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## ABSTRACT

*Aims:* 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.

*Background:* Relational social capital is an important interpersonal organizational resource that may foster new graduate nurses' workplace wellbeing and promote retention. Evidence shows that authentic leadership and structural empowerment are key aspects of the work environment that support new graduate nurses, however the mediating role of relational social capital has yet to be explored.

*Design:* A longitudinal survey design was used to test the hypothesized model.

*Methods:* One hundred ninety-one new graduate nurses in Ontario with <2 years of experience completed mail surveys in Jan-March 2010 and 1 year later in 2011. Path analysis using structural equation modeling was used to test the theoretical model.

*Results:* Participants were mostly female, working full-time in medicine/surgery or critical care. All measures demonstrated acceptable reliability and validity. Path analysis results supported our hypothesized model; structural empowerment mediated the relationship between authentic leadership and nurses' relational social capital, which in turn had a negative effect on mental health symptoms and a positive effect on job satisfaction. All indirect paths in the model were significant.

*Conclusion:* By creating structurally empowering work environments, authentic leaders foster relational social capital among new graduate nurses leading to positive health and retention outcomes.

# SUMMARY STATEMENT

**Why is this research or review needed?**

- Relational social capital is an important interpersonal organizational resource that may foster new graduate nurses' workplace wellbeing in the first 2 years of practice and promote retention of newcomers to the nursing workforce
- While there is evidence that authentic leadership and structural empowerment are key aspects of the work environment that support new graduate nurses, the mediating role of relational social capital has yet to be explored

**What are the key findings?**

- The effect of authentic leadership on new graduate nurses' perceptions of relational social capital on their work unit was fully mediated through structural empowerment, highlighting the important role that nurse managers play in shaping the context of the workplace.
- New graduate nurses' perceptions of positive workplace relationships (relational social capital) were related to fewer mental health symptoms and greater feelings of job satisfaction over the first year of practice.
- Structural empowerment is a key component of healthy nursing work environments for new graduate nurses that fosters relational social capital and job satisfaction, with protective effects on mental health.

**How should the findings be used to influence policy/practice/research/education?**

- The findings of this study contribute to the growing evidence in support of authentic leadership theory and empowerment and help advance the understanding of how leaders

can positively influence new graduate nurses' health and retention outcomes by creating structurally empowering workplaces.

- New graduates' relational social capital appears to be an important interpersonal resource that can be cultivated by authentic leaders who build positive, honest relationships with new recruits and respond to their needs by providing access to the empowerment structures they need to do their jobs well.
- Helping nurse managers cultivate their authentic leadership skills is a promising strategy that may help hospital organizations support new graduate nurses as they transition into their professional careers.

**Keywords:** authentic leadership, empowerment, mental health, new graduate nurses, nursing, social capital, job satisfaction

# INTRODUCTION

Maintaining a healthy, sustainable nursing workforce is a pressing concern and an international priority (WHO 2013). Many countries are facing a shortage of nurses due to an aging population and an aging nursing workforce, exacerbated by increased financial pressures. Nurse productivity and retention are important organizational outcomes that need to be addressed in order to help solve the nursing shortage and improve the cost-effectiveness of healthcare systems worldwide (WHO 2006).

New graduate nurses are a valuable health resource at a crucial time in their nursing careers. Experiences during the first few years of professional practice influence new graduate nurses' job satisfaction and desire to stay in their jobs (Giallonardo, Wong & Iwasiw 2010, Laschinger 2012, Pineau Stam *et al* 2013). New graduate nurses' early work experiences are influenced by characteristics of the work environment, including the leadership style of their supervisor, access to resources that empower them to accomplish their work, and the quality of relationships they develop with their co-workers (Laschinger 2012).

Concepts from three theoretical frameworks provide a useful approach for examining these aspects of new graduate nurses' early work experiences. Avolio et al. (2007) describe authentic leadership as a positive relational-focused leadership style characterized by self-awareness, honesty and transparency, behavioral integrity, and consistency. Structural empowerment theory (Kanter, 1977, 1993) suggests that work environments that provide access to information, support, resources, and opportunities are empowering and enable employees to accomplish their work in meaningful ways. Finally, social capital theory describes social resources within the work environment that enable employees to leverage existing resources to be effective at work (Nahapiet & Ghoshal 1998). A key component of social capital is relational

social capital which refers to the quality of positive relationships among co-workers. We argue that the presence of these organizational conditions in nursing work environments may have a positive effect on new nurses' early career experiences.

