July 2017

# A Systematic Review of the Antecedents, Mediators and Outcomes of Authentic Leadership in Healthcare

Bayan Alilyyani
*The University of Western Ontario*

Supervisor
Dr. Carol Wong
*The University of Western Ontario*

Graduate Program in Nursing

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

Follow this and additional works at: https://ir.lib.uwo.ca/etd

Part of the Nursing Commons

**Abstract**

Authentic leadership is a relational leadership style derived from the field of positive organizational behavior and is purported to promote healthy work environments that influence staff performance and positive organizational outcomes. The aim of this thesis was to conduct a systematic review to describe the state of the evidence on the relationship between authentic leadership, staff, and patient outcomes in healthcare. Published English-only research articles that examined the antecedents, mediators and outcomes of authentic leadership practices of leaders/managers in healthcare settings were selected from eleven online bibliographic databases. Quality assessments, data extraction and analysis were completed on all included studies. A total of 44 articles ($n$=38 quantitative and $n$=6 qualitative) representing 27 studies satisfied our inclusion criteria, were retained and included both published research and dissertations and theses. Results were reported as descriptive and narrative syntheses using authentic leadership theory as a guide. Findings provided support for positive relationships between authentic leadership and trust, job satisfaction, structural empowerment, work engagement and work group relationships. Also there were negative associations between authentic leadership and bullying, incivility and burnout. Findings from qualitative studies supported a positive connection between authentic leadership and healthy work environments and leadership characteristics were consistent with authentic leadership theory. Future studies using longitudinal and interventional designs and conducted in a variety of healthcare settings with more diverse and interprofessional samples are warranted. Healthcare leaders and practitioners can use findings of this review as a guide to increase awareness of the processes by which authentic leadership promotes positive outcomes in the workplace.

*Key Words:* authentic leadership, systematic review, antecedents, outcomes, nursing, healthcare

## CO-AUTHORSHIP

Bayan Alilyyani conducted this thesis work under the supervision of Dr. Carol Wong and Dr. Greta Cummings who will be co-authors on publications resulting from Chapter Two.

**Dedication**

I dedicate my thesis to my father, Hammady Alilyyani.

**Table of Contents**

# List of Tables

# List of Figures

Chapter One

**Introduction**

Research has shown that leadership has significant, albeit positive or negative, effects on work environments (Malloy & Penprase, 2010; Murphy, 2005), and suggests that the quality of leader-follower relationships predicts important significant individual, group, and organizational outcomes such as workers' job satisfaction, organizational commitment, and turnover intentions (Cummings et al., 2010; Gerstner & Day, 1997; Tomey, 2009). In fact, substantial emphasis has been directed to the vital role of leaders in creating healthy work environments for both staff and patients in healthcare organizations (Gardner, Thomas-Hawkins, Fogg, & Latham, 2007, Hansen, Williams & Singer, 2011, Paquet, Courcy, Lavoie-Tremblay, Gagnon, & Maillet, 2013). Also, there is increasing evidence for the connections among healthy work environments, patient safety, and the health and well-being of nurses and other professionals (Paquet et al., 2013). Nonetheless, the mechanisms by which leaders influence change and positive staff and patient outcomes in healthcare organizations are still not well understood (Wong, 2015). Described as a positive, transparent and ethical approach to leadership (Wang, Sui, Luthans, Wang, & Wu, 2014), authentic leadership (AL) theory (Avolio, Gardner, Walumbwa, Luthans, & May, 2004) includes proposed mediating mechanisms such as, identification with the leader and workgroup and trust, through which authentic leaders may influence the work attitudes and behaviors of staff such as job performance, work engagement and voice behaviour (Wong, 2008; Wong & Cummings, 2009a). Applying the relationally based theory of AL may provide new insight into complex processes through which leadership impacts the work related attitudes and behaviors of nurses and other healthcare providers, ultimately affecting

patient outcomes. In this review, research studies examining the effects of AL on both healthcare provider and patient outcomes ware assessed.

**Background**

Despite the widely recognized importance of leadership in creating healthy work environments, there is much debate in the literature as to what constitutes effective leadership in a context of dynamic workplace challenges such as staff shortages, workplace conflicts, technologic advances, economic pressures, and the hectic pace of change, all of which demand strong positive leadership practices (Sherman & Pross, 2010). Leaders are essential in every organization to achieve safe care for patients and positive work environments for staff. Northouse (2007) defined leadership as "a process whereby an individual influences a group of individuals to achieve a common goal" (p.3). At the organizational level, senior nurse leaders participate in decision-making forums by providing their expertise and judgement to influence how nursing is practiced and valued (Huston, 2008; Wong, Laschinger & Cumming, 2010). At the department and unit levels, leaders facilitate staff involvement in decision-making about patient care, staffing and quality improvement activities to enhance care delivery and outcomes (Page, 2004; Thompson et al., 2011; Tregunno, Jeffs, McGillis Hall, Baker, Doran, & Bassett, 2009). Nonetheless, a shortage in nurse manager incumbents is predicted within the next decade because of retirements of managers and few nurses choosing management positions (Laschinger et al., 2013) and this situation points to the need for active leadership development within organizations.

Healthcare leaders, including nurse managers and administrators, are fundamental to nurse/staff retention, and on account of their leadership role, have an inherent duty to ensure a healthy workplace for employees and patients alike (Anthony et al., 2005; Shirey, 2006). Specifically, nurse managers are central to the development of cultures built on trust where

staff can feel comfortable, satisfied, and safe in providing quality care to patients in the healthcare setting (Rogers, 2005). Targeted efforts by managers to address the problems of nurse/staff turnover, such as creating healthy work environments that empower, satisfy, attract and retain registered nurses now and in the future, are not only imperative, but within the scope of the manager role. Recently, high rates of absenteeism and nationwide nursing shortages which have negative consequences for patients, nurses, and organizations have drawn attention to nurses' work environments (Buchan, Duffield, & Jordan, 2015) and heightened awareness about possible links between the quality of the work environment and high levels of staff turnover and poor quality care outcomes (Djukic, Kovner, Brewer, Fatehi, & Cline, 2013; Heath, Johanson, & Blake, 2004; Laschinger & Finegan, 2005). Therefore, the vital role of having strong leadership to promote nurse/staff empowerment, including access to adequate resources and support, and trust in the manager is an essential characteristic to ensure positive outcomes such as retention (Anthony et al., 2005; Shirey, 2006).

In addition to nursing/staff shortages and turnover, incivility and bullying have become key factors in hostile work environments, and are most prevalent among nurses compared with other healthcare professionals (Lewis, 2006; Quine, 2001; Spector, Zhou, & Che, 2014; Vessey, Demarco, & DiFazio, 2009). In some studies, managers have been identified as common sources of nurse bullying (Hutchinson, Vickers, Jackson, & Wilkes, 2005; Lewis, 2006; Simons, 2008). In response to concerns about care quality and work environment including staff outcomes, several studies have called for strong nursing leadership to create cultures of safety through the development of trust in leaders (CNAC, 2002; IOM, 2004; Wong & Cummings, 2007). According to Avolio et al, (2004), AL is considered as the root component of effective leadership needed to build trust and healthier

work environments that promote high quality patient care and positive recruitment and retention of staff. In addition, authentic leaders can affect the work environment by declaring and demonstrating their values and goals and also by showing a high degree of consistency between their values and actions which are considered as key antecedents of AL (Peus, Wesche, Streicher, Braun, & Frey, 2012).

Although there are many leadership theories applied in nursing and healthcare such as transformational leadership (Bass & Avolio, 1994), emotional intelligence/resonant leadership (Boyatzis & McKee, 2005; Goleman, 1995) and leader-member exchange theory (Graen & Uhl-Bien, 1995), many focus primarily on leader or follower characteristics or behaviors, and very few on the leader-follower relationship (Northouse, 2007). Authentic leadership focuses on leader self-awareness and relational transparency, and it concentrates on the relationship between leaders and followers in terms of personal and social identification. Furthermore, it realizes the role of emotions and trust in leader-follower relationships (Wong, 2008). AL also emphasizes the positive role modeling of honesty, integrity, and high ethical standards in the development of leader-follower relationships. In terms of motivation, AL is purported to restore optimism, build confidence, promotes transparent relationships, and fosters trust and commitment which is vitally important to motivate staff and improve patient outcomes (Laschinger & Smith, 2013).

The concept of AL development has been a focus in the AL literature (Avolio et al., 2004; Avolio & Garder, 2005; Gardner, Avolio, Luthans, May, & Walumbwa, 2005). Shirey (2006) argued that AL was the kind of leadership that is needed to build high quality and positive work environments in healthcare (Shirey, 2006). According to Avolio and Gardner (2005), AL makes a difference in healthcare organizations by helping people find meaning at work, building optimism and commitment among followers, encouraging transparent

relationships that build trust, and promoting inclusive and positive ethical climates. Authentic leaders usually achieve high levels of authenticity because they know who they are and what they believe and act in accordance with their values and beliefs (Avolio et al., 2004). Furthermore, they demonstrate a sense of caring for their employees and share information with them in terms of what is and is not working well in their work relationships based on ethical and moral standards (Laschinger & Fida, 2014a). Actually, the current approach toward AL and related empirical research emphasizes the essential role authentic leaders can play in creating a positive ethical climate and sustainable follower performance through the development of both authentic leaders and followers (Dickson, Smith, Grojean, & Ehrhart, 2001; Gardner et al. 2005; Shirazi & Sharifirad 2013).

Avolio et al.'s theory (2004) offers a framework which is needed to understand how the AL of nurse /healthcare managers provide positive work environments in healthcare. Nonetheless, up until recently there have been few studies that have empirically tested the theoretical propositions outlined in Avolio et al.'s (2004) AL theory within healthcare settings (Bamford, Wong, & Laschinger, 2013). Despite progress in acknowledging AL as an important factor in staff outcomes, there is an obligation to determine what is known and not known about the antecedents and outcomes of authentic leadership in healthcare settings and also to clarify the possible mechanisms by which authentic leadership affects staff and patient outcomes.

**Purpose**

The purpose of this systematic review was to identify the relationship between authentic leadership and staff and patient outcomes in healthcare; more specifically, to describe the antecedents and mediators of authentic leadership and the outcomes, both staff and patient, that have been associated with authentic leadership.

**Significance**

This systematic review aims to provide a clear picture about the contribution of AL in healthcare organizations. Having a description of the current state of the evidence on AL is essential for future research to validate what is known and examine the gaps in the evidence of authentic leadership. The results demonstrate that relationships exist between AL and a wide variety of staff outcomes and some patient outcomes and only one antecedent of AL. The current state of the evidence is described and importantly, recommendations outlined for advancing research on AL. Existing findings are summarized visually in an adapted version of the AL theoretical model (Avolio et al. 2004) and thus, provides a tool for use by nurse/healthcare leaders and researchers. Organizational leaders and healthcare practitioners can use the model to increase awareness of the processes or mechanisms by which AL promotes positive outcomes in the workplace. Researchers can design new studies to test this model in greater depth by examining multiple antecedents, mediators and outcomes with advanced statistical analyses. Additionally, researchers can identify gaps in knowledge and pursue research to fill these gaps and further develop and make changes to the model.

**Summary**

To summarize, given recent growth in the number of studies examining AL in nursing and healthcare and the importance of new knowledge to inform leadership development strategies within healthcare, there is a need to identify the current state of evidence on AL. Specifically, there is a need for a deeper understanding of the factors that predict AL; the specific staff, patient and organizational outcomes associated with AL; and the processes by which AL is related to outcomes. A systematic review will synthesize evidence on AL in healthcare and make it more accessible to decision makers and help inform policy, enable

prevention, and guide intervention initiatives (Center for Reviews and Dissemination (CRD), 2009). Also, it is vital to improve individual, organizational, and patient outcomes.

**References**

Anthony, M. K., Standing, T. S., Glick, J., Duffy, M., Paschall, F., Sauer, M. R., Sweeney, D. K., Modic, M. B., & Dumpe, M. L. (2005). Leadership and nurse retention: The pivotal role of nurse managers. *Journal of Nursing Administration, 35*(3), 146-155.

Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly, 16,* 315-338. doi: 10.1016/j.leaqua.2005.03.001

Avolio, B. J., Gardner, W. L., Walumbwa, F., Luthans, F., & May, D. R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. *The Leadership Quarterly, 15*, 801–823. doi: 10.1016/j.leaqua. 2004. 09.003

Bamford, M., Wong, C. A., & Laschinger, H. (2013). The influence of authentic leadership and areas of worklife on work engagement of registered nurses. *Journal of Nursing Management*, *21*(3), 529-540. doi: 10.1111/j.1365-2834.2012.01399.x

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership.* Thousand Oaks, CA: Sage.

Boyatzis, R., & McKee, A. (2005). *Resonant leadership: renewing yourself and connecting with others through mindfulness, hope, and compassion*. Boston: Harvard Business School Press.

Buchan, J., Duffield, C., & Jordan, A. (2015). Solving' nursing shortages: Do we need a new agenda? *Journal of Nursing Management, 23*(5), 543-545. doi:10.1111/jonm.12315.

Canadian Nursing Advisory Committee. (2002). *Our health, our future: Creating quality workplaces for Canadian Nurses.* Ottawa, ON: Advisory Committee on Health Human Resources.

Center for Reviews and Dissemination (CRD). (2009). *Systematic reviews: CRD's guidelines for undertaking reviews in healthcare*. Layerthorpe, York: CRD, University of York.

Cummings, G., MacGregor, T., Davey, M., Lee, H., Wong, C., Lo, E.,. Stafford, E. (2010). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies, 47*(3), 363-385. doi: 10.1016/j.ijnurstu.2009.08.006

Dickson, M. W., Smith, D. B., Grojean, M. W., & Ehrhart, M. (2001). An organizational climate regarding ethics: The outcome of leader values and the practices that reflect them. *The Leadership Quarterly, 12*, 197–217. doi: 10.1016/S1048-9843(01)00069-8

Djukic, M., Kovner, C. T., Brewer, C. S., Fatehi, F. K., & Cline, D. D. (2013). Work environment factors other than staffing associated with nurses' ratings of patient care

quality. *Health Care Management Review*, *38*(2), 105-114. doi: 10.1097/HMR. 0b013e3182388cc3.

Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. (2005). Can you see the real me? A self-based model of authentic leader and follower development. *Leadership Quarterly, 16*, 343–372. doi: 10.1016/j.leaqua.2005.03.003

Gardner, J.K., Thomas-Hawkins, C., Fogg, L. & Latham, C.E. (2007). The relationships between nurses' perceptions of the hemodialysis unit work environment and nurse turnover, patient satisfaction, and hospitalizations. *Nephrology Nursing Journal, 34* (3), 271–281.

Gerstner, C, & Day, D. (1997). Meta-analytic review of leader-member exchange research: A comprehensive review of theory, measurement and data analytic practices. *Leadership Quarterly, 10,* 63-113. doi: 10.1037/0021-9010.82.6.827

Goleman, D. (1995). *Emotional intelligence.* New York: Bantam Books.

Graen, G. B., & Uhl-Bien, M. (1995). Relationship-based approach to leadership: Development of leader-member exchange (LMX) theory of leadership over 25 years: Applying a multi-level multi-domain perspective. *The Leadership Quarterly, 6(2),* 219-247. doi: 10.1016/1048-9843(95)90036-5

Hansen, L. O., Williams, M. V. & Singer, S. J. (2011). Perceptions of hospital safety climate and incidence of readmission. *Health Services Research,* 46(2), 596-616. doi: 10.1111/j.1475-6773.2010.01204.x

Heath, J., Johanson, W., & Blake, N. (2004). Healthy work environments: A validation of the literature. *Journal of Nursing Administration*, *34*(11), 524-530.

Huston, C. (2008). Preparing nurse leaders for 2020. *Journal of Nursing Management, 16*, 905–911. doi: 10.1111/j.1365-2834.2008.00942.x

Hutchinson, M., Vickers, M. H., Jackson, D., & Wilkes, L. (2005). "I'm gonna do what I wanna do." Organizational change as a legitimized vehicle for bullies. *Healthcare Management Review, 30*(4), 331-336.

Institute of Medicine. (2004). *Keeping patients safe: Transforming the work environment of nurses.* Washington, DC: National Academy Press.

Laschinger, H. K. S., & Fida, R. (2014a). A time-lagged analysis of the effect of authentic leadership on workplace bullying, burnout, and occupational turnover intentions. *European Journal of Work and Organizational Psychology*, *23*(5), 739-753. doi: 10.1080/1359432X.2013.804646

Laschinger, H.K., & Finegan, J. (2005). Using empowerment to build trust and respect in the workplace: A strategy for addressing the nursing shortage. *Nursing Economics, 23*(1), 6-13.

Laschinger, H. K. S., &Smith, L. M. (2013). The influence of authentic leadership and empowerment on new-graduate nurses' perceptions of interprofessional collaboration. *The Journal of Nursing Administration, 43*, 24–29. doi: 10.1097/NNA. 0b013e3 182786064.

Laschinger, H.K., Wong, C.A., MacDonald-Rencz, S.,Burkoski, V., Cummings, G.G., D'Amour, D.,… Grau, A. (2013). Part 1: The influence of personal and situational predictors on nurses' aspirations to management roles: Preliminary findings from a national survey of Canadian nurses. *Journal of Nursing Management 21*(2), 217-230. doi: 10.1111/j.1365-2834.2012.01452.x

Lewis, M.A. (2006). Nurse bullying: Organizational considerations in the maintenance and perpetration of healthcare bullying cultures. *Journal of Nursing Management*, *14*, 52-58. doi: 10.1111/j.1365-2934.2005.00535.x

Malloy, T., & Penprase, B. (2010). Nursing leadership style and psychosocial work environment. *Journal of Nursing Management, 18*, 715-725. doi: 10.1111/j.1365-2834.2010.01094.x

Murphy, L. (2005). Transformational leadership: A cascading chain reaction. *Journal of Nursing Management, 13*, 128-136. doi: 10.1111/j.1365-2934.2005.00458.x

Neider, L. L., & Schriesheim, C. A. (2011). The authentic leadership inventory (ALI): Development and empirical tests. *The Leadership Quarterly, 22*(6), 1146–1164. doi: 10.1016/j.leaqua.2011.09.008

Northouse, P.G. (2007). *Leadership theory and practice* (4th ed.). Thousand Oaks, CA: Sage Publications.

Page, A. (2004). *Keeping Patients Safe Transforming the Work Environment of Nurses*. National Academies Press, Washington, DC.

Paquet, M., Courcy, F., Lavoie-Tremblay, M., Gagnon, S., & Maillet, S. (2013). Psychosocial work environment and prediction of quality of care indicators in one Canadian health center. *Worldviews on Evidence-Based Nursing*, *10*(2), 82-94. doi: 10.1111/j.1741-6787.2012.00250.x

Peus, C., Wesche, J. S., Streicher, B., Braun, S., & Frey, D. (2012). Authentic leadership: An empirical test of its antecedents, consequences, and mediating mechanisms. *Journal of Business Ethics*, *107*(3), 331-348. doi: 10.1007/s10551-011-1042-3

Quine, L. (2001). Workplace bullying in nurses. *Journal of Health Psychology, 6*(1), 73-84.

Rogers, L. (2005). Why trust matters: the nurse manager-staff nurse relationship. *Journal of Nursing Administration, 35*(10), 421–423.

Sherman, R., & Pross, E. (2010). Growing future nurse leaders to build and sustain healthy work environments at the unit level. *Online Journal of Issues in Nursing*, *15*(1). doi: 10.3912/OJIN.Vol15No01Man01

Shirazi, A., & Sharifirad, M. S. (2013). What causes you to feel included, and why it is important? In *11th International Management Conference.*

Shirey, M. R. (2006). Authentic leaders creating healthy work environments for nursing practice. *American Journal of Critical Care, 15*(3), 256-267.

Simons, S. (2008). Workplace bullying experienced by Massachusetts registered nurses and relationship to intention to leave the organization. *Advances in Nursing Sciences, 31*(2), 48-59. doi: 10.1097/01.ANS.0000319571.37373.d7

Spector, P. E., Zhou, Z. E., & Che, X. X. (2014). Nurse exposure to physical and nonphysical violence, bullying, and sexual harassment: A quantitative review. *International Journal of Nursing Studies*, *51*(1), 72-84. http://dx.doi.org/10.1016/j.ijnurstu.2013.01.010

Thompson, D.N., Hoffman, L.A., Sereika, S.M., Lorenz, H.L, Wolf, G.A, Burns, H.K, Minnier, T.E, & Ramanujam, R. (2011). A relational leadership perspective on unit-level safety climate. *Journal of Nursing Administration, 41* (11), 479–487. doi: 10.1097/NNA.0b013e3182346e31

Tomey, A. (2009). Nursing leadership and management effects work environments. *Journal of Nursing Management, 17*, 15-25. doi: 10.1111/j.1365-2834.2008.00963.x

Tregunno, D., Jeffs, L., McGillis, Hall, L., Baker, R., Doran, D. & Bassett, S. (2009). On the ball – leadership for patient safety and learning in critical care. *Journal of Nursing Administration, 39* (7/8), 334–339. doi: 10.1097/NNA.0b013e3181ae9653

Vessey, J.A., Demarco R.F., Gaffney D.A., & Budin W.C. (2009). Bullying of staff registered nurses in the workplace: A preliminary study for developing personal and organizational strategies for the transformation of hostile to healthy workplace environments. *Journal of Professional Nursing, 25*(5), 299-306. doi: 10.1016/j.profnurs.2009.01.022

Wang, H., Sui, Y., Luthans, F., Wang, D., & Wu, Y. (2014). Impact of authentic leadership on performance: Role of followers' positive psychological capital and relational processes. *Journal of Organizational Behavior*, *35*(1), 5-21. doi: 10.1002/job.1850.

Wong, C. (2008). *The role of authentic leadership in nursing and healthcare.* (Unpublished doctoral dissertation). University of Alberta, Canada.

Wong, C.A. (2015). Invited Editorial - Connecting nursing leadership and patient outcomes: State of the science. *Journal of Nursing Management, 23*, 275-278. doi: 10.1111/ jonm.12307.

Wong, C. A., & Cummings, G. G. (2007). The relationship between nursing leadership and patient outcomes: a systematic review. *Journal of Nursing Management*, *15*(5), 508-521. doi: 10.1111/j.1365-2834.2007.00723.x

Wong, C.A., & Cummings, G.G. (2009a). Authentic leadership: A new theory for nursing or back to basics? *Journal of Health Organization and Management, 23*(5), 522-538. doi: 10.1108/14777260910984014

Wong, C. A., & Cummings, G. G. (2009b). The influence of authentic leadership behaviours on trust and work outcomes of healthcare staff. *Journal of Leadership Studies, 3*(2), 6-23. doi:10.1002/jls.20104

Wong, C., Laschinger, H. & Cummings, G. (2010). Authentic leadership and nurses' voice behaviour and perceptions of care quality. *Journal of Nursing Management, 18*, 889–900. doi: 10.1111/j.1365-2834.2010.01113.x

Chapter Two

**Manuscript**

Managers in healthcare organizations are responsible to create the conditions for nurses' and other care providers' work by framing the quality of support, information, and resources that are available in work areas (Laschinger, Finegan, & Wilk, 2009; Shirey 2006). Nurses respond positively to their work and trust their mangers when they perceive their leaders as authentic, open, and truthful and invite their participation in decision-making (Wong & Cummings 2009a; Wong, & Cummings, 2010). In addition, nurses who perceive their leaders to be authentic also feel empowered and supported in their work (Laschinger, Wong, & Grau, 2012). According to Wong and Cummings (2009a), authentic leadership (AL) is rooted in humanistic and patient care values which are at the core of nursing and other health professions. Moreover, AL promotes a positive climate wherein everyone, especially staff, feel respected, trusted and appreciated for their contributions (Blake, Blayney, Loera, Rowlett, & Schmidt, 2012).

Luthans and Avolio (2003) defined AL 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). According to Avolio, Gardner, Walumbwa, Luthans, and May (2004), authentic leaders have the ability to improve staff outcomes including engagement, commitment, and satisfaction which are required for staff to improve their work performance. Further, Avolio et al. (2004) suggested that authentic leaders facilitate higher quality relationships leading to active engagement of employees in workplace activities, which results in greater job satisfaction and higher productivity and performance. Therefore, authentic leaders are able to achieve high levels of authenticity

because they know who they are and know their values which guide them in their work (Avolio et al., 2004).

Authentic leaders develop follower motivation and self-determination by creating conditions or structures that facilitate two-way communication and follower autonomy, providing coaching and constructive feedback, acknowledging followers' perspectives and interests, and involving them in decision making (Gardner et al., 2005; Ilies et al., 2005; Tetrick, 1989). Authentic leadership is proposed as the root component of effective leadership that is needed to build healthy work environments to promote positive patient and staff outcomes (Avolio et al., 2004). Moreover, authentic leadership theory (Avolio et al., 2004) has gained empirical support in both the management and nursing literature (Laschinger, Borgogni, Consiglio, & Read, 2015) and can be considered a guide for researchers and leaders to identify the process by which leaders can affect follower attitudes and behaviors. The purpose of this study was to conduct a systematic review of antecedents, mechanisms, and outcomes of AL in healthcare by using Avolio et al.'s (2004) authentic leadership as the framework.

## Theoretical Framework

The etymology of authentic is traced to the Greek word, 'authento', which means "to have full power" (Trilling, 1972) but specifically power over oneself (Gardner, Cogliser, Davis, & Dickens, 2011). The earliest philosophical conceptions of authenticity within the leadership literature was in the 1960s (Novicevic, Harvey, Buckley, Brown, & Evans, 2006) and include humanistic psychology and the work of Maslow (1968) and Rogers (1961). The model is based on the integration of knowledge from several fields such as positive psychology (Seligman, 2002), positive organizational behaviour (Luthans, 2002), and ethical

and moral perspectives (Schulman, 2002). In early 2000, unprecedented concerns about the ethical conduct of leaders based on high profile examples of corporate scandals caused leadership authors such as George (2003) and Luthans and Avolio (2003) to appeal for a new form of values-based leadership called AL (Avolio et al., 2004; Gardner et al., 2011). Luthans and Avolio (2003) illustrated the most interesting conceptualization of AL and its development because they explained the theoretical underpinnings of their AL model which include positive organizational behaviour (Luthans, 2002), transformational/full-range leadership (Avolio, 1999), and ethical perspective-taking (Kegan, 1982).

The authentic leader builds healthier work environments through four key components which are balanced processing, relational transparency, internalized moral perspective, and self-awareness (Figure 1). Firstly, *self-awareness* refers to demonstrating an understanding of how one derives and makes meaning of the world then how that meaning impacts the way one views himself or herself over time (Kernis, 2003). Secondly, *relational transparency* refers to presenting one's authentic self to others. For example, some behaviour promotes trust through disclosures that involve openly sharing information while trying to minimize displays of inappropriate emotions and expressions (Kernis, 2003). Thirdly, *balanced processing* refers to leaders who show that they objectively analyze all relevant data before making a decision; such leaders also solicit views that challenge their deeply held positions (Gardner, Avolio, Luthans, May, & Walumbwa, 2005). Finally, *internalized moral perspective* refers to the form of self-regulation that is guided by internal moral standards and values rather than group, organization and societal pressures (Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008).

# Authentic Leadership Model
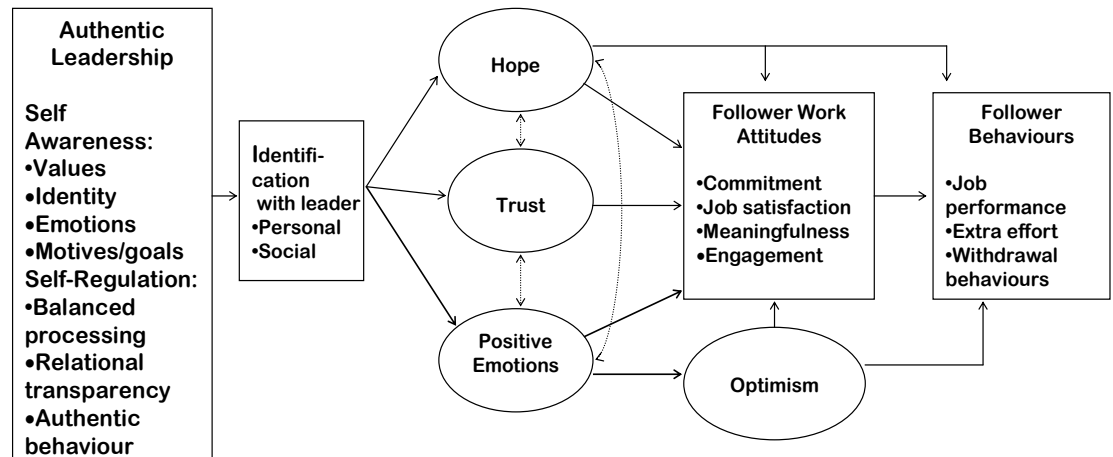


*Figure 1.* Proposed framework linking authentic leadership to followers'
attitudes and behaviours (Avolio et al., 2004).

