



# The influence of psychological capital, authentic leadership in preceptors, and structural empowerment on new graduate nurse burnout and turnover intent<sup>☆, ☆ ☆</sup>



Patricia A. Dwyer (PhD, RN)<sup>a,\*</sup>, Susan M. Hunter Revell (PhD, RN)<sup>b</sup>,  
Kristen A. Sethares (PhD, RN, CNE)<sup>b</sup>, Brian J. Ayotte (PhD)<sup>c</sup>

<sup>a</sup> Boston Children's Hospital, Department of Nursing, Boston, MA, United States

<sup>b</sup> University of Massachusetts Dartmouth, College of Nursing, North Dartmouth, MA, United States of America

<sup>c</sup> University of Massachusetts Dartmouth, Department of Psychology, North Dartmouth, MA, United States of America

## 1. Introduction

Transition into practice can be a challenging experience for newly graduated nurses. Unfortunately, burnout levels and turnover intent in novice nurses continues to be disturbingly high. Instability in the nursing workforce has a detrimental impact on healthcare organizations and patient outcomes. Considering that over 40% of today's nursing workforce is approaching retirement the retention of new graduate nurses is a priority concern (Auerbach, Buerhaus, & Staiger, 2014).

Numerous intrapersonal, interpersonal, and organizational level factors influence new graduate nurse transitional outcomes (Dwyer & Hunter Revell, 2016) including psychological capital (Boamah & Laschinger, 2015), authentic leadership in preceptors (Giallonardo, Wong, & Iwasiw, 2010), and structural empowerment (Laschinger, 2012a). Researchers have begun to explore the simultaneous effect of these influences (Pineau Stam, Laschinger, Regan, & Wong, 2015). However, despite a growing body of literature that suggests a complex interplay between individual nurse characteristics, interpersonal work relationships, and work environment influence transitional outcomes, there is a gap in the literature regarding the extent intrapersonal, interpersonal, and organizational level factors influence transition. No studies have examined the combined effect of psychological capital, authentic leadership in preceptors, and structural empowerment. Therefore, the purpose of this study was to explore the simultaneous influence of intrapersonal (psychological capital), interpersonal (authentic leadership in preceptors), and organizational influences (structural empowerment) factors on new graduate nurses' burnout and turnover intent.

## 2. Background

### 2.1. Burnout and turnover intent

When looking back, concern about the difficulties new nurses have during the first years of practice began in the mid 1970's. Kramer (1974) described the process of transition from nursing education to nursing practice as "reality shock." Over the last ten years several historically significant changes have occurred. The economic recession and decreased insurance coverage have dramatically altered the practice environment. Only the sickest, most complex patients remain in the hospital for any significant length of time. The boom in technology has added additional cognitive stress. Mounting demands within an increasingly acute practice environment have led to continued difficulties in new graduate nurse transition. In response, numerous researchers have qualitatively and quantitatively explored the process of new graduate nurse transition (Beecroft, Dorey, & Wenten, 2008; Casey, Fink, Krugman, & Propst, 2004; Laschinger, 2012a). However, despite a large body of research exploring factors that influence this transitional process, burnout and turnover intent among new graduate nurses remains high.

The burnout levels among novice nurses are quite concerning. Cho, Laschinger, and Wong (2006) found that 66% of new graduate nurses were suffering from severe burnout. In two additional studies, comparable burnout rates of 62% (Laschinger, Finegan, & Wilk, 2009) and 48.9% (Laschinger, Grau, Finegan, & Wilk, 2010) were reported. Burnout, specifically emotional exhaustion, can lead to poor mental health in new graduate nurses and an increase in turnover intent (Laschinger, Grau, Finegan, & Wilk, 2012).

New graduate nurses' intent to leave their current job is similarly concerning. Unruh and Zhang (2014) report that 18% of new graduate

\* This study was partially supported by a research funding grant from Theta Kappa Chapter of Sigma Theta Tau International.

\*\* No conflict of interest has been declared by the authors.

\* Corresponding author.