Several studies have shown that authentic leadership is an important antecedent to structural empowerment (Laschinger *et al* 2009, Wong & Laschinger 2013) and Laschinger, Wong & Grau (2012a) found that the combination of authentic leadership and empowerment was associated with higher job satisfaction among new graduate nurses. To our knowledge, however, the added value of positive interpersonal relationships at work (relational social capital) in fostering new graduate nurse workplace well-being has not been studied. Research to date has focused on linking authentic leadership and empowerment to negative aspects of nurse co-worker relationships, such as bullying and incivility (Laschinger, Wong & Grau 2012a, Read & Laschinger 2013). In this study, we address this gap in the literature by examining the influence of authentic leadership and empowerment on the development of positive relationships at work and how these factors influence new nurses' workplace well-being. Therefore, the purpose of this study was to test a hypothesized model linking authentic leadership and structural empowerment to relational social capital, and subsequently to new graduate nurses' mental health and job satisfaction over the first year of practice.

## BACKGROUND

### Theoretical Framework

#### *Structural Empowerment*

According to Kanter's (1977, 1993) theory of structural empowerment, employees need to work in conditions that allow them to do their jobs effectively. These include providing employees with access to information, support, resources, and opportunities to learn and grow.

With the hospital context in mind, access to information refers to availability of content knowledge and expertise required to do one's work, as well as knowledge of organizational values, goals, and policies. Access to information allows nurses to make informed decisions and strive towards common goals with others within their organization. Access to support includes providing new graduate nurses with constructive feedback that allows them to learn and consolidate their skills and abilities, and creating a safe environment where they can ask questions and rely on senior colleagues and their leader for assistance and advice. Access to resources refers to the equipment, supplies, and time nurses need to achieve their work goals. Access to opportunity means providing new graduate nurses with chances to safely develop new competencies and knowledge, to develop their leadership skills, and to take on new challenges. Kanter (1977, 1993) maintains that workers who have access to these sources of power are structurally empowered.

Managers in formal leadership positions are instrumental in providing nurses with access to these four empowerment structures. Past studies have shown that relationship-focused leadership styles are associated with nurses' perceptions of structural empowerment in hospital settings (Laschinger, Finegan & Wilk 2009, Laschinger, Wong & Grau 2012a). Structural empowerment has also been found to be a significant predictor of nurses' organizational and personal outcomes. For example, Wong and Laschinger (2013) found that structural empowerment led to increased job performance and satisfaction and Laschinger and Havens (1997) found that empowerment was related to nurses' occupational mental health and work effectiveness. Among new graduate nurses structurally empowering work environments have been associated with organizational commitment and work engagement (Cho, Laschinger & Wong 2006) and interprofessional collaboration (Laschinger & Smith 2012). Laschinger (2012)

also found significant correlations between structural empowerment and new graduate nurses' job and career satisfaction and turnover intentions.

***Authentic Leadership***

According to authentic leadership theory, authentic leaders are insightful and self-aware, with high ethical and moral standards; they engage in balanced decision-making and present their genuine selves to others (Avolio & Gardner 2005). Authentic leadership is characterized by four core behaviours: balanced processing, relational transparency, an internalized moral perspective, and self-awareness. Balanced processing involves requesting input and ideas from new graduate nurses, prior to making important decisions. By honestly presenting themselves to others (relational transparency), authentic leaders model openness and acceptance, encouraging new graduates to feel safe disclosing their learning needs, professional goals, and areas for development. Having an internalized moral perspective means that authentic leaders have a strong sense of ethics and personal integrity that serve as their moral compass. New graduate nurses can look to their leader as a role model for acting with personal integrity and promoting ethical treatment of other people. Lastly, by having a high level of self-awareness, authentic leaders have insight into their own strengths and limitations which allows them to develop more honest relationships with the nurses on their unit and encourages others to be open and accepting of one another (Avolio & Gardner 2005, Gardner *et al* 2005). These behaviours help authentic leaders develop positive, honest, and open relationships with followers that encourage followers' to be authentic and cultivate their personal and professional growth, resulting in desirable wellbeing and performance outcomes (Avolio & Gardner 2005, Gardner *et al* 2005).

Authentic leadership has been associated with structurally empowering working conditions (i.e. work environments where employees have access to information, support,

resources, and opportunities to learn and grow) in nursing with links to lower burnout (Laschinger, Wong & Grau 2012b) and greater interprofessional collaboration (Laschinger & Smith 2013), job performance, and satisfaction (Wong & Laschinger 2012). Wong and Laschinger (2012) suggested that through creating structurally empowering work environments authentic leaders can influence nurses' job performance and job satisfaction by influencing followers' self-determination (ability to perform their work autonomously, using their own discretion to determine how they will go about their work) (Deci & Ryan 2008).

Authentic leadership has been empirically linked to important organizational outcomes among new nurses. For example, new graduate nurses' perceptions of manager authentic leadership behaviour has been associated with work engagement and job satisfaction (Giallonardo, Wong & Iwasiw 2010) and has also been shown to have a protective effect against experiences of workplace bullying and associated burnout, job dissatisfaction, and job turnover intentions (Laschinger, Wong & Grau 2012b). This growing body of evidence suggests that authentic leadership is one way that nurse managers can positively influence new graduate nurses' work experiences and related outcomes.