Leaders who are more authentic develop greater self-awareness and self-regulated

behaviours (Gardner et al., 2005). The processes of self-awareness and self-regulation on the

part of the leader then fosters followers' authenticity and development, resulting in well-

being and improved performance (Avolio & Gardner 2005; Gardner et al., 2005). Authentic

leadership theory posits that authentic leaders model and support follower self-

determination. 'Self-determination' is one's autonomy or discretion to perform one's work in

the way that one chooses, including making decisions about work methods, procedures,

pace, and effort (Ilies, Morgeson, & Nahrgang, 2005; Thomas & Velthouse, 1990).

Authentic leaders are able to enhance the engagement, motivation, commitment,

satisfaction, and involvement required from followers to constantly improve their work and

performance outcomes through the creation of personal identification with the leader and

social identification with the work unit/organization (Kark & Shamir, 2002). Personal identification refers to a process whereby the individual's belief about a person (a leader) becomes self-referential or self-defining (Avolio & Gardner, 2005) while social identification is the degree to which individuals can belong to work with their group and notice the importance of group membership for their identity (Hogg, 2001). In combination with the identification processes, Avolio et al. (2004) posited that authentic leaders draw from their personal, positive psychological resources of hope, trust, positive emotion, and optimism to model and promote the development of these in others. Hope is defined as "a positive motivational state that is based on an interactively derived sense of successful: (1) agency (goal-directed energy) and (2) pathways (planning to meet goals)" (Snyder, Irving, & Anderson, 1991, p. 287). Trust is a "psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another" (Rousseau, Sitkin, Burt, & Camerer (1998), p. 395). Seligman (1998) defined optimism as a cognitive process involving positive outcome expectancies and causal attributions that are external, temporary, and specific in interpreting bad or negative events and internal, stable, and global for good or positive events. However, there is no universal definition of emotion because emotion is a constellation of related positive or negative reaction, so emotion represents a response or reaction to an event or a person (Weiss & Cropanzano, 1996). To summarize, Avolio et al.'s model illustrated that AL influences followers' attitudes and behaviours through the key psychological processes of identification, hope, positive emotions, optimism, and trust, but there are multiple connections among these variables as each variable influences one another.

Two instruments used to measure AL in the empirical literature. *The Authentic Leadership Questionnaire* (ALQ) (Avolio, Gardner, & Walumbwa, 2007; Walumbwa et al.,

2008) is the most common instrument and was developed by the authors of the theory. This measure consists of 16 items divided into four subscales: relational transparency, internalized moral perspective, balanced information processing and self-awareness. Citing some concerns with the ALQ in terms of full public availability of the measure and content validity of the items. *The Authentic Leadership Inventory* (ALI) was developed and validated by Neider and Schriesheim (2011) to measure AL. It was based on the Avolio et al. (2005) theory and the same four dimensions of AL, and consists of 14 items.

## Literature Review and Rationale for Review

Two important systematic reviews of the relationships among leadership styles and practices of nursing leaders and staff and patient outcomes are worth describing here as background to this review of AL. Cummings et al. (2010) examined the relationships between various styles of leadership and outcomes for the nursing workforce and their work environments. They searched 10 electronic databases for the period 1985 to May 2009 and found 53 quantitative studies that examined leadership behaviors and outcomes for nurses and organizations. By means of content analysis, a total of 64 outcomes in the 53 included studies were grouped into five themes: staff satisfaction with work, role and pay, staff relationships with work, staff health and wellbeing, work environment factors, and productivity and effectiveness. The findings of this review suggested that relationship or people focused leadership practices contribute to improving outcomes for the nursing workforce, work environments and for productivity and effectiveness of healthcare organizations. In fact, relationally focused leadership styles such as transformational, resonant, and supportive contributed to more frequent and positive outcomes than did other more task focused leadership styles, which included dissonant leadership, management by exception, transactional, instrumental and laissez-faire approaches which led to negative

outcomes. Although this review did not reveal any studies of AL, AL is considered a relationally focused leadership style and hence, lends support for the notion that AL may have similar effects. Cummings et al. (2010) also argued that even though there is a plethora of leadership theories and frameworks, the relationships and mechanisms of action for specific leadership styles and outcomes are still not well understood which makes this an important area for theory development and research.

In 2013, Wong, Cummings and Ducharme conducted a systematic review of studies testing the relationship between nursing leadership practices and patient outcomes. Building on a previous review (Wong & Cummings, 2007), authors searched eight online databases for the period 1 May 2005 to 31 July 2012 and found 20 studies that met study inclusion criteria. A range of leadership styles were tested in the studies but were primarily relational, that is, leader behaviours that are focused on people and relationships to achieve common goals as opposed to a task focus on structures and procedures. Transformational leadership was examined most frequently followed by approaches such as, participative, task- or relationship-oriented, and resonant leadership. Nineteen patient outcome variables were identified and grouped into five categories using content analysis: relationship between leadership and patient satisfaction, patient mortality, adverse events, complications, and patient healthcare utilization. The findings of this systematic review supported that relational leadership styles and practices were positively associated with some types of patient outcomes. There was an association between relational leadership and the reduction of adverse events through leaders' influence on human resource variables (staff expertise, turnover, absenteeism, overtime, and nurse to patient ratios) that may be connected to patient care outcomes. There was also a negative relationship between relational leadership and patient mortality in three of six studies while there was a positive relationship between

leadership and patient satisfaction. Despite the positive connection between relational leadership and patient outcomes none of the included studies examined AL.

There has been a growing body of research studies conducted in other disciplines such as business and industry to examine the effect of AL on outcomes such as organizational commitment (Gatling, Kang, & Kim, 2016), organizational citizenship (Valsania, León, Alonso, & Cantisano, 2012), and trust in the supervisor (Xiong, Lin, Li, & Wang, 2016). A significant increase in the number of studies of AL in a variety of fields prompted Gardner et al. (2011) to conduct a review in 2011 of the studies up to the end of December 2010. The purpose of this review was to clarify the AL construct and the evidence for its antecedents and outcomes. Authors searched EBSCO/Host databases and used specific keywords that were linked to AL such as "authentic leadership". They found 91 AL publications and coded the type of publications into theoretical, empirical, and practitioner categories. The key findings from their review included: solid support for the predictions advanced by and derived from AL theory; only two quantitative studies explored the relationships between selected antecedents and AL; the high volume of cross-sectional studies limited the interpretations of causality; and a relatively high percentage of qualitative studies prompted authors to recommend greater focus on the credibility and transferability of findings in future research. In summary, this review suggested that there was a need for further research using more rigorous and diverse methods to strengthen confidence in the nomological validity of AL theory and examination of the relationships of specific components of AL and various antecedents and outcomes. As far as we know this review is the only review of AL research to date and studies were not specific to healthcare although three studies by Canadian authors were included in the review (Giallonardo, Wong, & Iwasiw, 2010; Wong et al. 2010; Wong & Cummings, 2009b).

Shirey (2006) and Wong and Cummings (2009a) presented the relevance and applicability of the AL theory to the advancement of nursing leadership practice and research. Shirey was one of the first in nursing to define and describe the attributes of an authentic leader in nursing based on the work of Avolio et al. (2004) and George (2003). She also outlined the proposed mechanisms by which authentic nursing leaders create healthy work environments for practice and suggested practical strategies for developing authentic leaders. More importantly, Shirey (2006) stressed the need for a body of research to investigate the sustainable effects of authentic leaders on healthy work environments. Wong and Cummings (2009a) outlined the origins and key elements of the AL theory as proposed by Avolio et al. (2004), reviewed the theoretical, conceptual and measurement issues associated with AL and advocated the application of AL to contemporary nursing issues. They argued that AL's positive emphasis on the relational aspects of leadership, a strong moral component, and the importance of leader and follower development were closely aligned with nursing's priorities for healthy nursing work environments and also called for leadership research studies incorporating measures of AL. Although the concept of AL is still considered relatively new in healthcare, there have been a number of empirical studies linking AL with work attitudes and outcomes in nursing but fewer studies among other healthcare professions (Wong & Laschinger, 2013).

The first study of AL in nursing using the *Authentic Leadership Questionnaire* (Walumbwa et al., 2008) measure of AL was conducted by Wong, Laschinger, and Cummings in 2010 and tested the theoretical propositions between managers' AL, and staff nurses' trust in the manager, work engagement and voice behaviour among 280 Ontario nurses. Findings showed that AL and trust in the manager played a role in fostering trust, work engagement, voice behaviour, and perceived quality of care which means that findings

supported several of Avolio et al.'s (2004) AL theory propositions. Shortly thereafter, Giallonardo et al (2010) reported that nurse preceptors' AL was significantly related to work engagement and job satisfaction of 170 new graduate nurses. These studies were two examples of studies that have examined the vital role of AL in healthcare organizations specifically in nursing. In response to this growing number of studies examining AL in nursing populations there is a need to conduct a systematic review of the antecedents, mediators and outcomes of AL within healthcare including nursing and other health professionals. Establishing a summary of the evidence on AL is necessary to inform policy development, guide leadership development and intervention planning, and further direct future nursing and healthcare research.

## Purpose and Research Questions

The purpose of this thesis project was to identify the relationship between AL and staff and patient outcomes in healthcare and the antecedents and mediators of AL in healthcare settings. Therefore, the research questions are:

1. What antecedents are associated with authentic leadership?

2. What evidence is there that authentic leadership is associated with staff and patient outcomes?

3. What are the mechanisms (mediators) by which AL has been associated with staff and patient outcomes?

## Definition of Terms:

### Authentic leadership

Authentic leadership is defined as "a pattern of transparent and ethical leader behaviour that encourages openness in sharing information needed to make decisions while accepting input from those who follow" (Avolio, Walumbwa, & Weber, 2009. P.24).

Authentic leaders are defined by Avolio et al. (2004) as "those individuals who are deeply aware of how they think and behave and are perceived by others as being aware of their own and others' values/moral perspective, knowledge, and strengths; aware of the context in which they operate; and who are confident, hopeful, optimistic, resilient, and high on moral character" (p.4).

## Healthcare Staff

Healthcare staff is defined as all people engaged in the promotion, protection or improvement of the health of populations (Adams et al., 2003; Diallo, Zurn, Gupta, & Dal Poz, 2003). This is consistent with the WHO definition of health systems as comprising all activities with the primary goal of improving health. Healthcare professionals, including medicine, surgery, dentistry, respiratory therapy, physiotherapy, occupational therapy, radiology, pharmacy, and nursing, maintain health in humans through the application of the principles and procedures of evidence-based medicine and caring. They study, diagnose, treat and prevent human illness, injury and other physical and mental impairments in accordance with the needs of the populations they serve. Also, they advise on or apply preventive and curative measures, and promote health with the ultimate goal of meeting the health needs and expectations of individuals and populations, and improving population health outcomes.

## Staff Outcomes

Staff outcomes include attitudes, behaviours and performance of staff that may be influenced by the attitudes and behaviours of leaders in the workplace (Avolio et al., 2004). These outcomes often include satisfaction with work, roles, and pay; staff relationship with work; and staff health and wellbeing. Staff satisfaction with their work, roles, and pay can be measured as job, intrinsic, and team satisfaction, satisfaction with leader, job mobility and

security, financial rewards, pay, promotion, organizational work satisfaction, time with patients, people, work load, and job autonomy. Staff relationship with work includes staff reports of organizational commitment, intent to stay or leave the profession, and actual turnover such as absenteeism and depersonalization. Staff health and wellbeing outcomes are related to job stress and tension, emotional exhaustion, and anxiety (Cummings, et al., 2010).

**Patient Outcomes**

Patient outcomes are described as patient mortality, patient safety outcomes such as the incidence of adverse events involving patients (e.g. falls, nosocomial infections) or complications during hospitalization, patient perceptions of satisfaction with care, and healthcare utilization such as length of stay (Doran & Pringle, 2011).

## Methods

This review used the guidelines for conducting systematic reviews in health care developed by the Centre for Reviews and Dissemination (2009) at the University of York. Please note that Tables 1-8 which summarize the key elements of the search and analysis results are located at the end of this chapter.

**Search Strategy and Data Sources**

The search strategy for this thesis work was completed in January 2017 by using the following 11 electronic databases: ABI Inform Dateline, Academic Search Complete, Cochrane Database of Systematic Reviews (CDSR), PUBMED, CINAHL, EMBASE, ERIC, PsychINFO, SCOPUS, Web of Science, and Dissertations & Theses. The search included databases that publish health-related research in order to identify studies that are specific to healthcare disciplines. Furthermore, ABI Inform Dateline, Academic Search Complete, ERIC, and PsychINFO were also searched as they contain a large body of research on AL.

Finally, theses and dissertations were selected to identify research work that may not yet be published elsewhere.

A combination of similar search terms was used to search all databases (Table 1). The list of terms was selected based on a preliminary review of the literature, and finalized in consultation with a university librarian and supervisory committee. EndNote was used as the reference management system for this thesis work. Once the final search and screening was completed in October 2016, additional strategies were employed to ensure all relevant studies have been located. These strategies included hand-searching reference lists of relevant articles, and current reviews, and searching specific journals such as *Journal of Nursing Management* and *Health Care Management Review* for any additional articles written by experts in the field. The search was repeated the end of January 2017.

**Inclusion and Exclusion Criteria**

The inclusion and exclusion criteria for the systematic review were identified based on the research question. Also the PICOS framework was used to guide development of the inclusion and exclusion criteria, with consideration given to populations, interventions or comparators, outcomes, and study designs (CRD, 2009; Appendix A). Titles and abstracts were selected for further screening if they met all of the following inclusion criteria: peer-reviewed research; English language full text publication available; full-text published between January 1, 2004 and January 31, 2017 as AL theory did not appear in the literature prior to the publication of the work by Avolio et al. (2004); involve leaders and providers of patient, client and/or resident care in a variety of healthcare settings; measure AL; measure antecedents, mediators and outcomes of AL; and measure relationships among AL and other variables. Quantitative and qualitative studies were included. Qualitative studies were included if they directly explored AL in healthcare settings. Due to the study timeframe and

only English language proficiency in the research team, only studies published in English were included. Theses and dissertations were also included but other grey literature was excluded. Articles that described opinions about AL, were done in fields other than healthcare (e.g., education), or did not have enough (i.e., not full-text) information for data extraction were excluded.

**Screening and Study Selection**

Articles from the database and manual search were put through two screenings for the systematic review. The first screening stage included review of all titles and abstracts using inclusion criteria. A second reviewer screened all titles and abstracts. Any discrepancies between reviewers were discussed and consensus was reached in all cases. All manuscripts that passed first stage screening proceeded to full-text screening using inclusion criteria. All full-text manuscripts were screened by the primary researcher and a second reviewer reviewed them in order to ensure validity of the screening process.

**Quality Appraisal**

The primary researcher assessed each included study for methodological quality using a quality-rating tool during data extraction. For correlational studies, a quality appraisal tool adapted from an instrument in previously published systematic reviews (Cowden, Cummings, & Profetto-Mcgrath, 2011; Cummings & Estabrooks, 2003; Cummings et al., 2008, 2010; Germain and Cummings, 2010; Wong & Cummings, 2007) was used to assess four areas of the study: research design, sampling, measurement, and statistical analysis. Thirteen criteria were evaluated in the tool, with a total of fourteen possible points (Table 9a - Appendix B). Based on assigned points, studies were categorized as low (0–4), moderate (5–9), or high (10–14) quality. Included qualitative studies were assessed using the Critical Skills Appraisal Programme (CASP, 2010). It is comprised of ten questions related to rigor,

credibility and relevance, and allows for a possible maximum of nine points to be awarded based on yes/no responses. A score of nine indicates the highest quality rating available with the tool (Table 9b - Appendix B).

**Data Extraction**

After the final set of studies for inclusion was identified, data from each study were extracted and directly entered into data extraction tables adapted from work by Wong et al. (2013). The following data were extracted from the included studies: author, year, journal, country, study purpose, theoretical framework or conceptual model, conceptualization or definition of AL utilized, methodological approach, setting, sampling method, sample size, description of participants, measurement instruments, reported reliability and validity, identified antecedents, mediators and outcomes of AL, analysis and statistical techniques, and significant and non-significant results (Table 4). For qualitative studies (Table 5), author, year, journal, country, study purpose, conceptual framework, design and data collection process, participant characteristics, definition of AL, rigour, analysis and findings were extracted. Data were entered into a data extraction table by the primary researcher and a second researcher reviewed the extractions for each manuscript.

<div align="center">

**Analysis**

</div>

After data were extracted and quality appraisals were completed, the findings were described and analyzed by descriptive and narrative synthesis.

**Descriptive Synthesis**

For the descriptive synthesis, characteristics of the studies were examined to identify commonalities and differences and possible inferences based on common characteristics, such as authors, where studies were completed, years of study completion, characteristics of

participants, how AL was measured and defined by researchers, theoretical or conceptual frameworks used, instruments used to examine all variables, and analytic techniques utilized.

**Narrative Synthesis**

The narrative synthesis offers an analysis and interpretation of the evidence found in the included studies. According to the CRD (2009), this process is described as the exploration of relationships within and between studies. Even though there is no strict set of rules for the narrative synthesis, a general framework can be applied in order to help maintain transparency and add credibility to the process (CRD, 2009). The four elements of this framework are: developing a theory of how the intervention works (for intervention studies only), why and for whom; developing a preliminary synthesis of findings of included studies, exploring relationships within and between studies, and assessing the robustness of the synthesis CRD (2009).

In this study, narrative synthesis, involved a number of steps to analyze relationships among AL, its antecedents, mediators and outcomes that have been examined or measured in the research to date. First, statistically significant and non-significant antecedents, mediators and outcomes of AL in healthcare were examined using content analysis procedures (Krippendorf, 2013). Outcomes were reviewed for common characteristics and grouped into categories and the same was completed for antecedents and mediators. The identified categories were compared to the original AL model (Figure 1) to determine how extensively review findings aligned with or enhanced the model and an adapted model was developed that represented findings from this review. The results of the qualitative studies were also grouped into different categories and compared with the AL model and other review findings.

**Results**

**Search Results**

A summary of the search strategy and screening process results is presented in Figure 2. The electronic database search yielded 1036 titles and abstracts. After removal of

*Figure 2.* Selection of articles for review

```
┌─────────────────────────────┐
│  Online database yield: 1036│
│  potentially relevant titles│
└─────────────────────────────┘
              │            ┌──────────────────────────┐
              ├───────────▶│  Duplicates removed: 94  │
              │            └──────────────────────────┘
              ▼
┌─────────────────────────────┐
│  Titles/Abstracts screened: │
│  942                        │
└─────────────────────────────┘
              │            ┌──────────────────────────┐
              ├───────────▶│  Excluded: 800           │
              │            └──────────────────────────┘
              ▼
┌─────────────────────────────┐
│  Full text records screened:│
│  142                        │
│  Databases: 130             │
└─────────────────────────────┘
              │            ┌──────────────────────────┐
              ├───────────▶│  Excluded: 98            │
              │            └──────────────────────────┘
              ▼
┌─────────────────────────────┐
│  Eligible articles: 44=27   │
│  studies                    │
└─────────────────────────────┘
```

98 excluded:

- 5 AL not measured
- 14 not meet criteria
- 2 full text not available in English
- 38 not research studies
- 36 not in healthcare
- 3 duplicates papers

duplicates, a total of 942 titles and abstracts were screened using inclusion and exclusion criteria to determine possible eligibility for inclusion. The title and abstract review of the

database search results yielded 142 potentially relevant manuscripts to be retrieved for full text review including 12 additional manuscripts that were identified through consultation with an identified expert in the field of research and review of reference lists of included articles. After final full text review, 44 manuscripts representing 27 studies were included in this review. Since there were multiple papers (2-6) from five studies (Laschinger et al., 2012; Laschinger & Fida, 2014a; Spence Laschinger et al, 2016; Stander et al., 2016; Wong et al., 2010) the multiple papers for each study were counted as one study in the analyses and results. The heterogeneity in mediator and outcome variables in the included studies precluded the ability to statistically summarize these results through meta-analysis.

**Included Study Designs**

There were 38 manuscripts representing 21 original quantitative studies (Table 4) and 6 qualitative manuscripts representing 6 studies (Table 5) for a total of 27 included studies. Eleven manuscripts were unpublished doctoral dissertations and master's theses and all but one were quantitative studies and the other qualitative. Quantitative studies were primarily non-experimental, correlational studies ($n=18$, 86%): however, there were three time-lagged design studies from three original datasets reported in six papers (Boamah et al., 2017; Laschinger, et al., 2016; Laschinger & Fida, 2014a and 2014b; Nelson et al. 2014; Read & Laschinger, 2015) and one study that used unit level data for AL and outcomes in the analysis (Johnson, 2015). The qualitative component of one mixed methods study (Huddleston & Gray, 2016) was included in this review. Qualitative studies used the following study methodologies: narrative inquiry ($n=2$), qualitative description ($n=2$), grounded theory ($n=1$) and interpretive phenomenology ($n=1$).

**Quality Appraisal**

The summary results of the quality appraisals are reported in Tables 2 and 3. Both the quantitative and qualitative studies were rated as moderate or high quality, so none of them were excluded (see Tables 10 and 11 in Appendix B for detailed assessment of each study). All but one (moderate = score of 9) of the 21 quantitative studies were rated as strong (10 to 14). The results of the quality appraisal of quantitative studies were as follows: all 21 quantitative studies were prospective; 11 (52%) used probability sampling; the samples in 16 studies (76%) were drawn from more than one site; anonymity was protected in all studies; only 4 (19%) of the studies had response rates more than 60%; reliability and validity of instruments were discussed in all quantitative studies; 19 (90%) studies had an internal consistency equal or more than 0.70 for the scale used for measuring AL; in all but one study observed ratings of AL were used; all 21 studies used a theoretical model/framework for guidance; and all of them also analyzed correlations when multiple relationships were assessed (Table 2).

All 6 qualitative studies were rated between 7 and 9. All of them had a clear statement of the aims and used appropriate study designs as well as appropriate methodology. The only weakness that was found in 5 out of 6 studies was the relationship between participants and researchers was not adequately considered in studies (Table 3).

**Descriptive Synthesis: Characteristics of Included Studies**

Characteristics of each study that was selected in this systematic review are described in detail in Tables 4 and 5. All manuscripts were published between 2009 and 2017 with more than a quarter ($n$=13 papers for 8 studies) published in 2015-16. Twenty-five papers were published in nursing jounrnals. Four studies were published in psychological journals (Coxen, van der Vaart, & Stander, 2016; Laschinger, & Fida, 2014a, 2014b; Nelson et al., 2014), one in a business journal (Rahimnia, & Sharifirad, 2015), one in a human resource

journal (Stander, De Beer, & Stander, 2015), and one in a leadership journal (Wong & Cummings, 2009b).

The majority of studies were conducted in Canada (*n*=9 studies), and the United States (*n*=11). Two studies were completed in India (Malik at al., 2016; Malik, & Dhar, 2017), and one each in Iran (Rahimnia, & Sharifirad, 2015), Israel (Shapira-Lishchinsky, 2014), and Belgium (Mortier, Vlerick, & Clays, 2016), and two in South Africa (Du Plessis, 2014; Stander et al., 2015).

**Participant(s)/sample.** The total number of participants in all studies was 9,460. As per inclusion criteria, all study participants were registered healthcare professionals working in direct care roles or employed in management, administrative, supervisory, or leadership specific roles. In terms of quantitative studies, 13 studies sampled registered nurses; seven sampled mixed groups (nurses and supervisors, (*n*=3); nurses and physicians, (*n*=1); managers, specialists, administrative personnel, academic professionals, (*n*=3); and one sampled chief nurse executives. As for qualitative studies, five of the six studies sampled nurses in leadership roles as follows: chief nurse executive roles (*n*=2), managers/leaders (*n*=2), and team leaders (*n*=1). One study included registered nurses in direct patient care roles.

Demographics of study samples were reported in all included studies. In relation to registered nurses and work experience, 10 studies sampled experienced nurses and 4 sampled new graduate nurses (less than 2 years) specifically. Of these there was one study (Laschinger, Wong, & Grau, 2013) which compared experienced nurses and new graduate nurses in the same paper.

Studies (*n*=24 studies) were primarily conducted in acute care settings, while one was conducted in hospitals and nursing homes (Rhamina & Sharfirad, 2015), one specified

hospices (Ahern, 2015), and one was conducted in the private healthcare industry and did not specify level of care or settings (DuPlessis, 2014).

**Study purpose.** All quantitative studies examined the relationship between AL and a variety of different factors, including mediators and outcomes (Table 4). Only one study examined an antecedent of AL (Haddad, 2013).

For the qualitative studies (Table 5), one explored nurses' and managers' perceptions of the meaning of healthy work environment (Huddleston & Gray, 2016); one explored the experiences of hospital chief nurse executives in becoming and remaining authentic nurse leaders (Murphy, 2012); another examined nurses' ethical decision-making in team simulations in order to identify the benefits of these simulations for AL development (Shapira-Lishchinsky, 2014); Shirey, (2009) investigated the relationship among AL, organizational culture, and healthy work environments using a stress and coping lens; and finally, Ahern, 2015 explored how hospice leaders build resilience within interdisciplinary teams using AL as an element of the study conceptual framework.

**Theoretical or conceptual framework.** All (*n*=21 studies) quantitative studies included AL theory of Avolio et al. (2004) as a theoretical/conceptual framework in addition to other theories depending on study variables: Maslach & Leiter's (1997) six areas of worklife; Schaufeli and Bakker's (2004) concept of work engagement; Einarsen, Matthiesen, and Skogstad's (1998) notion of workplace bullying; Leiter and Maslach's (2004) burnout model; Aiken and Patrician's (2000) magnet hospital model of supportive professional practice environments; Pisanti, Lombardo, Lucidi, Lazzari, and Bertini's (2008) conceptualization of occupational coping self-efficacy; Borgogni, Consiglio, Alessandri, and Schaufeli's (2012) concept of interpersonal strain at work as part of the expanded model of burnout; Kanter's (1977) workplace empowerment theory; Nahapiet and Ghoshal's (1998)

theory of social capita;, Luthans and Jensen's (2005) psychological capital; Scott, Keehner Engelke and Swanson's (2008) organizational socialization model; Mayer, Davis, and Schoorman's (1995) dyadic trust; Donabedian's (1966) of quality healthcare and its three mechanisms for assessing quality, namely structure, process, and outcome; Dutton & Heaphy's (2003) high quality relationship model; Cortina, Magley, Williams, and Day-Langhout's (2001) notion of workplace incivility; and Edmondson's (1999) concept of team psychological safety. Five of six qualitative studies referenced AL theory in the background/literature review.

**Instruments to measure authentic leadership.** There were two instruments that were used to assess AL in studies. The most common one used (*n*=17 studies) was Avolio et al.'s *Authentic Leadership Questionnaire (ALQ,* 2007) which consists of 16 items divided into four subscales: relational transparency (5 items), internalized moral perspective (4 items), balanced information processing (3 items) and self-awareness (4 items). Neider and Schriesheim's of (2011) *Authentic Leadership Inventory (ALI)* was the other instrument that was found in three studies to measure AL (Mortier et al., 2016; Rahimnia, & Sharifirad, 2015; Stander et al., 2015). It is a 14-item scale divided on four subscales which are: self-awareness (3 items), balanced processing (4 items), relational transparency (3 items), and internalized moral perspective (4 items). This scale is a 5-point Likert-type scale, so the anchors ranged it from never to almost always. Wong and Cummings (2009b) utilized four items from the *Leadership Practices Inventory* (LPI; Kouzes & Posner 1993) to operationalize the four dimensions of AL.

**Instruments to measure factors associated with authentic leadership.** Eighty-seven different instruments were used to measure various factors associated with AL. No two studies used the same combination of measurement instruments. Only one instrument

(structural empowerment) was used to measure antecedents of AL. Thirty different instruments were used to measure mediating factors and fifty-five to measure outcome factors. Leiter and Maslach's *Areas of Worklife Scale* (AWS; 2002, 2004, 2011) was frequently used in studies (*n*=3). Also, Schaufeli and Bakker's (2003) *Utrecht Work Engagement Scale* (UWES) was found in three studies. The *Burnout Inventory-General Survey* (MBI-GS) by Schaufeli, Leiter, Maslach, and Jackson (1996) was used to measure burnout and emotional exhaustion in six studies. Lastly, Laschinger, Finegan, Shamian, and Wilk's (2001) of *Conditions of Work Effectiveness Questionnaire-II* (CWEQ-II) measured structural empowerment in seven studies. There were seven different scales utilized to measure job and career satisfaction, but Shaver and Lacey's (2003) was found in two studies.

A majority of studies used advanced statistical procedures such as structural equation modelling (SEM; *n*=11 studies) and multiple linear regression (*n*=7 studies) and path analysis (*n*=2 studies). Correlations (*n*=21 studies) were reported in all studies. Thematic and structural analysis was commonly used as analysis technique in qualitative studies (*n*=5 studies).

