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Megan Renee Bamford

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THE INFLUENCE OF AUTHENTIC LEADERSHIP AND AREAS OF WORKLIFE ON
WORK ENGAGEMENT OF REGISTERED NURSES

(Spine title: Authentic leadership and Work Engagement of Nurses)

(Thesis format: Monograph)

by

Megan R. Bamford

Graduate Program in Nursing

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Science in Nursing

The School of Graduate and Postdoctoral Studies
The University of Western Ontario
London, Ontario, Canada

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THE UNIVERSITY OF WESTERN ONTARIO
SCHOOL OF GRADUATE AND POSTDOCTORAL STUDIES

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entitled:
**The Influence of Authentic Leadership and Areas of Worklife on Work
Engagement of Registered Nurses**

is accepted in partial fulfilment of the
requirements for the degree of
Master of Science

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Chair of the Thesis Examination Board

Abstract

Reports have highlighted the impact of demanding and unsupportive work environments on nurses' health. Consequently, there has been a call for nursing leadership to create healthier work environments. The purpose of this study was to test the relationships among nurse managers' authentic leadership, nurses' person-job match in the six areas of worklife and their work engagement. A secondary analysis of data collected from a non-experimental predictive design survey of a random sample of 280 nurses in Ontario was conducted. An overall person-job match in the six areas of worklife fully mediated the relationship between authentic leadership and work engagement. Further, authentic leadership, overall person-job match and tenure in the profession explained 33.1% of the variance in work engagement ($F_{(3, 261)}=43.132, p<0.001, R^2=0.331$). Findings suggest that authentic leadership development for managers would be beneficial to healthcare organizations as authentic leaders enhance nurses' work engagement by fostering a greater overall person-job match in the six areas of worklife.

Keywords: authentic leadership, areas of worklife, work engagement, nurses

Dedication

I dedicate this thesis to my late mother, Heather Bamford.

Acknowledgements

Firstly, I would like to extend my up-most gratitude to my thesis supervisor Dr. Carol Wong who provided me with continuous support and encouragement throughout my graduate degree program. Dr. Wong's expertise and passion for what she teaches shines through and she is a pleasure to learn from. She allowed me to study a topic I am greatly interested in and was instrumental in developing this thesis into what it is today. I have grown as a writer, researcher and nurse by being her student.

Next, I would like to thank my committee member, Dr. Heather Laschinger, for her feedback and support. Dr. Laschinger helped to improve this study and I greatly appreciate her time and effort.

To my classmates I call friends, supporters, advocates, and colleagues. I need to thank each and every one of you. We laughed together, stressed together, and supported one another. This network of friends enriched my learning experience and I hope to work with you all in future endeavours.

My husband, Gautam, thank- you for always believing in me even when I doubted myself. Your love, patience and faith inspire me. Thank you for everything. Lastly, I would like to extend my endless appreciation and love to my parents and siblings.

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Chapter One

Introduction

Since the 1990s, organizational restructuring and fiscal restraints have negatively impacted nurses' well-being and work environments profiled by heavy workloads, increased overtime and job dissatisfaction (Cummings & Estabrooks, 2003; Cummings, Hayduk, & Estabrooks, 2005; Laschinger, 2010; Shamian, Kerr, Laschinger, & Thomson, 2002). Further, research has supported links between characteristics of the nursing work environment and adverse patient outcomes and the turnover of nursing staff (O'Brien-Pallas, Tomblin-Murphy, Shamian, Li, & Hayes, 2010; Tourangeau, Giovannetti, Tu, & Wood, 2002). Consequently, a current focus within the nursing and healthcare literature and for healthcare employers is the concern for the creation of healthy work environments that will facilitate the retention of registered nurses and promote safer patient care (Canadian Nurses Advisory Committee, 2002; Institute of Medicine, 2000).

In Canadian hospitals the average annual turnover rate for registered nurses is 19.9 per cent (O'Brien-Pallas, Tomblin-Murphy, & Shamian, 2008). Poor retention of registered nurses is a significant factor contributing to the Canadian nursing shortage which is forecasted to reach 60, 000 nurses by 2022 (Canadian Nurses Association [CNA], 2009a). A nursing workforce characterized by high turnover has been associated with poorer quality of care and heavier workloads (Birlener & Ginzberg, 2002; Duffield, O'Brien-Pallas, & Aiken, 2004; Minore et al., 2005). In turn, heavier workloads have been associated with job dissatisfaction and adverse mental and physical health outcomes

for nursing staff (Whitehead, 2006). For instance, nurses experience the highest number of sick days of any occupation in Canada (Shields & Wilkins, 2006).

The financial health of an organization is also tied to high turnover rates. A recent report has estimated that healthcare expenditure averages \$25,000 dollars per nurse vacancy within acute care hospitals in Canada largely ascribed to hiring of temporary replacements and lower productivity of new hires (O'Brien-Pallas et al., 2008). It is difficult to uncover the exact cost of turnover as there can be long lasting and hidden effects; however, costs can be largely attributed to recruitment, training and lower initial productivity of new hires (O'Brien-Pallas et al., 2010). Therefore, creating hospital work environments that promote employee health and well-being and enhance productivity is essential to sustaining the delivery of quality healthcare.

Work engagement is defined as a positive and satisfying work related state of mind (Schaufeli & Bakker, 2003) and has been identified as a strong positive predictor of retention, employee physical and mental health, performance and job satisfaction (Halbesleben, 2010; Harter, Schmidt, & Hayes, 2002). Given the relationship between work engagement and the preceding positive organizational outcomes it is an important concept for developing work environments that are satisfying and contribute to employee productivity (Laschinger, 2010; Maslach & Leiter, 1997). Maslach and Leiter (1997) proposed six areas of worklife: control, workload, community, rewards, fairness, and values which are antecedents to employee engagement. When employees experience a person-job match in the six areas of worklife they are expected to have a more positive relationship with their work and feel more engaged. Recent reports have called upon

nursing leaders to create healthy work environments that promote nurse engagement, retention and quality patient care (Kerfoot, 2006; Shirey, 2006).

Nurse managers are optimally positioned within hospital organizations to enhance nurses' work life due to their direct contact with nursing staff and their knowledge of unit concerns (Anthony et al., 2005). According to the CNA (2004) nurse managers are individuals in first level management positions who manage nurses (and others) who provide direct patient care. The roles and responsibilities of nurse managers do vary by organization; however, despite the variations in the role there are common elements. Generally, in Canada the nurse manager role encompasses clinical aspects (such as accountability for professional practice), managerial functions (including human, fiscal and material management) and leadership activities (mentoring, inspiring and supporting) (CNA, 2004; 2009b). Consequently, it is recognized that leadership and management are not synonymous (CNA, 2009b).

"Leadership is a process whereby an individual influences a group of individuals to achieve a common goal." (Northouse, 2007, p.3). Hudson (2003) defines management as "the operationalization of strategies that are created by the leader to support the innovative vision" (p. 4). Ideally, a nurse manager possesses both leadership and management skills (Association of Registered Nurses of Newfoundland and Labrador [ARNNL], 2005; CNA, 2009b). Nurses in all domains of practice and at all levels have a role to play in leadership, however, nurses who are in formal leadership positions play a pivotal role in leadership (ARNNL, 2005; CNA, 2009b). According to the Registered Nurses Association of Ontario (2010) formal nurse leaders support healthy work environments by building relationships and trust, creating empowering work

environments, supporting knowledge development and integration, sustaining change and balancing competing values and priorities.

Leadership is especially important and challenging during turbulent times. Within the nursing literature positive organizational outcomes have been attributed to nursing leadership. Research has shown consistent links between nurse managers' leadership behaviours and nurses' job satisfaction, retention, quality patient care and work engagement (Cummings, 2004; Cummings et al., 2005; Cummings et al., 2010; Leach, 2005; Upenieks, 2003; Wong & Cummings, 2007; Wong, Laschinger, & Cummings, 2010). Specifically, participative and relationship focused leadership styles have been linked to positive nurse outcomes (Cummings et al., 2005; 2010). However, there is still limited knowledge of how nursing leadership influences these positive outcomes within healthcare organizations (Wong et al., 2010). Research is needed that clearly conceptualizes leadership and the process or mechanisms by which leaders produce desired outcomes (Wong & Cummings, 2007). Further, when examining the influence of leadership on follower outcomes there is a need to study the conditions under which these relationships may occur in particular the role of the organizational context or climate (Gardner, Avolio, Luthans, May, & Walumbwa, 2005; Wong & Cummings, 2007).

Authentic leadership theory (Avolio, Gardner, Walumbwa, Luthans, & May, 2004) provides a logical framework which identifies the process by which leaders influence professional attitudes and behaviours of followers. Further, the theory acknowledges the role that leaders play in cultivating a positive work climate and the moderating role climate (ethical, caring, inclusive) has upon the leader-follower

relationship (Gardner et al., 2005). The essence of authenticity is to know, accept and remain true to oneself (Harter, 2002). Therefore, authentic leaders are persons who have achieved high levels of authenticity whereby they know who they are and what they believe and act in accordance with those values and beliefs (Avolio et al., 2004). Authentic leadership has been proposed as the genuine leadership needed to build quality work environments within healthcare (Kerfoot, 2006; Shirey, 2006).

The concept of authentic leadership development has recently emerged in the scholarly literature (Avolio et al., 2004; Avolio & Gardner, 2005; Gardner et al., 2005; Luthans & Avolio, 2003). Avolio and Gardner (2005) proposed that authentic leaders help people find meaning at work, encourage transparent relationships, foster trust, and promote positive work climates. Authentic leaders act in accordance with personal values to build credibility, respect and trust and thereby lead in a manner which employees view as authentic (Avolio et al., 2004). As this process is displayed to followers they too may act in a similar manner which over time becomes a basis for the organization's culture (Gardner et al., 2005). In the theory of authentic leadership, Avolio et al. (2004) suggest that authentic leaders are able to enhance employee engagement, commitment, and satisfaction all of which are required for employees to exert extra effort and constantly improve their work performance. It is through the processes of personal identification with followers, social identification with the organization, and the intervening variables of trust, hope, positive emotions, and optimism that authentic leaders produce such outcomes in followers.

Authentic leadership development is viewed as the root-construct underlying all positive forms of leadership development. However, there is limited published literature

that relates authentic leadership to nurse managers (Wong et al., 2010; Wong & Cummings, 2009a). Leadership theories that have been examined in the nursing realm include transformational leadership (Bass & Avolio, 1994), charismatic leadership (Conger & Kanungo, 1998) and leader-member exchange (Graen & Uhl-Bien, 1995). Although authentic leadership has some conceptual overlap with elements of these other leadership theories, the focus on the leaders' authenticity and transparency when interacting with followers, the mediating mechanism of positive psychological capital and the moderating role of the organizational climate are what set the authentic leadership theory apart (Avolio & Gardner, 2005; Wong & Cummings, 2009b).