***Relational Social Capital***

Nahapiet and Ghoshal's (1998) theory of social capital describes three forms of social capital that are created through and embedded in interpersonal relationships. Structural social capital refers to the configuration of relationships among actors in a social network, whereas relational social capital refers to the nature or quality of those relationships, and cognitive social capital describes the shared meanings and mental models of the group. While all three components of social capital are interconnected, this study focused on relational social capital because the quality of relationships, which includes a strong sense of community, may be

especially important to new graduate nurses' mental health and job satisfaction during their transition to their professional role. This proposition is supported by past work on new graduate nurses' transition to the profession which has shown that relationships with preceptors and co-workers and a sense of belonging at work are important factors influencing job satisfaction (Casey, Fink, Krugman & Propst 2004, Winter-Collins & McDaniel 2000).

According to social capital theory, higher levels of relational social capital, such as, trust, reciprocity, and community in the workplace, lead to greater levels of teamwork and cooperation (Nahapiet & Ghoshal, 1998). Social capital has been associated with lower levels of burnout (Kowalski *et al* 2010), better risk management behavior (Ernstmann *et al* 2009), and organizational commitment and pro-social customer service behaviours (Hsu *et al* 2011) among hospital nurses. In a recent multi-level analysis Laschinger, Read, Wilk, and Finegan (2014) found significant relationships between unit-level empowerment, social capital, unit effectiveness, and individual nurses' perceptions of patient care quality. Laschinger (2012) found significant correlations between new graduate nurses' perceptions of the sense of community on their unit and their job and career satisfaction and turnover intentions.

**Summary**

Authentic leadership of nurse managers has been identified as a key factor influencing new graduate nurse perceptions of empowerment (Laschinger & Smith 2013, Laschinger, Wong & Grau 2012a, Wong & Laschinger 2012) and structural empowerment has been linked to numerous positive workplace wellbeing and organizational outcomes for nurses (Laschinger & Finegan 2005, Laschinger, Finegan & Wilk 2009, Laschinger & Havens 1997). Social capital theory (Nahapiet & Ghoshal 1998) is emerging as a useful framework to explain how social resources create positive experiences at work and lead to beneficial outcomes for nurses and

healthcare organizations. Based on theory and research it is reasonable to expect that these constructs interact to influence new graduate workplace wellbeing. We developed a theoretical model aimed to further our understanding of the role of authentic leaders in creating empowering nursing work environments where positive relationships thrive, thereby fostering positive personal and job related outcomes.

**Hypothesized Model**

In our theoretical model (Figure 1) we hypothesize that nurse manager authentic leadership behaviour has a positive influence on new graduate nurses' perceptions of structural empowerment, which in turn has a positive influence on relational social capital. In our model structural empowerment is a mediating mechanism through which authentic leadership influences relational social capital. Moreover, we hypothesize that as a result of these positive work environment conditions, new graduate nurses will experience higher job satisfaction and fewer mental health symptoms over the first year of practice. We describe the rationale for each of these relationships in the upcoming paragraphs.

First, we propose that managers engaging in authentic leadership behaviours provide new graduate nurses with structurally empowering work conditions that help them perform their job effectively (hypothesis 1). Authentic leaders develop positive, honest, and open relationships with followers that encourage the development of their personal and professional growth (Avolio & Gardner 2005, Gardner *et al* 2005). We suggest that by establishing high quality relationships with followers (Avolio *et al* 2004) authentic leaders become more aware of the needs of the new graduate nurses' on their units and therefore provide them with access to valued information, support, resources, and opportunities that would empower them to accomplish their work in a meaningful way.

Next we propose that structural empowerment will lead directly to higher levels of relational social capital (hypothesis 2). New graduate nurses who are structurally empowered will be able to focus on successfully accomplishing their work goals and building positive relationships with others at work rather than expending energy competing for scarce resources. According to Nahapiet and Ghoshal's (1998) theory of social capital, when employees reduce social monitoring they develop cooperative, trusting relationships with others at work, allowing greater sharing and combination of ideas, advice, and other resources to occur. Thus, by promoting resource sharing and cooperative behaviours, structural empowerment is hypothesized to lead to a sense of community at work (a form of relational social capital).

In addition, we assert that authentic leadership will indirectly influence relational social capital through its effect on structural empowerment (hypothesis 3). Specifically, we hypothesize that when authentic leaders make the effort to establish positive relationships with their employees and provide them with the specific organizational means to empower them at work, new graduate nurses' will feel accepted and valued, contributing to a sense of community on their work unit. Thus, structurally empowering conditions created by authentic leaders provide the mechanism whereby leaders create relational social capital among new graduate nurses (hypothesis 4).

Finally, we hypothesized that relational social capital will lead to increased job satisfaction (hypothesis 5) and fewer mental health symptoms over time (one year later) (hypothesis 6). In light of the importance new nurses place on feeling that they belong (Winter-Collins & McDaniel 2000) we suggest that when new graduate nurses enjoy spending time with the people they work with and are able to access greater levels of support and advice to help them during their transition to their new professional role they will feel like they are a valued

part of their work team, resulting in feelings of job satisfaction. In addition, new graduate nurses who experience a strong sense of community are unlikely to have feelings of social isolation or exclusion at work and thus will experience better mental health (Einarsen & Mikkelsen 2003).