E-mail address: [patricia.dwyer@childrens.harvard.edu](mailto:patricia.dwyer@childrens.harvard.edu) (P.A. Dwyer).

nurses change jobs during their first year of employment and an additional 23% were thinking about leaving. Despite a focus on the development of new graduate nurse transition programs, these statistics are similar to those reported over ten years ago. Kovner et al. (2007) found that 13% had changed jobs after one year and 37% felt ready to change jobs.

The impact of new graduate nurse burnout and turnover intent is significant in terms of both cost and patient care. Nurse burnout and turnover has a financial impact on healthcare organizations (Laschinger, 2012a; Li & Jones, 2013). Estimates of nurse turnover costs range from \$82,000 to \$88,000 per nurse (Jones, 2008). However, researchers caution that the organizational impact includes sequelae that are difficult to quantify. Disruptions in continuity of care, increased length of stay, and lack of effective interdisciplinary communication are harmful to overall organizational performance (Jones, 2008). In addition to the financial impact, high turnover and burnout levels has a detrimental effect on patient care. Fluctuations in staffing occur while job vacancies are filled and new hires are oriented. Increases in nurse-patient ratios can have a devastating impact on patient outcomes. Alarming, patients are 7% more likely to die during hospitalization when a nurse's workload is increased by even one patient (Aiken et al., 2014).

## 2.2. Organizational level influences

Structural empowerment is an important organizational level factor that positively influences new graduate nurse transitional outcomes (Laschinger, 2012a). It refers to organizational structures that facilitate access to information, support, resources, and opportunities to learn and grow (Kanter, 1977, 1993). Structural empowerment influences new graduate nurse burnout and turnover intent. Laschinger et al. (2010) found that structural empowerment was significantly and negatively related to workplace bullying, which subsequently influenced all three components of burnout: emotional exhaustion, cynicism, and efficacy. Additionally, new graduate nurses' positive perception of structural empowerment was related to decreased intent to leave the job during both the first and second year of employment (Laschinger, 2012a).

## 2.3. Interpersonal level influences

Workplace relationships significantly impact new graduate nurse transitional outcomes (Beecroft et al., 2008; Giallonardo et al., 2010; Laschinger, 2012a). Authentic leadership describes a pattern of transparent and ethical leader behavior that encourages openness in sharing information while accepting follower inputs (Avolio, Walumbwa, & Weber, 2009). The presence of authentic leadership within a novice nurses' workplace relationships is vitally important. Several researchers have explored the impact of authentic leadership on burnout and turnover both directly and indirectly. Authentic leadership was inversely correlated with significantly lower levels of burnout in new graduate nurses using both a cross-sectional survey design (Laschinger, Wong, & Grau, 2012) and longitudinally at year one and year two (Laschinger & Fida, 2014). In addition, Laschinger (2012b) reported an indirect relationship between authentic leadership and new graduate nurse turnover intent. Both authentic leadership and emotional exhaustion had significant direct effects on job satisfaction, which indirectly influenced new graduate nurses' turnover intentions (Laschinger, 2012b).

Preceptors serve an important role during a new graduate nurse's transition and formal preceptorship is a universally accepted component of orientation programs (Park & Jones, 2010; Rush, Adamack, Gordon, Lilly, & Janke, 2013). However, there is a lack of research that explores the relationship between preceptor characteristics and new graduate nurse transitional outcomes. Although authenticity in management has been shown to positively impact new graduate transition,

only one research team has explored authentic leadership in preceptors as a predictor in new graduate nurse transition. Giallonardo et al. (2010) found that new graduate nurses that reported higher perceptions of authentic leadership in preceptors had higher levels of work engagement and job satisfaction.

## 2.4. Intrapersonal level influences

A growing number of researchers have explored how an employees' intrapersonal characteristics impact the organizations where they work. Psychological capital was originally developed from theoretical and empirical work in positive psychology and organizational behavior science (Luthans, Avolio, Avey, & Norman, 2007). Luthans, Youssef-Morgan, and Avolio (2007) defines psychological capital as "an individual's positive psychological state of development and is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success" (p. 3). The four components included in this definition are often referred to as the HERO within to represent hope, efficacy, resilience, and optimism (Luthans, Youssef-Morgan, & Avolio, 2015). An important aspect of psychological capital is that it is considered open to development and improvement through training and education (Luthans et al., 2015).