**Narrative Synthesis of Results**

Throughout the analysis, both themes that were consistent with the AL model (Figure 1) and unique themes and subthemes specific to findings from our review of AL studies in nursing/healthcare were identified and included greater emphasis on mediators and outcomes. Using content analysis procedures, the results of studies in the review were organized into two main categories based on the outcomes and mediators of AL examined in studies. Summary of study outcomes and mediators are illustrated in Table 6 and 7 respectively. Due to heterogeneity of the outcome and mediator variables examined, only direction of effects and statistical significance and not specific effect sizes are reported.

Maintaining the same overall structure of the AL model, it was adapted by including new listings of mediators and outcomes based on findings and adding an additional arrow linking AL directly to outcomes (Figure 3). Only one study examined antecedents of AL and this was structural empowerment (Haddad, 2013) and is included in Table 6 and Figure 3.

**Relationships between authentic leadership and outcomes.** Direct associations between AL and 43 outcomes were found and grouped into two major themes: follower outcomes and patient outcomes.

**Follower outcomes.** The outcomes of follower were organized into five subthemes: *personal psychological states*, *satisfaction with work, work environment factors, health & well-being,* and *performance.*
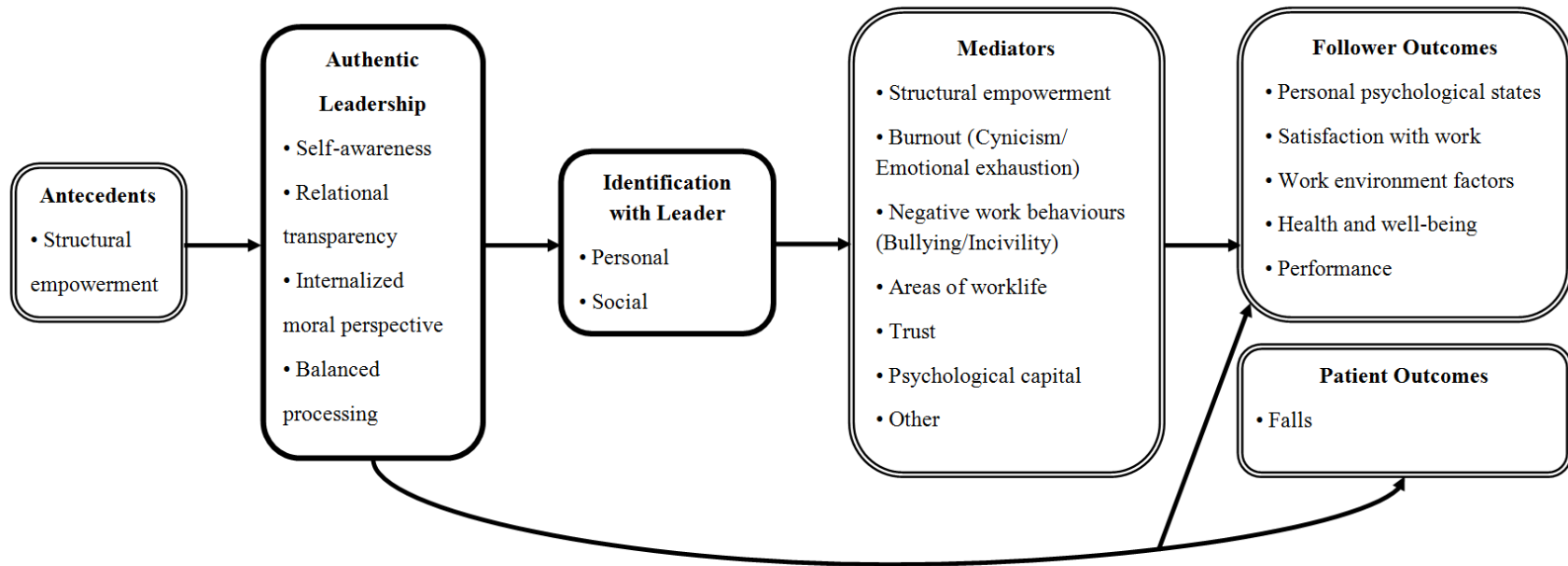
*Figure 3.* Adapted authentic leadership model based on findings of systematic review of authentic leadership in healthcare

Solid lines indicate that findings from the review support demonstrated relationships.

Double lined boxes indicate additions to the original theory.

***Personal psychological states.*** Three follower outcomes, psychological capital which also includes optimism (*n*=4 studies), identification which includes personal and social/organizational identification (*n*=2 studies) and trust which includes trust in manager, organization or co-worker (*n*=3 studies) reflected personal psychological states. These three concepts were articulated by Avolio et al (2004) and included as central concepts in AL theory. In all but one study (social identification in Wong et al., 2010) AL was positively and significantly associated with these variables.

***Satisfaction with work.*** Five subthemes derived from the content analysis and categorized as variables reflecting satisfaction with work. These were identified as job satisfaction, career satisfaction, job turnover intention, career turnover intention and work engagement. The most frequently identified outcome of AL was job satisfaction and was found to be positively significantly associated with AL in 8 out of 9 studies. Work engagement was also positively significantly associated with AL in three of four studies (Bamford et al., 2013; Du Plessis, 2014; Giallonardo et al., 2010). Laschinger et al. (2016) found that AL and job turnover intention and career satisfaction and career turnover intention were generally not significant.

***Work environment factors***. Thirteen identified outcome variables suggesting the broad theme of work environment factors were grouped into five subthemes: structural empowerment, negative workplace behaviours, workgroup relationships, practice environment and areas of worklife. Structural empowerment was the most common outcome and was significantly positively associated with AL in five studies. Negative workplace behaviours were all significantly negatively associated with AL in six studies: incivility in three studies and bullying in four studies. Authentic leadership was associated with various aspects of workgroup relationships reflected in six outcomes in six studies. All except team

psychological safety (Plasse, 2015) were significantly positively associated with AL. Regan et al. (2016) and Laschinger & Smith (2013) illustrated the positive and significant relationship between AL and interprofessional collaboration. Practice environment was examined by three outcomes (professional practice environment, nursing professional practice culture and decisional involvement) in three studies and all were significantly positively associated with AL; professional practice environment was examined in one study (Laschinger & Fida, 2015; Fallatah & Laschinger, 2016). Last, two studies (Wong & Giallonardo, 2013; Bamford et al., 2013; Laschinger et al., 2015; Laschinger & Read, 2016) assessed the positive and significant relationship between areas of worklife and AL.

*Health and well-being.* Seven follower outcomes were related to this subtheme of health and well-being. Burnout which was composed of emotional exhaustion and cynicism was the most frequently identified outcome in this subtheme and each was negatively significantly associated with AL in three studies (Laschinger & Fida, 2014a, 2014b; Wong & Cunnings, 2009b). Stress outcomes, specifically work stress and stress symptoms, were examined by Rahminia and Sharifrad (2015) but were not significant. However, Rahminia and Sharifrad (2015) found that attachment insecurity had a significant negative relationship with AL. Well-being was positively significantly associated with AL in two studies and two outcomes: vitality (Mortier et al., 2016) and psychological well-being (Nelson et al., 2014).

*Performance.* Seven outcomes suggested aspects of performance and all (job performance, knowledge sharing, creativity, learning and extra role behavior) but two (followership and organizational citizenship behaviour) were positively significantly associated with AL in a total of four studies.

**Patient outcomes.** Only one study examined a direct relationship between AL and patient outcomes (Johnson, 2015). These were falls with injury, patient satisfaction and

hospital acquired pressure ulcers. Only falls with injury was found to be negatively significantly associated with AL.

**Relationship between authentic leadership and mediators.** In this review, only the first mediator connecting AL directly and/or indirectly to an outcome was included in any given study. In some studies longer chains of variables were connected to AL in models which were assessed using structural equation modeling. However, the indirect effects of AL on more distal outcomes were not consistently reported and so the focus was placed on mediators and outcomes with the most proximal connection to AL in the model. There were 23 mediators between AL and 35 different outcomes variables in the included quantitative studies.

Structural empowerment was the most frequently tested mediator connecting AL to 10 different outcomes such as job satisfaction, job performance, burnout, social capital, short staffing, worklife interference and professional practice environment. Empowerment was a significant mediator of the relationship between AL and these outcomes in five of seven studies (Boamah et al., 2017; Laschinger et al., 2013; Laschinger & Fida, 2015; Read, 2016; Wong & Laschinger, 2013). Burnout components, emotional exhaustion and cynicism, were mediators in one study with four outcomes described in two papers (Laschinger & Fida, 2014a, 2014b). Emotional exhaustion was a significant mediator between AL and job satisfaction and mental health symptoms (Laschinger & Fida, 2014b) and career but not job turnover (Laschinger & Fida, 2014a). Cynicism was also a significant mediator between AL and job and career turnover (Laschinger & Fida, 2014a) and job satisfaction but not mental health symptoms (Laschinger & Fida, 2014b). Negative work behaviours, specifically, incivility and bullying were examined as mediators of AL in three studies. Incivility negatively mediated the relationship of AL and psychological safety (Plasse, 2015). Bullying

was a significant mediator of AL and emotional exhaustion and job satisfaction in one study (Laschinger et al., 2012) but was not a significant mediator of the relationship between AL and job and career turnover intention in one time-lagged study of new graduate nurses (Laschinger & Fida, 2014a).

Congruence in the areas of worklife was a significant positive mediator between AL and these outcomes: work engagement, (Bamford et al., 2013); occupational self-efficacy (Laschinger et al., 2015); and civility norms (Laschinger & Read, 2016). Areas of worklife was also a significant negative mediator of the relationship between AL and patient adverse events (Wong & Giallonardo, 2013) and was one of few studies linking AL with patient outcomes. As proposed in the Avolio et al. (2004) theory, trust in the manager was a significant positive mediator of the relationship between AL and these three outcomes in two studies: areas of worklife (Wong & Giallonardo, 2013); voice or speaking–up behaviour (Wong & Cummings, 2009b); and work engagement (Wong et al., 2010) but not a significant mediator for organizational citizenship behaviour (Coxen et al., 2016). Trust in the organization was a significant mediator of work engagement (Stander et al, 2015) and the organizational citizenship behaviour (Coxen et al., 2016). Coxen et al (2016) also found that trust in co-workers mediated the relationship between AL and organizational citizenship behavior.

Personal and social identification and psychological capital all of which were proposed as mediators in the in AL theory were examined in two studies. Personal identification with the manager was a significant mediator of AL and trust in the manager (Wong et al. 2010) and organizational identification (Fallatah et al., 2017). Tested in only one study, social identification was not a significant mediator of the relationship between AL and trust in the manager (Wong et al., 2010). Psychological capital (self-efficacy, hope,

optimism and resilience) was tested as a mediator in three studies and found to be a significant mediator of AL and work engagement (DuPlessis, 2014) and extra role behavior (Malik & Dhar, 2017) but not followership (Du Plessis, 2014). In addition, optimism alone was found to be a mediator of AL and work engagement (Stander et al., 2015). A number of other mediators of AL found in studies were tested in individual studies only and the following were significant: knowledge sharing (Malik & Dhar, 2017), work climate (Nelson et al., 2014), job satisfaction (Laschinger et al., 2012), work engagement (Gillonardo et al., 2013), professional practice environment (Fallatah & Laschinger, 2016), empathy of leader (Mortier et al., 2016). The following mediators were not significant: social capital (Read, 2016), followership (DuPlessis, 2014) and high quality relationship (Plasse, 2015).

In six studies, large models (reported in 8 papers) showing multiple mediators between AL and some outcomes were examined. Positive indirect effects of AL on nurse assessed quality of care were clearly significant (Wong et al., 2010) and either non-significant (Read, 2016) or not clearly reported (Boamah et al., 2017; Laschinger & Fida, 2015). There were significant negative indirect effects of AL on nurses' mental health symptoms in one study (Laschinger & Fida, 2015; Laschinger et al., 2015). Significant indirect effects of AL on emotional exhaustion (negative; Laschinger & Read, 2016) and job satisfaction (positive; Read & Laschinger, 2015) were found but not reported for AL on job turnover intention in another study (Haddad, 2013).

**Findings from qualitative studies.** Four different categories were identified from qualitative studies: *authentic leadership associated with healthy work environments, becoming and maintaining authenticity, characteristics of authentic leaders and development of AL.*

***Authentic leadership associated with healthy work environments.*** Huddleston and Gray (2016) found that AL was one of six characteristics of a healthy work environment including, appropriate staffing, effective decision making, meaningful recognition, skilled communication, and true collaboration. Also, AL was defined in the study as the ability to be goal oriented, to meaningfully engage followers, to be approachable and trustworthy, a good communicator, open minded, confident, coaches, visible, transparent, and responsive to needs of the staff. Furthermore, Shirey (2009) illustrated the relationship among AL, organizational culture, and healthy work environments using a stress and coping lens, and found that nurse managers working in positive organizational cultures generally worked in healthy work environments and engaged in more AL behaviors while those working in negative cultures reported less optimism and more challenges engaging in AL practices.

***Becoming and maintaining authenticity.*** Murphy (2012) concluded that authentic leaders are able to maintain their authenticity by having the moral courage to do the right thing and using values in decision making in order to maintain their authenticity.

***Characteristics of authentic leaders.*** Authentic leaders were described as collaborative and supportive which are qualities needed to influence positive patient outcomes and organizational performance (Prestia, 2015). Findings also showed that senior nurse leaders demonstrated resilience, hope, and optimism, and were self-regulating, self-monitoring, and self-reflecting. The other features of authentic leaders stressed were self-efficacy and awareness of self and others (Ahern, 2015).

***Development of authentic leadership.*** Shapira-Lishchinsky (2014) explored nurses' ethical decision-making in team simulations in order to identify the benefits of these simulations for AL development, and the result was that there were four core simulation benefits, which were derived from the quantitative analysis of the 50 simulation sessions, and

can be summarized as follows: self-awareness (23 cases), relational transparency (15 cases), balanced processing (9 cases), and internalized moral perspective (3 cases).

**Demographics and authentic leadership.** In this review, six studies reported relationships between AL and demographics. Level of nurses' education was positively associated with AL ratings (Johnson, 2015; Nelson et al., 2014) as was frequency of contact with supervisor (Nelson et al., 2014). Self-ratings of AL were positively correlated with age and tenure in executive nursing roles (Anderson, 2011). However, Bennett (2015) reported a negative correlation between nurses' age and their ratings of AL in their managers. Lastly, full-time nurses reported significantly lower levels of manager AL than part-time nurses (Fillmore, 2013) and higher AL was perceived in male leaders versus female leaders (Du Plessis, 2014).

### Discussion

The purposes of this review were to explore the relationship between AL and staff and patient outcomes in healthcare and specifically, to examine the antecedents, mediators and outcomes of AL in empirical studies conducted in healthcare settings. Findings illustrated significant growth in the number of studies of AL since 2010 primarily in nursing samples and a few in broader healthcare professional groups. In all but one of the quantitative studies AL was measured using one of two current AL instruments. To date the majority of studies examined a wide variety of staff personal, job, health and well-being, and work environment factors as mediators and/or outcomes of AL and only a few examined patient outcomes of AL. Only one study examined antecedents of AL (Haddad, 2013). The findings of this review provide support for positive relationships between AL and personal psychological states such as trust in the manager, satisfaction with work outcomes such as job satisfaction, and work environment factors such as structural empowerment, work

engagement and work group relationships. Key findings related to negative associations between AL and staff outcomes included negative workplace behaviours (bullying and incivility) and burnout including both emotional exhaustion and cynicism. These results suggest that AL of leaders and managers in healthcare environments is essential to enhance employee work engagement and satisfaction which may be linked to enhanced staff performance (Avolio et al., 2004). Some aspects of this review's findings are similar to Gardner et al.'s review (2011) which showed positive relationships between AL and outcomes including satisfaction with supervisor, supportive group, and organizational citizenship behaviors.

Because this review was based on Avolio et al.'s (2004) theory of AL, the adapted model in this review was used to further illustrate the study findings as applied to nursing and healthcare (Figure 3). The figure adds the one antecedent of AL (Haddad, 2013) that was found and illustrates that a few studies (Fallatah et al., 2017; Wong et al. 2010) supported the role of personal and social identification with the leader as mediating mechanisms between AL and outcomes. Studies reflecting a wider variety of mediators than were included in the original AL model (Figure 1) were identified even though trust and psychological capital (hope, optimism, resilience, and self-efficacy) were important mediators in this review as well. Studies also showed direct as well as indirect connections between AL and a broad list of staff outcomes including both follower work attitudes and follower behaviors and some patient outcomes. However, there were very few studies connecting AL to patient outcomes such as quality of care and adverse patient events and these were nurse assessed outcomes. Only one study (Johnson, 2015) attempted to link AL to objective patient care outcomes such as, patient falls with injuries which was significantly negatively associated with AL and patient satisfaction and hospital acquired pressure sores which were not significantly

associated with AL. Johnson noted that inconsistencies in data collection procedures for pressure ulcers and insufficient unit numbers in the study could have accounted for insignificant results. In addition Johnson (2015) stated that her study did provide support for the strength of the relationship between unit level authentic leadership and structural empowerment and patient outcomes and this should be tested with a path model in future research. Nevertheless future examination of the connections between AL and organizational and patient outcomes is essential to future studies of authentic leadership in healthcare.

Structural empowerment was found as the only antecedent of AL in this review (Haddad, 2013). The results of Haddad's study confirmed the important roles of empowerment and AL within nursing. Gardner et al.'s (2011) review also noted only two quantitative studies examining the antecedents of AL which included psychological capital (PsyCap) and self-monitoring. Since that review, findings from a study of personnel in a broad range of business industries, showed that self-knowledge and self-consistency positively predicted authentic leadership (Peus et al. (2012). Self-knowledge about leaders' values, strengths, and weaknesses was positively associated with being an authentic leader (Peus, 2012). Also self-consistency which refers to coherence between leaders' values, beliefs, and actions is essential for leaders to being perceived as authentic (Peus, 2012). The significant gap in understanding of AL antecedents signals the need for further examination of antecedents of AL in healthcare leaders. Increased empirically based knowledge of the attitudes and skills such as building self-awareness, understanding others' needs and expressing genuine feelings that may be preconditions for AL is needed in order to fully advance AL in the practice of leadership (Peus, et al. 2012). In addition psychological capital as a predictor of AL in healthcare samples and settings needs to be examined. This research

information could provide guidance for the development of future leadership development strategies and programs within healthcare organizations.

Some individual study findings suggested some interesting areas for future research. For example, the significant positive relationship between AL and employee creativity through knowledge sharing behaviour and employee creativity was noteworthy (Malik et al., 2016). Some previous studies in other industries have shown that AL increases employee creativity (Černe, Jaklič & Škerlavaj, 2013; Rego, Sousa, Marques & e Cunha, 2012). More specifically, sharing information and relational transparency have been found to promote creativity. The current need for innovative solutions to a variety of problems in healthcare work environments including patent safety suggests the important role of staff creativity for improving staff and patient outcomes and its positive relationship with AL signals the need to explore this variable in future studies. Also, Malik et al. (2016) showed that AL had a positive relationship with knowledge sharing which is considered as an essential component of AL (relational transparency) and has an important influence on staff satisfaction and engagement. These findings suggest that there is a need to look at staff creativity and the importance of knowledge sharing which may lead to positive organizational outcomes.

In terms of qualitative findings, AL was associated with healthy work environments (Huddleston & Gray, 2016; Shirey, 2009). This supports findings in the literature that emphasize the key role of leadership in creating healthy work environments that promote safe patient care and positive staff outcomes (Canadian Nurses Advisory Committee, 2002; Cummings et a., 2010; Shirey, 2006). Shirey (2009) found that AL was associated with a positive organizational culture which helps to create and sustain healthy work environments for healthcare quality practice. This supports the importance of examining the role of

organizational climate and culture in developing AL in future research. Murphy (2012) found that authentic leaders have the moral courage to do the right thing which means that moral courage is required in order to act morally and make the right decisions for patients and staff. Further exploration of the relationship between AL and moral courage in both qualitative and quantitative studies deserves attention in future healthcare research. Lastly, Prestia (2015) found that authentic leaders demonstrated resilience, hope, and optimism. This is an important observation as resilience, hope, and optimism are considered as factors that are related to AL which supports the theory of AL outlined by Avolio et al. (2004).

**Limitations**

Even though meticulous methods were employed in this review there were limitations. First, while dissertations and theses were included in this review, all grey literature databases were not searched and, as such, this review may not be representative of all relevant work in the field. There could be reporting bias due to the fact that English only studies were included which may have excluded other potentially relevant studies. Where details of study methods were not clear, no attempt was made to clarify these details by contacting the manuscript authors. This may have resulted in aspects of methods being scored lower in the quality assessment phase, possibly reflecting quality of the reporting rather than the actual methods used. With the exception of three time-lagged studies, the majority of studies were cross-sectional correlational designs which do not allow for causal inferences, nor do they support claims of specific directionality of effect. All but one study (Johnson, 2015) included studies using self-reported data, which introduces a potential response bias and limits objectivity of findings and no studies were excluded on the basis of quality. The majority of studies focused on registered nurses working in acute care settings which limits generalizability of findings to acute care registered nurses.

**Conclusion**

Findings of this review point to an increased body of research on the study of the relationship between AL and its antecedents, mediators and outcomes in nursing and healthcare. The current evidence supports positive relationships between AL and the staff outcomes of job satisfaction, structural empowerment, work engagement, and trust in the manager. There was also evidence supporting negative associations between AL and negative workplace behaviours (bullying and incivility) and burnout. In addition, this review showed that a number of studies included the testing of strong conceptual models of AL and the mechanisms of influence on staff /follower outcomes and some on patient outcomes. Structural empowerment, trust, areas of worklife, burnout, and bulling/incivility were significant mediators of the effect of AL on outcomes. However, the prominence of cross-sectional designs and the heterogeneity in many outcome variables and few studies of patient outcomes mean that robust evidence to support that AL that predicts a wider variety of staff outcomes such as, turnover and commitment, and specifically patient and organizational outcomes is limited. Although the majority of studies examined AL in acute care settings with registered nurses and notably, there were three time-lagged studies in this review, there is a need for future studies using longitudinal and interventional designs and conducted in a variety of healthcare settings with more diverse, interprofessional, and randomly selected samples. Since only one study included an antecedent of AL, studies examining potential predictors and strategies for developing AL are also warranted.

# References

Adams, O., Dal Poz, M., Shengelia, D., Kwankam, S., Issakov, A., Stilwell, B., ... & Goubarev, A. (2003). Human, physical and intellectual resource generation: Proposals for monitoring. *Health systems performance assessment: Debates, methods and empiricism. Geneva: World Health Organization*, 273-287.

Ahern, G. R. (2015). *A Narrative Inquiry: Case Leaders' Perspectives on Resilience in Hospice Care.* (Unpublished doctoral dissertation). Antioch University, United States.

Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J. A., Busse, R., Clarke, H., ... & Shamian, J. (2001). Nurses' reports on hospital care in five countries. *Health Affairs*, *20*(3), 43-53.

Aiken, L., & Patrician, P. (2000). Measuring organizational traits of hospitals: the revised nursing work index. *Nursing Research, 49*, 146-153.

American Nurses Association (ANA). (2000). *Nurse Staffing and Patient Outcomes in the Inpatient Hospital Setting: Report.* American Nurses Association, Washington, DC.

Anderson, T. L. K. (2011). *Relationships Between Chief Nurse Executive Perceived Leadership Styles, Personal Attributes and Organizational Context.* College Of Saint Mary.

Avolio, B. J. (1999). *Full leadership development: Building the vital forces in organizations.* Thousand Oaks, CA: Sage.

Avolio, B. J., & Bass, B. M. (2004). *Multifactor leadership questionnaire: Manual and sampler set* (3rd ed.). [Adobe Acrobat 7.0 Document]. Retrieved from http://www.mindgarden.com/login/55442/50380

Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly, 16,* 315-338. doi: org/10.1016/j.leaqua.2005.03.001

Avolio, B.J., Gardner, W.L., & Walumbwa, F.O. (2007). *Authentic Leadership Questionnaire.* Available: www.mindgarden.com (26.10.07).

Avolio, B. J., Gardner, W. L., Walumbwa, F., Luthans, F., & May, D. R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. *The Leadership Quarterly, 15*, 801–823. doi: 10.1016/j. leaqua. 2004.09.003

Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. *Annual Review of Psychology*, *60*, 421-449. doi: 10.1146/annurev.psych.60.110707.163621

Bamford, M., Wong, C. A., & Laschinger, H. (2013). The influence of authentic leadership and areas of worklife on work engagement of registered nurses. *Journal of Nursing Management, 21*, 529–540. doi: 10.1111/j.1365-2834.2012.01399.x

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173. doi: 10.1037/0022-3514. 51.6. 1173

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership.* Thousand Oaks, CA: Sage.

Bennett, K. (2015). *Exploring the Relationship Between Job Satisfaction, Bullying, and Authentic Leadership Among Medical-Surgical Nurses.* (Unpublished doctoral dissertation). University of Manitoba, Canada.

Blake, N., Blayney, F., Loera, T., Rowlett, C., & Schmidt, D. (2012). A model of authentic leadership to support a healthy work environment. *AACN Advanced Critical Care, 23*(4), 358–361.

Boamah, S. A., Read, E. A., & Spence Laschinger, H. K. (2017). Factors influencing new graduate nurse burnout development, job satisfaction and patient care quality: a time-lagged study. *Journal of Advanced Nursing*, *73*(5), 1182-1195. doi: 10.1111/ jan. 13215

Borgogni, L., Consiglio, C., Alessandri, G., & Schaufeli, W.B. (2012). Don't throw the baby out with the bathwater! Interpersonal strain at work and burnout. *European Journal of Work and Organizational Psychology, 21* (6), 875–898. doi: 10.1080/1359432X. 2011.598653

Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment. *Attachment Theory and Close Relationships,* 46–76.

Brown, M. E., Trevino, L. K., & Harrison, D. A. (2005). Ethical leadership: A social learning perspective for construct development and testing. *Organizational Behavior and Human Decision Processes, 97*(2), 117-134. doi: 10.1016/j.obhdp.2005.03.002

Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1979). *The Michigan assessment questionnaire.* Ann Arbor, MI: University of Michigan.

Canadian Nursing Advisory Committee. (2002). *Our health, our future: Creating quality workplaces for Canadian Nurses.* Ottawa, ON: Advisory Committee on Health Human Resources.

Cartwright, S., & Cooper, C. L. (2002). *ASSET: An organizational stress screening tool.* London: Robertson Cooper Limited and Cubiks.

Center for Reviews and Dissemination (CRD). (2009). *Systematic reviews: CRD's guidelines for undertaking reviews in healthcare*. Layerthorpe, York: CRD, University of York.

Černe, M., Jaklič, M., & Škerlavaj, M. (2013). Authentic leadership, creativity, and innovation: A multilevel perspective. *Leadership*, *9*(1), 63-85.

Cortina, L. M., Magley, V. J., Williams, J. H., & Langhout, R. D. (2001). Incivility in the workplace: incidence and impact. *Journal of Occupational Health sychology, 6,* 64-80. doi: 10.1037/1076-8998.6.1.64

Cowden, T., Cummings, G., & Profetto-Mcgrath, J. (2011). Leadership practices and staff nurses' intent to stay: a systematic review. *Journal of Nursing Management, 19*(4), 461-477. doi: 10.1111/j.1365-2834.2011.01209.x

Coxen, L., van der Vaart, L., & Stander, M. W. (2016). Authentic leadership and organisational citizenship behaviour in the public health care sector: The role of workplace trust. *SA Journal of Industrial Psychology*, *42*(1), 13-pages. doi: 10.4102/sajip.v42i1.1364

Cummings, G., & Estabrooks, C.A. (2003). The effects of hospital restructuring on individual nurses: A systematic review. *International Journal of Sociology, 23* (8/9), 8-53. doi: 10.1108/01443330310790633

Cummings, G., Lee, H., MacGregor, T., Davey, M., Wong, C., Paul, L., & Stafford, E. (2008). Factors contributing to nursing leadership: A systematic review. *Journal of Health Services Research & Policy, 13*(4), 240-248.

Cummings, G., MacGregor, T., Davey, M., Lee, H., Wong, C., Lo, E.,. & Stafford, E. (2010). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies, 47*(3), 363-385. doi: 10.1016/j.ijnurstu.2009.08.006.

Critical Appraisal Skills Programme (CASP), (2010). *10 questions to help you make sense of qualitative research*. from http://media.wix.com/ugd/dded87_29c5b002d99342f788c6ac670e49f274.pdf

Diallo, K., Zurn, P., Gupta, N., & Dal Poz, M. (2003). Monitoring and evaluation of human resources for health: an international perspective. *Human Resources for Health, 1*(1), 3. doi: 10.1186/1478-4491-1-3

Donabedian, A. (1966). Evaluating the quality of medical care. *Milbank Memorial Fund Quarterly*, *44*, 166–203. doi: 10.2307/3348969

Doran, D.M., & Pringle, D. (2011), Patient outcomes as an accountability. *In Nursing-Sensitive Outcomes* (D. Doran ed), pp. 1–27. Jones and Bartlett Publishers International, Mississauga, ON.