INSERT FIGURE 1 ABOUT HERE

## THE STUDY

### Aims

The purpose of this study was to test a model linking authentic leadership of managers to new graduate nurses' perceptions of structural empowerment, relational social capital, mental health, and job satisfaction.

### Design

This study used a longitudinal survey design. We tested our hypothesized model using data from a larger study of newly graduated nurses in acute care hospitals across Ontario.

### Sample

A random sample of nurses who had graduated in the last two years was drawn from the registry list of practicing nurses in Ontario. Initially at Time 1 (2010), 709 nurses were sent surveys to their home addresses and 342 surveys were returned (48.2% response rate). At Time 2 (2011) follow-up surveys were sent to responders (n=342) and a total of 191 matched useable returns were received (55.8% response rate). Demographic characteristics of the sample are presented in Table 1. Comparison of Time 1 and Time 2 demographic variables showed that expected increases in age and nursing experience occurred over the one year time period while gender, education, specialty area, employment status remained stable.

TABLE 1 ABOUT HERE

### Data Collection

Data were collected at two time points, one year apart (2010 and 2011) using a tailored survey design approach (Dillman 2011). Each year, three mailings were conducted to increase response rates. Initially, nurses received a survey package with a letter of information, a study questionnaire, and an addressed, stamped return envelope to return the completed questionnaire. A $2.00 coffee voucher was included with every survey as a token of appreciation. Four weeks later, reminder letters were mailed. Finally, a follow-up letter and replacement questionnaire with a return envelope were sent to non-responders eight weeks after the initial mailing.

**Ethical Considerations**

Ethics approval was granted from the university research ethics board before commencing the study.

**Data Analysis**

Variables were screened for outliers and missing data and descriptive statistics were calculated using SPSS software (version 21.0, IBM Corporation, 2012). Demographic variables at Time 1 and Time 2 were compared using the chi-square test for differences for categorical variables and paired t-tests for continuous variables. The hypothesized model was tested using structural equation modeling with maximum likelihood estimation (Tabachnick & Fidell 2013, Worthington & Whittaker 2006) in Amos software (version 21.0, IBM Corporation, 2012). As recommended by Kline (2011), the following fit statistics were used to assess the fit between the covariance structure of the data and the hypothesized model: Chi-square ($\rho$>.05), Chi-square ratio (<3), RMSEA (<.08), CFI (>.90), and IFI (>.90). Bootstrapping with 500 iterations using maximum likelihood estimation was conducted to estimate the significance of the indirect paths specification in the model (DiCicco & Efron 1996).

**Validity & Reliability**

Previously validated instruments were used to measure all major study variables. Acceptable internal consistency (Cronbach's α >.70) was found for all measures (Table 2).

***Authentic Leadership***

The Authentic Leadership Questionnaire (ALQ) (Walumbwa *et al.* 2008) was used to measure nurses' perceptions of their manager's authentic leadership behaviours. The ALQ consists of 16 items divided into four subscales: relational transparency (five items), balanced processing (five items), self-awareness (four items), and internalized moral perspective (four items). Items were rated on a five-point Likert scale ranging from 0 = not at all to 4 = frequently, if not always. Subscale scores were obtained by summing and averaging all items in each subscale. The ALQ has demonstrated acceptable validity and reliability. Cronbach's α values of .92 (self-awareness), .87 (transparency), .76 (moral/ethical perspective), .81 (balanced processing), and .93 (overall) and item factor loadings ranging from .62-.93 were reported in the initial validation study (Walumbwa *et al.* 2008). Confirmatory factor analysis supported the second-order measurement model ($\chi^2(196) = 421.30$, CFI=.96, RMSEA=.06).

***Structural Empowerment***

Structural empowerment was measured using four subscales of the Conditions of Work Effectiveness Questionnaire II (CWEQ-II) (Laschinger *et al* 2001): access to opportunity, information, support, and resources (three items each). Each item was measured on a five-point Likert scale ranging from 1 = none to 5 = a lot. Subscale scores were created by averaging the items for each of the four subscales; total empowerment was the sum of the subscale means (scale range 4-20). Confirmatory factor analysis of the CWEQ-II has supported the second-order measurement model ($\chi2(129) = 279$, CFI=.992, IFI=.992, RMSEA=.054) with item factor loadings ranging from .51 to .94 (Laschinger *et al* 2001). Acceptable internal consistency has

been reported for each of the subscales and overall (Cronbach's α of .81 [information], .80 [opportunity]. .78 [support], .81 [resources], and .87 [overall]).