Avolio et al.'s theory (2004) offers a framework for understanding how the authentic leadership of nurse managers can lead to greater person-job match in the six areas of worklife (Maslach & Leiter, 1997) and work engagement of nurses. Few studies have empirically tested the theoretical propositions outlined in the authentic leadership theory within the healthcare setting. Given the significant focus on the critical role of the nurse manager in building and supporting quality healthcare work environments (Kerfoot, 2006; Shirey, 2006), it is important to identify nurses' perceptions of managers' authentic leadership and how this relates to work attitudes. The purpose of this study is to empirically test propositions outlined in the authentic leadership theory by investigating the relationships among authentic leadership of nurse managers, nurses' overall person-job match in the six areas of worklife and their work engagement in the Ontario acute hospital setting. Investigating these relationships will uncover some of the mechanisms or processes by which nursing leaders influence nurses' work engagement.

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Chapter Two

Manuscript

The nursing workforce has faced significant fiscal restraints resulting in heavy workloads, increased overtime, and job dissatisfaction (Cummings & Estabrooks, 2003; Laschinger, 2010; Shamian, Kerr, Laschinger, & Thomson, 2002). Such working conditions have been named as contributing factors to poor organizational outcomes including high absenteeism and poor retention. For instance, nurses experience the highest number of sick days of any occupation in Canada (Shields & Wilkins, 2006) and a shortage of 60, 000 registered nurses is expected by 2022 (Canadian Nurses Association [CNA], 2009). Further, research has supported the link between characteristics of the nursing work environment and adverse patient outcomes and poor nurse retention (O'Brien-Pallas, Tomblin-Murphy, Shamian, Li, & Hayes, 2010; Tourangeau, Giovannetti, Tu, & Wood, 2002). Consequently, a current focus within the nursing and healthcare literature and for employers is the creation of healthy work environments that will facilitate the retention of registered nurses and promote safer patient care (Canadian Nurses Advisory Committee, 2002; Institute of Medicine, 2000).

Work engagement is defined as a positive and satisfying work-related state of mind (Schaufeli & Bakker, 2003) and has been identified as a strong predictor of turnover, employee physical and mental health, performance and job satisfaction (Halbesleben, 2010; Harter, Schmidt, & Hayes, 2002). Given the connection between work engagement and these positive organizational outcomes it is important to consider how work engagement can be nurtured to produce work environments that are fulfilling and contribute to employee productivity (Laschinger, 2010). Maslach and Leiter (1997)

proposed six areas of worklife: workload, control, rewards, community, fairness, and values that are antecedents to work engagement. When employees experience a person-job match in the six areas of worklife they are expected to have a more positive relationship with their work and feel more engaged. Recent reports have called upon nursing leaders to create quality work environments that promote nurse engagement, retention and quality patient care (Kerfoot, 2006; Shirey, 2006).

Specifically, there has been a call for authentic leadership as an effective leadership style needed to build work environments that foster trust, promote quality care and the retention of nurses (Avolio & Gardner, 2005, Kerfoot, 2006; Shirey, 2006; Wong & Cummings, 2009b). The essence of authenticity is to know, accept and remain true to oneself (Harter, 2002). Therefore, authentic leaders are persons, who have achieved high levels of authenticity whereby they know who they are and what they believe in and act in accordance with those values and beliefs (Avolio, Gardner, Walumbwa, Luthans, & May, 2004). In doing so authentic leaders build credibility, respect and trust and thereby lead in a manner which employees view as authentic (Avolio et al., 2004). As this process is displayed to followers they too may act in a similar manner which over time becomes a basis for the organization's culture (Gardner, Avolio, Luthans, May, & Walumbwa, 2005).

Authentic leadership theory (Avolio et al., 2004) provides a logical framework which identifies the process by which leaders influence professional attitudes and behaviours. Further, the theory acknowledges the role that leaders play in cultivating a positive work climate and the moderating role climate has upon the leader-follower relationship (Gardner et al., 2005). In the theory of authentic leadership, Avolio et al.

(2004) suggest that authentic leaders are able to enhance employee work engagement, commitment, and satisfaction which are required for employees to exert extra effort and constantly improve their work performance. It is through the processes of personal identification with followers, social identification with the organization, trust, and the intervening variables of hope, optimism, and positive emotions that authentic leaders produce such outcomes in followers.

There is limited published literature that relates authentic leadership to nurse managers (Wong & Cummings, 2009a; Wong, Laschinger, & Cummings, 2010). Avolio et al. (2004) offers a theoretical framework for understanding how the authentic leadership of nurse managers can lead to greater perceptions of quality work life and work engagement of nurses. Because there is significant attention on the critical role of the nurse manager in building and supporting quality healthcare work environments (Kerfoot, 2006; Shirey 2006), it is important to identify nurses' perceptions of managers' authentic leadership and how this relates to work attitudes. The purpose of this study was to empirically test propositions outlined in authentic leadership theory (Avolio et al., 2004) by investigating the relationships among authentic leadership of nurse managers, nurses' overall person-job match in the six areas of worklife and their work engagement. Investigating these relationships may illuminate the mechanisms or processes by which nursing leaders influence nurses' work engagement.

Theoretical Framework

Luthans and Avolio (2003) first introduced the concept of authentic leadership with the goal of integrating the work on positive organizational psychology and life course leadership development (Avolio, Walumbwa, & Weber, 2009). Luthans and

Avolio (2003) define authentic leadership as a process that “draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviours on the part of leaders and associates, fostering positive self-development” (p. 243). Authentic leaders are seen as hopeful and optimistic, practice with a high ethical standard, ensure that their values and beliefs are made transparent and focus on the priorities of their staff (Avolio et al., 2004). Consequently, the authentic leader-follower relationship is characterized by follower trust (Gardner et al., 2005). The four main components of authentic leadership are self-awareness, relational transparency, internalized moral perspective and balanced information processing (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008).

Self-awareness is the ability to assess one’s strengths and weaknesses (Avolio et al., 2009). It is a process whereby leaders come to understand their talents, purpose, core values and goals (Avolio et al., 2004). *Relational transparency* involves the presentation of one’s genuine self (Avolio et al., 2009). It is achieved through open and appropriate sharing of emotions and values and by soliciting feedback and listening to diverse viewpoints and opinions (Gardner et al., 2005). *Internalized moral perspective* refers to being directed by internalized moral principles to self-regulate behaviour (Avolio et al., 2009). In order to be viewed as authentic leaders must align their values and actions and not be swayed by group or societal pressures. Finally, *balanced information processing* is the ability to objectively analyze all relevant data in order to formulate decisions (Avolio et al., 2009). Authentic leaders solicit views that may challenge deeply held positions in order to formulate accurate and fair decisions (Walumbwa et al., 2008).

Avolio et al. (2004) proposed a theory linking authentic leadership to followers' work attitudes such as, work engagement, job satisfaction and organizational commitment. Subsequently, these positive attitudes result in follower behaviours including, enhanced performance, extra effort and reduced withdrawal behaviours (Avolio et al., 2004). The authentic leadership theory outlines several mediating processes through which authentic leaders influence followers' work attitudes and behaviours. These mediating processes include followers' personal identification with the leader, social identification with the organization, trust in the leader and the positive psychological capacities of hope, optimism and positive emotions (Walumbwa et al., 2008).

Authentic leadership theory also considers the organizational climate in which the leader-follower relationship develops, because an ethical and engaged organizational climate can facilitate the development of authentic leaders and followers (Avolio, 2007). Moreover, it is proposed that authentic leaders will create organizational climates that are more inclusive, supportive, and fair and provide greater opportunities for learning and development (Gardner et al., 2005). Maslach and Leiter (1997) formulated a theory that focuses on the degree of experienced match between the employee and six domains of the job which are similar to how Gardner et al. (2005) conceptualized an "engaged and ethical" organizational climate. Specifically, Maslach and Leiter (1997) proposed that when employees experience congruence between themselves and their work in the following six domains, workload, control, rewards, community, fairness, and values, they develop more positive relationships with their work and are more likely to experience work engagement. Applying Maslach and Leiter's (1997) six areas of worklife to

Avolio's et al. (2004) authentic leadership theory contributes to an understanding of the ways in which authentic leaders cultivate positive work experiences, but also provides further insight into the domains by which people develop positive psychological relationships with their work.

Although the authentic leadership theory outlines several processes such as, personal and social identification, trust, hope, optimism and positive emotions by which authentic leaders influence followers, this study will be testing the effect of nurses' perceptions of their managers' authentic leadership on nurses' overall person-job match in the six areas of worklife outlined by Maslach and Leiter (1997) and on work engagement.

Related Research

Authentic Leadership

Research on authentic leadership is in the early stages; however results do provide consistent support for the theory's propositions. To date studies have been completed that test various aspects of the model within diverse work environments, such as finance (Walumbwa, Luthans, Avey, & Oke, 2009), retail (Clapp-Smith, Vogelgesang, & Avey, 2009), healthcare (Giallonardo, Wong, & Iwasiw, 2010; Wong et al., 2010; Wong & Cummings, 2009a) corrections (Carsten et al., 2008) and cross-culturally (Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010; Walumbwa et al., 2008). Predominately, these studies have investigated the mediating mechanisms, such as trust, psychological capacities, identification, and work attitudes by which authentic leaders influence work performance (Carsten et al., 2008; Clapp-Smith et al., 2009; Walumbwa et al., 2009;

Walumbwa et al., 2010; Wong & Cummings, 2009a; Wong et al., 2010) and to a lesser extent the role of authentic leadership solely on work attitudes (Giallonardo et al., 2010).

Wong et al. (2010) tested the theoretical propositions between managers' authentic leadership, trust, work engagement and work behaviours (voice behaviour and perceptions of unit care quality) among registered nurses ($N=280$). Authentic leadership had a direct effect on trust ($\beta=.43, p<.001$) and an indirect effect on work engagement ($\beta=.22, p<.001$). Further, trust had a positive direct effect on work engagement ($\beta=.19, p<.001$) which in turn had a positive direct effect on voice behaviour ($\beta=.22, p<.001$) and perceived quality of care ($\beta=.23, p<.001$). Additionally, Giallonardo et al. (2010) investigated the role of preceptors' authentic leadership on work attitudes (work engagement and job satisfaction) of new graduate nurses ($N=170$). Authentic leadership of preceptors was significantly related to work engagement ($r=.21, p<.01$) and job satisfaction ($r=.29, p<.01$). Moreover, authentic leadership and work engagement explained 20% of the variance in job satisfaction.

Outside of the healthcare setting, Carsten et al. (2008) examined the role of authentic leadership upon followers' identification, psychological capacities, work attitudes (engagement, organizational commitment, job satisfaction and meaningfulness) and behaviours (performance, withdrawal and extra effort) in a sample of corrections personnel ($N=223$). Authentic leadership indirectly influenced psychological capacities through its relation with social identification ($\beta=.59, p<.05$). In turn, psychological capacities related to work attitudes (engagement, organizational commitment, job satisfaction and meaningfulness) ($\beta=.88, p<.05$) and subsequently, work attitudes related to extra effort ($\beta=.45, p<.05$). In addition, Walumbwa et al. (2010) found a significantly

positive relationship between supervisors' authentic leadership and work engagement ($\beta=.26, p=.01$) among employees of two large telecom firms in China.

Areas of Worklife and Work Engagement

Research on the concept of work engagement has repeatedly found a relationship between engagement and positive organizational outcomes such as, employee performance, organizational commitment, decreased turnover intentions and employee physical and mental health (Halbesleben, 2010; Harter et al., 2002; Schaufeli & Bakker, 2004). However, employee engagement research includes several conceptualizations of engagement. The two main conceptualizations of work engagement that have emerged within the nursing literature are based on the work of Maslach and Leiter (1997) and Schaufeli and Bakker (2003).