Du Plessis, M. (2014). *The relationship between authentic leadership, psychological capital, followership and work engagement*. (Unpublished doctoral dissertation). University of the Western Cape, South Africa.

Dutton, J. E., & Heaphy, E.D. (2003). The power of high-quality relationships at work. In K. S. Cameron, J.E. Dutton & R.E. Quinn (eds.), *Positive Organizational Scholarship* (pp. 263-278). San Francisco: Berrett-Koehler Publishers.

Dutton, J.E., & Ragins, B.E. (2007). Moving forward: Positive relationships at work as a research frontier. In J.E. Dutton & Ragins, B.E. (eds.), *Exploring Positive Relationships at Work: Building a Theoretical and Research Foundation* (pp.387-400). Mahwah: Lawrence Erlbaum Associates, Inc., Publishers.

Earvolino-Ramirez, M. (2007). Resilience: A concept analysis. *Nursing Forum*, *42*(2), 73-82. doi: 10.1111/j.1744-6198.2007.00070.x

Edmondson, A. C. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44*, 350-383.

Einarsen, S., & Hoel, H. (2001). *The negative acts questionnaire: development, validation, and revision of a measure of bullying at work*. In: 10Th Annual Congress of Work and Occupational Psychology, Prague, Czech Republic.

Einarsen, S., Hoel, H., & Notelaers, G. (2009). Measuring exposure to bullying and harassment at work: validity, factor structure and psychometric properties of the Negative Acts Questionnaire. *Work Stress, 13,* 24-44. doi: 10.1080/02678370902 815673

Einarsen, S., Matthiesen, S., & Skogstad, A. (1998). Bullying, burnout and well-being among assistant nurses. *Journal of Occupational Health and Safety: Australia and New Zealand 14*(6), 563–568.

Eisenberger, R., Karagonlar, G., Stinglhamber, F., Neves, P., Becker, T.E., Gonzalez-Morales, M.G., & Steiger-Mueller, M. (2010). Leader-member exchange and affective organizational commitment: the contribution of supervisor's organizational embodiment. *Journal of Applied Psychology, 95*(6), 1085-1104. doi: 10.1037/a0020 858

Fallatah, F., & Laschinger, H. K. (2016). The influence of authentic leadership and supportive professional practice environments on new graduate nurses job satisfaction. *Journal of Research in Nursing, 21*(2) 125–136. doi:10.1177/1744987115624135

Fallatah, F., Laschinger, H., & Read, E. (2017). The effects of authentic leadership, organizational identification, and occupational coping self-efficacy on new graduate nurses' job turnover intentions in Canada. *Nursing Outlook, 65*(2), 172-183. doi: 10.1016/j.outlook.2016.11.020

Ferres, N., & Travaglione, T. (2003). *The development and validation of the workplace trust survey (WTS): Combining qualitative and quantitative methodologies*. Paper presented at APROS, Mexico.

Fillmore, K. (2013). *Nurses' trust in managers: the role of authentic leadership and workplace empowerment*. (Unpublished master's thesis). The University of Western Ontario, London, Ontario, Canada.

Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. (2005). Can you see the real me? A self-based model of authentic leader and follower development. *Leadership Quarterly, 16*, 343–372. doi: 10.1016/j.leaqua.2005.03.003

Gardner, W. L., Cogliser, C. C., Davis, K. M., & Dickens, M. P. (2011). Authentic leadership: A review of the literature and research agenda. *The Leadership Quarterly, 22*(6), 1120-1145. doi:10.1016/j.leaqua.2011.09.007

Gatling, A., Kang, H. J. A., & Kim, J. S. (2016). The effects of authentic leadership and organizational commitment on turnover intention. *Leadership & Organization Development Journal, 37*(2), 181-199. doi: 10.1108/LODJ-05-2014-0090

George, B. (2003). *Authentic leadership: Rediscovering the secrets to creating lasting value*. San Francisco, CA: Jossey- Bass.

Germain, P. B., & Cummings, G. (2010). The influence of nursing leadership on nurse performance: A systematic literature review. *Journal of Nursing Management, 18*(4), 425-439. doi: 10.1111/j.1365-2834.2010.01100.x

Giallonardo, L. M., Wong, C. A., & Iwasiw, C. L. (2010). Authentic leadership of preceptors: Predictor of new graduate nurses' work engagement and job satisfaction. *Journal of Nursing Management, 18*(8), 993-1003. doi:10.1111/j.1365-2834.2010.01126.x

Gilbert, M.-H., Lebrock, P., & Savoie, A. (2006). Validation initiale d'un modèle prévi-sionnel de la santé psychologique au travail. *In 14e congrès de l'Associationinternationale de psychologie du travail et de langue franc¸ aise (AIPTLF)* (pp. 11–22).

Gilbert, M.-H., Dagenais-Desmarais, V., & Savoie, A. (2011). Validation d'une mesurede santé psychologique au travail [Validation of a psychological health at work measure]. *Revue Européenne de Psychologie Appliquée/European Review of Applied Psychology, 61*(4), 195–203. doi: 10.1016/j.erap.2011.09.001

Goldberg, D.P., Williams, P. (1988). *A User's Guide to the General Health Questionnaire.* NFER-Nelson, Windsor, UK.

Hackman, J.R., Oldham, G.R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology, 60*, 159–170. doi: 10.1037/h0076546

Haddad, L. M. (2013). *Generational Differences in Empowerment, Professional Practice Environment, Incivility, Authentic Leadership, Job Satisfaction, Engagement and Intent to Leave in Acute Care Nurses*. (Unpublished doctoral dissertation). University of Tennessee, United States.

Havens, D. S., & Vasey, J. (2005). The staff nurse decisional involvement scale: Report of psychometric assessments. *Nursing Research, 54,* 376–383.

Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A -based approach*. Guilford Press.

Hogg, M.A. (2001). A social identify theory of leadership. *Personality and Social Psychology Review, 5*, 184–200.

Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Fact Sheet. (2013). Retrieved from http://www.hcahpsonline.org/Facts.aspx

Huddleston, P., & Gray, J. (2016). Describing Nurse Leaders' and Direct Care Nurses' Perceptions of a Healthy Work Environment in Acute Care Settings, Part 2. *Journal of Nursing Administration*, *46*(9), 462-467. doi: 10.1097/NNA.0000000000000376

Hsieh, H.F., Shannon, S.E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277-1288.

Ilies, R., Morgeson, F. P., & Nahrgang, J. (2005). Authentic leadership and eudaemonic wellbeing: Understanding leader–follower outcomes. *The Leadership Quarterly, 16*, 373–394. doi: 10.1016/j.leaqua.2005.03.002

Jackofsky, E. F., & Slocum, J. W. (1987). A causal analysis of the impact of job performance on the voluntary turnover process. *Journal of Occupational Behavior*, *8*, 263-270. doi: 10.1002/job.4030080307

Johnson, S. H. (2015). *The influence of authentic leadership and structural empowerment on staff nurse decisional involvement and patient quality outcomes*. (Unpublished doctoral dissertation). Boston College, United States.

Kanter, R. M. (1977). *Men and Women of the Corporation*. Basic Books, New York, NY.

Kark, R., & Shamir, B. (2002). The dual effort of transformational leadership: Primary relational and collective selves and further effects on followers. In B.J. Avolio, & F.J.Yammarino (Eds), *Transformational and Charismatic Leadership: The Road Ahead, 2*, 67-91. doi: 10.1108/S1479-357120130000005010

Kark, R., Shamir, B., & Chen, G. (2003). The two faces of transformational leadership: dependence and empowerment. *Journal of Applied Psychology, 88*, (2), 243–255. doi: 10.1037/0021-9010.88.2.246

Kegan, R. (1982). *The evolving self: Problem and process in human development*. Cambridge, MA: Harvard University Press.

Kelley, R. E. (1992). *The power of followership: How to create leaders people want to follow and followers who lead themselves*. New York: Doubleday.

Kelloway, E.K., Gottlieb, B.H., & Barham, L. (1999). The source, nature, and direction of work and family conflict. A longitudinal investigation. *Journal of Occupational Health Psychology, 4*, 337–346. doi: 10.1037/1076-8998.4.4.337

Kenaszchuk, C., Reeves, S., Nicholas, D., Zwarenstein, M. (2010). Validity and reliability of a multiple-group measurement scale for interprofessional collaboration. *BMC Health Services Research, 18*(83), 1-15. doi: 10.1186/1472-6963-10-83

Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry, 14*(1), 1-26. doi: 10.1207/S15327965PLI1401_01

Kouzes, J. M., & Posner, B. Z. (2003). *Leadership practices inventory: Self & observer*. San Francisco: Jossey-Bass.

Krippendorff, K. (2013). *Content analysis. An introduction to its methodology (3rd ed)*. California, CA: Sage Publications.

Lake, E. (2002). Development of the practice environment scale of the nursing work index. *Research in Nursing & Health, 25*(3), 176-188. doi: 10.1002/nur.10032

Laschinger, H. K. S., Borgogni, L., Consiglio, C., & Read, E. (2015). The effects of authentic leadership, six areas of worklife, and occupational coping self-efficacy on new graduate nurses' burnout and mental health: A cross-sectional study. *International Journal of Nursing Studies, 52*(6), 1080–1089. doi: 10.1016/j.ijnurstu.2015.03.002

Laschinger, H. K. S., Cummings, G., Leiter, M., Wong, C., MacPhee, M., Ritchie, J., ... & Young-Ritchie, C. (2016). Starting Out: A time-lagged study of new graduate nurses' transition to practice. *International Journal of Nursing Studies, 57*, 82-95. doi: 10.1016/j.ijnurstu.2016.01.005

Laschinger, H. K. S., & Fida, R. (2014a). A time-lagged analysis of the effect of authentic leadership on workplace bullying, burnout, and occupational turnover intentions. *European Journal of Work and Organizational Psychology, 23*(5), 739-753. doi: 10.1080/1359432X.2013.804646

Laschinger, H. K., & Fida, R. (2014b). New nurses burnout and workplace wellbeing: The influence of authentic leadership and psychological capital. *Burnout Research, 1*(1), 19–28. doi: 10.1016/j.burn.2014.03.002

Laschinger, H., & Fida, R. (2015). Linking nurses' perceptions of patient care quality to job satisfaction. *Journal of Nursing Administration, 45*(5), 276–283. doi: 10.1097/NNA.0000000000000198

Laschinger, H. K. S., Finegan, J., Shamian, J., Wilk, P. (2001). Impact of structural and psychological empowerment on job strain in nursing work settings: expanding Kanter's Model. *Journal of nursing Administration, 31,* 260-272.

Laschinger H.K., Finegan J. & Wilk P. (2009). Context matters: the impact of unit leadership and empowerment on nurses' organizational commitment. *The Journal of Nursing Administration, 39*(5), 228–235. doi: 10.1097/NNA.0b013e3181a23d2b

Laschinger, H. K. S., & Read, E. A. (2016). The effect of authentic leadership, person-job fit, and civility norms on new graduate nurses' experiences of coworker incivility and burnout. *Journal of Nursing Administration, 46*(11), 574-580. doi: 10.1097/NNA. 0000000000000407

Laschinger, H. K. S., & Smith, L. M. (2013). The influence of authentic leadership and empowerment on new-graduate nurses' perceptions of interprofessional collaboration. *The Journal of Nursing Administration*, *43*(1), 24–9. doi: 10.1097/NNA.0b01 3e3 182 786064

Laschinger, Heather K., Wong, Carol A., & Grau, A. (2012). The influence of authentic leadership on newly graduated nurses' experiences of workplace bullying, burnout and retention outcomes: A cross-sectional study. *International Journal of Nursing Studies*, *49*(10), 1266–1276. doi: 10.1016/j.ijnurstu.2012.05.012

Laschinger, H. K. S., Wong, C. A., & Grau, A. L. (2013). Authentic leadership, empowerment and burnout: a comparison in new graduates and experienced nurses. *Journal of Nursing Management*, *21*(3), 541–52. doi: 10.1111/j.1365-2834.2012.01375.x

Leiter, M.P., & Day, A. (2013). *Straightforward Incivility Scale Manual.* Technical Document. Centre for Organizational Research, Acadia University.

Leiter, M. P., & Maslach, C. (2002). *Areas of Worklife Scale Manual. Centre for Organizational Research and Development*. Acadia University, Wolfville, NS.

Leiter, M.P., & Maslach, C. (2004). *Areas of worklife: A structured approach to organizational predictors of job burnout.* In: Perrewe, P.L., Ganster, D.C. (Eds.), Research in Occupational Stress and Well-being. Elsevier, Oxford, pp. 91–134.

Leiter, M. P., & Maslach, C. (2011). *Areas of Worklife Survey Manual*, 5th ed. Mind Garden, Inc., California.

Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior, 23,* 695-706. doi: 10.1002/job.165

Lu, L., Leung, K., & Koch, P.T. (2006). Managerial knowledge sharing: the role of individual, interpersonal, and organizational factors. *Manag. Organ. Rev, 2*(1), 15–41. doi: 10.1111/j.1740-8784.2006.00029.x

Luthans, F., & Avolio, B. J. (2003). Authentic leadership: A positive developmental approach. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship* (pp. 241–261). San Francisco, CA: Barrett- Koehler.

Luthans, K. W., & Jensen, S. M. (2005). The linkage between psychological capital and commitment to organizational mission: a study of nurses. *Journal of Nursing Administration, 35*(6), 304.

Luthans, F., Luthans, K., & Luthans, B. (2007). Positive psychological capital: beyond human and social capital. *Bus Horizons, 1*(1), 45-50. doi: 10.1016/j.bushor. 2003.11.007

Malik, N., & Dhar, R. L. (2017). Authentic leadership and its impact on extra role behaviour of nurses: the mediating role of psychological capital and the moderating role of autonomy. *Personnel Review, 46*(2), 277-296. doi: 10.1108/PR-05-2015-0140

Malik, N., Dhar, R. L., & Handa, S. C. (2016). Authentic leadership and its impact on creativity of nursing staff: A cross sectional questionnaire survey of Indian nurses and their supervisors. *International Journal of Nursing Studies, 63,* 28-36. doi: 10.1016/j.ijnurstu.2016.08.004

Maslach, C., & Leiter, M.P. (1997). *The Truth About Burnout: How Organizations Cause Personal Stress and What To Do About It*. Jossey-Bass, San Francisco, CA.

Maslow, A. H. (1970). *Motivation and personality*. New York: Harper & Row.

May, D.R., Chan, A., Hodges, T., & Avolio, B.J. (2003). Developing the moral componont of authentic leadership. *Orgnizational Dynamics, 32,* 246-260.

Mayer, R. C, Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review, 20(3),* 709-734.

Mayer, R. C., & Gavin, M. B., (2005). Trust in management and performance: who minds the shop while the employees watch the boss? *Academy of Management Journal, 48,* (5), 874–888.

Montgomery, P., Bailey, P.H. (2007). Field notes and theoretical memos in grounded theory. *Western Journal of Nursing Research, 29*(1), 65-79.

Mortier, A. V., Vlerick, P., & Clays, E. (2016). Authentic leadership and thriving among nurses: the mediating role of empathy. *Journal of Nursing Management*, *24*(3), 357–65. doi: 10.1111/jonm.12329

Mueller, C. W., & McCloskey, J. C. (1990). Nurses' job satisfaction: A proposed measure. *Nursing Research, 39*(2), 113–117. doi:10.1097/00006199-199003000-00014

Murphy, L. G. (2012). Authentic leadership: Becoming and remaining an authentic nurse leader. *Journal of Nursing Administration*, *42*(11), 507-512. doi: 10.1097/NNA.0b013e3182714460

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review, 23*(2), 242-266.

Neider, L. L., & Schriesheim, C. A. (2011). The Authentic Leadership Inventory (ALI): development and empirical tests. *The Leadership Quarterly, 22,* 1146–1164. doi: 10.1016/j.leaqua.2011.09.008

Nelson, K., Boudrias, J.-S., Brunet, L., Morin, D., De Civita, M., Savoie, A., & Alderson, M. (2014). Authentic leadership and psychological well-being at work of nurses: The mediating role of work climate at the individual level of analysis. *Burnout Research*, *1*(2), 90–101. doi: 10.1016/j.burn.2014.08.001

Novicevic, M. M., Harvey, M. G., Buckley, M. R., Brown, J. A., & Evans, R. (2006). Authentic leadership: A historical perspective. *Journal of Leadership and Organizational Studies, 13*, 64–76.

Oldham, G.R., & Cummings, A. (1996). Employee creativity: personal and contextual factors at work. *Academy of Management Journal, 39*(3), 607–634.

Orchard, CA, Curran, V., Kabene, S. (2005). Creating a culture for interdisciplinary collaborative professional practice. *Medical Education Online, 10*, 1-13. doi:10.3402/meo.v10i.4387

Park, R., & Searcy, D. (2012). Job autonomy as a predictor of mental well-being: the moderating role of quality-competitive environment. *Journal of Business and Psychology, 27*(3), 305-316. doi: 10.1007/s10869-011-9244-3

Peus, C., Wesche, J. S., Streicher, B., Braun, S., & Frey, D. (2012). Authentic leadership: An empirical test of its antecedents, consequences, and mediating mechanisms. *Journal of Business Ethics*, *107*(3), 331-348. doi: 10.1007/s10551-011-1042-3

Pisanti, R., Lombardo, C., Lucidi, F., Lazzari, D., & Bertini, M. (2008). Development and validation of a brief Occupational Coping Self-Efficacy Questionnaire for Nurses. *Journal of Advanced Nursing, 62*(2), 238–247. doi: 10.1111/j.1365-2648.2007.04582.x

Plasse, M. J. (2015). *Impact of Authentic Leadership on Team Psychological Safety As Mediated by Relationship Quality.* (Unpublished doctoral dissertation). Northeastern University, United States.

Porath, C., Spreitzer, G., Gibson, C. & Garnett, F.G. (2012). Thriving at work: toward its measurement, construct validation, and theoretical refinement. *Journal of Organizational Behavior, 33*, 250–275. doi: 10.1002/job.756

Prestia, A. S. (2015). Chief Nursing Officer Sustainment: A Phenomenological Inquiry. *Journal of Nursing Administration*, *45*(11), 575-581. doi: 10.1097/NNA.0000000000000266

Quinn, R.P. & Shepard, L.G. (1974). *The 1972-1973 Quality of Employment Survey.* University of Michigan, Institute for Social Research, Ann Arbor, MI.

Rahimnia, F., & Sharifirad, M. S. (2015). Authentic Leadership and employee well-being: The mediating role of attachment insecurity. *Journal of Business Ethics*, *132*(2), 363–377. doi:10.1007/s10551-014-2318-1

Read, E. A. (2016). *Nurses' Workplace Social Capital: Development and Validation of a Self-report Questionnaire.* (Unpublished doctoral dissertation). University of Western Ontario, Canada.

Read, E., & Laschinger, H. K. (2013). Correlates of new graduate nurses' experiences of workplace mistreatment. *The Journal of Nursing Administration*, *43*(4), 221–8. doi: 10.1097/NNA.0b013e3182895a90

Read, E. A., & Laschinger, H. K. S. (2015). The influence of authentic leadership and empowerment on nurses' relational social capital, mental health and job satisfaction over the first year of practice. *Journal of Advanced Nursing*, *71*(7), 1611-1623. doi: 10.1111/jan.12625

Regan, S., Laschinger, H. K. S., & Wong, C. A. (2016). The influence of empowerment, authentic leadership, and professional practice environments on nurses' perceived interprofessional collaboration. *Journal of Nursing Management, 24*(1), E54-E61. doi:10.1111/jonm.12288

Roe, R. A., Zinovieva, I. L., Dienes, E. & Ten Horn, L. A. (2000). A comparison of work motivation in Bulgaria, Hungary and the Netherlands: test of a model. *Applied Psychology: An International Review, 49*(4), 658–687. doi: 10.1111/1464-0597.00039

Rogers, C. (1961). *On becoming a person: A therapist's view of psychotherapy.* Boston: Houghton Mifflin.

Rego, A., Sousa, F., Marques, C., & e Cunha, M. P. (2012). Authentic leadership promoting employees' psychological capital and creativity. *Journal of Business Research*, *65*(3), 429-437. doi: 10.1016/j.jbusres.2011.10.003

Rothmann, S. (2010). *Unpublished research report: The reliability and validity of measuring instruments of happiness in the Southern African context.* Vanderbijlpark, South Africa: North-West University.

Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review, 23*, 393–404.

Roy, F. (1989). *Élaboration et validation d'un questionnaire sur le climat de travail [Development and validation of a work climate questionnaire]* (Doctoral dissertation, Master dissertation, Université de Montréal, Montreal).

Schaufeli, W.B., & Bakker, A.B. (2003). *Utrecht Work Engagement Scale (UWES) – Preliminary Manual.* Occupational Health Psychology Unit, Utrecht University, Utrecht, ND.

Schaufeli, W.B., & Bakker A.B. (2004). Job demands, job resources, and their relationship with burnout and engagement: a multi-sample study. *Journal of Organizational Behaviour, 25,* 293–315. doi: 10.1002/job.248

Schaufeli, W. B., Leiter, M. P., Maslach, C., Jackson, S. E. (1996). *Maslach burnout inventory-general survey.* In: Maslach, C., Jackson, S.E., Leiter, M.P. (Eds.), The Maslach Burnout Inventory-Test Manual. 3rd ed. Consulting Psychologists Press, Palo Alto, CA, pp. 22–26.

Schulman, M. (2002). How we become moral: The sources of moral motivation. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 499-514). Oxford, UK: Oxford University Press.

Scott, E. S., Keehner Engelke, M., & Swanson, M. (2008). New graduate nurse transitioning: Necessary or nice? *Applied Nursing Research, 21*(2), 75–83. doi: 10.1016/j.apnr.2006.12.002

Saga, V. L., & Zmud, R.W. (1993). *The nature and determinants of IT acceptance, routinization, and infusion.* Proceedings of the IFIP TC8 Working Conference on Diffusion Transfer and Implementation of Information Technology, Elsevier Science Inc., pp. 67–86.

Seligman, M. E. P. (1998). *Learned optimism.* New York: Pocket Books.

Seligman, M. E. (2002). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment.* New York: The Free Press.

Senge, P.M. (2006). *The fifth discipline: The art and practice of the learning organization.* New York, NY: Doubleday.

Shapira-Lishchinsky, O. (2014). Simulations in nursing practice: Toward authentic leadership. *Journal of Nursing Management*, *22*(1), 60–69. doi: 10.1111/j.1365-2834.2012.01426.x

Shaver, K.H., Lacey, L.M. (2003). Job and career satisfaction among staff nurses: effects of job setting and environment. *Journal of Nursing Administration, 33* (3), 166–172.

Shirey, M. R. (2006). Authentic leaders creating healthy work environments for nursing practice. *American Journal of Critical Care, 15*(3), 256-267.

Shirey, M. R. (2009). Authentic leadership, organizational culture, and healthywork environments. *Critical Care Nursing Quarterly, 32*(3), 189-198. doi: 10.1097/CNQ.0b013e3181ab91db

Shortell, S. M., Marsteller, J. A., Lin, M., Pearson, M. L., Wu, S. Y., Mendel, P., ... & Rosen, M. (2004). The role of perceived team effectiveness in improving chronic illness care. *Medical Care, 42*(11), 1040-1048.

Siu, O. L., Lu, C. Q., & Spector, P. E. (2007). Employees' well-being in greater China: The direct and moderating effects of general self-efficacy. *Applied Psychology, 56*(2), 288–301. doi: 10.1111/j.1464-0597.2006.00255.x

Siu, O. L., Spector, P. E., & Cooper, C. L. (2006). A three-phase study to develop and validate a Chinese coping strategies scales in Greater China. *Personality and Individual Differences, 41*(3), 537–548. doi: 10.1016/j.paid.2006.02.012

Sluss, D.M., Ployhart, R.E., Cobb, M.G., Ashforth, B.E. (2012). Generalizing newcomers' relational and organizational identifications: Processes and prototypicality. *Advance Management Journal, 55*(4), 949-975. doi: 10.5465/amj.2010.0420

Smith, J. A. (2008). *Qualitative Psychology: A Practical Guide to Research Methods*. London, UK: Sage Publishers.

Snyder, C. R., Irving, L. M., & Anderson, J. R. (1991). Hope and health. *Handbook of Social and Clinical Psychology: The Health Perspective*, *162*, 285-305.

Sochalski, J. (2001). Quality of care, nurse staffing, and patients outcomes. *Policy, Politics and Nursing Practice, 2*(1), 9-18.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, *38*(5), 1442-1465.

Stamps, P. L. (1997). *Nurses and Work Satisfaction: An Index for Measurement*, 2 ndedn. Health Administration Press, Chicago, IL.

Stander, F. W., De Beer, L. T., & Stander, M. W. (2015). Authentic leadership as a source of optimism, trust in the organisation and work engagement in the public health care sector. *SA Journal of Human Resource Management*, *13*(1), 12-pages. doi: 10.4102/sajhrm.v13i1.675

Stearns, M. (2012). *The relationship of leadership behaviors to staff RN job satisfaction and retention*. (Unpublished doctoral dissertation). Grand Canyon University, United States.

Taylor, C., Gibbs, G.R. (2010). *How and What to Code*. http://onlineqda.hud.ac.uk/Intro_QDA/how_what_to_cod.php. Accessed July 7, 2013.

Tetrick, L. E. (1989). The motivating potential of leader behaviors: a comparison of two models. *Journal of Applied Social Psychology, 19*, 947–958. doi: 10.1111/j.1559-1816.1989.tb01231.x

Thomas, K. W. & Velthouse B. A. (1990). Cognitive elements of empowerment: an 'interpretive' model of intrinsic task motivation. *Academy of Management Review, 15*, 666–681.

Trilling, L. (1972). *Sincerity and authenticity*. Cambridge, MA: Harvard University Press.

Valsania, S., León, J., Alonso, F., & Cantisano, G. (2012). Authentic leadership and its effect on employees' organizational citizenship behaviours. *Psicothema*, *24*(4), 561–6.

VanDyne, L., & LePine J. A. (1998). Helping and extra-role behaviors: evidence of construct and predictive validity. *Academy of Management Journal, 41*(1), 108–119.

Van Veldhoven, M., Meijman, T.F., Broersen, J.P.J., & Fortuin, R.J. (1997). *Handleiding VBBA. Onderzoek naar de beleving van psychosociale arbeidsbelasting en werkstress met behulp van de vragenlijst beleving en beoordeling van de arbeid.* Amsterdam, The Netherlands: SKB.

Walsh, B. M., Magley, V. J., Reeves, D. W., Davies-Schrils, K. A., Marmet, M. D., & Gallus, J. (2012). Assessing workgroup norms for civility: the development of the Civility Norms Questionnaire Brief. *Journal of Business and Psychology, 27*(4), 407-420. doi: 10.1007/s10869-011-9251-4

Walumbwa, F.O., Avolio, B.J., Gardner, W.L., Wernsing, T.S. & Peterson, S.J. (2008). Authentic leadership: development and validation of a theory- based measure. *Journal of Management, 34*, 89–126.

Ware, J. E. & Kosinski, M. (2000). *SF-36 Physical & Mental Health Summary Scales: A Manual for Users of Version 1.* Quality Metric Inc, Lincoln, RI.

Weiss, H. W., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in Organizational Behavior, 18*, 1–74.

Wong, C. A., & Cummings, G. G. (2007). The relationship between nursing leadership and patient outcomes: a systematic review. *Journal of Nursing Management*, *15*(5), 508-521. doi: 10.1111/j.1365-2834.2007.00723.x

Wong, C.A.**,** & Cummings, G.G. (2009a). Authentic leadership: A new theory for nursing or back to basics? *Journal of Health Organization and Management, 23*(5), 522-538. doi: 10.1108/14777260910984014

Wong, C. A., & Cummings, G. G. (2009b). The influence of authentic leadership behaviours on trust and work outcomes of healthcare staff. *Journal of Leadership Studies, 3*(2), 6-23. doi:10.1002/jls.20104

Wong, C. A., Cummings, G. G., & Ducharme, L. (2013). The relationship between nursing leadership and patient outcomes: A systematic review update. *Journal of Nursing Management, 21*(5), 709-724. doi:10.1111/jonm.12116

Wong, C. A., & Giallonardo, L. M. (2013). Authentic leadership and nurse-assessed adverse patient outcomes. *Journal of Nursing Management*, *21*(5), 740–752. doi: 10.1111/jonm.12075

Wong, C. A., & Laschinger, H. K. (2013). Authentic leadership, performance, and job satisfaction: the mediating role of empowerment. *Journal of Advanced Nursing*, *69*(4), 947-959. doi: 10.1111/j.1365-2648.2012.06089.x

Wong, C. A., Laschinger, H. & Cummings, G. G. (2010). Authentic leadership and nurses' voice behaviour and perceptions of care quality. *Journal of Nursing Management, 18*(8), 889–900. doi: 10.1111/j.1365-2834.2010.01113.x

Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance and attitude: an exploratory study. *The Leadership Quarterly, 13*, 243–274. doi: 10.1016/S1048-9843(02)00099-1

Xiong, K., Lin, W., Li, J., & Wang, L. (2016). Employee trust in supervisors and affective commitment: The moderating role of authentic leadership. *Psychological Reports, 118*(3), 829-848. doi:10.1177/0033294116644370

Yemi-Sofumade, H. B. (2012). *The relationship between ethical and authentic nurse leadership and the turnover intentions of staff nurses*. (Unpublished doctoral dissertation). Capella University, United States.