Psychological capital is an emerging intrapersonal influence on new graduate nurse transition. More recently, nurse researchers examined the influence of psychological capital on new graduate nurse transition. Psychological capital has been shown to be a significant intrapersonal level influence on new graduate nurse transitional outcomes including: work engagement (Boamah & Laschinger, 2015), burnout, job satisfaction, mental health (Laschinger & Fida, 2014), emotional exhaustion, health outcomes (Laschinger & Grau, 2012), and burnout, work engagement (Laschinger, 2012a). While most studies suggested an inverse relationship between psychological capital and detrimental transitional outcomes, one study reported that higher psychological capital actually predicted increased turnover intent (Laschinger, 2012a).

## 2.5. Intrapersonal, interpersonal and organizational level influences

Although researchers have identified numerous intrapersonal, interpersonal, and organizational level influences on new graduate nurse transition, this phenomenon is complex and these influences do not occur in isolation. Instead, each level of influence has a reciprocal relationship with each other. Intrapersonal level influences like psychological capital will affect a new graduation nurses' perception of both their organizational structure and workplace relationships. Likewise, a new graduate nurse's perception of his or her organization and workplace relationships will have an effect of his or her psychological capital. Researchers have begun to explore the simultaneous effect of influences such as psychological capital and workplace empowerment (Boamah & Laschinger, 2015); psychological capital, workplace empowerment, and staffing (Pineau Stam et al., 2015); and authentic leadership and psychological capital (Laschinger & Fida, 2014). The results of these studies suggest that the combination of intrapersonal, interpersonal, and organizational influences predict transitional outcomes. To date, no studies have examined the simultaneous effect of intrapersonal (psychological capital), interpersonal (authentic leadership in preceptors), and organizational (structural empowerment) level influences on new graduate nurse transitional outcomes.

### 3. Theoretical framework

Rosabeth Moss Kanter's Structural Theory of Organizational Behavior (1977, 1993) and the Social Ecology Model [SEM] (McLeroy, Bibeau, Steckler, & Glanz, 1988) provided the theoretical framework for this study. Kanter's Theory of Organizational Behavior provides a framework for understanding how organizational factors impact the behaviors of people working within them. An important assumption in the theory is that an individual's response to their work experiences is primarily influenced by factors at the organizational level (Kanter, 1977, 1993). Kanter's theory posits that access to opportunity, power, and the social composition within an organization explains the majority of individual responses within the work environment (Kanter, 1977, 1993). Individuals who have access to these important organizational structures perceive their organizations as empowering. Structural empowerment subsequently leads to positive organizational outcomes such as decreased burnout and turnover intent.

The SEM expands Kanter's Theory of Organizational Behavior to provide for the conceptualization of how intrapersonal influences such as psychological capital and interpersonal influences such as authentic leadership in preceptors influence burnout and turnover intent. In the SEM, behavior is viewed as being determined by multiple levels including intrapersonal, interpersonal, institutional, community, and public policy (McLeroy et al., 1988). The SEM is a model that is grounded in a social ecological perspective (McLeroy et al., 1988). This perspective proposes that humans are influenced by their environment, relationships, and individual attributes (Bronfenbrenner, 1979). A core principle concerns the reciprocal relationship between intrapersonal, interpersonal, and organizational factors (Stokols, 1996). Each level of influence is both independent and interdependent upon each other (McLeroy et al., 1988). The SEM provides a framework to examine the relationship and simultaneous influence of intrapersonal, interpersonal, and organizational factors on new graduate nurse burnout and turnover intent.

### 4. Aim

The aim of the study was to explore the combined influence of intrapersonal (psychological capital), interpersonal (authentic leadership in preceptors), and organizational (structural empowerment) level factors on new graduate nurse burnout and turnover intent.

#### 4.1. Objectives

1. To describe what percentage of new graduate nurses report severe burnout.
2. To describe the strength and direction of the relationship between psychological capital, authentic leadership in preceptors, and structural empowerment, and transition into practice outcomes (burnout, turnover intent) in new graduate nurses.
3. To evaluate the simultaneous effect of psychological capital, authentic leadership in preceptors, and structural empowerment on new graduate nurses' transition into practice outcomes (burnout, turnover intent).