Maslach and Leiter's (1997) conceptualization of work engagement.

According to Maslach and Leiter (1997) engagement and burnout are positioned at opposite ends of a continuum composed of three dimensions, *energy*, *involvement* and *efficacy*. Burnout is thought to result from the erosion of work engagement, whereby energy turns to exhaustion, involvement turns into cynicism and efficacy turns into ineffectiveness (Maslach, Schaufeli, & Leiter, 2001). Consequently, engagement is assessed by opposite scoring patterns on the three dimensions of the Maslach Burnout Inventory- General Survey (MBI-GS; Maslach, Jackson, & Leiter, 1996). Further, Maslach and Leiter (1997) identified six areas of the job that are considered the most relevant to the relationships people develop with their work. A match between people and their job in these six areas is believed to enhance work engagement. These areas include

workload, control, rewards, community, fairness and values. *Workload* refers to the job demands placed on an employee given a specified amount of time and resources. *Control* is the opportunity for employees to make important decisions about their work, as well as their range of professional autonomy and ability to gain access to resources necessary to do their job effectively. *Rewards* involve the recognition for work contributions and can be financial, social and/or internal. *Community* is the quality of the social context in which one works, including relationships with managers, colleagues and subordinates. *Fairness* is related to the extent that openness and respect are present in the organization and the decision making process. Finally, *values* represent the congruence between the organization's priorities and values and those of the employee. (Maslach & Leiter, 1997).

Leiter and Maslach (2004) examined the relationships among the six areas of worklife and burnout/engagement continuum using data from several databases ($N=6,815$). The six areas of worklife were all found to be significantly related to the burnout/engagement continuum. Mismatch in workload, fairness and control were most strongly related to emotional exhaustion, whereas, cynicism had the strongest relationship with fairness and values. Finally, personal efficacy had the strongest relationship with control and values. The validity of the model was supported by the stable relationship patterns among the six areas of worklife and the burnout/engagement continuum across three time periods (Leiter & Maslach, 2004).

Within the nursing literature Maslach and Leiter's (1997) conceptualization of work engagement/burnout has predominated and is frequently studied alongside the six areas of worklife (Cho, Laschinger, & Wong, 2006; Greco, Laschinger, & Wong, 2006; Laschinger & Finegan, 2005; Laschinger, Finegan, Shamian, & Wilk, 2003; Laschinger,

Finegan, & Wilk, 2009; Laschinger & Leiter, 2006; Laschinger, Leiter, Day, & Gilin, 2009; Laschinger, Shamian, & Thomson, 2001; Lee & Cummings, 2008; Leiter, Gascon, & Martinez-Jarreta, 2010; Leiter & Maslach, 2009). Three studies utilizing Maslach and Leiter's (1997) conceptualization of work engagement/burnout have supported that leadership can enhance employees' person-job match in the six areas of worklife.

Lee and Cummings (2008) investigated the relationships between directors' leadership practices and managers' worklife and burnout within the healthcare setting utilizing the Kouzes and Posner Leadership Practice Inventory (Kouzes & Posner, 2002), the Areas of Worklife Survey (Leiter & Maslach, 2002), and the MBI (Maslach et al., 1996). Transformational leadership practices significantly related to three of the six areas of worklife. Using MANCOVA, significant relationships were found between directors' transformational leadership practice of *inspiring a shared vision* and managers' perceptions of appropriate reward ($F=7.78, p=.007$) and between directors leadership practice of *enabling others to act* and a high amount of control ($F=12.9, p=.001$) and perceptions of fairness ($F=12.6, p=.001$). Leiter et al. (2010) also examined the relationships between supervisor behaviours (delegating authority, consulting subordinates and encouraging innovativeness) and four of the six areas of worklife (control, workload, fairness and values) and engagement/burnout among a sample of nurses ($N=874$). In this study supervisors' behaviours were positively related to control ($r=.25, p<.01$), workload ($r=.16, p<.01$), fairness ($r=.37, p<.01$) and values ($r=.34, p<.01$).

Further, Greco et al. (2006) tested a model linking nurse leaders' empowering behaviours, nurses' empowerment, the six areas of worklife and burnout/engagement

among acute care nurses ($N=322$) using a cross-sectional survey design. As predicted, nurse leaders' empowering behaviours had an indirect effect on emotional exhaustion (burnout) through structural empowerment and overall person-job match in the six areas of worklife. More specifically, leader empowering behaviours had a positive direct effect on empowerment ($\beta = .71, p < .05$) which in turn had a strong direct effect on overall person-job match in the six areas of worklife ($\beta = .67, p < .05$). Further, overall person-job match in the six areas of worklife had a strong negative effect on emotional exhaustion ($\beta = -.54, p < .05$). These findings suggest that leaders' empowering behaviours can enhance an employee's person-job match in the six areas of worklife (Greco et al., 2006). The six areas of worklife have been studied less frequently in relation to Schaufeli and Bakker's (2003) conceptualization of work engagement.

Schaufeli and Bakker's (2003) conceptualization of work engagement.

Schaufeli and Bakker (2003) consider work engagement as an independent, distinct concept that is negatively related to burnout. According to Schaufeli and Bakker (2003) work engagement cannot be measured by the opposite scoring on burnout, because although related, the content and measurement of both concepts are different. Therefore, an employee who experiences low burnout may or may not experience engagement (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). Schaufeli and Bakker (2003) define work engagement as a positive, fulfilling, work related state of well-being that is characterized by vigour, dedication and absorption. *Vigour* is characterized by high levels of energy, effort and mental resilience while working and persistence in the face of adversity (Schaufeli & Bakker, 2010). *Dedication* refers to being strongly involved in work and experiencing a sense of pride, significance and inspiration from work

(Schaufeli & Bakker, 2010). Finally, *absorption* is defined as being engrossed in work related tasks, whereby time passes quickly (Schaufeli & Bakker, 2010). Vigour and dedication are considered direct opposites of exhaustion and cynicism, respectively (two core symptoms of burnout) (Bakker, Schaufeli, Leiter, & Teris, 2008). In addition, based on in-depth interviews absorption was included as the third aspect of work engagement (Bakker et al., 2008). There is significant empirical support for the argument that burnout and engagement are independent states (Demerouti, Mostert, & Bakker, 2010; Schaufeli et al., 2002; Schaufeli & Bakker, 2004; Schaufeli, Bakker, & Solanova, 2006). For instance, Schaufeli et al. (2002) found that burnout and engagement are moderately negatively correlated, sharing only about one quarter to one third of their variance. For this study, engagement is viewed as a distinct concept from that of burnout.

Fewer studies have been conducted utilizing Schaufeli and Bakker's (2003) conceptualization of work engagement within the nursing literature (Giallonardo et al., 2010; Laschinger, 2010; Laschinger, Wilk, Cho, & Greco, 2009; Simpson, 2009b; Wong et al., 2010) and only recently has Maslach and Leiter's (1997) six areas of worklife been studied in connection with Schaufeli and Bakker's (2003) conceptualization of work engagement. In her seminal work, Laschinger (2010) tested the relationship between Kanter's (1977) structural empowerment theory, Maslach and Leiter's (1997) six areas of worklife and Schaufeli and Bakker's (2003) conceptualization of work engagement. The study utilized a cross-sectional design and tested these relationships among a sample of nurses ($N=322$) working in acute care hospitals in Ontario. Among the six areas of worklife, control played an important role in both directly and indirectly influencing engagement through its prediction of greater rewards, relationships with peers, fairness

and value congruence. Additionally, rewards, fairness and value congruence had a direct influence on work engagement. Therefore, four of the six areas of worklife (control, rewards, fairness, and value congruence) mediated the influence of empowerment on work engagement. The findings suggest that when managers create organizational structures that empower nurses they facilitate a greater match between nurses' expectations of a quality worklife and the actual work environment and consequently, promote greater work engagement (Laschinger, 2010).

The notion of work engagement as an independent state has been studied more extensively within the organizational psychology and management literature. Several studies have investigated the organizational antecedents of work engagement, many of which are similar to the six areas of worklife outlined by Maslach and Leiter (1997). Schaufeli and Bakker (2004) found a positive relationship between job resources (supervisory coaching, performance feedback and social support) and work engagement ($r=.51, p<.001$) amongst four independent occupational samples ($N= 1698$). Similar results were also produced by Bakker, Hakanen, Demerouti and Xanthopoulou (2007) who revealed positive correlations between job resources (job control, supervisor support, climate, information, innovativeness and appreciation) and the three components of work engagement (dedication, vigour and absorption) in a sample of teachers. Moreover, Koyunco, Burke and Fiksenbaum (2006) found that work life experiences (rewards, value-fit and control) were significant predictors of work engagement in a sample of female bank managers.

Finally, the relationship between leadership styles and work engagement as an independent construct has also been studied. Zhu, Avolio and Walumbwa (2008)

surveyed senior managers ($N=140$) employed in various industries to examine the relationship between executives' transformational leadership style and senior managements' work engagement. A significant positive relationship was found between follower-rated transformational leadership and followers' work engagement ($r=.58$, $p<.01$). Similarly, Tims, Bakker and Xanthopoulou (2011) also demonstrated a significant and positive relationship between supervisors' daily transformational leadership and employees' daily work engagement. Babcock-Roberson and Strickland (2010) examined the effect of charismatic leadership on work engagement in a sample of undergraduate university students who were concurrently employed. Employees' perceptions of supervisors' charismatic leadership accounted for 16% of the variance in employee work engagement ($\beta=.40$, $p<.01$, $R^2=.16$). Giallonardo et al. (2010) and Wong et al. (2010) also found a positive link between authentic leadership and work engagement among nurses (previously outlined).

Summary of the Literature

The review of the literature has demonstrated the positive organizational outcomes of an engaged workforce (Giallonardo et al., 2010; Halbesleben, 2010; Harter et al., 2002). Studies have supported the link between authentic leadership and work engagement among nurses (Giallonardo et al., 2010; Wong et al., 2010). Further, preliminary research has established a correlation between leadership styles and person-job match in the six areas of worklife (Greco et al., 2006; Leiter et al., 2010). However, no study has examined the relationships among nurse managers' authentic leadership, overall person-job match in the six areas of worklife and work engagement among nurses. Applying the concept of authentic leadership to nurses' perceptions of their nurse

managers may expand our understanding of the process by which nurse managers influence professional work attitudes of nurses.

Hypothesis and Rationale

Based on the authentic leadership theory (Avolio et al., 2004), Maslach and Leiter's (1997) six areas of worklife and a review of the literature, the model in Figure 1 was tested and the following hypothesis was developed.

Figure 1. *Hypothesized Model*

Hypothesis: Nurses' overall person-job match in the six areas of worklife will mediate the relationship between nurses' perceptions' of their managers' authentic leadership and nurses' work engagement.

Leadership has been suggested as one of the most important factors contributing to employee engagement (Harter et al., 2002). Authentic leadership theory postulates that authentic leaders influence followers' work engagement by demonstrating self-awareness, an internalized moral perspective, relational transparency and balanced processing (Avolio et al., 2004). Accordingly, authentic nurse managers encourage open communication, show true concern for their staff, and demonstrate a high level of integrity. It is assumed that these sustained behaviours elicit positive emotions from staff and help staff to identify and use their true talents, thus augmenting feelings of

engagement (Gardner et al., 2005). Preliminary research has supported the link between authentic leadership and nurses' work engagement (Giallonardo et al., 2010).