Table 1

*Literature Search: Electronic Databases*

| Database<br>January 2004 to January 2017 | Search terms | Number of articles |
|---|---|---|
| Main Search Terms/Concepts: | Nurse AND Authentic Leadership AND Patient Outcome OR Healthcare Professionals AND Staff Outcome | |
| ABI Inform Dateline | "Authentic leader*"<br>AND Staff OR employee* OR "healthcare professional*" OR worker OR nurs* OR doctor* OR physician* OR "healthcare sector*" OR "healthcare discipline*" OR "healthcare" OR pharmacist* OR anesthesiologist* OR cardiologist* OR dermatologist* OR endocrinologist* OR gastroenterologist* OR surgeon* OR hematologist* OR immunologist* OR nephrologist* OR neurologist* OR gynecologist* OR oncologist* OR ophthalmologist* OR physiotherapist* OR psychiatrist* OR radiologist* OR urologist*<br>AND Patient* OR client*<br>AND Outcome* OR influence* OR result* OR effect* OR relation* OR consequence* OR impact* | 204 |
| Academic Search Complete | As above | 188 |
| Cochrane Database of Systematic Reviews (CDSR) | As above | 0 |
| ERIC | As above | 359 |
| PsychINFO | As above | 16 |
| SCOPUS | As above | 16 |
| Web of Science | As above | 52 |
| Dissertations & Theses | As above | 18 |
| PUBMED | "Authentic leadership" (All Field) | 54 |
| CINAHL | "Authentic leadership" | 54 |
| EMBASE | Authentic leadership.mp. | 63 |
| Total | | 1036 |
| Total minus duplicates | | 942 |
| Manual search | | 12 |
| Papers reviewed | | 142 |
| **Final Selection** | | **44=27 studies** |

Table 2

*Summary of Quality Assessment – 21 included quantitative studies*

| Criteria | No. of studies | |
|---|---|---|
| Scores | YES (=1) | NO (=0) |
| Design: | | |
|    Prospective studies | 21 | 0 |
|    Used probability sampling | 11 | 10 |
| Sample: | | |
|    Appropriate/justified sample size | 20 | 1 |
|    Sample drawn from more than one site | 16 | 5 |
|    Anonymity protected | 21 | 0 |
|    Response rate >60% | 4 | 17 |
| Measurement: | | |
|    Reliable measure of leadership | 21 | 0 |
|    Valid measure of leadership | 21 | 0 |
|    *AL was observed rather than self-reported | 20 | 1 |
|    Internal consistency $\geq$ .70 when scale used | 19 | 2 |
|    Theoretical model/framework used | 21 | 0 |
| Statistical Analyses: | | |
|    Correlations analyzed when multiple effects studied | 21 | 0 |
|    Management of outliers addressed | 21 | 0 |

*This item scored 2 points. All others scored 1 point
Weak (0-4) Moderate (5-9) Strong (10-14)       Moderate (*n*=1) Strong (*n*=20)

Table 3

*Summary of Quality Assessment – 6 included qualitative studies*

| Criteria | No. of studies | |
|---|---|---|
| Scores | YES (=1) | NO (=0) |
| Clear statement of research aims | 6 | 0 |
| Appropriate methodology | 6 | 0 |
| Appropriate research design | 6 | 0 |
| Appropriate recruitment strategy | 6 | 0 |
| Appropriate data collection | 6 | 0 |
| Relationship between the researcher and participants described | 1 | 5 |
| Ethical issues considered | 5 | 1 |
| Sufficient data analysis | 6 | 0 |
| Clear statement of findings | 5 | 1 |
| Total Score: 9 | 3 studies= 8    2 studies=7 | 1 study=9 |