### 5. Methods

#### 5.1. Participants

This study utilized a cross-sectional exploratory online survey design. Participants included 136 newly licensed graduate nurses. Sample inclusion criteria included: graduated from a nursing educational program between May 2012 and May 2015, newly licensed as a registered nurse, working as a newly licensed nurse in the United States for at least six months but not longer than three years, and working in first job as a newly licensed nurse. Exclusion criteria included: currently working

more than one nursing job, previously worked as a licensed practical nurse (LPN), or as a nurse in a country other than the United States.

#### 5.2. Data collection

A research study invitation was electronically sent to email addresses of recent Bachelor of Science in Nursing (BSN) graduates from a university in the Northeast United States and posted on Facebook nursing group pages in January through February 2016. New graduate nurses were asked to click on the link provided within the study invitation. The link directed potential participants to the online survey powered through Qualtrics LLC ©. Qualtrics research suite provided a secure web-based tool for conducting online surveys and offered survey protection services that kept people from taking the survey more than once. A restatement of the eligibility criteria and informed consent was listed on the first page of the Qualtrics webpage. Those who chose "I decline to participate" were redirected to a page thanking them for their time and consideration. Participants that selected "I agree to participate" were directed to begin the survey which included a demographic questionnaire, and five validated self-survey instruments. The five validated self-survey instruments closely align with the theoretical development and conceptual definition of the variables and underwent extensive validity testing during their development.

#### 5.3. Measures

##### 5.3.1. Demographic questionnaire

A 12-item questionnaire that was developed by the researcher collected demographic sample characteristics. Data was collected on age, gender, marital status, current area of practice, hours worked per week, race/ethnicity, residential area of work environment, geographic location of work environment, if work environment has Magnet designation, length of time working as a registered nurse, shift most often worked, and education.

##### 5.3.2. Structural empowerment

Structural empowerment was operationalized using the Conditions for Workplace Effectiveness Questionnaire II (CWEQ-II) (Laschinger, 2012b). The CWEQ-II is a 19-item five-point Likert scale which uses six subscales to measure access to opportunity, resources, information, support, formal power, and informal power. An overall empowerment score was calculated by summing the mean scores on the first four subscales: opportunity, resources, information, and support. Possible scores on the CWEQ-II were between 4 and 20. Higher scores represented stronger perceptions of workplace empowerment. Cronbach's alpha reliability coefficient for the CWEQ-II is 0.89 (Laschinger, Finegan, Shamian, & Wilk, 2001).

##### 5.3.3. Authentic leadership in preceptors

Authentic Leadership Questionnaire (ALQ) was used to measure new graduate nurses' perceptions of their primary preceptors' use the interpersonal processes that comprise authenticity (Avolio, Gardner, & Walumbwa, 2007). The ALQ is a 16-item scale that measures self-awareness, transparency, ethical/moral conduct, and balanced processing from four distinct 4-item subscales (Avolio et al., 2007). This scale was modified to reflect authentic leadership in preceptors with the authors' permission. The stem of the question "My Leader" was altered to "My Preceptor." An acceptable alpha coefficient of 0.91 was reported when this instrument was similarly used to measure new graduate nurses' perception of authentic leadership in preceptors (Giallonardo et al., 2010).

##### 5.3.4. Psychological capital

New graduate nurse's psychological capital was assessed using the Psychological Capital Questionnaire (PCQ) (Luthans, Avolio, & Avey, 2007). The PCQ is a 24-item scale that measures the four dimensions of

psychological capital using four 6-item subscales. A composite score for each subscale was summed and averaged. The average score on each subscale was added to calculate a psychological capital total score. Higher scores indicated higher levels of psychological capital. Subscales reliabilities of 0.89 (efficacy), 0.85 (hope), 0.74 (resiliency), and 0.72 (optimism), and overall total alpha of 0.90 were reported in a sample of new graduate nurses (Laschinger & Fida, 2014).