Further, it is proposed that authentic leaders will aid in the creation of organizational climates that are more inclusive, supportive, and fair and provide opportunities for learning and development (Gardner et al., 2005). These workplace conditions help employees complete their work. It is assumed that nurse managers that demonstrate high levels of authentic leadership facilitate greater overall person-job match in the six areas of worklife by creating the conditions that foster a greater congruence between nurses' expectations of quality worklife and their actual work. In turn, a greater overall person-job match in the six areas of worklife is likely to result in higher levels of work engagement as work environments that aid nurses to accomplish their work goals and are fair and supportive should promote higher levels of vigour, dedication and absorption (work engagement). Laschinger (2010) findings support the positive effect of areas of worklife on work engagement.

Methods

Design and Sample

A secondary analysis of data from the study entitled *The Influence of Authentic Leadership on Trust and Work Outcomes of Registered Nurses* (Wong, Laschinger, & Cummings, 2008) was conducted. Wong et al. (2008) used a non-experimental predictive survey design. A random sample of 600 registered nurses working in acute care academic and community hospitals in Ontario was selected from the College of Nurses (CNO) registry to participate in the study. Participants met inclusion criteria if they were

a registered staff nurse employed in a direct care nursing position. A final sample of 280 completed surveys was obtained, resulting in a 48% response rate. In order to determine the appropriate sample size for this study, a power analysis was conducted. Based on an alpha of .05, two predictors and a power level of .80 (Cohen, 1987), the calculation revealed that 77 participants were required to calculate a moderate effect size (.13). Therefore, the sample size of 280 participants was sufficient for the present study.

Demographic characteristics are presented in Table 1. In this sample nurses averaged 43.4 ($SD=9.7$) years of age and the majority were female (93.5%). The majority of nurses were employed in permanent positions (98.2%), full-time (65.6%) in academic hospitals (54%) and had a college diploma as their highest level of education (69.5%). Nurses averaged 18.9 ($SD=11.0$) years of experience in the nursing profession and were employed at their current organization for an average of 13.4 ($SD=9.8$) years and on their current unit for an average of 8.6 ($SD=7.4$) years. Medical-surgical was the most common area of practice (35.4%), followed by ambulatory care (14.6%), and critical care (14.3%). The demographic profile of this sample is similar to the demographic profile of nurses in Ontario however; the average age of nurses in the province is slightly higher at 46.3 years of age (CNO, 2009).

Table 1. *Demographic Characteristics*

Demographic		Frequency (<i>n</i>)	Percent %
Sex	Female	261	93.5
	Male	18	6.5
Employment Status	Full-time	183	65.6
	Part-time	85	30.5
	Casual	11	3.9

Employment Type	Permanent	274	98.2
	Temporary	5	1.8
Education	College	194	69.5
	Baccalaureate	80	28.7
	Master	5	1.8
Specialty Area	Medical-Surgical	99	35.4
	Ambulatory Care	41	14.6
	Critical Care	40	14.3
	Maternal-Child	36	12.9
	Emergency	30	10.7
	OR/PACU	24	8.6
	Mental Health	6	2.1
Type of Hospital	Academic	149	54
	Community	127	46

Demographics	<i>N</i>	Mean	SD
Age	268	43.4	9.7
Years in Nursing	275	18.9	11.0
Years at current organization	258	13.4	9.8
Years on current unit	257	8.6	7.4
Years reporting to current manager	268	4.0	4.5

Instruments

Three standardized self-report instruments were used to measure the main study variables (Appendix A). The *Authentic Leadership Questionnaire* (ALQ) (Avolio, Gardner, & Walumbwa, 2007) was used to measure nurses' perceptions of managers' authentic leadership. The *Areas of Worklife Scale* (AWS) (Leiter & Maslach, 2002) was used to measure nurses' perceptions of the match between their experiences and the six

areas of worklife. The *Utrecht Work Engagement Scale* (UWES) short version (Schaufeli & Bakker, 2003) was used to measure nurses' work engagement.

The ALQ is a 16 item scale divided into four subscales. The subscales reflect the four components of authentic leadership: relational transparency (five items), internalized moral perspective (four items), balanced information processing (three items) and self-awareness (four items). For each subscale item participants are asked to judge how frequently each statement fits their manager's leadership style. All scale items are rated on a five point Likert scale ranging from zero (not at all) to four (frequently, if not always). Scoring is achieved by averaging all the scale items to produce a total scale score between zero and four, whereby higher scores reflected a greater degree of authentic leadership. Each subscale items are averaged for a subscale score out of four. Confirmatory factor analysis has supported the four dimensional structure of the ALQ (Walumbwa et al., 2008). Initial validity of the 16 item scale was tested in two independent samples of university students (Walumbwa et al., 2008a). Discriminate validity was established (average variance extracted ranged from .52 to .67) by distinguishing authentic leadership from ethical and transformational leadership (Walumbwa et al., 2008a). Predictive validity of the ALQ was supported as the measure predicted organizational citizenship behaviour ($\beta = .30, p < .01$), organizational commitment ($\beta = .26, p < .01$) and follower satisfaction with supervisor ($\beta = .33, p < .01$) when controlling for ethical leadership and organizational citizenship behaviour ($\beta = .29, p < .01$), organizational commitment ($\beta = .34, p < .01$) and follower satisfaction with supervisor ($\beta = .34, p < .01$) when controlling for transformational leadership (Walumbwa et al., 2008a). Initial reliability testing revealed Cronbach's alpha coefficients ranged

from .72 to .92 in two independent samples of Chinese and American employees (Walumbwa et al., 2008a). In this study the Cronbach's alpha coefficient for the ALQ was .97 with subscales ranging from .86 to .93.

The AWS is a 29 -item instrument that produces a score for each of the six areas of worklife: workload (six items), control (three items), rewards (four items), community (five items), fairness (six items), and values (five items). Each item is scored on a five point Likert scale ranging from one (strongly disagree) to five (strongly agree). For each item participants are asked to use the rating scale to indicate the extent to which they agree with the statement. The ten negatively worded items are reversed scored. For each of the six subscales, a high score (greater than three) indicates a match between the workplace and the employee's preference and a low score (less than three) indicates a mismatch between the workplace and the employee (Leiter & Maslach, 2004). The mean of each subscale is summed to produce a measure of overall degree of match in the six areas of worklife with a possible score ranging from six to 30. The AWS has yielded a consistent factor structure across samples (Leiter & Maslach, 2004). Criterion-related validity is supported by the strong correlations between the AWS and the three dimensions of the MBI-GS (Maslach et al., 1996) across independent samples (Leiter & Maslach, 2004). An indication of the subscales' construct validity is that when participants wrote complaints about issues in their workplace it corresponded with the areas of worklife that they evaluated negatively (Leiter & Maslach, 2004). Acceptable Cronbach alpha values have been reported for the AWS ranging from .70 to .82 (Leiter & Maslach, 2004). In this study Cronbach's alpha coefficient for the AWS was .89 with subscales ranging from .71 to .85.

The UWES short version is a nine item instrument composed of three subscales: vigour (three items), dedication (three items) and absorption (three items). Items are rated on a seven point Likert scale ranging from zero (never) to six (always). For each item participants are asked to decide how often they feel this way about their job. All items in each subscale are averaged to produce a subscale score from zero to six with higher scores representative of greater work engagement. A total work engagement score is created from the average of all items in the scale ranging from zero to six.

Confirmatory factor analysis has supported the three factor structure of this instrument (Schaufeli et al., 2002). Stability coefficients over a one year period for the UWES ranged from .64 to .73 (Schaufeli et al., 2006). Acceptable Cronbach alpha values ranging from .85 to .92 have been reported for the overall scale (Schaufeli et al., 2006). In this study Cronbach's alpha coefficient for the UWES was .90 with subscales ranging from .70 to .84.

In addition a demographic questionnaire (Appendix A) was used to gather information about each participant's age, gender, education, employment status, length of nursing experience, length of employment in current work setting, practice area, length of time reporting to current manager and frequency of contact with their current manager.

Data Collection

For the primary study ethical approval was received from the University of Western Ontario Ethics Review Board for Health Sciences Research in July 2008 (Appendix C). A modified Dillman approach was used (Dillman, 2007). Each participant was mailed a package that included the questionnaire (Appendix A), letter of

information (Appendix B), a research-addressed stamped envelope, and a two dollar gift certificate for a coffee shop as a token of appreciation. A follow-up thank you card and reminder letter (Appendix B) was sent to all participants two weeks after the initial survey was mailed. Three weeks after the second mailing, a final package consisting of a follow-up letter (Appendix B), replacement questionnaire, and a self-addressed stamped envelope were sent to all non-respondents. Consent to participate was indicated by the participants completing and returning the questionnaire (Polit & Beck, 2008). In order to maintain participants' confidentiality and facilitate the follow-up of nurses who did not respond the individual questionnaires were coded in ordered numbers, which were only identifiable to the researchers.

Data Analysis

All data was analyzed using the Statistical Package for Social Sciences (SPSS) version 19.0 (SPSS Inc., 2010). Means, standard deviations and ranges for all scores on all scales were calculated. Consistent with the assumptions outlined in Munro (2005), data was normally distributed and linear relationships existed between the independent variable (authentic leadership), mediator variable (areas of worklife) and dependent variable (work engagement). Relationships between the demographic variables, age, tenure in the profession, years of employment with the organization, years employed on the unit and length of time reporting to the manager and the major study variables (authentic leadership, areas of worklife and work engagement) were analyzed using Pearson correlation. The relationships between sex, employment type and hospital type and the major study variables were analyzed with t-test. Finally, the demographic variables employment status, education level, unit area, frequency meeting with manager

and the major study variables were assessed using ANOVA. Hierarchical multiple regression and mediation analysis were used to test the study hypothesis. Pearson correlation was used to assess relationships between all main study variables (authentic leadership, areas of worklife, work engagement). For all analyses the level of significance was set at $p < .05$. Internal consistency of each instrument and their subscales was calculated using Cronbach's alpha.

The mediation model was tested using the method articulated by Baron and Kenny (1986). Four conditions are necessary to establish mediation: (1) the independent and dependent variables must be significantly related; (2) the independent and mediator variables must be significantly related; (3) the mediator and dependent variables must be significantly related; (4) the relationship between the independent and dependent variables must be reduced (partial mediation) or removed and nonsignificant (full mediation) when the mediator is added. In addition, the Sobel test based on Preacher and Leonardelli's (2001) procedure was conducted to confirm the significance of the mediation model.

Results

Descriptive Results

The means, standard deviations and reliability coefficients for the major study variables are found in Table 3. Nurses in this study perceived their managers to exhibit a moderate degree of authentic leadership ($M=2.35$, $SD=0.99$). All the ALQ subscales averaged around the midpoint based on the five-point scale with the internalized moral perspective subscale rating the highest ($M=2.51$, $SD=1.03$) and the self-awareness subscale rating the lowest ($M=2.06$, $SD=1.17$). Giallonardo et al. (2010) reported a

higher ALQ mean in a sample of newly graduated nurses who rated their preceptors' authentic leadership ($M=3.05$, $SD=0.62$). Similarly, ALQ means tended to be higher in studies examining other professional groups ranging from 2.84 ($SD=0.90$) in American corrections personnel to 3.38 ($SD=0.66$) in employees of two large telecom firms in China (Carsten et al., 2008; Walumbwa et al., 2010).