***Relational Social Capital***

The Sense of Community subscale of Leiter and Maslach's (2003) Areas of Worklife Scale (AWS) scale was used to measure nurses' relational social capital. This measure consists of five items assessing individuals' perceptions of social relationships in the workplace and is measured on a five-point Likert scale with ratings from 1 = strongly disagree to 5 = strongly agree. Higher scores indicate higher levels of relational social capital. Cronbach's α of .82 was reported by Letier and Maslach (2003).

***Mental Health***

The Mental Health Inventory (MHI-5) is a five-item scale that measures experienced frequency of negative mental health symptoms over the last month (e.g., "How much of the time during the past four weeks…have you felt downhearted and blue?") (Ware & Kosinski 2000). Items were rated on a six-point Likert scale from 1 = all of the time to 6 = none of the time, with higher scores indicating higher levels of mental health symptoms. Three items were reverse-scored. Previous internal consistency estimates for this subscale have been acceptable ($\alpha$ = .78–.83) (Friedman *et al* 2005).

***Job Satisfaction***

Job satisfaction was measured using four items from a previously validated scale from Shaver and Lacey (2003) (e.g. "I feel satisfied with my job"). Items were rated on a five-point Likert scale with ratings from 1 = strongly disagree to 5 = strongly agree. Cronbach's α was reported to be .82.

TABLE 2 ABOUT HERE

# RESULTS

## Descriptive Analyses

At Time 1, nurses reported that their manager often demonstrated authentic leadership behaviours with a mean score of 2.47 (.90) out of 4. The mean rating of structural empowerment was 13.70 (2.13) out of a possible score of 20. On average, nurses rated their relational social capital as 3.75 (.92) out of 5. At Time 2, few nurses in our sample reported experiencing frequent mental health symptoms (scores of 4 or above) and the average rating was 2.40 (.99) out of 6. Overall ratings of job satisfaction were 3.11 (.91). Correlations between main study variables ranged from -.13 to .49 (see Table 3).

TABLE 3 ABOUT HERE

## Testing the Hypothesized Model

Results of path analysis showed that the fit between the hypothesized model and the data was acceptable ($\chi 2$ (166) = 361.571; $\chi 2$ ratio = 2.18; IFI=.90; CFI=.90; RMSEA=.079). As presented in Figure 2, authentic leadership had a significant positive effect on structural empowerment ($\beta$ =.50, $\rho$<.05) which in turn had a significant effect on relational social capital ($\beta$=.70, $\rho$<.05). Relational social capital had a significant negative direct effect on mental health symptoms ($\beta$ =-.21, $\rho$<.05) and a positive direct effect on job satisfaction ($\beta$ =.50, $\rho$<.05).

Analysis of indirect effects (Table 4) showed that authentic leadership had a significant effect on relational social capital through structural empowerment ($\beta$ =.35, $\rho$<.05; 95% CI from .21 to .47), as well as significant effects on job satisfaction ($\beta$ =.28, $\rho$<.001; 95% CI from .08 to .28) and mental health symptoms ($\beta$ = -.07, $\rho$<.05; 95% CI from -.15 to -.01) through its effects on structural empowerment and relational social capital. Structural empowerment was found to have significant indirect effects on job satisfaction ($\beta$ = .35, $\rho$<.05; 95% CI from .20 to .50) and

mental health symptoms ($\beta = -.15$, $\rho<.05$; 95% CI from -.28 to -.02) through its effect on relational social capital.

FIGURE 2 ABOUT HERE

TABLE 4 ABOUT HERE

## DISCUSSION

The results of this study supported a model suggesting that authentic leaders create structurally empowering work environments which in turn positively influences new graduate nurses' relational social capital in the workplace. New graduate nurses experiencing a strong sense of community, an important type of relational social capital, were also found to experience fewer mental health symptoms and higher job satisfaction one year later.

As demonstrated in past research, leaders often have an indirect effect on nurses' organizational and health outcomes (Brady & Cummings, 2010). In particular, our findings add empirical support that authentic leaders influence new graduate nurses' relational social capital through their effect on structural empowerment. Past studies have shown that structural empowerment is a key organizational factor through which authentic leaders influence new graduate nurses' organizational and personal outcomes such as burnout, work performance, and job satisfaction (Laschinger, Wong, & Grau 2012, Wong & Laschinger 2012). It makes sense that by engaging in authentic leadership behaviours such as being open and honest with others, requesting input on important decisions, and exercising ethical judgment, nurse managers can build positive, trusting relationships with new graduate nurses that help them understand their personal and professional goals and needs. This allows nurse managers to provide specific information, support, resources, and opportunities to learn and develop that meet the needs of

novice nurses by creating a structurally empowering work environment (Kanter 1977; 1993) and foster positive relationships at work.

