, Washington, DC.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., Podsakoff, N.P., 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology* 88 (5), 879–903.
- Rodgers, B., 2000. Concept analysis: an evolutionary view. In: Rodgers, B.L., Knafl, K.A. (Eds.), *Concept Development in Nursing: Foundations, Techniques, and Applications*. 2nd ed. W.B. Saunders Company, Philadelphia, PA, pp. 77–102.
- Richardson, A.M., Burke, R.J., Martinussen, M., 2006. Work and health outcomes among police officers: the mediating role of police cynicism and engagement. *International Journal of Stress Management* 13, 555–574.
- Salanova, M., Agut, S., Peiro, J.M., 2005. Linking organizational resources and work engagement to employee performance and customer loyalty: the mediation of service climate. *Journal of Applied Psychology* 90 (6), 1217–1227.

- Schaufeli, W.B., Bakker, A.B., 2001. Work and wellbeing: toward a positive approach in occupational health. Unpublished manuscript.
- Schaufeli, W.B., Bakker, A.B., 2003. Utrecht work engagement scale: version 1. In: Preliminary Manual, Occupational Health Psychology Unit, Utrecht University.
- Schaufeli, W.B., Bakker, A.B., 2004. Job demands, job resources and their relationship with burnout and engagement: a multi-sample study. *Journal of Organizational Behavior* 25, 293–315.
- Schaufeli, W.B., Bakker, A.B., Salanova, M., 2006. The measurement of work engagement with a short questionnaire: a cross-national study. *Educational and Psychological Measurement* 66 (4), 701–716.
- Schaufeli, W.B., Salanova, M., Gonzalez-Roma, V., Bakker, A.B., 2002. The measurement of engagement and burnout: a confirmative analytic approach. *Journal of Happiness Studies* 3, 71–92.
- Xanthopoulou, D., Bakker, A.B., Demerouti, E., Schaufeli, W.B., 2007. The role of personal resources in the job demands-resources model. *International Journal of Stress Management* 12, 121–141.