In this sample nurses perceived a person-job match in the following areas of worklife, community ($M=3.63$, $SD=0.75$), rewards ($M=3.42$, $SD=0.87$), value congruence ($M=3.41$, $SD=0.70$) and control ($M=3.25$, $SD=0.82$). The greatest degrees of mismatch in the areas of worklife were workload ($M=2.74$, $SD=0.78$) and fairness ($M=2.86$, $SD=0.70$). A similar degree of person job match/mismatch in the six areas of worklife was found by Cho et al. (2006) who surveyed a sample of new graduate nurses with mean scores ranging from 2.61 ($SD=0.63$) for workload to 3.65 ($SD=0.72$) for community. Greco et al. (2006) also reported a comparable degree of person-job match/mismatch in the six areas of worklife in a sample of staff nurses with mean scores ranging from 2.73 for workload ($SD=0.69$) and fairness ($SD=0.69$) to 3.57 ($SD=0.77$) for community.

Nurses in this sample reported to be moderately engaged in their work ($M=4.01$, $SD=0.97$) and scored highest on the dedication subscale ($M=4.46$, $SD=1.02$), followed by the absorption ($M=3.94$, $SD=1.09$) and vigour ($M=3.65$, $SD=1.17$) subscales. Similar mean scores for work engagement ($M=3.90$, $SD=0.79$), and the three subscales of dedication ($M=4.36$, $SD=0.95$), absorption ($M=3.61$, $SD=0.86$) and vigour ($M=3.72$, $SD=0.87$) were reported by Laschinger (2010) who also analyzed a sample of Canadian acute care nurses.

Relationship of Demographic Variables to Major Study Variables

No significant relationships were found between the following demographic variables: sex, level of education, current enrolment in an educational program, type of hospital (academic versus community), preferred employment status, speciality area, or frequency meeting with manager, and the major study variables (authentic leadership, areas of worklife, and work engagement). Tenure in the profession correlated significantly and positively with work engagement ($r=.23, p<.001$) and with areas of worklife ($r=.16, p=.008$). Nurses' perceptions of their managers' authentic leadership varied by employment status ($F_{(2, 272)}=3.56, p=.03$). Nurses employed part-time ($M=2.59, SD=0.91$) rated their managers to be significantly more authentic than nurses employed full-time ($M=2.24, SD=1.00$). Nurses' overall person-job match in the six areas of worklife also varied by employment status ($F_{(2, 271)}=4.81, p=.009$). Nurses employed part-time ($M=20.15, SD=2.77$) reported a greater person-job match than nurses employed full-time ($M=18.86, SD=3.31$).

Tests of Hypothesis

The hypothesis stated that an overall person-job match in the six areas of worklife mediates the relationship between authentic leadership and work engagement. Three hierarchical multiple linear regression analyses were performed, following the method of mediation analysis specified by Baron and Kenny (1986). *Tenure in the profession* was used as a control variable due to its significant positive relationships with the major study variables. In the first equation tenure in the profession ($\beta=.20, t_{(267)}=3.45, p=.001$) and authentic leadership ($\beta=.26, t_{(267)}=4.43, p<.001$) were significantly related to the dependent variable work engagement (Condition 1). In the second equation *tenure in the profession* ($\beta=.15, t_{(263)}=2.63, p=.009$) and authentic leadership ($\beta=.42, t_{(263)}=7.54,$

$p < .001$) were significantly related to the mediator, areas of worklife (Condition 2). In the third and final equation the control variable *tenure in the profession*, followed by authentic leadership, then areas of worklife were entered in separate blocks (Table 2). In the final model tenure in the profession accounted for 4.8% of the variance in work engagement ($F_{(1, 263)} = 13.39, p < .001, R^2 = .048$) and was a significant predictor of work engagement ($\beta = .12, t_{(261)} = 2.38, p = .018$). The addition of authentic leadership explained a further 6.2% of the variance ($F_{(2, 262)} = 16.17, p < .001, R^2 = .11$) in work engagement, but was no longer a significant predictor of work engagement ($\beta = .03, t_{(261)} = 0.52, p = .60$). Areas of worklife explained another 22.1% of the variance in work engagement ($F_{(3, 261)} = 43.13, p < .001, R^2 = .331$) and was a significant predictor of work engagement ($\beta = .53, t_{(261)} = 9.30, p < .001$). Overall, the three variables explained 33.1% of the variance in work engagement.

The final equation met the two remaining requirements for full mediation: The hypothesized mediator, areas of worklife ($\beta = .53, t_{(261)} = 9.30, p < .001$), was a significant predictor of work engagement while controlling for authentic leadership (Condition 3) and the effect of authentic leadership ($\beta = .03, t_{(261)} = 0.52, p = .60$) on work engagement became insignificant once areas of worklife was entered into the model (Condition 4). To further assess the significance of the mediation, the Sobel (1982) test was applied. Results indicated that the mediation effect of areas of worklife between authentic leadership and work engagement was significant ($z = 5.98, p < .001$). Therefore, the hypothesized model was fully supported, whereby an overall match in the six areas of worklife fully mediated the relationship between nurses' perceptions of their managers' authentic leadership and nurses work engagement (Fig. 2).

Table 2. *Coefficients of Final Model for Study Hypothesis*

Model	Variables	R ²	Adjusted R ²	β	<i>t</i>	Sig.
Model 1	Tenure in Nursing	.048	.045	.22	3.66	<.001
Model 2	Tenure in Nursing			.20	3.41	.001
	Authentic Leadership	.110	.103	.25	4.25	<.001
Model 3	Tenure in Nursing			.12	2.38	.018
	Authentic Leadership			.03	0.52	.604
	Areas of Worklife	.331	.324	.53	9.30	<.001

Dependent Variable: Work Engagement

Figure 2. *Final Model*

Note. $p < .001^{***}$

Additional Analysis

The relationships between all major study variables and each of their subscales were analyzed with Pearson correlation (Table 3). Nurses' perceptions of their managers' authentic leadership was positively and significantly related to areas of worklife ($r = .43, p < .001$). In addition, authentic leadership was positively and

significantly related to all of the six areas of worklife having the strongest relationship with fairness ($r=.50, p<.001$), followed by control ($r=.31, p<.001$). Further, an overall match in the six areas of worklife was positively and significantly related to all four subscales of the ALQ with self-awareness having the strongest relationship ($r=.42, p<.001$).

Nurses perceptions of their managers' authentic leadership was positively and significantly related to work engagement ($r=.28, p<.001$). Work engagement was positively and significantly related to all subscales of the ALQ exhibiting the strongest relationship with the internalized moral perspective subscale ($r=.28, p<.001$). Additionally, all subscales of the ALQ and the UWES were positively and significantly related to each other. Further, as predicted, areas of worklife and work engagement were significantly and positively related ($r=.55, p<.001$). Areas of worklife was significantly and positively related to all subscales of the UWES with dedication ($r=.55, p<.001$) having the strongest relationship. Finally, work engagement was positively and significantly related to all six areas of worklife with rewards having the strongest relationship ($r=.50, p<.001$).

Discussion

The purpose of this study was to examine the relationships among nurses' perceptions of their managers' authentic leadership, nurses' overall person-job match in the six areas of worklife and nurses' work engagement. The hypothesis in this study was fully supported. Nurses' overall person-job match in the six areas of worklife fully mediated the positive relationship between managers' authentic leadership and nurses' work engagement. The demographic variable, *tenure in the profession* was entered into

the final equation due to its relationship with areas of worklife and work engagement. Overall, tenure in the profession, authentic leadership and match in the six areas of worklife explained 33.1% of the variance in work engagement.

The result of the final model tested (Fig. 2) supports previous research which has demonstrated the positive effect authentic leadership has on nurses' work engagement (Giallonardo et al., 2010; Wong et al., 2010) and supports Avolio et al.'s (2004) authentic leadership theory which specifies that authentic leaders enhance followers' work engagement. Further, authentic leadership predicted work engagement through an overall person-job match in the six areas of worklife which provides support for a link between authentic leadership theory (Avolio et al., 2004) and Maslach and Leiter's (1997) six areas of worklife, thereby illuminating the process by which authentic leaders influence work attitudes. These findings are important to hospital administrators as strategies aimed at increasing the authentic leadership of nurse managers can be effective for improving perceptions of quality work life and work engagement of nurses.

Nurses in this study rated their managers to have a moderate level of authentic leadership. No direct comparisons can be made as this group has not been studied using authentic leadership research in a distinct data set. However, Giallonardo et al. (2010) reported a higher ALQ mean in a sample of newly graduated nurses who rated their preceptors' authentic leadership. Similarly, ALQ means tended to be higher in studies examining other professional groups ranging from American corrections personnel to telecom employees (Carsten et al., 2008; Walumbwa et al., 2010).

Table 3. Means, Standard Deviations, Reliability Analysis and Correlation Matrix

Variable	<i>M</i>	<i>SD</i>	α	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.ALQ	2.35	0.99	.97															
2. Relational Transparency	2.49	1.00	.88	.92**														
3. Balanced Processing	2.31	1.11	.86	.92**	.78**													
4. Internalized Moral Perspective	2.51	1.03	.89	.91**	.78**	.79**												
5. Self-Awareness	2.06	1.17	.93	.93**	.78**	.86**	.79**											
6. AWS	19.30	3.20	.89	.43**	.35**	.41**	.41**	.42**										
7. Workload	2.74	0.78	.78	.17**	.11	.18**	.15*	.18**	.62**									
8. Control	3.25	0.82	.71	.31**	.24**	.33**	.29**	.31**	.75**	.42**								
9. Community	3.63	0.75	.85	.23**	.21**	.21**	.23**	.21**	.67**	.22**	.41**							
10.Rewards	3.42	0.87	.84	.29**	.24**	.27**	.28**	.28**	.78**	.35**	.45**	.51**						
11. Fairness	2.86	0.70	.73	.50**	.44**	.44**	.50**	.47**	.70**	.26**	.40**	.39**	.49**					
12.Values	3.41	0.70	.76	.28**	.23**	.26**	.31**	.27**	.60**	.24**	.37**	.24**	.36**	.40**				
13. UWES	4.01	0.97	.90	.28**	.25**	.26**	.28**	.25**	.55**	.38**	.40**	.29**	.49**	.39**	.31**			
14. Vigour	3.65	1.17	.83	.28**	.23**	.27**	.29**	.27**	.55**	.46**	.41**	.25**	.46**	.37**	.33**	.90**		
15.Dedication	4.46	1.02	.84	.24**	.22**	.21**	.24**	.21**	.55**	.42**	.33**	.34**	.48**	.37**	.30**	.89**	.74**	
16. Absorption	3.94	1.09	.70	.28**	.23**	.17**	.20**	.17**	.35**	.15*	.21**	.19**	.37**	.30**	.20**	.85**	.63**	.64**

* $p < 0.05$, two-tailed ** $p < 0.01$, two-tailed, *M* = mean, *SD* = standard deviation, α = Cronbach's alpha

Of all the authentic leadership dimensions nurses' perceptions of their managers' self-awareness received the lowest rating. Self-awareness is characterized by open and positive exchanges which reflect deeply held values and shared goals (Avolio & Gardner, 2005, pp. 327). Nurses' relatively low rating of managers' authentic leadership suggests that although nurses believe their managers to be moderately authentic, their relationship may not be marked by this authentic connection.