In this study, empowerment mediated the relationship between authentic leadership and relational social capital, as well as the relationships between authentic leadership and relational social capital and the outcome variables of job satisfaction and mental health. Our findings are in line with previous findings examining the relationship between authentic leadership and structural empowerment among new graduate nurses. For example, Wong and Laschinger (2012) showed that empowerment mediated the relationship between authentic leadership and job satisfaction of new graduate nurses. The current study contributes to our knowledge of the role of structural empowerment as a modifiable work environment factor that authentic leaders can use to foster relational social capital and feelings of job satisfaction and protect the mental health of new graduate nurses. This suggests that nurse leaders have the power to positively influence new graduate nurses' experiences of work which may ease their transition to practice and enhance retention. To our knowledge, this is the first study linking authentic leadership and empowerment to new graduate nurses' relational social capital in hospital settings.

Relational social capital is an important interpersonal resource embedded within relationships that employees have with one another (Nahapiet & Ghoshal 1998). Our findings add to the current evidence that developing high-quality relationships with colleagues in the workplace may be an especially important part of new graduate nurses' transition to professional practice (Casey *et al* 2010, Feng & Tsai 2012). During the socialization to practice novice nurses learn the ropes from more experienced nurses and gain access to valuable advice, support, and assistance that allows them to practice effectively, leading to feelings of satisfaction with their work and greater self-confidence (Greene & Puetzer 2002). In addition, it makes sense that

high quality relationships in themselves contribute to a positive work environment where nurses can work together to achieve patient care goals and feel positively about their profession. Workplace social capital among hospital nurses has been associated with important organizational outcomes such as organizational commitment (Hsu *et al* 2012) and risk management behavior (Ernstmann *et al* 2008). Our results suggest that new graduate nurses' social capital at work also contributes to their job satisfaction and mental health.

Relational social capital is an important aspect of nurses' work life that influenced job satisfaction in our study. In past studies new graduate nurses have reported that feeling a sense of belonging and community at work is a primary concern during their transition to professional practice (Malouf & West 2011) and has been associated with new nurses' job satisfaction (Winter-Collins & McDaniel 2000). Our findings add empirical support for the link between relationships at work and new graduate nurses' job satisfaction and contribute to the growing literature about positive relationships at work (Dutton & Ragins 2007) which examines the effects of positive phenomena such as social capital within organizations.

New graduate nurses may be at elevated risk of experiencing mental health problems because the transition period to nursing practice is often stressful and they may not feel confident or supported in their new role (Casey *et al* 2004). To date, much of the research on new graduate nurses' mental health has focused on negative experiences such as burnout, bullying (Lashinger *et al* 2012, McKenna *et al* 2003), incivility (Laschinger *et al* 2013), and strain (Lavoie-Tremblay *et al* 2008). From a more positive perspective, there is also evidence that empowering work environments influence mental health directly (Laschinger & Havens 1997) as well as through work engagement (Lachinger & Finegan 2005). Our findings add to the current understanding about the impact of structurally empowering work environments on mental health by showing

that when new nurses experience a strong sense of community (an important type of relational social capital), they experience few mental health symptoms one year later.

High quality social relationships that provide employees with access to social resources such as social support are an important determinant of employee mental health (DeLange *et al* 2004; Nahum-Shanià *et al* 2011). Moreover, given the importance new graduate nurses place on fitting in and feeling accepted (Malouf & West 2011, Winter-Collins & McDaniel 2000), it makes sense that interpersonal relationships at work have an important effect on new graduate nurses' mental health. It is likely that when new graduate nurses experience high-quality relationships with their colleagues they enjoy the social interactions they have at work and benefit from these work relationships by having support, advice, and assistance from more experienced nurses, other team members, and their manager. In other words, having relational social capital in the workplace provides new graduate nurses with access to social resources that may ease their transition to practice and help them meet the demands of their new professional role, leading to lower mental health symptoms over their first year on the job. This is consistent with past studies demonstrating that workplace social capital has positive effects on employee mental health (Oksanen *et al* 2008) and adds to our understanding of the relationship between social capital and mental health symptoms among the new graduate nurse population.

Interestingly, relational social capital had a much smaller effect on mental health symptoms than on job satisfaction. One logical explanation for this is that new graduate nurses may have other sources of relational social capital outside of work (e.g. significant other, friends, family members, mentors) that provide them with social resources that protect them from experiencing mental health symptoms that could result from stressful working conditions and, perhaps, an unfriendly work climate on their hospital unit. Perceptions of job satisfaction, on the

other hand, may be more directly related to relational social capital at work because new graduate nurses often need direct, immediate access to supportive, helpful colleagues as well as a supervisor who can provide them with assistance, advice, and encouragement on the job (Casey *et al* 2010). Therefore, it makes sense that having high levels of relational social capital at work would have a stronger effect on new graduate nurses' job satisfaction than their mental health. In future research it may be valuable to examine external sources of relational social capital in addition to those available in the workplace.

**Limitations**

The main limitation of the current study is attrition from Time 1 (n=342) to Time 2 (n=191) which may have introduced non-response bias that influenced our findings. Attrition over time is difficult to avoid in longitudinal studies however the longitudinal nature of the data strengthens the case for causality in the proposed model.