Table 4

*Characteristics of Included Quantitative Studies*

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| 1 | Wong, C.A., & Cummings, G.G. (2009b). *Journal of Leadership Studies, 3*(2), 6-23<br><br>Canada | To test a model linking authentic leadership behaviors with trust in management, perceptions of supportive groups and work outcomes using a health care employee dataset and structural equation modeling procedures<br><br>Avolio et al.'s authentic leadership theory (2004) and the framework of dyadic trust of Mayer et al. (1995) | Quantitative survey – secondary analysis | Two groups: (1) the clinical group comprised responses from 147 clinical provider staff, including registered nurses, pharmacists, physicians, radiation therapists, and other health care professionals; and (2) nonclinical group included 188 administrative, research, and support staff; randomly selected<br><br>Response rate=NR<br>Final n= 147 and 188<br><br>**Demographics:**<br>Reported: yes | Self-awareness, balanced information processing, authentic behavior, and relational transparency: Leadership Practices Inventory (LPI; Kouzes & Posner, 2003)<br><br>**Mediating Factor(s):**<br>Trust in management and supportive group: Areas of Worklife Scale (AWS; Leiter & Maslach, 2004)<br><br>**Outcome Factor(s):**<br>Voice behavior, self-rated performance, and burnout: Maslach Burnout Inventory General Survey (MBI-GS; Maslach, Jackson, & Leiter, 1996) | NR/NR<br><br><br><br>NR/NR<br><br><br><br>NR/NR | Structural equation Modeling<br><br>Pearson correlations |
| 2a | Wong, C. A., Spence Laschinger, H. K., Cummings, G. G., (2010). *Journal of Nursing Management, 18*(8), 889–900<br><br>Canada | To test a theoretical model linking authentic leadership with staff nurses' trust in their manager, work engagement, voice behaviour and perceived unit care quality<br><br>Avolio et al.'s authentic leadership theory (2004) | A non-experimental, predictive survey | 600 registered randomly selected nurses working in acute care teaching and community hospitals in Ontario<br><br>Response rate: 48%<br>Final n: 280<br><br>**Demographics:** | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007)<br>Mean= 2.35      SD=0.99<br><br>**Mediating Factor(s):**<br>Personal identification: Personal Identification Questionnaire (Kark et al., 2003) | $\alpha$= 0.97/CFA<br><br><br><br>$\alpha$= 0.95/CFA<br><br>$\alpha$= 0.90/CFA | Structural Equation Modelling<br><br>Path Analysis<br><br>Pearson's Correlations<br><br>Reliability estimates |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | | | Reported: yes | Social identification: Social Identification Questionnaire (Kark et al., 2003) | | |
| | | | | | Trust: Trust in Management Scale (Mayer & Gavin, 2005) | α= 0.83/ EFA | |
| | | | | | Work engagement: Utrecht Work Engagement Scale (UWES) short version (Schaufeli & Bakker, 2003) | α= 0.90/ CFA | |
| | | | | | **Outcome Factor(s):** Voice behavior: Helping and Voice Behaviours Scale (VanDyne & LePine, 1998) | α= 0.92/ Construct | |
| | | | | | Perceptions of unit care quality: from Hospital Staffing and Organization of Patient Outcomes (Aiken et al., 2001) | NR/NR | |
| 2b | Wong, C. A., & Laschinger, H. K. S. (2013). *Journal of Advanced Nursing*, *69*(4), 947–959  Canada | To test a model linking authentic leadership of managers with nurses' perceptions of structural empowerment, performance, and job satisfaction  Authentic leadership theory (Avolio et al., 2004) | A non-experimental, predictive survey | 600 registered nurses (RNs) randomly selected working in acute care teaching and community hospitals in Ontario  Response rate: 48% Final n: 280  **Demographics:** Reported: yes | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007) Mean=2.35  SD=0.98  **Mediating Factor(s):** Structural empowerment: Conditions of Work Effectiveness Questionnaire II (CWEQ-II) (Laschinger et al., 2001)  **Outcome Factor(s):** Job satisfaction: Global Job Satisfaction Survey (Quinn & Shepard,1974) | α= 0.97/ CFA  α= 0.88/CFA  α=0.95/ correlations with other variables | Structural equation modelling  Path analysis  Pearson correlations |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | | | | Performance: General Performance scale (Roe et al., 2000) | α= 0·81/ correlations with other variables | |
| 2c | Bamford, M., Wong, C., & Laschinger, H. (2013). *Journal of Nursing Management*, 21, 529–540  Canada | To examine the relationships among nurses' perceptions of nurse managers' authentic leadership, nurses' overall person–job match in the six areas of worklife and their work engagement  Six areas of worklife (Maslach & Leiter, 1997) and authentic leadership theory (Avolio et al., 2004) | A non-experimental, predictive survey design | A random sample of 600 nurses working in acute care hospitals in Ontario and employed in a direct-care nursing position; selected from the College of Nurses (CNO)  Response rate= 48% Final= 280  **Demographics:** Reported: yes | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007) Mean= 2.35    SD=0.99  **Moderating Factor(s):** Person–job match in the six areas of worklife: The Areas of Worklife Scale (AWS) (Leiter & Maslach, 2002)  **Outcome Factor(s):** Work engagement: The Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2003) | α = 0.97/CFA         α=0.89/ Criterion validity       α= 0.90/CFA | Hierarchical multiple regression and mediation analysis  Pearson correlations |
| 2d | Wong, C. A., & Giallonardo, L. M. (2013). *Journal of Nursing Management*, *21*(5), 740–752  Canada | To test a model examining relationships among authentic leadership, nurses' trust in their manager, areas of work life and nurse-assessed adverse patient outcomes  Authentic leadership theory (Walumbwa et al. 2008) | Secondary analysis of data collected in a cross-sectional survey | 600 nurses randomly selected working in acute care hospitals across Ontario fulltime and part-time  Response rate: 48% Final n: 280  **Demographics:** Reported: yes | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007) Mean=2.35   SD=0.98  **Mediating Factor(s):** Trust in manager: Trust in Management Scale.(Mayer & Gavin, 2005)  Person–job match: The Areas of Worklife Scale (AWS) (Leiter & Maslach 2002)  **Outcome Factor(s):** | α=0.97/CFA          α= 0.83/ Factor analysis     α= 0.98 correlations with other variables    α=0.81/ | Reliability estimates  Pearson correlations  Structural Equation Modelling |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | | | | Adverse patient outcomes: American Nurses Association (ANA) Nursing Quality Indicators (Sochalski, 2001) | correlations with other variables | |
| 3 | Giallonardo, L., Wong, C., & Iwasiw, C. (2010). *Journal of Nursing Management, 18*, 993–1003  Canada | To examine the relationships between new graduate nurses_ perceptions of preceptor authentic leadership, work engagement and job satisfaction  Authentic leadership (Avolio et al., 2004) and concept of work engagement (Schaufeli & Bakker, 2004) | A non-experimental, predictive survey design | 500 randomly selected from the College of Nurses of Ontario (CNO); nurses working in acute care settings with <2 years nursing experience. The inclusion criteria were later modified to include new graduate nurses with less than or equal to 3 years of nursing experience.  Response rate= 39% Final= 170  **Demographics:** Reported: yes | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007) Mean= 3.05  SD = 0.62  **Mediating Factor(s):** Work engagement: The Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2003)  **Outcome Factor(s):** Job satisfaction: Index of Work Satisfaction scale (IWS) (Stamps, 1997) | α= 0.91/ CFA    α= 0.86/ CFA    α= 0.90/ NR | Pearson's correlations, hierarchical multiple regression and mediation analysis |
| 4a | Laschinger, H., Wong, C., & Grau, A. (2012). *International Journal of Nursing Studies, 49*, 1266–1276  Canada | Test a model linking authentic leadership to new graduate nurses' experiences of workplace bullying and burnout, and subsequently, job satisfaction and intentions to leave their jobs     Authentic leadership (Avolio et al., 2004), notion of workplace | A cross-sectional survey design | 907 newly graduated nurses with less than two years of experience in acute care hospitals across Ontario drawn randomly from registry list of practicing nurses in Ontario  Response rate=38% Final n= 342  **Demographics:** | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007) Mean= 2.47      SD=0.85  **Mediating Factor(s):** Workplace bulling: Negative Acts Questionnaire-Revised (Einarsen & Hoel, 2001).  **Outcome Factor(s):** Burnout: Emotional exhaustion subscale of the Maslach | α= 0.95/ CFA    α= 0.92/ CFA    α= 0.92/ | Structural equation modelling (SEM)  Pearson correlations  Reliability Assessments |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | bullying (Einarsen et al., 1998), and burnout model (Leiter & Maslach, 2004) | | Reported: yes | Burnout Inventory-General Survey (MBI-GS) (Schaufeli et al., 1996). | correlations with other variables | |
| | | | | | Job satisfaction: Job Satisfaction Scale ( Hackman & Oldham, 1975) | $\alpha$= 0.80/ correlations with other variables | |
| | | | | | Turnover Intentions: Turnover Intentions Scale (Kelloway, Gottlieb & Barham, 1999) | $\alpha$= 0.87/ correlations with other variables | |
| 4b & 2a | Laschinger, H., Wong, C. & Grau, A. (2013). *The Journal of Nursing Management, 21*, 541-552  Canada | To examine the effect of authentic leadership and structural empowerment on the emotional exhaustion and cynicism of new graduates and experienced acute-care nurses  Empowerment theory (Kanter, 1977, 1993), AL theory (Avolio et al, 2009), and burnout theory (Leiter & Maslach, 2004) | A secondary analysis of data from two studies | 907 new graduate nurses randomly selected with <2 years of practice experience and 600 nurses with more than 2years experience  Response rate: 37.7% for new graduate (NG) and 48% for the experienced nurses (EN) Final n: 342 NG and 273 EN  **Demographics:** Reported: yes | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007) Mean= 2.37   SD=0.98  **Mediating Factor(s):** Structural Empowerment: The Conditions of Work Effectiveness Questionnaire-II (CWEQ-II) (Laschinger et al., 2001)  **Outcome Factor(s):** Emotional exhaustion and cynicism: The Maslach Burnout Inventory–General Survey (Schaufeli et al., 1996) | $\alpha$= EN:0.97 NG: 0.95/ CFA  $\alpha$=EN: 0.84 NG:0.83/ CFA  $\alpha$ = EN:0.93; 0.89 NG: 0.92; 0.85/NR | Structural equation modelling (SEM)  Pearson correlations |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| 4c | Read, E., & Laschinger, H. K. (2013). *The Journal of Nursing Administration, 43*(4), 221–228<br><br>Canada | To explore correlates of new graduate nurses' experiences of workplace mistreatment<br><br>Organizational and personal correlates of new graduate nurses' experiences of workplace mistreatment (incivility and bullying) (Read & Laschinger, 2013) | Secondary data analysis of cross-sectional survey | 907 RNs newly registered randomly selected with the College of Nurses of Ontario within the last 2 years<br><br>Response rate: 48%<br>Final n: 342<br><br>**Demographics:** Reported: yes | Authentic leadership: Authentic Leadership Questionnaire (Walumbwa et al., 2008)<br>Mean= 2.47   SD=0.86<br><br>**Workplace mistreatment:**<br>Incivility: Workplace Incivility Scale (Cortina et al., 2001)<br>Bullying: Negative Acts Questionnaire (Einarsen et al., 2009) | α= 0.94/NR<br><br><br><br>α= 0.89/NR<br><br>α=0 .90/NR | Pearson's correlations |
| 4d | Laschinger, H. & Smith, L. (2013). *The Journal of Nursing Administration, 43*, 24-29<br><br>Canada | To examine new-graduate nurses' perceptions of the influence of authentic leadership and structural empowerment on the quality of interprofessional collaboration in healthcare work environments<br><br>Authentic leadership theory (Avolio et al., 2004) and workplace empowerment Theory (Kanter, 1977) | A correlational survey design | 342 new graduates randomly selected from the College of Nurses of Ontario registry list with less than 2 years' experience<br><br>Response rate: NR<br>Final n: 194<br><br>**Demographics:** Reported: yes | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al. 2007)<br>Mean= 2.35   SD= 1.00<br><br>Structural empowerment: Conditions of Work Effectiveness Questionnaire-II. (Laschinger et al., 2001)<br><br>**Mediating Factor(s):** NR<br><br>**Outcome Factor(s):**<br>Interprofessional collaboration: A researcher-constructed Interprofessional Collaboration Scale (Kenaszchuk et al., 2010; Orchard et al., 2005) | α= 0.96/ CFA<br><br><br><br>α= 0.84/ CFA<br><br><br><br>α= 0.75 /EFA | Hierarchical multiple linear regression |
| 5a | Laschinger, H. & Fida, R. (2014a). *European Journal of Work and Organizational Psychology, 23*, 739–753 | To examine: 1) The relationship between authentic leadership and new graduate nurses experiences of workplace bullying and | Two-wave study utilized questionnaire data gathered | 907 new graduated nurses randomly selected with less than 2 years of experience in acute care hospitals | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007)<br>Mean= 2.49   SD=0.88 | α= 0.94/NR | Structural equation models (SEM)<br><br>Pearson correlations |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | Canada | burnout over a 1-year timeframe in Canadian healthcare settings. 2) The process from workplace bullying to subsequent burnout dimensions, and to job and career turnover intentions  Authentic leadership theory (Avolio et al., 2004) | in 2010 (Time 1) and 2011 (Time 2) | across Ontario, Canada  Response rate: Time 1=37.7%, Time 2= 59.9% Final n:T1= 342, T2= 205  **Demographics:** Reported: yes | **Mediating Factor(s):** Work-related bullying: Negative Acts Questionnaire (NAQ-R; Einarsen & Hoel, 2001)  The emotional exhaustion and cynicism: Maslach Burnout Inventory–General Survey (MBIGS; Schaufeli, Leiter, Maslach, & Jackson, 1996)  **Outcome Factor(s):** Job turnover: Job Turnover Intentions Scale (Kelloway, Gottlieb, & Barham, 1999)  Career turnover intention: Job Turnover Intentions Scale (Kelloway, Gottlieb, & Barham, 1999) | α= 0.80/ NR    α= 0.92-0.85/NR       α= 0.88/NR     α= 0.82/ NR | |
| 5b | Laschinger, H. K., & Fida, R. (2014b). *Burnout Research, 1*(1), 19–28  Canada | To investigate the influence of authentic leadership, an organizational resource, and psychological capital, an intrapersonal resource, on new graduate burnout, occupational satisfaction, and workplace mental health over the first year of employment  Authentic leadership (Avolio & Gardner, 2005) and psychological | A two-wave survey (Time 1 in 2010; Time 2 in 2011) | 907 newly graduated nurses randomly selected with less than two years of experience in acute care hospitals across Ontario  Response rate: Time 1=37.7%, Time 2= 59.9% Final n:T1= 342, T2= 205 **Demographics:** Reported: yes | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007) Mean=2.49    SD=0.88  Psychological capital: Psychological Capital Questionnaire (Luthans et al., 2007; Luthans et al., 2007)  **Mediating Factor(s):** Emotional exhaustion and cynicism: Maslach Burnout Inventory-General Survey (MBI-GS) (Schaufeli, Leiter, Maslach, & Jackson, 1996) | α = 0.94/ correlations with other variables   α = 0.90/ correlations with other variables   α = 0.92-0.84/ correlations with other variables | Conditional latent growth model (LGM) with two time points  Pearson correlations |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | capital (Luthans & Jensen, 2005) | | | **Outcome Factor(s):** Work and career satisfaction: (Shaver & Lacey, 2003) | α= 0.85/ correlations with other variables | |
| | | | | | Mental health: Mental Health Index (MHI-5) (Ware & Sherbourne, 1992) | α= 0.82/ correlations with other variables | |
| 5c | Read, E. & Laschinger, H. (2015). *Journal of advanced nursing, 71*(7), 1611-1623 <br><br> Canada | To examine a theoretical model testing the effects of authentic leadership, structural empowerment and relational social capital on the mental health and job satisfaction of new graduate nurses over the first year of practice <br><br> Structural empowerment (Kanter, 1977, 1993), authentic leadership theory (Avolio & Gardner, 2005), and social capital theory (Nahapiet & Ghoshal, 1998) | A longitudinal survey design | 709 new graduate nurses randomly selected in Ontario with <2 years of experience <br><br> Response rate: Time 1=48.2%, Time 2= 55.8% <br> Final n:T1= 342, T2= 191 <br><br> **Demographics:** Reported: yes | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008) Mean= 2.47 SD=0.88 <br><br> **Mediating Factor(s):** Structural empowerment: Conditions of Work Effectiveness Questionnaire II (CWEQ-II) (Laschinger et al., 2001) <br><br> **Outcome Factor(s):** Relational social capital: Areas of Worklife Scale (AWS) (Leiter & Maslach, 2003) <br><br> Mental health symptoms: Mental Health Inventory (MHI-5) (Ware & Kosinski, 2000) <br><br> Job satisfaction: (Shaver & Lacey, 2003) | α = 0.95 /CFA <br><br><br><br> α= 0.80/ CFA <br><br><br><br><br> α=0.81/ NR <br><br><br> α= 0.86/ NR <br><br><br> α=0.82/ NR | Structural equation modelling <br><br> Pearson correlations <br><br> Path Analysis |
| 5d | Regan, S., Laschinger, H. K. S., & Wong, C. A. (2016). *Journal of Nursing Management, 24*(1), 54–61 | To examine the influence of structural empowerment, authentic leadership and professional nursing practice environments | A predictive non-experimental design | 2012 experienced registered nurses (those with greater than 5 years' experience) | Structural empowerment: Conditions of Work Effectiveness Questionnaire – II (CWQ-II) (Laschinger et al., 2001) | α= 0.85/ correlations with other variables | Hierarchical multiple linear regression analyses <br><br> Pearson Correlations |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | Canada | on experienced nurses' perceptions of interprofessional collaboration | | Response rate:13% Final n: 220  **Demographics:** Reported: yes | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2012) Mean= 2.28    SD=1.04 | α= 0.97/ correlations with other variables | |
| | | Structural empowerment (Kanter, 1977; Laschinger, 1996), authentic leadership (Walumbwa et al. 2008), and professional nursing practice environments (American Association of Colleges of Nursing, 2002) | | | Professional nursing practice environment: Nursing Work Index- Revised (NWI-R) (Aiken & Patrician, 2000)  **Mediating Factor(s):** NR  **Outcome Factor(s):** Interprofessional collaboration: Interprofessional Collaboration Scale (IPCS) (Laschinger & Smith, 2013) | α= 0.82/ correlations with other variables  α= 0.90/ correlations with other variables | |
| 5e | Laschinger, H., & Fida, R. (2015). *Journal of Nursing Administration*, *45*(5), 276–283  Canada | A model linking authentic leadership, structural empowerment, and supportive professional practice environments to nurses' perceptions of patient care quality and job satisfaction was tested  AL theory (Avolio & Gardner, 2005), structural empowerment theory (Kanter, 1977, 1993), and Magnet Hospital Model (MHM) (McClure et al., 2002) | A cross-sectional provincial survey | 723 nurses working in direct patient care settings randomly selected  Response rate: NR Final n: 723  **Demographics:** Reported: yes | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008) Mean= 2.29   SD=1.05  **Mediating Factor(s):** Structural empowerment: Conditions of Work Effectiveness-II (CWEQ-II) (Kanter, 1977)  **Outcome Factor(s):** Supportive practice environments and adequate staffing: Nursing Work Index-Revised (NWI-R) (Aiken & Patrician, 2000) Quality of care: Nurse-assessed patient care quality was measured using A) a single item How would you describe the | α=0.97/ correlations with other variables  α= 0.86/ correlations with other variables  α=0.80/ correlations with other variables  NR/ correlations with other variables | Structural equation modeling  Pearson correlations |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | | | | quality of nursing care delivered to patients in your unit? B) In the last month, how often has short-staffing affected your ability to meet your patient/clients' needs? | | |
| | | | | | Job satisfaction: (Cammann et al., 1983) | α =0.77/ correlations with other variables | |
| 5f | Fallatah, F. & Spence Laschinger. H., (2016). *Journal of Research in Nursing, 21*(2), 125–136<br><br>Canada | To test a theoretical model linking authentic leadership to new graduate nurses' job satisfaction through its effect on supportive professional practice environments<br><br>Authentic leadership theory (Avolio et al., 2004) and Magnet Hospital model of supportive professional practice environments (Aiken & Patrician, 2000) | Tested the hypothesized model by using data from a larger two-wave study of new graduate nurses in their first two years of practice | 93 new graduate nurses randomly drawn from the registry list of the College of Nursing in Ontario; working in acute care settings and with less than two years of experience<br><br>Response rate: NR<br>Final n: 93<br><br>**Demographics:**<br>Reported: yes | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007)<br>Mean= 2.31    SD= 0.79<br><br>**Mediating Factor(s):**<br>Supportive professional practice environments: Nursing Worklife Index (NWI-R) (Aiken & Patrician, 2000)<br><br>**Outcome Factor(s):**<br>New graduate nurses' job satisfaction: North Carolina Center for Nursing – Survey of Newly Licensed Nurses (Scott et al., 2008) | α= 0.92/ correlations with other variables<br><br><br>α= 0.79/ correlations with other variables<br><br><br>α= 0.79/ correlations with other variables | Mediation analysis of Baron and Kenny (1986).<br><br>Hierarchical multiple linear regression<br><br>Pearson correlations |
| 6a | Laschinger, H. K. S., Cummings, G., Leiter, M., Wong, C., MacPhee, M., Ritchie, J., ... & Young-Ritchie, C. (2016). *International Journal of Nursing Studies, 57*, 82-95 | To investigate factors influencing new graduate nurses' successful transition to their full professional role in Canadian hospital settings and to determine predictors of job and career | A time-lagged | 3906 Registered Nurses randomly selected with less than 3 years of experience currently working in direct patient care but the results of this study were described from nurses who responded | **Time 1:**<br>Authentic leadership: Authentic Leadership Questionnaire (Walumbwa et al., 2008)<br>Mean: T1= 2.64 T2=2.51<br>SD: TI= 0.87 T2=0.90<br><br>**Outcome Factor(s):**<br>**Time 2:** | α= 0.96/ CFA | Paired t-tests<br><br>Pearson's correlations<br><br>Hierarchical multiple linear regression |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | Canada | satisfaction and turnover intentions over a one-year time period in their early employment<br><br>Organizational socialization model (Scott et al., 2008) | | to both Time 1 and Time 2<br><br>Response rate: Time 1= 27.3% Time 2=39.8% Final n: Time 1=1020 Time 2= 403 of Time 1<br><br>**Demographics:** Reported: yes | Job satisfaction: (Cammann et al., 1983)<br><br>Job turnover intentions: (Kelloway et al., 1999)<br><br>Career satisfaction: (Shaver & Lacey, 2003)<br><br>Career turnover intentions: (Kelloway et al., 1999) | α=0.88/ previous studies<br><br>α=0.88/ previous studies<br><br>α =0.77/ previous studies<br><br>α=0.75/ previous studies | |
| 6b | Laschinger, H, Borgogni, L., Consiglio, C. & Read, E., (2015). *International Journal of Nursing Studies, 52*, 1080–1089<br><br>Canada | To test: 1) a model linking authentic leadership, areas of worklife, occupational coping self-efficacy, burnout, and mental health among new graduate nurses and 2) the validity of the concept of interpersonal strain at work as a facet of burnout<br><br>Authentic leadership (Avolio & Gardner, 2005), six areas of worklife model (Leiter & Maslach, 2004; Maslach & Leiter, 1997), conceptualization of occupational coping self-efficacy (Pisanti et al., 2008), and concept | A cross-sectional national survey | 3743 new graduate nurses randomly selected with less than 3 years of nursing experience working in direct patient care settings from across Canada<br><br>Response rate: 27% Final n: 1009 **Demographics:** Reported: yes | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008) Mean=2.60 SD=0.87<br><br>**Mediating Factor(s):** Areas of worklife: Areas of Worklife Scale (Leiter & Maslach, 2011)<br><br>**Outcome Factor(s):** Occupational coping self-efficacy: Occupational Coping Self-Efficacy Scale (Pisanti et al., 2008)<br><br>Burnout: Burnout Inventory-General Survey (Borgoni et al., 2012) | α=0.96/ CFA<br><br>α=0.81/ CFA<br><br>α=0.83/ CFA<br><br>α= 0.82-0.92/ CFA | Structural equation modelling (SEM)<br><br>Pearson correlations |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | of interpersonal strain at work as part of the expanded model of burnout (Borgogni et al., 2012) | | | Mental health: General Health Questionnaire (Goldberg & Williams, 1988) | α=0.85/ previous studies | |
| 6c | Laschinger, H. K. S., & Read, E. A. (2016). *Journal of Nursing Administration*, *46*(11), 574-580 <br><br> Canada | To examine influence of authentic leadership, person-job fit with 6 areas of worklife, and civility norms on coworker incivility and burnout among new graduate nurses <br><br> Authentic leadership theory (Avolio & Gardner, 2005) | A cross-sectional mail survey | 3906 new graduate nurses randomly selected from the nursing registry bodies of 10 Canadian provinces <br><br> Response rate= 27.3% Final= 1020 <br><br> **Demographics:** Reported: yes | Authentic leadership: Authentic Leadership Questionnaire (Walumbwa et al., 2008) Mean= 2.61  SD= 0.87 <br><br> **Mediating Factor(s):** Areas of worklife: Areas of Worklife Scale (Leiter & Maslach, 2000) <br><br> **Outcome Factor(s):** Civility norms: Civility Norms Questionnaire (Walsh et al. 2012) <br><br> Co-worker incivility: Straightforward Workplace Incivility Scale, Co-worker Incivility Subscale (Leiter& Day, 2013) <br><br> Emotional exhaustion: Maslach Burnout Inventory (MBI), Emotional Exhaustion Subscale (Schaufeli et al., 1996) | α= 0.96/ CFA <br><br><br><br><br> α=0.77/ CFA <br><br><br><br> α= 0.89/ CFA <br><br><br><br><br> α=0.93/ CFA <br><br><br><br><br><br> α= 0.92/ CFA | Structural equation modeling (SEM) <br><br> Correlation analysis |
| 6d | Boamah, S. A., Read, E. A., & Spence Laschinger, H. K. (2017). *Journal of Advanced Nursing*, *73*(5), 1182–1195 <br><br> Canada | To test a hypothesized model linking new graduate nurses' perceptions of their manager's authentic leadership behaviours to structural empowerment, short- | A time-lagged study | 3,743 registered nurses randomly selected with less than 3 years of nursing work experience currently working in direct patient care roles were selected from the | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008) Mean= 2.64  SD= 0.86 <br><br> **Mediating Factor(s):** Structural empowerment: Conditions of Work | α= 0.93/ CFA <br><br><br><br><br> α= 0.85/ CFA | Structural equation modelling <br><br> Pearson correlation |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | staffing and work–life interference and subsequent burnout, job satisfaction and patient care quality | | nursing registry database of each of the 10 Canadian provinces | Effectiveness-II (CWEQ-II) (Laschinger et al., 2001) | | |
| | | | | Response rate= Time 1= 27.3% Time 2= 39.8% Final= Time 1= 1,020 Time 2= 406 of Time 1 | **Outcome Factor(s):** Work-life interference: The Work Interference with Personal Life (WIPL) (Fisher-McAuley et al., 2003) | α= 0.85/ NR | |
| | | Authentic leadership theory (Avolio & Gardner, 2005), structural empowerment (Kanter, 1993), and burnout theory (Maslach & Leiter, 1997) | | **Demographics:** Reported: yes | Short-staffing: A single-item how often working short-staffed affects nurses' ability to provide quality patient care (Pineau Stam et al., 2015) | NR/ NR | |
| | | | | | Burnout: Maslach Burnout Inventory General Survey (MBI-GS) (Schaufeli et al., 1996) | α = 0.81-0.92/ Previous studies | |
| | | | | | Job satisfaction: Michigan Assessment of Organizations Questionnaire (Cammann et al., 1983) | α= 0.86/ NR | |
| | | | | | Nurse-assessed quality of care: (Aiken & Patrician, 2000) | NR/ NR | |
| 6e | Fallatah, F, Laschinger, H, & Read, E, (2017). *Nursing Outlook, 65*(2), 172-183 Canada | To examine influence of authentic leadership on new nurses' job turnover intentions through new graduate nurses' personal identification with their leader, organizational identification, and occupational coping self-efficacy | A cross-sectional design | 3,906 new graduate nurses with less than three years of experience currently working in acute care and community settings Response rate: NR Final n: 998 | Authentic leadership: Authentic Leadership Questionnaire (Walumbwa et al., 2008) Mean= 2.60    SD= 0.87 **Mediating Factor(s):** Personal identification: Relational Identification Scale (Sluss, Ployhart, Cobb & Ashforth, 2012) | α= 0.93/ previous studies α= 0.89/ Previous studies | Pearson's r correlations Structural equation modeling (SEM) Confirmatory factor analysis (CFA) |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | Authentic leadership theory (Avolio et al., 2004) | | **Demographics:** Reported: yes | **Outcome Factor(s):** Organizational identification: The Organizational Identification Scale (Sluss & colleagues, 2012) | α= 0.87/ previous studies | |
| | | | | | Occupational coping self-efficacy: The Occupational Coping Self-Efficacy Questionnaire (Pisanti, Lombardo, Lucidi, Lazzari & Bertini, 2008) | α= 0.82/ Previous studies | |
| | | | | | Job turnover intention: Turnover Intention Scale (Kelloway, Gottlieb & Barham, 1999) | α= 0.87/ previous studies | |
| 7 | Nelson, K., Boudrias, J., Brunet, L., Morin, D., Civita, M., Savoie, A., and Alderson, M. (2014). *Burnout Research, 1,* 90–101<br><br>Canada | To examine link between authentic leadership and psychological well-being by considering the mediational effect of work climate<br><br>Psychological well-being (Gilbert et al., 2011) and authentic leadership theory (Avolio & Gardner, 2005) | A non-experimental time-lagged design | 7997 nurses randomly selected<br><br>Response rate: Time 1=10.7%, Time 2= 71.8%<br>Final n:T1= 859, T2= 608 of T1<br><br>**Demographics:** Reported: yes Examined/ Analyzed: yes (education and frequency of contact with supervisor are positively associated with AL) | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008) Mean= 3.49    SD= .90<br><br>**Mediating Factor(s)** Work climate: Work Climate Scale (Roy, 1989)<br><br>**Outcome Factor(s):** Psychological well-being at work: Psychological Well-Being Scale (Gilbert et al., 2011, 2006) | α=0.82-0.95/ CFA<br><br><br>α=0.97/ CFA<br><br><br>α=0.95 Exploratory factor analysis | Confirmatory Factor Analysis<br><br>Correlational analyses<br><br>Multiple linear regression analyses<br><br>Mediation assessed using ordinary least squares path analysis with the PROCESS macro developed by Hayes (2013) in SPSS 21.0 |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| 8 | Rahimnia, F., & Sharifirad, M. S. (2015). *Journal of Business Ethics, 132*(2), 363-377<br><br>Iran | To investigate relationship between authentic leadership and the three dimensions of employee well-being (job satisfaction, perceived work stress, and stress symptoms) and attachment insecurity<br><br>Authentic Leadership and Employee Well-Being (Avolio & Gardner, 2005) | A non-experimental, predictive survey design | 352 health care providers with patient contact- 5 hospitals/ randomly selected (nurses = 67.2%; MDs = 32.8%)<br><br>Response rate:60.2% Final n: 212<br><br>**Demographics:** Reported: yes | Authentic leadership: Authentic Leadership Inventory (ALI) (Neider & Schriesheim, 2011) Mean= 3.11    SD= 0.57<br><br>**Mediating Factor(s):** Attachment insecurity: Close Relationships Inventory Scale (Brennan et al., 1998)<br>**Outcome Factor(s):** Job satisfaction: (Cammann et al., 1979)<br><br>Perceived work stress: (Siu et al., 2007, 2006)<br><br>Stress symptoms: Organizational Stress Screening Tool (Cartwright & Cooper, 2002) | α=0.91/CFA<br><br><br><br>α=0.88/CFA<br><br>α=0.84/ NR<br><br>α=0.87/NR<br><br>α=0.92/NR | Confirmatory Factor Analysis<br><br>Structural equation modeling<br>Pearson correlations |
| 9a | Stander, F. W., De Beer, L. T., & Stander, M. W. (2015). *Journal of Human Resource Management, 13*(1), 12-pages<br><br>South African | To determine whether AL predicts optimism, trust in the organization and work engagement and to establish whether optimism and trust in the organization mediates relationship between AL and work engagement<br><br>Authentic leadership theory (Walumbwa et al., 2008) | A cross-sectional survey research design | 633 public health employees from 27 hospitals and clinics and who work in various functions (management = 7.4%; administration = 19.6%; specialist=12%; other=50.9%)/ convenience sampling selected<br><br>Response rate: NR Final n: 633<br><br>**Demographics:** Reported: yes | Authentic leadership: Authentic Leadership Inventory (ALI) (Neider & Schriesheim, 2011) Mean= NR   SD=NR<br><br>Job resources of relationship with colleagues  and communication: VBBA (Van Veldhoven et al., 1997)<br><br>**Mediating Factor(s):** Optimism: PsyCap Questionnaire (Luthans, Avolio, Avey & Norman, 2007)<br><br>Trust in the organization: Workplace Trust Survey (WTS; Ferres & Travaglione, 2003) | α = 0.93/CFA<br><br><br><br>α = 0.83-0.84/ CFA<br><br><br>α =0.74/ CFA<br><br>α =0.88/CFA | Structural equation modelling<br><br>Confirmatory factor analysis<br><br>Correlation analyses |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | | | | **Outcome Factor(s):** Work engagement: Utrecht Work Engagement Scale (Schaufeli et al., 2002) | α= 0.90/CFA | |
| 9b | Coxen, L., van der Vaart, L., & Stander, M. W. (2016). *SA Journal of Industrial Psychology, 42*(1), 13-pages | To investigate the influence of authentic leadership on organizational citizenship behavior, through workplace trust | A quantitative cross-sectional survey | 633 employees working in the public health care sector – 27 hospitals and clinics and who work in various functions (management = 7.4%; | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008) Mean: 3.37    SD: 0.92 **Mediating Factor(s):** | α= 0.92/ CFA | Structural equation modelling (SEM) Pearson correlations |
| | South Africa | Authentic leadership theory (Walumbwa et al., 2008) | | administration = 19.6%; specialist=12%; other=50.9%)/ (convenience sampling) | Trust in the organization, trust in the immediate supervisor, and trust in co-worker: The Workplace Trust Survey (WTS) (Ferres, 2003) | α= 0.87/ CFA | Confirmatory factor analyses (CFA) |
| | | | | Response rate=NR Final n= 633 | **Outcome Factor(s):** Organizational citizenship behavior (organization and co-worker): Organizational Citizenship Behavior Scale (OCBS) (Rothmann, 2010) | α = 0.73/ CFA | |
| | | | | **Demographics:** Reported: yes | | | |
| 10 | Malik, N., Dhar, R. & Handa, S. (2016). *International Journal of Nursing Studies, 63*, 28-36 | To examine the relationship between AL and employee creativity, while determining the mediating effect of knowledge sharing behaviour and moderating effect of use of information technology on this association | A questionnaire-based survey | 620 nurses and their supervisors for hospitals and nursing homes/ convenience samplingence Response rate:65.32% Final n: 405 nurses and 81 supervisors = 405 nurse-supervisor dyads | Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008) Mean= 1.875    SD=1.12 **Mediating Factor(s):** Knowledge sharing behavior: (Lu et al., 2006) | α = 0.97/ CFA α = 0.96/ CFA | Confirmatory factor analyses (CFA) Pearson correlations Path analysis using SPSS macro named PROCESS (Hayes, 2013) |
| | India | | | **Demographics:** Reported: no | **Moderating Factor(s):** Use of information technology: (Saga & Zmud, 1993) | α = 0.93/ CFA | |
| | | Authentic leadership (Walumbwa et al., 2008) and employee | | | **Outcome Factor(s):** | | |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | creativity (Amabile, 1988; Oldham & Cummings, 1996) | | | Employee creativity: (Oldham & Cummings, 1996) | $\alpha$ = 0.84/ CFA | |
| 11 | Mortier, A.V., Vlerick, P. & Clays. E. (2016). *Journal of Nursing Management, 24*, 357–365 <br><br> Belgium | To examine relationship between authentic leadership and two dimensions of thriving (learning and vitality) among nurses, and to study the mediating role of empathy in this relationship <br><br> Nurses' wellbeing model (Utriainen et al., 2014) and authentic leadership theory (Avolio & Gardner, 2005) | A cross-sectional design | 950 nurses in large hospital approached for study/convenience sample <br><br> Response rate:37.9% <br> Final n: 360 <br><br> **Demographics:** <br> Reported: yes | Authentic Leadership: Authentic Leadership Inventory (ALI) (Neider & Schriesheim 2011) Mean= 53.40  SD= 10.58 <br><br> **Mediating Factor(s):** <br> Empathy: (Wong & Law, 2002) <br><br> **Outcome Factor(s):** <br> Thriving: (Porath et al., 2012) | $\alpha$=0.93/ NR <br><br><br><br><br> $\alpha$=0.87/ NR <br><br><br><br> $\alpha$=0.80-0.86/ NR | Hierarchical multiple linear regression analyses <br><br> 3-step procedure of Baron and Kenny (1986) <br><br> Sobel test for mediation <br><br> Correlational analyses |
| 12 | Malik, N., & Dhar, R. L. (2017). *Personnel Review, 46*(2), 277-296 <br><br> India | To examine the relationship between authentic leadership and employee extra role behavior (ERB) while determining the mediating effect of psychological capital (PC) and moderating effect of autonomy on that relationship <br><br> Authentic leadership (Luthans, Youssef and Avolio, 2007) and employee extra role behavior (Clapp-Smith et al., 2009; Moriano et al., 2011) | A quantitative, descriptive, correlation design | 900 questionnaires were distributed among nurses and an equal number among 163 supervisors in hospitals – convenience sample <br><br> Response rate for nurses=57.77 and for supervisors= 63.66 <br><br> Final n= 520 nurses and their 163 supervisors <br><br> **Demographics:** <br> Reported: yes | Authentic leadership: Authentic Leadership Questionnaire (Avolio & Chan, 2008) Mean= 2.316    SD= 1.39 <br><br> **Mediating Factor(s):** <br> Psychological capital: Psychological Capital Scale (Luthans, Avolio, Avey, & Norman, 2007) <br><br> **Moderating Factor(s):** <br> Autonomy: (Park & Searcy, 2012) <br><br> **Outcome Factor(s):** <br> Extra Role Behavior: (Eisenberger et al., 2010) | $\alpha$= 0.98/ CFA <br><br><br><br><br> $\alpha$= 0.98/ CFA <br><br><br><br> $\alpha$= 0.94/ CFA <br><br><br> $\alpha$= 0.97/ CFA | Correlations <br><br> Path analysis employing SPSS macro named PROCESS (Hayes, 2013) <br><br> Confirmatory factor analysis (CFA) <br><br> Sobel test for mediation |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | | | **UNPUBLISHED DISSERTATIONS & THESES** | | | |
| 13 | Anderson, T. L. K. (2011). (Doctoral dissertation, College Of Saint Mary) U.S | To examine the perceived levels of transformational and authentic leadership among chief nurse executives (CNEs) of acute care U.S. hospitals  Anderson Predicted Nurse Executive Leadership Conceptual Model developed for study | A quantitative, descriptive, correlation design/web-based survey | 184 CNEs speaking English, working within United States acute care hospitals; convenience sampling  Response rate= NR Final= 144 used in analysis  **Demographics:** Reported: yes Examined/ Analyzed: yes; AL positively correlated with age, and tenure in executive nursing roles, but not level of education | Transformational leadership: Multifactorial Leadership Questionnaire (MLQ) (Avolio & Bass, 2004)  Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al. 2007) Mean= 3.36-3.80 SD=.30-.48 (subscales)  **Mediating Factor(s):** NR  **Outcome Factor(s):** Organizational context; (Nursing Professional Practice Culture, NPPC): Nursing Professional Practice Culture scale (ANCC, 2008) | α=.56-.72/ NR    α=.43-.77/ NR      α=.66/NR | Frequency distributions Spearman rho correlations Mann-Whitney $U$-tests Chi square  Pearson correlations |
| 14 | Stearns, M. (2012). (Doctoral dissertation, Grand Canyon University) U.S | To investigate whether there was a relationship between the authentic leadership behaviors of nurse managers and staff RN job satisfaction and retention  Avolio et al. (2004) model of authentic leadership | A descriptive correlational design | 355 staff RNs and 29 nurse managers working on medical-surgical units at the study hospitals participated in the study- purposive sampling  Response rate:43.2% Final= 139 staff RNs and 29 nurse managers  **Demographics:** Reported: yes | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007) Mean= 3.22     SD= 0.25 **Mediating Factor(s):** NR  **Outcome Factor(s):** Job satisfaction: Satisfaction Scale (MMSS) (Mueller & McCloskey, 1990)  Unit level retention data ($n$=9 sample size too small to utilize) | α= 0.96/ previous studies      α=0.94/ previous studies | Correlational analysis  Regression analysis |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| 15 | Yemi-Sofumade, H. B. (2012). (Doctoral dissertation, Capella University)<br><br>U.S | To determine whether the perceived ethical and authentic leadership characteristics of the frontline nurse leaders may be related to the turnover intentions of subordinate staff nurses<br><br>Ethical leadership (Brown, Trevino & Harrison, 2005) and AL (Walumbwa et al., 2008) | A quantitative survey | 350 nurses randomly selected who were members of the ANA (American Nurses Association) in the Southeastern region of the U.S<br><br>Response rate:40.9%<br>Final= 116<br><br>**Demographics:**<br>Reported: yes | Ethical leadership: The Ethical Leadership Scale (ELS) (Brown, Trevino, & Harrison, 2005)<br><br>**Mediating Factor(s): NR**<br><br>**Moderating Factor(s):**<br>Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008)<br>Mean= NR    SD= NR<br><br>**Outcome Factor(s):**<br>Turnover intentions: The Turnover Intentions Questionnaire (TIQ) (Jackofsky & Slocum, 1987) | $\alpha$=0.95/ Exploratory Factor Analysis<br><br><br><br><br>$\alpha$=0.97/ CFA<br><br><br><br>$\alpha$=0.71/ NR | Linear regression<br><br>Pearson correlations |
| 2e | Fillmore, K. (2013). (Master thesis, UWO)<br><br>Canada | To examine the relationship among authentic leadership, structural empowerment, and nurses' trust in their manager in a sample of Ontario acute care nurses, and determine if structural empowerment mediates the relationship between authentic leadership and trust<br><br>The authentic leadership model Avolio et al. (2004) | A non-experimental, cross-sectional, predictive survey design | 600 registered nurses randomly selected working full-time and part-time in direct care positions in acute care community and teaching hospitals in Ontario<br><br>Response rate= 48%<br>Final= 280<br><br>**Demographics:**<br>Reported: yes<br>Examined/ Analyzed: yes - Full-time nurses have lower levels of authentic leadership than part-time nurses | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Avolio, Gardner, & Walumbwa, 2007; Walumbwa et al., 2008)<br>Mean= 2.35    SD=0.99<br><br>**Mediating Factor(s):**<br>Structural empowerment: Conditions of Work Effectiveness Questionnaire II (CWEQ-II) (Laschinger, Finegan, Shamian, & Wilk, 2001)<br><br>**Outcome Factor(s):**<br>Trust in manager: Trust in Manager Scale (Mayer & Gavin, 2005) | $\alpha$=0.97/ CFA<br><br><br><br><br>$\alpha$=0.97/ CFA<br><br><br><br><br>$\alpha$=0.83/ CFA | Pearson correlations<br><br>Hierarchical multiple linear regression<br><br>Mediation regression analysis |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| 16 | Haddad, L. M. (2013). (Doctoral dissertation, University of Tennessee)<br><br>U.S | To examine generational differences among acute care nurses on empowerment, professional practice, authentic leadership, incivility, job satisfaction, engagement and intent to leave the current job<br><br>Theory of Structural Power in Organizations (Kanter, 1993) and Generational Theory (Strauss & Howe, 1991) | A cross-sectional, randomized non-experimental design | 1500 surveys were sent out to registered nurses in acute care across state Response rate=16.9% Final= 75 participants in each of the three generational groups for a final sample of 210 RNs; systematic random sampling (every 10th nurse in registry)<br>**Demographics:** Reported: yes | Generational differences: participants were asked about birth; For this study generational cohorts were divided into the following groups: Baby Boomers, birth years 1943 – 1960, Generational X'ers, birth years 1961 – 1980, Generational Y'ers, birth year 1981 or after<br><br>Empowerment: Conditions of Work Effectiveness Questionnaire II (CWEQ-II) (Laschinger et al., 2001)<br><br>**Mediating Factor(s):** Professional practice environment: Practice Environment Scale of The Nursing Work Index (NWI-PES) (Lake, 2002)<br><br>Incivility: Workplace Incivility Scale (WIS) (Cortina et al., 2001)<br><br>Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007)<br><br>**Outcome Factor(s):** Job satisfaction: Job Diagnostic Survey (Hackman & Oldham, 1975)<br><br>Engagement: Utrecht Work Engagement Scale (UWES) | NR/NR<br><br><br><br><br>$\alpha$= 0.83/ CFA<br><br><br><br>$\alpha$= 0.94/ CFA<br><br><br><br>$\alpha$= 0.93/ NR<br><br><br>$\alpha$= 0.98/ NR<br><br><br><br>$\alpha$= 0.91/ NR<br><br><br>$\alpha$ = 0.91/ NR | General linear model (GLM)<br><br>Pearson correlations<br><br>Structural Equation Modeling (SEM) with Proc CALIS in SAS |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | | | | (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002) | | |
| | | | | | Intent to leave: Turnover Intentions Scale (Kelloway et al., 1999) | $\alpha$=0.81/ NR | |
| 17 | Du Plessis, M. (2014). (Doctoral dissertation, University of the Western Cape)<br><br>South Africa | To create a theoretical model of the relationships between authentic leadership, psychological capital, followership, and work engagement that will assist in developing organizational development (OD) interventions and leadership practices in order to improve work engagement<br><br>Work Engagement (Bakker & Demerouti, 2007), Psychological Capital (Luthans, Youssef & Avolio, 2007), Followership (Kelley, 2008), AL (Avolio & Gardner, 2005) | A quantitative, cross-sectional online survey design | 855 academic professionals and managers in a national South African private healthcare industry organization; purposive sampling<br><br>Response rate= 76% Final= 647<br><br>**Demographics:** Reported: yes Examined/ Analyzed: yes–higher AL perceived in male leaders | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007) Mean= 2.80     SD= 0.84<br><br>**Mediating Factor(s):** Psychological capital: Psychological Capital Questionnaire (PCQ) (Avolio, et al., 2007)<br><br>Followership: (Kelley, 1992)<br><br>**Outcome Factor(s):** Work engagement: Utrecht Work Engagement Scale (UWES) (Schaufeli & Bakker, 2003) | $\alpha$=0.95/CFA<br><br><br>$\alpha$= 0.89/CFA<br><br><br><br>$\alpha$= 0.79/CFA<br><br>$\alpha$= 0.92/ CFA | Confirmatory and exploratory factor analyses, reliability assessment, Pearson correlation analysis, multiple liner regression analysis and ANOVA<br><br>Structural equation modeling<br><br>Baron & Kenny (1986) mediation analysis<br><br>Sobel test or mediation |
| 18 | Bennett, K. (2015). (Master's Thesis, University of Manitoba)<br><br>Canada | To use the Organizational Framework for Predicting Nurse Retention to explore the relationship between workplace bullying, job satisfaction, and | Descriptive correlational cross-sectional survey | 317 medical-surgical nurses working in the province of Manitoba; convenience sampling (2061) invited to participate<br><br>Response rate= NR | Organizational climate: The Perceived Nurse Working Environment (PNWE) (NWI-R; Aiken & Patrician, 2000)<br><br>Control and autonomy: The McCloskey Mueller Satisfaction | $\alpha$ = NR/ Previous studies<br><br><br>NR/ NR | Bivariate tests<br><br>Multivariate ordinal regression analysis<br><br>Kruskal-Wallis test Spearman-rho correlations |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | | authentic leadership among medical-surgical nurses<br><br>Organizational Framework for Predicting Nurse Retention (OFNPR) by Sawatzky and Enns (2012) | | Final= 317<br><br>**Demographics:**<br>Reported: yes<br>Examined/ Analyzed: yes – nurses' age negatively correlated with AL of manager | Scale (MMSS; Mueller & McCloskey, 1990)<br><br>Bullying: Negative Acts Questionnaire-Revised (NAQ-R) (Notelaers & Einarsen, 2012)<br><br>Authentic leadership: The Authentic Leadership Questionnaire (ALQ) (Avolio et al. 2007)<br>Mean= 2.34    SD= 16.28<br><br>**Mediating Factor(s): NR**<br><br>**Outcome Factor(s):**<br>Job satisfaction: (Lu et al., 2012; Sawatzky & Enns, 2012) | <br><br>NR/ Previous studies<br><br>NR/ Previous studies<br><br><br><br>NR/ NR | |
| 19 | Johnson, S. H. (2015). (Doctoral dissertation, Boston College)<br><br>U.S | To examine the influence of unit-level authentic leadership and structural empowerment on staff nurse decisional involvement and patient quality outcomes<br><br>Donabedian theory of quality healthcare and its three mechanisms for assessing quality, namely structure, process, and outcome (1966) | A cross-sectional, web-based, survey | 1,669 staff nurses working in on general care units in the 11 acute-care hospital settings/convenience sampling – unit level data (*n*=105 units)<br><br>Response rate= 39%<br>Final= 1,669 from 105 units<br><br>**Demographics:**<br>Reported: yes<br>Examined/ Analyzed: yes - AL positively associated with level of education | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Walumbwa et al. 2008)<br>Mean= 2.92    SD= 0.93<br><br>Structural empowerment: Conditions of Work Effectiveness Questionnaire-II (CWEQ-II) (Laschinger et al., 2001)<br><br>**Mediating Factor(s): NR**<br><br>**Outcome Factor(s):**<br>Staff nurse decisional involvement: Decisional Involvement Scale (DIS) (Havens & Vasey, 2005) | α= 0.97/ CFA<br><br><br><br>α= 0.86/ CFA<br><br><br><br>α=0.92-0.94/ NR | Correlational analysis<br><br>Multiple regression using linear mixed effect models<br><br>Multilevel modeling |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|-------|---------------------------|------------------------------|--------|------------------|------------------------|----------------------|----------|
| | | | | | Patient quality outcomes: Patient satisfaction measure (HCAHPS) (CMS, 2006) | α=NR/ NR | |
| 20 | Plasse, M. J. (2015). (Doctoral dissertation, Northeastern University) U.S | To explore the congruence between nurse director's self-evaluation of authentic leadership style and staff nurses' evaluation of leadership style, To determine the impact of leadership style on team psychological safety, and to identify if leadership style's impact on psychological safety as mediated by peer-to peer relationship quality<br><br>Avolio, Gardner, Walumbwa, Luthans, & May (2004) authentic leadership model, Dutton and Heaphy's (2003) high quality relationship model, Cortina, Magley, Williams, and Day-Langhout (2001) notion of workplace incivility and Edmondson's (1999) notion of team psychological safety | Cross-sectional online survey | 2210 staff nurses and nurse working in general medical and surgical units within an acute care hospital setting; convenience sampling<br><br>Response rate: nurse directors=55% staff nurses=21% Final= 455 staff nurses and 17 directors<br><br>**Demographics:** Reported: yes | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Avolio et al., 2007) Mean= 4.30 for staff and 3.59 for directors SD= 1.10 for staff and 0.26 for directors<br><br>**Mediating Factor(s):** Relational quality: High-Quality Relationship Tool (Dutton & Ragin, 2007)<br><br>Workplace incivility: Workplace Incivility Scale (WIS) (Cortina, Magley, Williams, & Langhout, 2001; Cortina & Magley, 2003; Leiter, Laschinger, Day & Oore, 2011)<br><br>**Outcome Factor(s):** Psychological safety: Psychological Safety (Edmondson, 1999) | α=0.98/ CFA<br><br><br><br><br><br>α= 0.93/ NR<br><br><br><br>α= 0.90/ NR<br><br><br><br><br><br><br><br>α= 0.74/ NR | Pearson correlations<br><br>Intra-class correlation coefficients (ICC)<br><br>Structural Equation modeling - Path and mediation analysis using Mplus |
| 21 | Read, E. A. (2016). (Doctoral dissertation, University of Western Ontario) | To develop and test a self-report questionnaire to measure nurses' workplace social capital | A cross-sectional survey (online) | 1000 nurses randomly selected working in teaching or non- | Authentic leadership: Authentic Leadership Questionnaire (ALQ) (Walumbwa et al., 2008) Mean= 2.41      SD=0.99 | α=0.97/ CFA | Pearson's correlations<br><br>Structural equation modeling |

| Study | Author(s)/ Journal/Country | Purpose/ Conceptual framework | Design | Subjects/ Sample | Measurement/ instrument | Reliability/ Validity | Analysis |
|---|---|---|---|---|---|---|---|
| | Canada | and examine the nomologicial network of the concept including authentic leadership and structural empowerment as precursors of social capital and team effectiveness and patient care quality as outcomes<br><br>Nahapiet & Ghoshal's (1998) theory of social capital within organizations | | teaching hospitals in direct care staff nurse<br><br>Response rate: 25.3% Final= 247<br><br>**Demographics:** Reported: yes | **Mediating Factor(s):** Structural empowerment: Conditions of Work Effectiveness Questionnaire II (CWEQ-II) (Laschinger et al., 2001)<br><br>Workplace social capital: Workplace Social Capital Questionnaire (Read, 2016)<br><br>Team effectiveness: Technical quality Subscale (Shortell et al., 2001)<br><br>**Outcome Factor(s):** Nurse-assessed patient care quality: (Aiken & Patrician, 2000) | α= 0.84/ CFA<br><br><br>α=0.70/ a content validity index (CVI)<br><br>α=0.91/ CFA<br><br><br>one item/ NR | Confirmatory Factor analysis |