Consistent with Avolio et al.'s (2004) theoretical framework nurses' perceptions of their managers' authentic leadership was positively related to nurses' work engagement. All the ALQ subscales correlated positively with work engagement suggesting that all four components that characterize an authentic leader are important in influencing nurses' work engagement. However, nurses rated their managers' internalized moral perspective dimension the highest in comparison to all four dimensions of authentic leadership and it also had the strongest correlation with work engagement. This suggests that the high moral and ethical perspective of the nurse manager was relatively important in characterizing the authentic-leader follower relationship. Leaders who have integrity and act in accordance with their moral principles produce outcomes that benefit groups and the larger community as a whole (Lord & Brown, 2001). It is expected that nurse managers who display such actions facilitate nurses' work engagement by creating structures that support nurses to accomplish their work goals (providing safe and ethical care to patients) and thereby identify with the personal morality that resides within nurses (Storch, Rodney, Pauly, Brown, & Starzomski, 2002; Wong & Cummings, 2009b).

In this sample nurses perceived a person-job match in the following areas of worklife, community, rewards, value and control and the greatest degree of mismatch in the areas of workload and fairness. This degree of person-job match/mismatch in the six areas of worklife has been found in other studies examining nurses' perceptions of their work environment (Cho et al., 2006; Greco et al., 2006). Nurses' ratings of managers' authentic leadership correlated positively and significantly to all six areas of worklife. This suggests that authentic leaders are influential in creating work environments that promote control over practice, decisional involvement, access to resources, recognition, teamwork, respect and reflect nurses' values. Nurses' perceptions of overall person-job match in the areas of worklife could be construed as the quality of work environment. As such this finding indirectly supports Avolio et al.'s (2004) theory that authentic leaders create positive organizational climates that are ethical, inclusive and caring.

Of the six areas of worklife, fairness was the most strongly related to nurse managers' authentic leadership. Fairness at work is marked by perceptions of a fair decision making process and that people are treated with respect (Leiter & Maslach, 2004). Authentic leaders are expected to act in accordance with high moral values, be transparent and formulate decisions objectively based on all relevant data. Consequently, it is expected that nurse managers who are more authentic would increase perceptions of fairness. However, despite the relatively strong relationship between fairness and authentic leadership, nurses in this sample still perceived their work environment to be unfair. This could be indicative of broader corporate decisions within the hospital that are beyond the control of the unit manager which are perceived to be unfair.

Albeit significant, the relationship between authentic leadership and workload was relatively weak. This implies that nurses did not perceive authentic leaders to be particularly effective in facilitating manageable workloads. This however, may be reflective of the current climate of healthcare in Canada. Nursing managers are challenged to create quality work environments that promote safe patient care while dealing with decreasing human and financial resources. Therefore, the fact that in this sample nurses reported to have unmanageable workloads could be reflective of the larger economic and political landscape of healthcare, especially given that nurses have consistently reported to experience unmanageable workloads in other samples (Cho et al., 2006; Greco et al., 2006). These findings are similar to Greco et al. (2006) who linked leaders' empowering behaviours (enhancing meaningfulness of work, fostering participative decision making, and facilitating goal accomplishment and fostering autonomy) to Maslach and Leiter's (1997) six areas of worklife. Greco et al. (2006) also found nurses reported the greatest degree of person-job mismatch in the areas of workload and fairness. Despite this, leader empowering behaviours still had a positive indirect effect on nurses' overall person-job match in the six areas of worklife. Although, authentic leadership theory emphasizes leaders' authenticity and high internalized perspective similarities do exist with leader empowering behaviours. Specifically, both leadership theories have a strong focus on open communication and participative decision making, suggesting that open, inclusive and participative leadership behaviours are particularly important in facilitating a greater sense of overall person-job match in the six areas of worklife.

An overall person-job match in the six areas of worklife as measured by the AWS (Leiter & Maslach, 2002) predicted nurses' work engagement. This relationship asserts Maslach and Leiter's (1997) theory that employee work engagement is dependent on the six areas of worklife. Further, this finding is similar to that of Laschinger (2010) who found that four areas of worklife (control, fairness, rewards and value congruence) had a direct effect on nurses' work engagement. An overall match in the six areas of worklife had the strongest influence on the dedication dimension of work engagement. Dedication is defined as the pride and significance one achieves from work. It would be expected that a person-job match in the six areas of worklife would allow nurses to accomplish their work related goals essentially enhancing the congruence between their ideals of nursing practice and actual practice and therefore, increasing their sense of pride and significance from work. Of all the areas of worklife rewards had the strongest relationship with work engagement. Laschinger (2010) also found rewards to have the strongest relationship with nurses' work engagement. It is assumed that when employees feel their contributions to the organization are fairly rewarded they are more likely to be motivated to pursue organizational goals and feel more dedicated to their job (Maslach & Leiter, 1999).

Some significant relationships were found between the demographics and the main study variables. *Tenure in the profession* positively correlated with work engagement and the areas of worklife, specifically workload and rewards. As nurses' professional experience increases so does their level of clinical expertise enabling them to more effectively manage work demands, perhaps influencing their experience of a manageable workload (Benner, 1984). Further, nurses who have acquired a level of

clinical expertise are often put in positions such as preceptor and/or charge nurse. These new and challenging roles may increase nurses' involvement in and fulfillment from their work role, thereby enhancing work engagement. Nurses employed part-time rated their managers to be significantly more authentic and reported a greater overall person-job match than nurses employed full-time. Nurses' employed full-time spend more time at work and presumably may have more interactions with their manager perhaps influencing their assessments of their manager's leadership style. Further, in an analysis of the health of registered nurses in Ontario acute care hospitals it was found that full-time nurses experienced more burnout and job dissatisfaction than part-time nurses (Shamian et al., 2002).

Limitations

The cross-sectional design of this study inhibits one's ability to determine causality (Polit & Beck, 2008). The nurses in this study were employed in acute care settings therefore; this limits the generalizability of results to nurses employed in other settings. In addition, there is potential for response bias due to the use of self-report surveys (Polit & Beck, 2008).

Conclusion

The results of this study provide support for Avolio et al.'s (2004) theory of authentic leadership as applied to nurse managers. In addition, this study provides support for the theoretical links between authentic leadership, the six areas of worklife and work engagement. The findings suggest that when nurses work for managers who demonstrate higher levels of authentic leadership they report a greater overall person job-match and

subsequently, greater work engagement. Avolio et al.'s (2004) theory can be used by healthcare administrators to create leadership programs which focus on the development of authentic leadership for nurse managers and subsequently, increase perceptions of a quality work environment and work engagement among staff nurses.

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Chapter Three

Discussion

The purpose of this study was to examine the relationships among nurses' perceptions of their managers' authentic leadership (Avolio, Gardner, Walumbwa, Luthans, & May, 2004), nurses' overall person-job match in the six areas of worklife (Maslach & Leiter, 1997) and nurses' work engagement (Schaufeli & Bakker, 2003). In this study, an overall person-job match in the six areas of worklife fully mediated the influence of nurse managers' authentic leadership on nurses' work engagement. Nurse managers' authentic leadership and an overall person-job match explained 28.3% of the variance in work engagement. The theoretical, practical and research implications of these findings are discussed below.

Implications for Theory

In this study nurse managers' authentic leadership predicted nurses' work engagement. This finding provides support for Avolio et al.'s (2004) authentic leadership theory which specifies that authentic leaders influence employees' work engagement and corroborates previous research that has found a positive link between authentic leadership and employees' work engagement (Carsten et al., 2008; Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010). Additionally, although some researchers (Gardner, Avolio, Luthans, May, & Walumbwa, 2005) have suggested that authentic leaders influence the development of positive organizational climates (ethical, inclusive and caring) this has not been empirically tested. This study demonstrated that nurse managers' authentic leadership predicted nurses' overall person-job match in the six domains of worklife, control, workload, rewards, community, values and fairness as outlined by Maslach and Leiter (1997). Nurses' perceptions of overall person-job match

in the areas of worklife could be construed as the quality of work environment. In doing so results indirectly provide preliminary support for the argument that authentic leaders influence organizational climates which employees view as ethical, caring and inclusive.

A second contribution of this study lies in drawing together Avolio et al.'s (2004) authentic leadership theory and Maslach and Leiter's (1997) six areas of worklife to explain how leaders' authenticity explains their followers' work engagement. This is the first study to link Avolio et al.'s (2004) authentic leadership theory to Maslach and Leiter's (1997) six areas of worklife, thereby extending theory development. Findings demonstrate that it is through an overall match in the six areas of worklife that authentic leaders influence followers' work engagement. Further, this is one of few studies linking Maslach and Leiter's (1997) six areas of worklife to Schaufeli and Bakker's (2003) conceptualization of work engagement. Results of this study provide support for Maslach and Leiter's (1997) theory which specifies that a match in the six areas of worklife predicts employees' work engagement.

Implications for Practice

The findings of this study suggest that Avolio et al.'s (2004) theory can be used as a framework to facilitate the development of nurse managers' authentic leadership which would influence nurses' overall person-job match in the six areas of worklife and subsequently, nurses' work engagement. More specifically, nurses who perceived their managers to display a higher degree of self-awareness, relational transparency, balanced processing and ethical standards also reported a higher degree of overall person-job match in the six areas of worklife and work engagement. Therefore, leadership development for nurse managers focusing on these four components would be useful to healthcare organizations.

Self-awareness is the degree to which leaders are aware of their strengths and weaknesses (Avolio et al., 2004). Consequently, to achieve self-awareness managers must be able to identify their strengths and be aware of performance areas that could be developed or further strengthened. In this sample nurses rated their managers' self-awareness the lowest in comparison with all four authentic leadership components. As such, directors must organize evaluation strategies that give managers the opportunity to assess their performance on a regular basis and thereby, enhance their self-assessment skills. Feedback from multiple sources or '360-degree feedback' is an evaluation approach that relies on input from numerous individuals, including supervisors, colleagues and subordinates (McCarthy & Garavan, 1999). The 360-degree feedback system gives the recipient a complete summary of their skills, strengths, and job-related performance viewed by themselves and others, therefore providing managers an opportunity to become more self-aware (McCarthy & Garavan, 1999). For this process to be successful nurse managers must be open to receiving feedback and directors must communicate feedback constructively and honestly. In addition, consistent with positive organizational psychology, feedback must not only identify performance gaps, but more acutely focus on identifying and leveraging managers' strengths (Spreitzer, 2006).

Relational transparency involves the presentation of one's genuine self (Avolio, Walumbwa & Weber, 2009). It is achieved through open, appropriate and truthful sharing of goals, emotions, and values (Gardner et al., 2005). For managers it would be beneficial to emphasize information sharing, being open and truthful with nursing staff and highlighting goals and reasons for decision outcomes within their practice. Hospital administrators and directors can facilitate the development of managers' relational transparency by encouraging open and honest communication between themselves,

managers and the nursing staff. Further, organizations should design clear leadership role expectations which encompass performance related to this area (Registered Nurses Association of Ontario [RNAO], 2010), that is, the expectation that nurse managers are accessible, promote open communication and foster honest relationships with their staff (RNAO, 2010).