Common method bias may also be a concern for single method self-report questionnaires but according to Podsakoff *et al* (2003), techniques to control for common method variance are not always desirable for assessing constructs that are perceptual in nature. For example, it would not be useful to have people rate their co-workers' job satisfaction because what we present to others is not always an accurate reflection of how we feel. Similarly, nurses themselves are the best judge of the structural, relational, and cognitive social capital embedded in their workplace relationships therefore it makes sense to have them complete self-report questionnaires. Collecting data at different points in time, as we did in the current study, is one recommended way to combat common method bias (Podsakoff *et al* 2003). Therefore we feel that shared variance in the data caused by the use of a common measurement method was reasonably controlled for.

# CONCLUSION

The findings of this study contribute to the growing evidence in support of authentic leadership and empowerment theories and help advance the understanding of how leaders can positively influence new graduate nurses' health and retention outcomes by creating structurally empowering workplaces. In addition, new graduates' relational social capital appears to be an important interpersonal resource that can be cultivated by authentic leaders who build positive, honest relationships with new recruits and respond to their needs by providing access to the empowerment structures they need to do their jobs well. Nurse leaders can influence social capital by engaging in authentic leadership practices that create structurally empowering work environments. Therefore, providing leadership training and opportunities for nurse managers to cultivate their authentic leadership skills (e.g. developing self-reflection skills to increase self-awareness; strategies to get input before making important decisions) is a promising strategy that may help hospital organizations support new graduate nurses as they transition into their professional careers.

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Figure 1. Hypothesized Model