Table 5

*Characteristics of Qualitative Studies*

| Study | Author(s)/ Journal | Purpose/ Conceptual framework | Design | Subjects/ Sample | Authentic Leadership | Rigour | Analysis |
|---|---|---|---|---|---|---|---|
| 22 | Shirey, M. R. (2009). *Critical Care Nursing Quarterly, 32*(3), 189-198<br><br>U.S | To show relationships among authentic leadership, organizational culture, and healthy work environments using a stress and coping lens<br><br>Authentic leadership, organizational culture, and healthy work environments (Shirey, 2008) | A qualitative descriptive study/ 14-question face-to-face interview/ secondary analysis of findings from previous study | 21 nurse managers employed at 3 US acute care hospitals, registered nurses holding the title of nurse manager for 1 year or more and having 24-hour accountability for at least 1 patient care unit | AL is the glue that holds together the healthy work environment | Audio recorded interviews which were transcribed<br>Three researchers coded data for themes | Immediately following each interview, the investigator completed a debriefing session and summarized the preliminary themes emerging from the interview |
| 23 | Murphy, L. G. (2012). *Journal of Nursing Administration, 42*(11), 507-512<br><br>U.S | To explore experiences of hospital chief nurse executives (CNEs) in becoming and remaining authentic nurse leaders<br><br>Authentic leadership theory (Walumbwa et al., 2008) | Narrative inquiry/ 2 semi structured interview | Three nurses known as authentic nurse leaders, 1 current and 2 former hospital CNEs from the western region of the U.S; Each had experience CNE for at least 3 years | Authenticity, described as being oneself - identified as most important quality of leadership<br>AL seen as emphasizing character versus behaviours and traits | Interviews transcribed verbatim<br><br>Member checking – reviewed transcripts for accuracy | Sorting and organizing data into themes or patterns |
| 24 | Shapira-Lishchinsky, O. (2014). *Journal of Nursing Management, 22*(1), 60–69 | To explore nurses' ethical decision-making in team simulations in order to identify the benefits of these simulations for authentic leadership | Qualitative data analysis based on Grounded Theory/ group interviews | 50 nurses came from different specialties from 10 Israeli hospitals and HMOs in the center of Israel | AL defined consistent with using Avolio et al. (2004) and Gardner et al. (2005) | Videotaped simulations and discussions were all transcribed verbatim | Data analysis followed a three-step process, as outlined by Strauss and Corbin (1998):<br>1-open coding<br>2-axial coding<br>3-selective coding |

| Study | Author(s)/ Journal | Purpose/ Conceptual framework | Design | Subjects/ Sample | Authentic Leadership | Rigour | Analysis |
|---|---|---|---|---|---|---|---|
| | Israel | Authentic leadership theory (Avolio et al., 2004) | | | | Data analyzed independently by three people | Data were organized using the ATLAS.TI 5.0 software package that enables qualitative analysis of textual data |
| 25 | Prestia, A. S. (2015). *Journal of Nursing Administration, 45*(11), 575-581<br><br>U.S | To explore factors leading to chief nursing officer (CNO) sustainment in the professional practice of nurse executive leadership<br><br>Theory of bureaucratic caring (Ray, 1989), authentic leadership theory (Avolio & Gardner, 2005), and resiliency theory (Earvolino-Ramirez, 2007) | An interpretative phenomenologic al approach/ individual interview using 5 questions | 20 CNOs currently practicing for 2 plus consecutive years in the role at their current acute care | CNO's described authentic leadership theory components of self-awareness and behaving in accordance with one's true self as important to their ability to be sustained | Credibility of the data<br><br>Validity with an inquiry audit<br><br>Audio-taped interviews conducted<br><br>Advisor reviewed 5 unaltered transcripts prior to the theme development | A step-by-step process described by Smith (2008); Hsieh & Shannon (2005); Montgomery & Bailey (2007), and Taylor & Gibbs (2013), which included levels 1 and 2 coding for themes and subthemes Key words and phrases grouped under individual study questions; subthemes developed, themes refined, and potential conceptual framework for CNO sustainment emerged |
| 26 | Huddleston, P., & Gray, J. (2016). *Journal of Nursing Administration, 46*(9), 462-467<br><br>U.S | To explore the nurse leaders' and direct care nurses' perceptions of the meaning of a Healthy Work Environment (HWE), to describe the nurse leaders' and direct care nurses' perceptions of a HWE, and to define the characteristics of a HWE | Exploratory descriptive designs using focus groups and guided questions with tape-recorded interviews | Purposive sampling; 72 nurse leaders from 10 acute care settings in 9 focus groups. Nurse leaders with less than 2 years of experience; 57 direct care nurses from 11 acute care settings in 10 focus groups; new graduate nurses, agency and contract nurses, and a nurse who was the daughter of the principal investigator (PI) were excluded from the direct care nurse sample | Authentic leadership defined as "ability to be goal oriented, to get the followers to follow, be approachable and trustworthy, a good communicator, open minded, confident, coaches, visible, transparent, and responsive to | Comparing & cross-checking data by observations of interviews<br><br>Credibility - researcher's years of study on HWE<br><br>Triangulation - use of multiple researchers analyzing transcripts and comparing findings | Interviews transcribed verbatim<br><br>Transcripts coded line by line, sentence by sentence, using open coding to identify labels, common themes, or concepts<br><br>NVIVO software (Burlington, Massachusetts) to assist with identification of themes and to develop word clouds to map themes |

| Study | Author(s)/ Journal | Purpose/ Conceptual framework | Design | Subjects/ Sample | Authentic Leadership | Rigour | Analysis |
|---|---|---|---|---|---|---|---|
| | | Quality Care Model (Donabedian, 1996), structural empowerment (Laschinger et al., 2003) and psychological empowerment (Spreitzer, 1995) | | | requests and needs of the staff"(p.465) | Memos & diagrams | |

**UNPUBLISHED DISSERTATIONS & THESES**

| Study | Author(s)/ Journal | Purpose/ Conceptual framework | Design | Subjects/ Sample | Authentic Leadership | Rigour | Analysis |
|---|---|---|---|---|---|---|---|
| 27 | Ahern, G. R. (2015). (Doctoral dissertation, Antioch University) U.S | To examine how hospice team leaders build resilience for themselves and within the interdisciplinary teams they lead  Three key leadership theories - servant (Grenleaf, 1977), spiritual and authentic Authentic leadership theory (Gardner et al., 2005) | Narrative inquiry using phenomenologic-al approach to interviews | Purposeful sampling eight team leaders (all registered nurses) interviewed were from a range of hospices in diverse settings and all were directly responsible for leading interdisciplinary teams | AL is a pattern of transparent and ethical leader behavior that encourages awareness of self and other and openness in sharing information that is needed to make decisions while accepting follower inputs | Audio-recorded interviews transcribed Field notes and Verbatim transcripts with member checking Peer de-briefer who also coded | Thematic and structural Analysis as defined by Riessman (2008) |

Table 6

*Summary of Study Antecedents and Outcomes (Direct Effects) of Authentic Leadership*

| Antecedent/Outcome | Source | Direction | Significance* |
|---|---|---|---|
| **Antecedents:** | | | |
| • Structural empowerment | Haddad (Diss., 2015) | + | S |
| **Follower Outcomes:** | | | |
| *Personal Psychological States* | | | |
| • Psychological capital | Laschinger & Fida (2014b) | + | S |
| | Du Plessis (Diss., 2014) | + | S |
| | Malik & Dhar (2017) | + | S |
| • Optimism | Stander et al. (2015) | + | S |
| Identification: | | | |
| • Personal | Wong et al. (2010) | + | S |
| | Fallatah et al. (2017) | + | S |
| • Social | Wong et al. (2010)\ | + | NS |
| • Organizational | Fallatah et al. (2017) | + | S |
| Trust in: | | | |
| • Manager | Wong et al. (2010) | + | S |
| | Wong & Giallonardo (2013) | + | S |
| | Wong & Cummings (2009b) | + | S |
| | Fillmore (Thesis, 2013) | + | S |
| | Coxen et al. (2016) | + | S |
| • Organization | Stander et al. (2015) | + | S |
| | Coxen et al. (2016) | + | S |
| • Co-workers | Coxen et al. (2016) | + | S |
| *Satisfaction with work* | | | |
| • Job satisfaction | Rahminia & Sharifrad (2015) | + | S |
| | Wong & Laschinger (2013) | + | S |
| | Laschinger & Fida (2015) | + | S |
| | Laschinger et al (2012) | + | S |
| | Giallonardo et al. (2010) | + | S |
| | Fallatah & Laschinger (2016) | + | S |
| | Laschinger & Fida (2014b) | + | S |
| | Laschinger et al. (2016) | + | NS |
| | Bennett (Diss., 2015) | + | S |
| | Haddad (Diss., 2013) | + | S |
| | Stearns (Diss., 2012) | + | S |
| • Job turnover intention | Laschinger et al. (2016) | - | NS |
| | Yemi-Sofumade (Diss., 2012) | - | S |
| • Career satisfaction | Laschinger et al. (2016) | - | NS |
| • Career turnover intention | Laschinger et al. (2016) | - | NS |
| • Work engagement | Stander et al. (2015) | + | NS |
| | Bamford et al. (2013) | + | S |
| | Giallonardo et al. (2010) | + | S |
| | Du Plessis (Diss., 2014) | + | S |
| *Work Environment Factors* | | | |
| • Structural empowerment | Wong & Laschinger (2013) | + | S |

| Antecedent/Outcome | Source | Direction | Significance* |
|---|---|:---:|:---:|
| | Laschinger & Fida (2015) | + | S |
| | Laschinger et al. (2013) | + | S |
| | Fillmore (Thesis, 2013) | + | S |
| | Read & Laschinger (2015) | + | S |
| | Laschinger et al (2016) | + | S |
| | Read (Diss., 2016) | + | S |
| | Boamah et al. (2017) | + | S |
| Negative workplace behaviours: | | | |
| • Incivility: | | | |
|   - Co-worker | Read & Laschinger (2013) | - | S |
|   - Supervisor | Read & Laschinger (2013) | - | S |
|   - Combined | Haddad (Diss., 2013) | - | S |
| | Plasse (Diss., 2015) | - | S |
| • Workplace bullying: | Laschinger et al. (2012) | - | S |
| | Read & Laschinger (2013) | - | S |
| | Laschinger & Fida (2014a) | - | S |
| | Bennett (Diss., 2015) | - | S |
| Workgroup relationships | | | |
| • Interprofessional collaboration | Regan et al. (2016) | + | S |
| | Laschinger & Smith (2013) | + | S |
| • High quality relationship | Plasse (Diss., 2015) | + | S |
| • Team psychological safety | Plasse (Diss., 2015) | + | NS |
| • Social capital | Read (Diss., 2016) | + | S |
| • Work climate | Nelson et al. (2014) | + | S |
| • Empathy of leader | Mortier et al. (2016) | + | S |
| Practice environment: | | | |
| • Professional practice environment | Laschinger & Fida (2015) | + | S |
| | Fallatah & Laschinger (2016) | + | S |
| • Nursing professional practice culture | Anderson (Diss., 2011) | + | S |
| • Decisional involvement | Johnson (Diss., 2015) | + | S |
| • Areas of worklife | Wong & Giallonardo (2013) | + | S |
| | Bamford et al. (2013) | + | S |
| | Laschinger et al. (2015) | + | S |
| | Laschinger & Read (2016) | + | S |
| *Health & Well-Being* | | | |
| Burnout: | | | |
| • Emotional exhaustion | Laschinger & Fida (2014a) | - | S |
| | Laschinger & Fida (2014b) | - | S |
| | Wong & Cummings (2009b) | - | S |
| • Cynicism | Laschinger et al. (2013) | - | S |
| | Laschinger & Fida (2014a) | - | S |
| | Laschinger & Fida (2014b) | - | S |
| Stress: | | | |
| • Work stress | Rahminia & Sharifrad (2015) | - | NS |
| • Stress symptoms | Rahminia & Sharifrad (2015) | - | NS |
| • Attachment insecurity | Rahminia & Sharifrad (2015) | - | S |
| Well-being: | | | |
| • Vitality | Mortier et al. (2016) | + | S |
| • Psychological well-being | Nelson et al. (2014) | + | S |

| Antecedent/Outcome | Source | Direction | Significance* |
|---|---|---|---|
| *Performance* | | | |
| • Job performance | Wong & Cummings (2009b) | + | S |
| • Knowledge sharing | Malik et al (2016) | + | S |
| • Creativity | Malik et al (2016) | + | S |
| • Learning | Mortier et al. (2016) | + | S |
| • Followership | Du Plessis (Diss., 2014) | + | NS |
| • Employee extra role behavior | Malik & Dhar (2017) | + | S |
| • Organizational citizenship behaviour | Coxen et al. (2016) | + | NS |
| **Patient Outcomes:** | | | |
| • Patient falls with injury | Johnson (Diss., 2015) | - | S |
| • Patient satisfaction | Johnson Diss (2015) | + | NS |
| • Hospital acquired pressure ulcers | Johnson Diss (2015) | - | NS |

*Significance: NS = not significant, S = significant at $p < 0.05$

Diss. = Dissertation

Table 7

*Summary of Study Mediators: Indirect Effects of Authentic Leadership on Outcomes*

| Mediators | Source | Direction | Significance |
|---|---|---|---|
| AL →Structural empowerment: | | | |
| → Job satisfaction | Wong & Laschinger (2013) | +,+ | S |
| → Job performance | Wong & Laschinger (2013) | +,+ | S |
| → Prof. practice environment | Laschinger & Fida (2015) | +,+ | S |
| → Short staffing | Laschinger & Fida (2015) | +,- | S |
| | Boamah et al. (2017)* | +,- | S |
| → Emotional exhaustion | Laschinger et al. (2013) | +,- | S |
| → Cynicism | Laschinger et al. (2013) | +,- | S |
| → Relational social capital | Read & Laschinger (2015)* | +,+ | S |
| → Social capital | Read (Diss., 2016) | +,+ | S |
| → Worklife interference | Boamah et al. (2017)* | +,- | S |
| → Trust in Manager | Fillmore (Thesis, 2013) | +,+ | NS |
| AL → Burnout: | | | |
| Emotional exhaustion: | | | |
| → Job turnover intention | Laschinger & Fida (2014a)* | -,+ | NS |
| → Career turnover intention | Laschinger & Fida (2014a)* | -,+ | S |
| → Mental health symptoms | Laschinger & Fida (2014b)* | -,+ | S |
| → Job satisfaction | Laschinger & Fida (2014b)* | -,+ | S |
| Cynicism: | | | |
| → Job turnover intention | Laschinger & Fida (2014a)* | -,+ | S |
| → Career turnover intention | Laschinger & Fida (2014a)* | -,+ | S |
| → Mental health symptoms | Laschinger & Fida (2014b)* | -,+ | NS |
| → Job satisfaction | Laschinger & Fida (2014b)* | -,- | S |
| AL → Negative work behaviours: | | | |
| Bullying: | | | |
| → Job turnover intention | Laschinger & Fida (2014a)* | -,+ | NS |
| → Career turnover intention | Laschinger & Fida (2014a)* | -,+ | NS |
| → Emotional exhaustion | Laschinger et al. (2012) | -,+ | S |
| → Job satisfaction | Laschinger et al. (2012) | -,- | S |
| Incivility: | | | |
| → Psychological Safety | Plasse (Diss., 2015) | -,- | S |
| AL→Areas of worklife: | | | |
| → Adverse events | Wong & Giallonardo (2013) | +,- | S |
| → Work engagement | Bamford et al. (2013) | +,+ | S |
| → Occupational self-efficacy | Laschinger et al (2015) | +,+ | S |
| → Civility norms | Laschinger & Read (2016) | +,+ | S |
| AL →Trust in manager: | | | |
| →Areas of worklife | Wong & Giallonardo (2013) | +,+ | S |
| → Voice | Wong & Cummings (2009b) | +,+ | S |
| →Work engagement | Wong et al. (2010) | +,+ | S |
| →Org. Citizenship behaviour | Coxen et al. (2016) | +,+ | NS |
| Trust in organization: | | | |
| →Work engagement | Stander et al. (2016) | +,+ | S |
| →Org. Citizenship behaviour | Coxen et al, (2016) | +,+ | S |
| Trust in co-workers: | | | |
| →Org. Citizenship behaviour | Coxen et al, (2016) | +,+ | S |

| | | | |
|---|---|---|---|
| AL→Attachment insecurity: | | | |
| → job satisfaction | Rahminia & Sharifrad (2015) | -,- | S |
| → work stress | Rahminia & Sharifrad (2015) | -,+ | S |
| → stress symptoms | Rahminia & Sharifrad (2015) | -,+ | S |
| AL→ Identification: | | | |
| Personal: | | | |
| → Trust in manager | Wong et al. (2010) | +,+ | S |
| → Organizational identification | Fallatah et al. (2017) | +,+ | S |
| Social: | | | |
| → Trust in manager | Wong et al. (2010) | +,+ | NS |
| AL → Psychological capital: | | | |
| → Work Engagement | Du Plessis (Diss., 2014) | +,+ | S |
| → Followership | Du Plessis (Diss., 2014) | +,+ | NS |
| → Employee extra role behavior | Malik & Dhar (2017) | +,+ | S |
| Optimism: | | | |
| → Work engagement | Stander et al. (2015) | +,+ | S |
| AL → Empathy of leader: | | | |
| → Vitality | Mortier et al. (2016) | +,+ | S |
| → Learning | Mortier et al. (2016) | +,+ | NS |
| AL → Social capital: | | | |
| → Patient care quality | Read (Diss., 2016) | +,+ | NS |
| →Team effectiveness | Read (Diss., 2016) | +,+ | NS |
| AL → Knowledge sharing → creativity | Malik et al (2016) | +,+ | S |
| AL → Work climate → Psychological well-being | Nelson et al. (2014)* | +,+ | S |
| AL → Job satisfaction → Turnover intention | Laschinger et al. (2012) | +,- | S |
| AL → Work engagement → Job satisfaction | Giallonardo et al (2010) | +,+ | S |
| AL → Professional practice Environment → Job satisfaction | Fallatah & Lashinger (2016) | +,+ | S |
| AL → Followership → Work Engagement | Du Plessis (Diss., 2014) | +,+ | NS |
| AL → High Quality Relationship → Psychological Safety | Plasse (Diss., 2015) | +,+ | NS |

NOTE: S= significant; NS= Not significant; Diss= Dissertation; *=time-lagged studies

Table 8

*Findings and Categories from Qualitative Studies*

| Categories | Source | Findings |
|---|---|---|
| • AL contributes to or is associated with healthy work environments | Huddleston & Gray (2016) | • AL identified as one of 6 original AACN characteristics of HWE<br>• Added to AL definition notions of goal orientation, approachability, trustworthiness, sound communication, open mindedness, confidence, visibility, transparency and responsiveness to staff needs |
| | Shirey (2009) | • Nurse managers working in positive organizational cultures generally worked in healthy work environments and engaged in more authentic leadership behaviors while those working in negative cultures reported less optimism and more challenges engaging in authentic leadership practices |
| • How leaders become and maintain their authenticity | Murphy (2012) | • -Authentic leaders are able to maintain their authenticity by having the moral courage to do the right thing<br>• Importance of reframing, reflection in alignment with values, and the courage needed as nurse leaders progress to authenticity |
| • CNOs exemplify authentic leadership traits through collaborating with other supportive leaders to influence positive patient outcomes and organizational performance | Prestia (2015) | • AL was described as important to leaders' ability to be sustained |
| • Ethically resilient team leaders align with four components of AL leaders | Ahern (2015) | • All participants reflected ethically resilient practitioners who define themselves within the understandings of servant, spiritual, and authentic leadership<br>• Authentic leaders worked with resilience, hope, and optimism; are self-regulating, self-monitoring, self-reflecting, and have self-efficacy; have good awareness of self and others |
| • Team-based simulations of nurses' ethical decision-making reflect the 4 components of AL | Shapira-Lishchinsky (2014) | • Four core simulation benefits derived from data are consistent with components of AL: (1) self-awareness (2) relational transparency (3) balanced processing; and (4) internalized moral perspective |

Chapter Three

## Discussion

This review illustrated the relationship between authentic leadership (AL), staff, and patient outcomes in healthcare, and the key antecedents of AL. The results of this review provided an extensive understanding of outcomes and mediators to date that have been associated with AL in healthcare. The findings also highlighted the direct, indirect, positive, or negative relationships between AL, outcomes, and mediators. Additionally, findings of the review supported the essential elements of Avolio, Gardner, Walumbwa, Luthans, and May's (2004) theory that was used as a framework for the majority of studies in the review. This review may provide a guide for future researchers and leaders to explore the application of authentic leadership in healthcare. Implications for nursing theory, practice, policy, education and research of results are presented in this chapter.

### Implications for Theory

Theory is a fundamental guide for research as it identifies the important variables and how they may be interrelated so they can be empirically tested (Shalley, 2012). The fact that all quantitative studies used a theoretical framework indicated that the validity of research findings on AL in healthcare was strengthened by theory. In support of the AL theory by Avolio et al. (2004) findings suggested that authentic leaders may contribute to strengths-based organizations by promoting the elements of healthy work environments for staff and patients. Specifically there were positive associations between AL and job satisfaction, structural empowerment, areas of worklife, positive workgroup relationships, and trust and negative associations with negative work group behaviours and burnout (Avolio & Gardner, 2005). Findings also supported that the four dimensions of AL (balanced processing,

relational transparency, internalized moral perspective, and self-awareness) as articulated in Avolio et al.'s (2004) theory were related to varying follower outcomes that encompassed a range of work attitudes (job satisfaction, work engagement, well-being, etc.) and to a lesser extent some behaviours (extra role behavior, knowledge sharing, turnover, etc.). Since only two studies examined the postulated relationship between AL and outcomes mediated through personal and social identification and the findings of these studies were mixed, there is a need for further testing of these mediating mechanisms. Other mediators proposed in the theory such as psychological capital and trust were reasonably well supported by review findings.

A wide variety of staff or follower outcomes were associated with AL in this review and these were organized into specific categories that went beyond the work attitudes and behavior of the original AL theory. These categories were: *personal psychological states, satisfaction with work, work environment factors, health & well-being,* and *performance* and since there were direct associations between AL and these outcomes as well as evidence for indirect mechanisms, an additional arrow was added in Figure 3 thus adapting Avolio e al.'s original model. Several significant mediators (structural empowerment, areas of worklife, burnout, and negative workplace behaviours) not specified in AL theory were also added to Figure 3. There were some findings linking AL to organizational performance outcomes such as patient outcomes. Avolio and Gardner (2005) argued that AL contributed to "sustainable performance" (p. 333) at the individual, group and organizational levels and there was some evidence for associations between AL and patient outcomes in a few studies (Johnson, 2015; Wong, Laschinger, & Cummings, 2010). Cummings et al. (2010) argued in their review of nursing leadership and staff outcomes that despite an excess of leadership styles or theories, the relationships and mechanisms of action for specific leadership styles and outcomes was

under-theorized and required future research. Thus, findings of this review of the current state of the AL theory in nursing and healthcare does address the issue of mechanisms of action albeit for one leadership perspective that is, AL.

**Implications for Leadership Practice and Policy**

Healthcare's rapid changes and growing complexity necessitate that all care providers collaborate and maximize their efficiency as never before and effective leaders are integral to creating the conditions where challenging problems can be solved (Cummings et al., 2010; Shirey & White-Willimas, 2015). Documented concerns about a future shortfall of future healthcare leaders (Titzer, Shirey, & Hauck, 2013) underscore the necessity to recruit, develop and retain leaders who can meet these challenges and contribute to care environments and processes that produce positive outcomes needed in dynamic healthcare systems (Waite, McKinney, Smith-Glasgow, & Meloy, 2014). Given that findings provided some support for Avolio et al.'s (2004) theory and positive associations between AL and outcomes for staff there is some merit in considering the application of AL theory and strategies to increase authentic leadership in nursing and healthcare settings.

Leaders who are authentic have the ability to develop greater self-awareness and self-regulated behaviors (Gardner, Avolio, Luthans, May, & Walumbwa, 2005). Self-awareness is one of components of authentic leadership that authentic leaders must develop. Self-evaluation can be considered as a vital part of self-awareness as many leaders are not aware of how they are perceived by others and need to engage in purposeful strategies to gather self-evaluative information for their personal leadership development (Murphy, 2012; Waite et al., 2014). Knowing one's strengths and weaknesses provides direction for improving performance. According to Andrade and Valtcheva (2009) self-assessment promotes learning and improvements in one's work and has been shown to promote achievement.

Senior nurse leaders provide direction for evaluation approaches that allow managers opportunities to assess their performance on a regular basis and thereby, enhance their self – assessment. Feedback from multiple sources or '360-degree feedback' is an evaluation approach that relies on input from numerous individuals, including supervisors, colleagues and subordinates and others (Martin, McCormack, Fitzsimons, & Spirig, 2012), therefore contributing to enhanced self-awareness. However, managers must be open to receiving feedback and directors must communicate feedback constructively and honestly for this process to be most meaningful. In addition, consistent with positive organizational psychology, feedback must not only identify weaknesses in performance, but emphasize and leverage manager's strengths (Spreitzer, 2006).

Moreover, authentic leaders build healthier work environments through the other key components of authentic leadership which are balanced processing, relational transparency, and internalized moral perspective. Balanced processing is the ability of leaders to objectively analyze all relevant data before making a decision (Gardner et al., 2005). 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 (Gardner et al., 2005; Ilies et al., 2005; Tetrick 1989). Senior leaders facilitate balanced processing of their managers by organizing meetings where managers have the opportunity to present new ideas or practice challenges to administrators. This would allow 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 the best available evidence to inform management decisions by providing managers with access to evidence informed guidelines or policies and professional practice support. Decisions that are made without access to the best quality evidence can

cause an increase the inappropriate or ineffective management decisions (Pullin & Knight, 2003).

Relational transparency is related to presenting one's authentic self to others (Kernis, 2003). Leaders or managers share their ideas or knowledge with others and encourage their staff on the importance of sharing ideas together. The intent here is to promote an atmosphere of openness and honesty and inspire staff to feel comfortable in discussing problems and potential solutions with their managers. Not only departmental managers but also unit level managers need to be honest and straightforward in dealing with staff because relational transparency is considered a key component of AL that is proposed to build trust in followers (Wong, 2008). Involving staff in unit decision-making allows them to experience a sense of positive purpose in their work which leads to increase positive consequences for their work engagement and performance. Asking for feedback, listening to and accepting others' points of view, and acting on suggestions are ways for leaders to increase trustful environments (Wong, 2008).

Internalized moral perspective is the final component of authentic leadership and means that the leader's behaviour is guided primarily by their internal moral standards and values rather than those of others (Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008). According to Cianci, Hannah, Roberts and Tsakumis (2014), leaders who exhibit the dimensions of authentic leadership are likely to affect employees' moral stance and decisions based on their ethics. Actually, if leaders are engaged in authentic leadership, they tend to express moral maturity linked with their internal personal values (Avolio et al., 2004). When leaders communicate with their staff, they must present a respectful, honest, and trusting demeanor and 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 or unit issues that highlight ethical leadership in practice (May, Hodges, Chan, & Avolio, 2003; Storch, Makaroff, Pauly, & Netwon, 2013). These learning activities can stimulate individuals to think about problems in new and alternative ways, increase awareness of moral dilemmas in practice and promote confidence in decision making which may improve performance (May et al., 2003). Senior leaders can also support the internalized moral perspective of managers by validating the significance of acting in harmony with one's moral values rather than bowing to external pressures. Indeed, sometimes it takes moral courage to stand up for what is right and defend one's actions in the face of workplace pressures (Murphy, 2012).

According to Kark and Shamir (2002), engagement, motivation, commitment, satisfaction, and involvement of staff will increase if their leaders are authentic. Therefore, health care organizations should recruit their leaders/managers based on the essential components of AL. Also leadership development programs that incorporate AL theory can enhance leadership competencies and ultimately the work environments for staff and patients Findings of Baron's (2016) recent study of a three-year leadership development program showed an increase in authentic leadership development amongst leaders in middle management positions in Quebec. This program was based on action learning principles and primarily focused on the application of authentic leadership development by working through real problems, experiments, activities, and case studies with peers and receiving coaching. Although Baron's is one of very few studies of AL development, results suggested that authentic leadership can be developed but also indicated that adequate resources must be directed to leadership development in organizations for this to happen.