Balanced information processing is the ability to objectively analyze all relevant data in order to formulate decisions (Avolio et al., 2009). Managers can demonstrate balanced processing by soliciting staff feedback, creating an environment in which staff feel comfortable providing feedback and involving staff in decision making when appropriate. Directors can facilitate balanced processing of nursing managers by organizing staff meetings where nurse managers have the opportunity to present new ideas or practice challenges to administrators. This would allow nurse managers to receive feedback from other nursing and/or allied health managers, as well as program directors. In addition, healthcare organizations should encourage the use of best available evidence to inform management decisions by providing managers with access to evidence informed guidelines or policies and professional practice support.

Nurses in this study reported their perceptions of managers' internalized moral perspective to be the highest when compared to the other three dimensions of authentic leadership. Internalized moral perspective refers to being directed by internalized moral principles to self-regulate behaviour (Avolio et al., 2009). Managers must align their actions with their core principles and values. The moral component of the authentic leader can be enhanced by exposure to and discussion of moral dilemmas through case studies that highlight ethical leadership in practice (Brown & Trevino, 2006; May,

Hodges, Chan, & Avolio, 2003). Such learning activities can improve an individual's ability to think about problems in alternative ways, recognize moral dilemmas in practice and increase self-efficacy which in turn may facilitate performance (May et al., 2003). Directors can also enhance the internalized moral perspective of managers by reinforcing to managers the importance of acting in accordance with their moral values rather than external pressures.

Additionally, organizations can facilitate the development of authentic leadership by choosing managers who exemplify the four dimensions of an authentic leader when promoting or hiring new managers (Wong & Cummings, 2009). It is also the organization's responsibility to provide new leaders with adequate orientation to the role of unit manager. Hospital administrators must recognize the value of leadership development and provide the adequate financial resources necessary to facilitate this process. This should include pairing a new leader with a more experienced leader who demonstrates authentic leadership whereby experienced leaders can act as a coach or mentor for the new hire.

It is important to note that in this study nurses' did not experience a person-job match (a score greater than three) in two areas of worklife, workload and fairness. Given the positive link between all areas of worklife and work engagement, working conditions which foster a greater congruence between nurses' work experiences and the expectation of a manageable workload and fair working conditions would presumably improve nurses' engagement. Despite the fact that nurses reported a mismatch in the areas of workload and fairness authentic leadership still positively and significantly related to both workload and fairness.

Albeit significant, the relationship between authentic leadership and workload was relatively weak. This implies that nurses did not perceive authentic leaders to be particularly effective in facilitating manageable workloads. Nursing managers are challenged to create quality work environments that promote safe patient care while dealing with decreasing human and financial resources. Therefore, the fact that in this sample nurses reported to have unmanageable workloads could be reflective of the larger economic and political landscape of healthcare beyond the unit level. Thus, hospital administrators are also charged with creating conditions necessary to promote manageable workloads. Administrators must allocate the necessary financial resources at the unit level in order to ensure adequate staffing which includes the hiring of an appropriate number of nursing staff and replacing day to day nurse vacancies. Furthermore, hospital administrators must also ensure that funding is available to hire support staff for the units, such as unit clerks, housekeeping and personal support workers.

Of the six areas of worklife, fairness was the most strongly related to nurse managers' authentic leadership. Authentic leaders are expected to act in accordance with high moral values, be transparent and formulate decisions objectively based on all relevant data. Consequently, it is expected that nurse managers who are more authentic would increase perceptions of fairness. However, a perception of fairness in the workplace does not only include decisions involved at the unit level, but also at the departmental and corporate levels. Therefore, staff nurses' perceptions of unfairness in the workplace could be indicative of broader corporate decisions within the hospital that are beyond the control of the unit manager. Management at all levels in the organization

are responsible for making their decision process transparent and soliciting feedback from those that will be affected by the decision outcomes.

In summary, the implementation of leadership development based on Avolio et al.'s (2004) theory of authentic leadership is likely to nurture the development of authentic managers and therefore, increase nurses' overall match in the six areas of worklife and subsequently, nurses' work engagement. Further, providing managers with appropriate training and creating structures that improve the working conditions of nurses are likely to positively influence the relationship nurses develop with their work and thus, their work engagement.

Recommendations for Future Research

This study was the first to link Avolio et al.'s (2004) theory to Maslach and Leiter's (1997) six areas of worklife. This study specifically focused on one work attitude, work engagement. Future research should investigate nurses' experience of an overall match in the six areas of worklife and work engagement as mediating links between nurse managers' authentic leadership and important organizational outcomes as specified in the authentic leadership theory such as, organizational commitment and withdrawal behaviours (Leiter & Maslach, 2004). This would allow a greater understanding of the process by which authentic leaders influence additional organizational outcomes and more specifically, the role engagement plays in predicting follower attitudes and behaviours. Additionally, investigating the link between nurse managers' authentic leadership and nurses' organizational commitment and withdrawal behaviours is extremely relevant to the nursing population due to the high turnover and absenteeism that characterizes the nursing workforce (O'Brien-Pallas et al., 2004;

O'Brien-Pallas, Tomblin-Murphy, & Shamian, 2008). Further, authentic leadership as applied to nurse managers should investigate how personal identification with the leader and trust in management influences employees overall match in the six areas of worklife as defined by Maslach and Letier (1997). Understanding the mediating effects of the identification process may shed light on the dynamic interactions which occur in the manager-nurse relationship and how this affects perceptions of the work environment.

This is the first study to illuminate the relationships between Avolio et al.'s (2004) theory as applied to nurse managers, an overall person-job match in the six areas of worklife and nurses' work engagement. Wong, Laschinger and Cummings (2010) tested the relationships between nurse managers' authentic leadership, the mediating variables of personal and social identification and trust in management on work engagement, voice behaviours and perceptions of unit care quality. The next step would be to investigate the mediating role of psychological capacities (hope, optimism, positive emotions) between nurse managers' authentic leadership and nurses' work engagement. The authentic leadership theory specifies that authentic leader influence important follower outcomes through psychological capacities and research has suggested that psychological capital may be an important predictor of work engagement (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Furthermore, there has been a call for authentic leaders as the leadership necessary to create healthier and safer work environments (Kerfoot, 2006; Shirey, 2006); therefore, investigating the process by which nurse managers' authentic leadership influences patient safety outcomes would be worthwhile. Measurable safety indicators that are dependent on nursing care and worth investigating include medication errors and fall rates.

Another critical issue that deserves research attention is authentic leadership development. Understanding how authentic leadership of nurse managers develops can lead to evidenced based training programs formulated on Avolio et al.'s (2004) theory. Therefore, experimental intervention studies that examine the effectiveness of leadership development programs are needed. Finally, replication of this study should be done using samples of nurses in other practice settings, such as long-term care and public health to increase the generalizability of results and to explore if differences between nurses' perceptions of their managers' authentic leadership, overall match in the six areas of worklife and work engagement exist based on practice setting.

Conclusion

In closing, the results of this study support theoretical propositions outlined in Avolio et al.'s (2004) authentic leadership model as applied to the nursing population. Results also support Maslach and Leiter's (1997) theory that an overall match in the six areas of worklife influences work engagement as applied to the nursing population. Authentic leadership of nurse managers had a positive direct effect on overall match in the six areas of worklife and an indirect effect on work engagement through the six areas of worklife. By being more in touch with oneself, displaying transparency and being guided by high moral/ethical principles an individual can be a successful leader. Consequently, implementing strategies to promote authentic leadership development in healthcare organizations may play a role at improving the work experience of registered nurses in the acute care sector.

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APPENDIX A

Study Instruments

- A. 01 Authentic Leadership Questionnaire
- A. 02 Areas of Worklife Scale
- A. 03 Utrecht Work Engagement Scale
- A. 04 Demographic Questionnaire

Authentic Leadership Questionnaire Sample Items

(Avolio, Gardner, & Walumbwa, 2007)

The following survey items refer to your immediate manager's leadership style, as you perceive it. Think about your experiences with this individual over the previous 12 months. *Judge how frequently each statement fits his or her leadership style:*

My manager:	Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
1. Says exactly what she or he means	0	1	2	3	4
2. Demonstrates beliefs that are consistent with actions	0	1	2	3	4
3. Solicits views that challenge her or his deeply held beliefs	0	1	2	3	4
4. Seeks feedback to improve interactions with others	0	1	2	3	4
5. Tells you the hard truth.	0	1	2	3	4

Due to copyright restrictions only five items of the Authentic Leadership Questionnaire can be published in this thesis.

Legend

Self-awareness: 4
 Balanced Processing: 3
 Relational Transparency: 1, 5
 Internalized Moral Perspective: 2

Areas of Worklife Scale

(Leiter & Maslach, 2002)

Please use the following rating scale to indicate the extent to which you agree with the following statements:

		1	2	3	4	5
		Strongly disagree	Disagree	Hard to decide	Agree	Strongly agree
1.	I do not have time to do the work that must be done.	1	2	3	4	5
2.	I work intensely for prolonged periods of time.	1	2	3	4	5
3.	After work I come home too tired to do the things I like to do.	1	2	3	4	5
4.	I have so much work to do on the job that it takes me away from my personal interests.	1	2	3	4	5
5.	I have enough time to do what's important in my job.	1	2	3	4	5
6.	I leave my work behind when I go home at the end of the workday.	1	2	3	4	5
7.	I have control over how I do my work.	1	2	3	4	5
8.	I can influence management to obtain the equipment and space I need for my work.	1	2	3	4	5
9.	I have professional autonomy/independence in my work.	1	2	3	4	5
10.	I receive recognition from others for my work.	1	2	3	4	5
11.	My work is appreciated.	1	2	3	4	5
12.	My efforts usually go unnoticed.	1	2	3	4	5

	1	2	3	4	5
	Strongly disagree	Disagree	Hard to decide	Agree	Strongly agree
13. I do not get recognized for all the things I contribute.	1	2	3	4	5
14. People trust one another to fulfill their roles.	1	2	3	4	5
15. I am a member of a supportive work group.	1	2	3	4	5
16. Members of my workgroup cooperate with one another.	1	2	3	4	5
17. Members of my work group communicate openly.	1	2	3	4	5
18. I don't feel close to my colleagues.	1	2	3	4	5
19. Resources are allocated fairly here.	1	2	3	4	5
20. Opportunities are decided solely on merit.	1	2	3	4	5
21. There are effective appeal procedures available when I question the fairness of a decision.	1	2	3	4	5
22. Management treats all employees fairly.	1	2	3	4	5
23. Favouritism determines how decisions are made at work.	1	2	3	4	5
24. It's not what you know but who you know that determines a career here.	1	2	3	4	5

	1	2	3	4	5
	Strongly disagree	Disagree	Hard to decide	Agree	Strongly agree
25. My values and the Organization's values are alike.	1	2	3	4	5
26. The Organization's goals influence my day to day work activities.	1	2	3	4	5
27. My personal career goals are consistent with the Organization's stated goals.	1	2	3	4	5
28. The Organization is committed to quality.	1	2	3	4	5
29. Working here forces me to compromise my values.	1	2	3	4	5

Legend

Workload: 1, 2, 3, 4, 5, 6

Control: 7, 8, 9

Rewards: 10, 11, 12, 13

Community: 14, 15, 16, 17, 18

Fairness: 19, 20, 21, 22, 23, 24

Values: 25, 26, 27, 28, 29

Utrecht Work Engagement Scale

(Schaufeli & Bakker, 2003)

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, circle the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by circling the number (from 1 to 6) that best describes how frequently you feel that way.