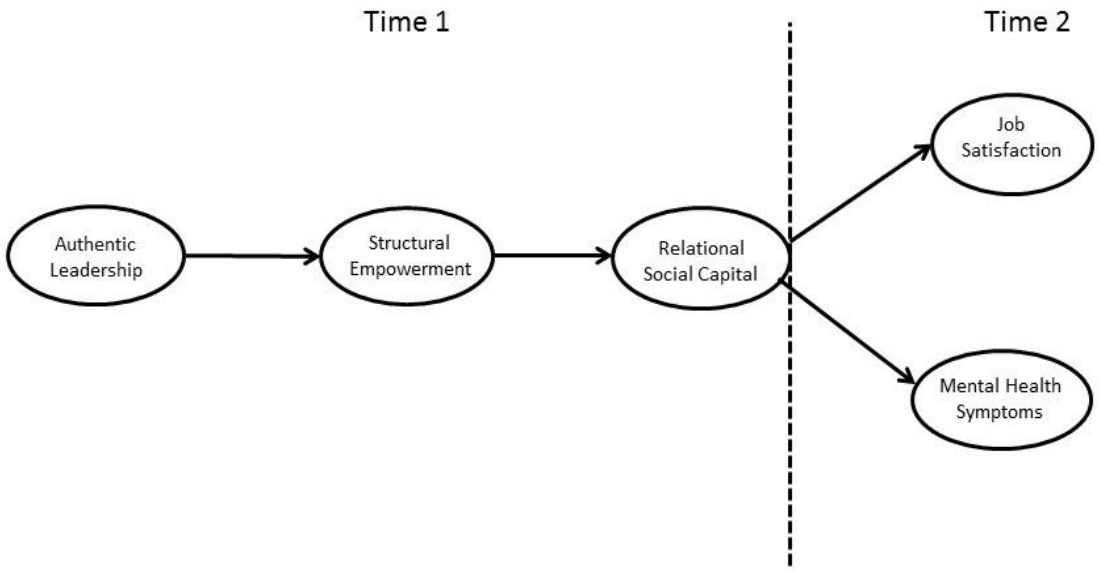


Figure 2. Results of testing the hypothesized model

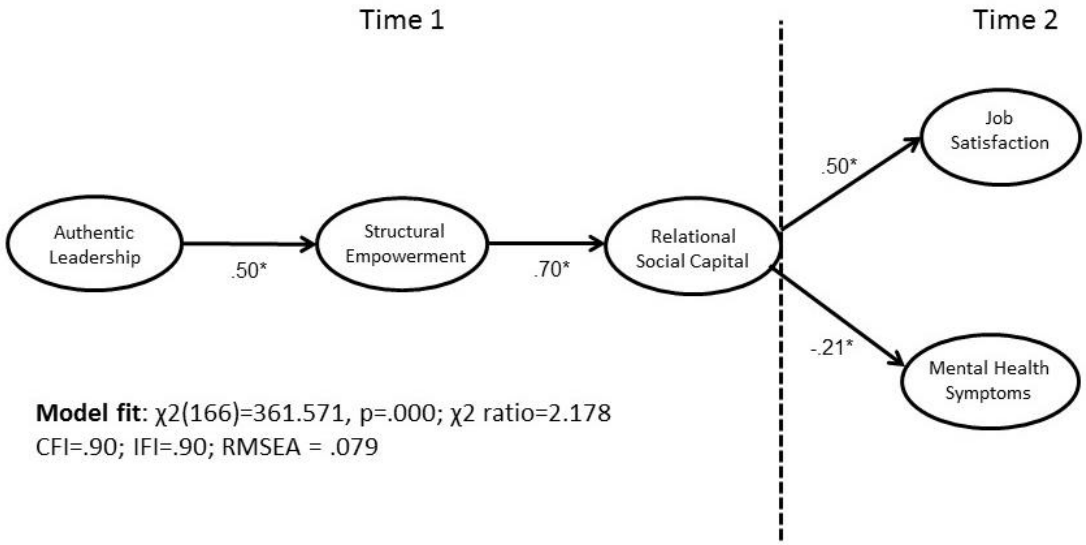

Table 1. New-graduate nurse demographic characteristics at Time 1 (N=191)

| | **Time 1** | | **Time 2** | | **Comparison** | |
|---|---|---|---|---|---|---|
| *Demographic Characteristic* | *Mean(n)* | *SD* | *Mean* | *SD* | *T-value* | ρ |
| **Age** | 28.41 (190) | 6.79 | 29.18 (190) | 6.74 | -11.930 | .000 |
| **Years as RN** | 1.01 (191) | 0.25 | 1.87(184) | 0.57 | -6.507 | .000 |
| | *N* | *%* | | | $X^2$ | ρ |
| **Gender** | | | | | .019 | .889 |
| Female | 174 | 91.1 | 173 | 90.6 | | |
| Male | 17 | 8.9 | 17 | 8.9 | | |
| **Education** | | | | | .001 | .997 |
| BScN | 189 | 99.0 | 189 | 99.0 | | |
| Master of Nursing | 2 | 1.0 | 1 | 0.5 | | |
| **Specialty of current unit** | | | | | 2.957 | .398 |
| Medical-surgical | 118 | 61.8 | 108 | 56.5 | | |
| Critical care | 43 | 22.5 | 44 | 23.0 | | |
| Maternal-child | 15 | 7.9 | 17 | 8.9 | | |
| Mental health | 11 | 5.8 | 14 | 7.3 | | |
| **Current employment status** | | | | | .408 | .815 |
| Full time | 122 | 63.9 | 126 | 66.0 | | |
| Part time | 49 | 25.7 | 51 | 26.7 | | |
| Casual | 18 | 9.4 | 14 | 7.3 | | |

Table 2. Study instruments

| Variable | Instrument | Authors | # of items | Scale Range | Cronbach's α |
|---|---|---|---|---|---|
| Authentic Leadership | Authentic Leadership Questionnaire | Walumbwa et al., 2008 | 16 | 0 = not at all to 4 = frequently, if not always | .95 |
| Structural Empowerment | Conditions of Work Effectiveness II (CWEQ II) | Laschinger et al., 2001 | 12 | 1 = none to 5 = a lot | .80 |
| Relational Social Capital | Areas of Worklife Scale, *Community Subscale* | Leiter & Maslach, 2003 | 3 | 1 = strongly disagree to 5 = strongly agree | .81 |
| Mental Health | Mental Health Inventory-5 | Berwick et al., 1991 | 5 | 1 = all of the time to 6 = none of the time | .86 |
| Job Satisfaction | Unnamed | Shaver and Lacey, 2003 | 4 | 1 = strongly disagree to 5 = strongly agree | .82 |

Table 3. Means, standard deviations, and internal consistency of major study variables

| | Variable | M | SD | α | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|---|---|---|
| | **Time 1** | | | | | | | |
| 1. | Authentic Leadership | 2.47 | 0.88 | .95 | - | | | |
| 2. | Total Empowerment | 13.70 | 2.13 | .80 | .38 | - | | |
| 3. | Relational Social Capital | 3.75 | 0.92 | .81 | .30 | .49 | - | |
| | **Time 2** | | | | | | | |
| 4. | Mental Health | 2.39 | 0.99 | .86 | -.13 | -.18 | -.14 | - |
| 5. | Job Satisfaction | 3.11 | 0.91 | .82 | .31 | .36 | .36 | -.29 |

Correlations >.14 are significant at the ρ<.05 level

Table 4. Indirect effects

| Structural Paths | Standardized Coefficient | 95% Confidence Interval | | SE | ρ |
|---|---|---|---|---|---|
| | | *Lower Bound* | *Upper Bound* | | |
| AL → SE→ RSC | .351 | .211 | .473 | .066 | .004 |
| AL → SE→ RSC → JSat | .283 | .082 | .275 | .049 | .004 |
| AL → SE→ RSC → MH | -.073 | -.147 | -.011 | .035 | .017 |
| SE→ RSC → JSat | .352 | .197 | .496 | .073 | .004 |
| SE→ RSC → MH | -.146 | -.278 | -.024 | .065 | .017 |

Notes: AL = Authentic Leadership; SE = Structural Empowerment;
RSC = Relational Social Capital; JSat = Job Satisfaction; MH = Mental Health