**Implications for Education**

Leadership education in undergraduate education should include some focus on authentic leadership to serve as a foundation for effective leadership by preparing students with the competencies of AL and enabling them to become effective practitioners and potential future leaders. Many healthcare leadership experts have suggested that leadership skills are critical at every level and in wide-ranging healthcare contexts (MacPhee, Chang, Lee, & Spiri, 2013; Porter-O'Grady, 2011). Thus, it may be essential to introduce students to leadership development during their nursing education as one approach to promoting future graduates' influence on the profession and health care outcomes (Laschinger et al., 2013; Waite et al., 2014). As discussed earlier, a focus on self-development through reflection and feedback from others is central to building effective leadership competencies. New and emerging leaders must be able to actively participate in solving problems and strategies for creating change, such as building collaborative alliances and positively influencing climate and culture (Scully, 2015; Waite et al. 2014). By way of example, Waite et al (2014) reported on positive outcomes for the implementation of a unique authentic leadership course within an undergraduate nursing program in the United States. The aim of this course was to enhance undergraduate nursing students' self-awareness and self-development. Teaching strategies used were learner-centered and action oriented and included both in-person and online learning approaches. Therefore, students were engaged through round table debates, cross-cultural interviews, autobiographies, mind mapping, and reflective analysis journals. Positive student feedback acknowledged the value of self-examination associated with authentic leadership in ongoing personal and professional development (Waite et al, 2014). Educating students and new graduate nurses to be equipped with AL competencies should be a priority so that knowledge can be translated into the development of future healthcare leaders (Cummings et al., 2010; Laschinger et al., 2013).

## Recommendations for Future Research

As far as it is known, this review is considered the first review of authentic leadership research in nursing and health care; therefore, these findings may provide direction for future research in authentic leadership. The findings of the review were based on Avolio et al.'s (2004) theory of authentic leadership and suggest the following as priorities for future research. Firstly, there is a significant gap in terms of exploring the antecedents of authentic leadership and future studies need to increase knowledge of the attitudes and skills such as building self-awareness, understanding others and expressing authenticity that may be prerequisites of AL to inform the practice of AL. Secondly, there are some other areas that have not been examined well in studies. For example, Avolio et al.'s (2004) theory explained the relationships between authentic leadership, hope, and positive emotions but there were only a few studies examining this relationship (Du Plessis, 2014; Laschinger & Fida, 2014b; Malik & Dhar, 2017; Stander et al. 2015) and this requires further study. In terms of patient outcomes, only one study (Johnson, 2015) empirically tested the relationship between authentic leadership and actual or objective patient outcomes. However, the relationship between authentic leadership and nurse assessed care quality was examined in three studies (Boamah, Read & Spence Laschinger 2017; Laschinger & Fida, 2015; Read, 2015; Wong et al., 2010) and results were mixed. There is a need for future studies using objective ratings of actual patient outcomes to build on findings from this review. Similarly only a few studies examined important staff retention outcomes like job turnover and findings were mixed; there were no studies of staff commitment and few of organizational citizenship behaviours such as voice behaviour and extra role behaviour.

Future studies need to include longitudinal, quasi-experimental or experimental designs in order to examine the causal association between authentic leadership and

outcomes. It was noteworthy that six studies presented time lagged data showing significant associations between AL and job satisfaction and mental health symptoms (Laschinger & Fida, 2014b; Read & Laschinger, 2015), psychological well-being (Nelson et al., 2014), burnout (Boamah et al., 2016) and mixed results for job and career turnover intentions (Laschinger & Fida, 2014a; Laschinger et al., 2016). However, it is concerning that even though there was a substantial increase in the number of AL since 2010, the majority were cross-sectional in design. Most of the studies were multi-sited and this is an important factor in obtaining adequate sample sizes for multi-level analysis. The use of random sampling procedures significantly strengthens studies but in this review there was still 1/3 that included convenience sampling. One notable issue was that only 4 (11%) studies had a response rate of 60% or more which signals concern for future survey studies in healthcare. Additional activities to increase response rates would improve reliability of the results and strengthen data analysis, although the challenge of accessing subjects in healthcare that is becoming increasingly complex in dynamic fast-paced work settings must be acknowledged.

Most of studies in this review were conducted in acute health care organizations and used primarily nurses as participants and thus, limiting generalizability of the review findings to primarily acute care nurses. Future studies should be expanded to include more diverse samples of healthcare professionals and a wider variety of healthcare settings that include settings such as, long term care, community care, public health, mental healthcare etc. Examining the influence of AL on various levels of leaders and staff within organizations and using multilevel analysis procedures may help to illuminate understanding of how AL is enacted within and across organizations.

**Conclusion**

A synthesis of the current research on the antecedents, mediators and effect of authentic leadership on staff and patient outcomes in nursing and healthcare was conducted. Based on Avolio et al.'s (2004) theory of authentic leadership, findings of this review provide support for this theoretical framework in future research in nursing/healthcare but there is a need for more research of AL among other healthcare professionals. Knowledge generated by this systematic review provides a more comprehensive understanding of authentic leadership, which can be used to educate future leaders and managers about the importance and benefits of authentic leadership. Further, findings may provide guidance for future research on AL in healthcare settings. Although there were six time-lagged studies in this review, there is a need for future studies using longitudinal and interventional designs and conducted in a variety of healthcare settings with more diverse, interprofessional, and randomly selected samples. Finally, illuminating the current evidence for the positive outcomes of authentic leadership in healthcare has the potential to improve leadership development strategies and outcomes within healthcare organizations.

# References

Andrade, H., & Valtcheva, A. (2009). Promoting learning and achievement through self-assessment. *Theory into Practice*, *48*(1), 12-19. doi: 10.1080/00405840802577544

Avolio, B. J., Gardner, W. L., Walumbwa, F., Luthans, F., & May, D. R. (2004). Unlocking the mask: A look at the process by which authentic leaders impact follower attitudes and behaviors. *The Leadership Quarterly, 15*, 801–823. doi:10.1016/j.leaqua.2004.09.003

Baron, L. (2016). Authentic leadership and mindfulness development through action learning. *Journal of Managerial Psychology*, *31*(1), 296-311. doi: 10.1108/JMP-04-2014-0135

Bennett, K. (2015). *Exploring the relationship between job satisfaction, bullying, and authentic leadership among medical-surgical nurses.* (Unpublished doctoral dissertation). University of Manitoba, Winnipeg, Manitoba, Canada.

Blau, P. M. (1964). *Exchange and power in social life*. New York, NY: Academic Press.

Boamah, S. A., Read, E. A., & Spence Laschinger, H. K. (2017). Factors influencing new graduate nurse burnout development, job satisfaction and patient care quality: a time-lagged study. *Journal of Advanced Nursing*, *73*(5), 1182-1195. doi: 10.1111/jan.13215

Cianci A. M., Hannah S. T., Roberts R. P., Tsakumis G. T. (2014). The effects of authentic leadership on followers' ethical decision-making in the face of temptation: An experimental study. *Leadership Quarterly, 25*, 581-594. doi: 10.1016/j.leaqua.2013.12.001

Cummings, G., MacGregor, T., Davey, M., Lee, H., Wong, C., Lo, E.,. & Stafford, E. (2010). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies, 47*(3), 363-385. doi: 10.1016/j.ijnurstu.2009.08.006.

Fallatah, F., & Laschinger, H. K. (2016). The influence of authentic leadership and supportive professional practice environments on new graduate nurses job satisfaction. *Journal of Research in Nursing, 21*(2) 125–136. doi:10.1177/1744987115624135

Haddad, L. M. (2013). *Generational Differences in Empowerment, Professional Practice Environment, Incivility, Authentic Leadership, Job Satisfaction, Engagement and Intent to Leave in Acute Care Nurses*. (Unpublished doctoral dissertation).University of Tennessee, United States.

Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F. (2005). Can you see the real me? A self-based model of authentic leader and follower development. *Leadership Quarterly, 16*, 343–372. doi: 10.1016/j.leaqua.2005.03.003

Giallonardo, L. M., Wong, C. A., & Iwasiw, C. L. (2010). Authentic leadership of preceptors: Predictor of new graduate nurses' work engagement and job satisfaction. *Journal of Nursing Management, 18*(8), 993-1003. doi:10.1111/j.1365-2834.2010.01126.x

Ilies, R., Morgeson, F. P., & Nahrgang, J. (2005). Authentic leadership and eudaemonic wellbeing: Understanding leader–follower outcomes. *The Leadership Quarterly, 16*, 373–394. doi: 10.1016/j.leaqua.2005.03.002

Johnson, S. H. (2015). *The influence of authentic leadership and structural empowerment on staff nurse decisional involvement and patient quality outcomes.* (Unpublished doctoral dissertation). Boston College, United States.

Kark, R., Shamir, B. (2002). The dual effort of transformational leadership: Primary relational and collective selves and further effects on followers. In B.J. Avolio, & F.J.Yammarino (Eds), *Transformational and charismatic leadership: The road ahead, 2*, 67-91. *Amsterdam: JAI: An Imprint of Elsevier Science.*

Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry, 14*(1), 1-26. doi: 10.1207/S15327965PLI1401_01

Laschinger, H. K. S., Cummings, G., Leiter, M., Wong, C., MacPhee, M., Ritchie, J., ... & Young-Ritchie, C. (2016). Starting Out: A time-lagged study of new graduate nurses' transition to practice. *International Journal of Nursing Studies*, *57*, 82-95. doi: 10.1016/j.ijnurstu.2016.01.005

Laschinger, H. K., & Fida, R. (2014b). New nurses burnout and workplace wellbeing: The influence of authentic leadership and psychological capital. *Burnout Research*, *1*(1), 19–28. doi: 10.1016/j.burn.2014.03.002

Laschinger, H., & Fida, R. (2015). Linking Nurses' Perceptions of Patient Care Quality to Job Satisfaction. *Journal of Nursing Administration*, *45*(5), 276–283. doi: 10.1097/NNA.0000000000000198

Laschinger, H., Wong, C., & Grau, A. (2012). The influence of authentic leadership on newly graduated nurses' experiences of workplace bullying, burnout and retention outcomes: A cross-sectional study. *International Journal of Nursing Studies*, *49*(10), 1266–1276. doi: 10.1016/j.ijnurstu.2012.05.012

Laschinger, H.K.S., Wong, C.A., Macdonald-Rencz, S., Burkoski, V., Cummings G., D'Amour, D.,… Grau, A. (2013). The influence of personal and situational predictors on nurses' aspirations to management roles: Preliminary findings of a national survey of Canadian nurses. *Journal of Nursing Management, 21*, 217–230. doi: 10.1111/j.1365-2834.2012.01452.x.

MacPhee, M., Chang, L., Lee, D., & Spiri, W. (2013). Global health care leadership development: trends to consider. *Journal of Healthcare Leadership*, *5*, 21-29. doi: 10.2147/JHL.S23010

May, D., Hodges,T., Chan, A., & Avolio, B. (2003). Developing the moral component of authentic leadership. *Organizational Dynamics, 12*(3), 247-260.

Martin, J. S., McCormack, B., Fitzsimons, D., & Spirig, R. (2012). Evaluation of a clinical leadership programme for nurse leaders. *Journal of Nursing Management*, *20*(1), 72-80. doi: 10.1111/j.1365-2834.2011.01271.x

Murphy, L. G. (2012). Authentic leadership: Becoming and remaining an authentic nurse leader. *Journal of Nursing Administration*, *42*(11), 507-512. doi: 10.1097/NNA.0b013e3182714460

Porter-O'Grady, T. (2011). Leadership at all levels. *Nursing Management*, 42, 32–37. doi: 10.1097/01.NUMA.0000396347.49552.86

Pullin, A. S., & Knight, T. M. (2003). Support for decision making in conservation practice: an evidence-based approach. *Journal for Nature Conservation*, *11*(2), 83-90. doi: 10.1078/1617-1381-00040

Rahimnia, F., & Sharifirad, M. S. (2015). Authentic Leadership and Employee Well-Being: The Mediating Role of Attachment Insecurity. *Journal of Business Ethics*, *132*(2), 363–377. doi:10.1007/s10551-014-2318-1

Read, Emily A., & Laschinger, H. K. S. (2015). The influence of authentic leadership and empowerment on nurses' relational social capital, mental health and job satisfaction over the first year of practice. *Journal of Advanced Nursing*, *71*(7), 1611-1623. doi: 10.1111/jan.12625

Scully, N. J. (2015). Leadership in nursing: The importance of recognising inherent values and attributes to secure a positive future for the profession. *Collegian*, *22*(4), 439-444. doi: 10.1016/j.colegn.2014.09.004

Shirey, M. R., & White-Williams, C. (2015). Boundary Spanning Leadership Practices for Population Health. *Journal of Nursing Administration*, *45*(9), 411-415. doi: 10.1097/NNA.0000000000000223

Shalley, C. E. (2012). Writing good theory: Issues to consider. *Organizational Psychology Review*, *2*(3), 258-264.

Spreitzer, G. M. (2006). Leading to grow and growing to lead:: Leadership development lessons from positive organizational studies. *Organizational Dynamics*, *35*(4), 305-315.

Storch, J., Makaroff, K. S., Pauly, B., & Newton, L. (2013). Take me to my leader: The importance of ethical leadership among formal nurse leaders. *Nursing Ethics*, *20*(2), 150-157.

Sosik, J. J., & Godshalk, V. M. (2000). Leadership styles, mentoring functions received, and job-related stress: A conceptual model and preliminary study. *Journal of Organizational Behavior*, 365-390.

Stander, F. W., De Beer, L. T., & Stander, M. W. (2015). Authentic leadership as a source of optimism, trust in the organisation and work engagement in the public health care sector. *SA Journal of Human Resource Management*, *13*(1), 12-pages. doi: 10.4102/sajhrm.v13i1.675

Stearns, M. (2012). *The relationship of leadership behaviors to staff RN job satisfaction and retention.* (Unpublished doctoral dissertation). Grand Canyon University, United States.

Titzer, J. L., Shirey, M. R., & Hauck, S. (2014). A nurse manager succession planning model with associated empirical outcomes. *Journal of Nursing Administration*, *44*(1), 37-46. doi: 10.1097/NNA.0000000000000019

Tsai, Y. (2011). Relationship between organizational culture, leadership behavior and job satisfaction. *BMC Health Services Research*, *11*(1), 1. doi: 10.1186/1472-6963-11-98

Tetrick, L.E. (1989). The motivating potential of leader behaviors: a comparison of two models. *Journal of Applied Social Psychology, 19*, 947–958. doi: 10.1111/j.1559-1816.1989.tb01231.x

Waite, R., McKinney, N., Smith-Glasgow, M. E., & Meloy, F. A. (2014). The embodiment of authentic leadership. *Journal of Professional Nursing*, *30*(4), 282-291. doi: 10.1016/j.profnurs.2013.11.004

Walumbwa, F.O., Avolio, B.J., Gardner, W.L., Wernsing, T.S. & Peterson, S.J. (2008). Authentic leadership: development and validation of a theory- based measure. *Journal of Management, 34*, 89–126.

Walumbwa, F., Luthans, F., Avey, J. B., & Oke, A. (2011). Authentically leading groups: The mediating role of collective psychological capital and trust. *Journal of Organizational Behavior, 32*, 4–24. doi: 10.1002/job.653

Walumbwa, F., Wang, P., Wang, H., Schaubroeck, J., & Avolio, B. (2010). Psychological processes linking authentic leadership to follower behaviors. *The Leadership Quarterly, 21*, 901–914.

Waterworth, S. (2003). Time management strategies in nursing practice. *Journal of Advanced Nursing*, *43*(5), 432-440. doi: 10.1046/j.1365-2648.2003.02740.x

Wong, C. (2008). *The role of authentic leadership in nursing and healthcare.* (Unpublished doctoral dissertation). University of Alberta, Canada.

Wong, C. A., & Laschinger, H. K. (2013). Authentic leadership, performance, and job satisfaction: the mediating role of empowerment. *Journal of Advanced Nursing*, *69*(4), 947-959. doi: 10.1111/j.1365-2648.2012.06089.x

Wong, C.A.**,** & Cummings, G.G. (2009a). Authentic leadership: A new theory for nursing or back to basics? *Journal of Health Organization and Management, 23*(5), 522-538. doi: 10.1108/14777260910984014

Wong, C. A., & Cummings, G. G. (2009b). The influence of authentic leadership behaviours on trust and work outcomes of healthcare staff. *Journal of Leadership Studies, 3*(2), 6-23. doi:10.1002/jls.20104

Wong C.A., Laschinger H. & Cummings G.G. (2010). Authentic leadership and nurses' voice behaviour and perceptions of care quality. *Journal of Nursing Management, 18*(8), 889–900. doi: 10.1111/j.1365-2834.2010.01113.x

**Appendix A**

**Systematic Review Inclusion and Exclusion Criteria**

| PICOS Elements* | Inclusion Criteria | Exclusion Criteria |
|---|---|---|
| Population | ▪ Articles that consider any healthcare providers as a population such as PRNs, PSWs, physiotherapists, physicians, radiologists, respiratory therapists, nutritionists, and laboratory technicians<br>▪ Can include nurse managers or nurses in manager roles and any manger in healthcare settings.<br>▪ Studies that consider patients or clients outcomes and their perspectives of authentic leadership as a part of the study | ▪ Studies that consider non-healthcare professionals as a population in the study |
| Interventions/ Comparators | ▪ Studies examining the relationship between authentic leadership; staff work, attitude, and behaviour; and patient outcomes<br>▪ Studies that include self- assessment of mangers.<br>▪ Studies that examine role of authentic leadership in healthcare and patient care<br>▪ Studies examining the impact of authentic leadership on creating healthy work environments<br>▪ Studies that predict, examine, develop, influence, affect authentic leadership. | ▪ Studies examining the relationship between authentic leadership and non-healthcare professionals |
| Outcomes | ▪ Articles that examine or measure the effect of authentic leadership on staff work, attitude, and behaviour and patient outcomes<br>▪ Studies where authentic leadership is examined and measured as an outcome of the study | ▪ Articles that examine or measure authentic leadership as an outcome for not healthcare sectors |
| Study Design | ▪ Peer-reviewed research studies (quantitative and qualitative)<br>▪ Dissertations and theses<br>▪ Published in English with full text available<br>▪ Published 2004-2016 | ▪ Full text not available<br>▪ English full text not available |

*PICOS elements adapted from: Center for Reviews and Dissemination (CRD) (2009)

# Appendix  B

# Quality  Appraisal  Forms  and Detailed Appraisal  Results

Table 9a

*Quality Assessment Tool for Correlational Studies*

| Quality Assessment and Validity Tool for Correlational Studies | | |
|---|---|---|
| **Study:**<br>**First Author:**<br>**Publication Date:**<br>**Journal:** | | |
| **Design:**<br>1. Was the study prospective?<br>2. Was probability sampling used? | No<br>☐<br>☐ | Yes<br>☐<br>☐ |
| **Sample:**<br>1. Was the sample size justified?<br>2. Was the sample drawn from more than one site?<br>3. Was anonymity protected?<br>4. Response rate more than 60%? | ☐<br>☐<br>☐<br>☐ | ☐<br>☐<br>☐<br>☐ |
| **Measurement:**<br>**Measurement:**<br>Factor associated with authentic leadership (DVs):<br>(assess for IVs correlated with DVs only)<br>1. Was the factor measured reliably?<br>2. Was the factor measured using a valid instrument?<br><br>**Authentic leadership (IV):**<br>1. Are the effects observed rather than self-reported? (2 points)<br>2. Did the scale used for measuring authentic leadership have an internal consistency ≥ 0.70?<br>3. Was a theoretical model/framework used for guidance? | ☐<br><br>☐<br><br><br>☐<br><br>☐<br><br><br>☐ | ☐<br><br>☐<br><br><br>☐<br><br>☐<br><br><br>☐ |
| **Statistical Analysis:**<br>1. If multiple factors were studied, are correlations analyzed?<br>2. Are outliers managed? | ☐<br><br>☐ | ☐<br><br>☐ |
| **Overall Study Validity Rating:**<br>(0-4=LOW; 5-9=MED; 10-14=HIGH) | **Total:** _____<br>**LO MED HIGH** | |

*Adapted from Cummings et al. (2010) and Germain & Cummings (2010)

Table 9b

*Quality Assessment Tool for Qualitative Studies*

| CASP Qualitative Criteria* | Study:<br>First Author:<br>Publication Date:<br>Journal: | | |
|---|---|---|---|
| 1. Was there a clear statement of the aims of the research? | No<br>☐ | Yes<br>☐ | Explanation of answer: |
| 2. Is a qualitative methodology appropriate? | ☐ | ☐ | |
| 3. Was the research design appropriate to address the aims of the research? | ☐ | ☐ | |
| 4. Was the recruitment strategy appropriate to the aims of the research? | ☐ | ☐ | |
| 5. Were the data collected in a way that addressed the research issue? | ☐ | ☐ | |
| 6. Has the relationship between the researcher and participants been adequately considered? | ☐ | ☐ | |
| 7. Have the ethical issues been taken into consideration? | ☐ | ☐ | |
| 8. Was the data analysis sufficiently rigorous? | ☐ | ☐ | |
| 9. Is there a clear statement of findings? | ☐ | ☐ | |
| 10. How valuable is the research? | ☐ | ☐ | |
| Total Score: _____/9 possible yes answers | | | |

* Adapted from: Critical Appraisal Skills Programme (CASP)

Table 10

*Detailed Summary of Quality Appraisal of Quantitative Studies*

| Detailed Summary of Quality Assessment of Quantitative Studies | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| First Author /Year/ Journal | 1. Design | | 2. Sample | | | | 3. Measurement | | | | | 4. Stat. Analysis | | 5. Summary | | | |
| | | | | | | | Types | | Effects | | | | | | | | |
| | 1 | 2 | 1 | 2 | 3 | 4 | 1 | 2 | 1 | 2 | 3 | 1 | 2 | Total | Rating | Inc. | Exc. |
| Wong, C./2009b/ *Journal of Leadership Studies* | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 1 | 12 | strong | ✓ | |
| Wong, C./2010/ *Journal of Nursing Management* <br> • Bamford, M./2013/*Journal of Nursing Management* <br> • Wong, C. /2013/ *Journal of Nursing Management* <br> • Wong, C./2013/*Journal of Advanced Nursing* <br> • Fillmore, K./2013/ Master's thesis, UWO | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 13 | strong | ✓ | |
| Giallonardo, L./2010*/ Journal of Nursing Management* | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 13 | strong | ✓ | |
| Laschinger, H./2012/ *International Journal of Nursing Studies* <br> • Laschinger, H./2013/ *Journal of Nursing Management* <br> • Laschinger, H./2013/ *Journal of Nursing Administration* <br> • Read, E./ 2013/ *The Journal of Nursing Administration* | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 13 | strong | ✓ | |
| Laschinger, H./2014a/ *European Journal of Work and Organizational Psychology* | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 13 | strong | ✓ | |

| Detailed Summary of Quality Assessment of Quantitative Studies | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| First Author /Year/ Journal | 1. Design | | 2. Sample | | | | 3. Measurement | | | | | 4. Stat. Analysis | | 5. Summary | | | |
| | | | | | | | Types | | Effects | | | | | | | | |
| | 1 | 2 | 1 | 2 | 3 | 4 | 1 | 2 | 1 | 2 | 3 | 1 | 2 | Total | Rating | Inc. | Exc. |
| • Spence Laschinger, H. K./ 2014b/ *Burnout Research*<br>• Read, E./ 2015/ *Journal of Advanced Nursing*<br>• Laschinger, H./ 2015/ *Journal of Nursing Administration*<br>• Regan, S./ 2016/ *Journal of Nursing Management*<br>• Fallatah, F./2016/ *Journal of Research in Nursing* | | | | | | | | | | | | | | | | | |
| Nelson, K./ 2014/ *Burnout Research* | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 13 | strong | ✓ | |
| Spence Laschinger, H./2016/ *International Journal of Nursing Studies*<br>• Laschinger, H./ 2015/ *International Journal of Nursing Studies*<br>• Laschinger, H./2016/ *Journal of Nursing Administration*<br>• Boamah, S. A./2017/ *Journal of Advanced Nursing*<br>• Fallatah, F/ 2017/ *Nursing Outlook* | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 13 | strong | ✓ | |
| Rahimnia, F./2015/ *Journal of Business Ethics* | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 14 | strong | ✓ | |
| Stander, F./2015/ *South African Journal of Human Resource Management*<br>• Coxen, L./2016/ *SA Journal of Industrial Psychology* | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 12 | strong | ✓ | |
| Malik, N./2016/ *International Journal of Nursing Studies* | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 13 | strong | ✓ | |

| Detailed Summary of Quality Assessment of Quantitative Studies | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| First Author /Year/ Journal | 1. Design | | 2. Sample | | | | 3. Measurement | | | | | 4. Stat. Analysis | | 5. Summary | | | |
| | | | | | | | Types | | Effects | | | | | | | | |
| | 1 | 2 | 1 | 2 | 3 | 4 | 1 | 2 | 1 | 2 | 3 | 1 | 2 | Total | Rating | Inc. | Exc. |
| Mortier A.V./2016/ *Journal of Nursing Management* | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 11 | strong | ✓ | |
| Malik, N./ 2017/ *Personnel Review* | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 13 | strong | ✓ | |
| Anderson, T./2011/ Doctoral dissertation, College Of Saint Mary | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 9 | moderate | ✓ | |
| Stearns, M./2012/ Doctoral dissertation, Grand Canyon University | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 11 | strong | ✓ | |
| Yemi-Sofumade, H./2013/ Doctoral dissertation, Capella University | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 13 | strong | ✓ | |
| Haddad, L. M./2013/ Doctoral dissertation, University of Tennessee | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 13 | strong | ✓ | |
| Du Plessis, M./2014/ Doctoral dissertation, University of the Western Cape | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 12 | strong | ✓ | |
| Bennett, K./ 2015/ Master's Thesis, University of Manitoba | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 1 | 1 | 10 | strong | ✓ | |
| Johnson, S./2015/ Doctoral dissertation, Boston College | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 12 | strong | ✓ | |
| Plasse, M./2015/ Doctoral dissertation, Northeastern University | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 11 | strong | ✓ | |
| Read, E./2016/ Doctoral dissertation, University of Western Ontario | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 13 | strong | ✓ | |

Maximum score= 14, studies were categorized as low (0–4), moderate (5–9), or high (10–14) quality

Table 11

*Detailed Summary of Quality Assessment of Qualitative Studies*

| Detailed Summary of Quality Assessment: Qualitative Studies | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| First Author/Year/Journal | 1. Aim | 2. Method | 3. Design | 4. Recruit-ment | 5. Data Collection | 6. R/P Relationship | 7. Ethics | 8. Analysis | 9. Findings | Total Score |
| Huddleston, P./2016/ *Journal of Nursing Administration* | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 7 |
| Murphy, L. G./ 2012/ *Journal of Nursing Administration* | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 7 |
| Prestia, A. S./ 2015/ *Journal of Nursing Administration* | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 8 |
| Shapira-Lishchinsky, O./ 2014/ *Journal of Nursing Management* | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 8 |
| Shirey, M. R./2009/ *Critical Care Nursing Quarterly* | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 8 |
| Ahern, G. R./2015/ Doctoral dissertation, Antioch University | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9 |

Maximum  score=9, 1= yes, 0=no

**Appendix C**

**Curriculum Vitae**

Name:                                    Bayan Alilyyani

Post-Secondary Education:        Master of Science in Nursing
                                              Arthur Labatt Family School of Nursing
                                              The University of Western Ontario
                                              London, ON, Canada
                                              2015-2017


                                              Bachelor of Nursing
                                              College of Nursing
                                              Umm Al-Qura University
                                              Makkah, Saudi Arabia
                                              2007-2012

Honours and Awards:              King Abdullah Scholarship
                                              Ministry of Higher Education
                                              Riyadh, Saudi Arabia
                                              2013-Present

                                              CultureWorks ESL Scholarship
                                              King's University College
                                              London, Ontario, Canada
                                              2015

                                              Third rank for the best research project
                                              Nursing Department, Umm Al-Qura University
                                              Makkah, Saudi Arabia
                                              2012

Related Work Experience:         Teaching Assistant
                                              Taif University
                                              Taif, Saudi Arabia
                                              2016- Present

                                              Palliative Care Coordinator

                                              King Abdullah Medical City
                                              Makkah, Saudi Arabia
                                              2012-2013

                                              Intern Nurse Student
                                              King Abdullah Medical City

Makkah, Saudi Arabia
2011-2012
Intern Nurse Student

Maternity and Children Hospital
Makkah, Saudi Arabia
2012

Professional Memberships: Registered Nurses Association of Saudi Arabia