	Never	Almost never	Rarely	Sometimes	Often	Very often	Always
	0	1	2	3	4	5	6
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

Legend

Vigour: 1, 2, 5
 Dedication: 3, 4, 7
 Absorption: 6, 8, 9

Demographic Questionnaire

Please tell us something about yourself and the characteristics of your work setting.

1. Gender:

- ☐ Female
- ☐ Male

2. Age: _____ years

3. Highest Level of Education:

- ☐ High School
- ☐ College Diploma
- ☐ Bachelor's Degree
- ☐ Master's Degree
- ☐ Doctorate

4. Are you currently enrolled in an educational program?

Yes ____ No ____ Program name _____

5. Type of hospital where you are employed:

- ☐ Teaching (Academic)
- ☐ Community

6. What is your current employment status at this hospital?

- ☐ Full time
- ☐ Part time
- ☐ Casual

7. Is your employment:

- ☐ Permanent
- ☐ Temporary

8. My **preferred** employment status is:

- ☐ Full time
- ☐ Part time
- ☐ Casual

9. How many years have you worked:

a) in your profession? _____ years _____ months

b) in your present facility? _____ years _____ months

c) on your current unit? _____ years _____ months

10. What type of unit do you work on? **Select the ONE unit where you work the MOST hours**

- ☐ Medical
- ☐ Surgical
- ☐ Intensive Care
- ☐ Obstetrics
- ☐ Pediatrics
- ☐ Operating Room
- ☐ Post-anesthetic Care
- ☐ Psychiatry
- ☐ Emergency
- ☐ Ambulatory Care
- ☐ Other – Specify: _____

11. What is the position title of the person to whom you report?
 _____ (e.g., manager, coordinator, etc.)

12. How long have you reported to this person? _____ years _____ months

13. How frequently do you see/meet with your manager on average?

- ☐ every day
- ☐ once or twice a week
- ☐ once or twice a month
- ☐ once or twice in 6 months
- ☐ once or twice a year
- ☐ other – please specify: _____

Please share any other thoughts about your work setting you feel we should know about:

APPENDIX B

Letters of Information

- B. 01 Letter of Information
- B. 02 Follow-up Letter of Information

Information and Consent Form for Survey

Study Title: The Influence of Authentic Leadership on Trust and Work Outcomes of Registered Nurses

September, 2008

Dear Nursing Colleague,

We would like to invite you to participate in a research project we are conducting. The purpose of this study is to examine the influence of the leadership practices of first line patient care managers on nurses' trust in leadership and some important work outcomes of registered nurses in teaching and community hospitals. Your participation in this study will be vital in allowing us to analyze how the nature and work of front-line patient care leaders can help or hinder nurses' practice and outcomes for patients.

In order to examine this topic, we have developed a questionnaire that asks for your assessment of your manager's leadership practices, your working conditions, structures that support your work, and the outcomes of your work in terms of involvement in work, performance, job satisfaction, and perceptions of the quality of care in your organization and also some general questions about yourself. Your name was randomly selected from a registry list of the College of Nurses of Ontario. Your participation in this research is entirely voluntary. You may refuse to participate, refuse to answer any of the questions, or withdraw from the study at any time without penalty. The enclosed questionnaire should take about 30 minutes to complete. Completion and return of the questionnaire indicates your consent to participate in the study. While we would like you to answer all the questions, if you do not wish to answer a particular question, please feel free to leave it blank.

Your responses will be kept strictly confidential and locked in a filing cabinet in Dr. Wong's office until the data have been analyzed. Individual responses will only be seen by a research assistant who will enter them into a computer file. Each questionnaire is identified by a code number to enable us to send out a reminder letter to individuals who have not responded. Your name will never be attached to your questionnaire and once the study is completed, the questionnaires will be destroyed.

As a small token of our appreciation for your contribution to the study, we have included a coupon redeemable at Tim Horton's. When the research project is complete, we would be happy to send you a copy of the results. If you are interested in receiving the results, please write your name and address on the enclosed small **blue** form and return it with your completed questionnaire. To ensure that your responses remain anonymous, this form will be separated from the rest of your questionnaire when it arrives back in Dr. Wong's office. This identification will also be destroyed after the summary of the results is mailed to you. While the results of this study may be published, they will only be presented as group data, ensuring that identification of individual responses will be impossible.

While there are no known risks to this study, your participation will give you the opportunity to provide information useful for leadership practices that are most helpful in promoting trust and positive working conditions for nurses. Should you have any questions about the conduct of this study or your rights as a research subject, you may contact the Director, Office of Research Ethics, The University of Western Ontario, (519) 661-3036 or email at: ethics@uwo.ca.

We would very much appreciate your participation in this research project. If you choose to participate, please use the pre-addressed, stamped envelope enclosed to return the questionnaire to Dr. Wong's office. If you do not wish to participate, please return the blank questionnaire, after which we will not contact you again. If at

any time you would like to withdraw from the study, please contact the Principal Investigator and your data will be removed from our files. This letter and the Tim Horton's coupon are for you to keep, regardless of whether or not you decide to participate. If you have any questions, please feel free to contact Dr. Wong at the phone number or e-mail address listed below. Thank you very much for considering this request.

Sincerely,

Carol Wong, RN, PhD
Principal Investigator
Assistant Professor,
Arthur Labatt Family School of Nursing
The University of Western Ontario

and

Dr. Heather Laschinger, RN, PhD
Co-investigator
Professor
Arthur Labatt Family School of Nursing
The University of Western Ontario

**Follow-up
Information and Consent Form for Survey**

**Study Title: The Influence of Authentic
Leadership on Trust and Work Outcomes
of Registered Nurses**

October 2008

Dear Nursing Colleague,

A few weeks ago, we sent you a letter inviting you to participate in our study of nursing leadership, trust and work outcomes of registered nurses. So far, we have not heard from you and are writing to nurses who have not returned the questionnaire to ask you one more time if you would consider helping us with this study by completing the questionnaire. We realize that nurses have busy lives and therefore, time is precious. However, if you could find some time to complete the questionnaire, we would sincerely appreciate your help.

While participation is strictly voluntary, we understand that you may have chosen not to take part. If you have misplaced the first questionnaire package, we have enclosed another one with the hope that you will share your thoughts by completing the questionnaire. We have also enclosed another Tim Horton's coupon as a small token of our appreciation for your contribution to this study. The coupon is for you to keep regardless of whether or not you decide to participate.

Our questionnaire asks for your assessment of your manager's leadership practices, your working conditions, structures that support your work, and the outcomes of your work in terms of involvement in work, performance, job satisfaction, and perceptions of the quality of care in your organization and also some general questions about yourself. Your name was randomly

selected from a registry list of the College of Nurses of Ontario. Your participation in this research is entirely voluntary. You may refuse to participate, refuse to answer any of the questions, or withdraw from the study at any time without penalty. The enclosed questionnaire should take about 30 minutes to complete. Completion and return of the questionnaire indicates your consent to participate in the study. While we would like you to answer all the questions, if you do not wish to answer a particular question, please feel free to leave it blank.

We want to assure you that your responses are completely confidential and that no individual responses will ever be identified in sharing the results. We also would be very pleased to send you a copy of the final report if you wish to have one. If you are interested in receiving the results, please write your name and address on the enclosed small **blue** form and return it with your completed questionnaire. To ensure that your responses remain anonymous, this form will be separated from the rest of your questionnaire when it arrives back in Dr. Wong's office. This identification will also be destroyed after the summary of the results is mailed to you. While the results of this study may be published, they will only be presented as group data, ensuring that identification of individual responses will be impossible. Representatives of The University of Western Ontario Health Sciences Research Ethics Board may contact you or require access to your study-related records to monitor the conduct of the research.

If you have already responded, we would like to thank you for your time and support. If you do not wish to participate, please return the blank questionnaire in the pre-addressed, stamped envelope and you will not be contacted further. If you have any questions regarding this study, please do not hesitate to contact Dr. Wong by e-mail or by phone at extension .

Sincerely,

Carol Wong, RN, PhD
Principal Investigator
Assistant Professor,
Arthur Labatt Family School of Nursing
The University of Western Ontario

and

Dr. Heather Laschinger, RN, PhD
Co-investigator
Professor
Arthur Labatt Family School of Nursing
The University of Western Ontario

APPENDIX C

Letter of Approval

- C. 01 The University of Western Ontario Review Board of Health Sciences Research Involving Human Subjects Certificate of Approval
-
- C. 02 Permission for use of the Authentic Leadership Questionnaire

Office of Research Ethics

The University of Western Ontario
 Room 00045 Dental Sciences Building, London, ON, Canada N6A 5C1
 Telephone: (519) 661-3036 Fax: (519) 850-2466 Email: ethics@uwo.ca
 Website: www.uwo.ca/research/ethics

Use of Human Subjects - Ethics Approval Notice

Principal Investigator: Dr. C.A. Wong

Review Number: 15292E

Review Level: Expedited

Review Date: July 17, 2008

Protocol Title: The Influence of Authentic Leadership on Trust and Work Outcomes of Registered Nurses

Department and Institution: Nursing, University of Western Ontario

Sponsor:

Ethics Approval Date: July 18, 2008

Expiry Date: October 31, 2009

Documents Reviewed and Approved: UWO Protocol, Letter of Information, Reminder Letter, Follow-up Letter

Documents Received for Information:

This is to notify you that The University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the Health Canada/ICH Good Clinical Practice Practices: Consolidated Guidelines; and the applicable laws and regulations of Ontario has reviewed and granted approval to the above referenced study on the approval date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

The ethics approval for this study shall remain valid until the expiry date noted above assuming timely and acceptable responses to the HSREB's periodic requests for surveillance and monitoring information. If you require an updated approval notice prior to that time you must request it using the UWO Updated Approval Request Form.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the HSREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of monitor, telephone number). Expedited review of minor change(s) in ongoing studies will be considered. Subjects must receive a copy of the signed information/consent documentation.

Investigators must promptly also report to the HSREB:

- a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
- b) all adverse and unexpected experiences or events that are both serious and unexpected;
- c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to this office for approval.

Members of the HSREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the HSREB.

Chair of HSREB: Dr. Paul G. Harding

Ethics Officer to Contact for Further Information			
☐ Janice Sutherland	☐ Elizabeth Wambolt	☐ Grace Kelly	☒ Denise Gratton

This is an official document. Please retain the original in your files.

cc: ORE File

www.mindgarden.com

To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material;

Instrument: Authentic Leadership Questionnaire (ALQ)

Authors: Bruce J. Avolio, William L. Gardner, and Fred O. Walumbwa

Copyright: "Copyright © 2007 Authentic Leadership Questionnaire (ALQ) by Bruce J. Avolio, William L. Gardner, and Fred O. Walumbwa. All rights reserved in all medium."

for his/her thesis research.

Five sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

Vicki Jaimez
Mind Garden, Inc.
www.mindgarden.com