### 5.3.5. Burnout

The Maslach Burnout Inventory-General Survey (MBI-GS) is a 16-item scale that measures the three dimensions of burnout using the corresponding subscales: emotional exhaustion, cynicism, and professional efficacy (Maslach, Jackson, & Leiter, 1996). In this study burnout was measured using the emotional exhaustion subscale of the MBI-GS (Schaufeli, Leiter, Maslach, & Jackson, 1996). The emotional exhaustion subscale consists of five items. An average rating for the subscale was calculated with high scores ( $> 3$ ) on the emotional exhaustion subscale reflective of high degrees of burnout (Maslach et al., 1996). Researchers previously used the MBI-GS to measure burnout among new graduate nurses and reported acceptable Cronbach's alpha of 0.91 for the emotional exhaustion subscale (Laschinger et al., 2009).

### 5.3.6. Turnover intent

Turnover intent was measured using the Anticipated Turnover Scale (ATS) (Hinshaw & Atwood, 1984). The ATS operationalizes the concept of anticipated turnover and measures the variable, intent to leave (Barlow & Zangaro, 2010). The ATS is a 12-item Likert scale that uses a range from 1 (agree strongly) to 7 (disagree strongly) to quantify nurses' intent to leave their jobs. The ATS has demonstrated excellent construct validity and overall mean reliability of 0.89 based on 2442 registered nurses across studies (Barlow & Zangaro, 2010).

### 5.4. Ethical considerations

The researcher submitted and received Institutional Review Board (IRB) approval from a state University in the Northeast. Once a participant linked to the electronic survey an informed consent form was included at the start of the survey. The informed consent described the purpose of the study, participation criteria, risks and benefits of participation, costs and compensation, and that participation was voluntary, confidential, and included the right to withdraw at any time.

### 5.5. Data analysis

Descriptive and inferential statistics were used to describe and analyze the data collected using IBM SPSS version 23.0. Following data screening, 42 participant survey responses were deleted because of missing data  $> 15\%$  (Munro, 2005). A final sample of 136 new graduate nurses satisfied the a priori power analysis which was based on a statistical power of 0.80, an alpha of 0.05, and a moderate effect size of 0.13 (Cohen, 1992).

Data was subsequently checked for outliers, skewness, normality, linearity, homoscedasticity, and multicollinearity. Inspection of the boxplots and assessment of the trimmed mean and mean revealed no significant concern with outliers. Modest deviations in the assumption of normality and skewness were observed in two scales: ALQ and the emotional exhaustion subscale of the MBI-GS. Although most statisticians argue that modest violations in assumptions are well tolerated with good sample sizes (Cone & Foster, 2006), these variables were transformed using procedures described by Tabachnick and Fidell (2013). Statistical analyses were performed with and without transformed variables and no significant differences were observed. Reported results reflect non-transformed variables.

Descriptive statistics including mean, median, range, standard deviation, and Cronbach's alpha reliability coefficients were calculated on all study variables. Frequency percentiles were calculated and reported

on the demographic questionnaire data and the outcome variable burnout (mean scores  $> 3$  on the emotional exhaustion subscale of the MBI-GS).

Statistical significance was set at an alpha level of 0.05 for inferential data analysis. Pearson product-moment correlation coefficients were calculated to examine the strength and direction of the relationship between the study variables. Lastly, two hierarchical multiple regressions were conducted for each outcome variable (burnout, turnover intent). Personal and work-related demographics which were previously positively or negatively associated with new graduate nurse transition were included in both models (Kovner, Brewer, Greene, & Fairchild, 2009; Scott, Engelke, & Swanson, 2008; Thomson, 2011; Unruh & Nooney, 2011; Unruh & Zhang, 2014). Personal demographic characteristics (e.g., age, gender, race, and marital status) were entered in step one. Gender was coded as female = 0, male = 1, race was coded white, non-Hispanic = 0, all other races = 1, and marital status was coded married = 0, not married = 1. In step two, the work-related characteristics of hours worked per week, months working as a RN, work environment has magnet designation (yes = 0, no = 1), and shift worked (days = 0, evening, nights or rotating = 1) were entered. After controlling for demographic covariates, burnout and turnover intent were regressed on the explanatory variables; psychological capital, authentic leadership in preceptors, and structural empowerment (step three).

## 6. Results

The study participants were predominately female (95.6%) and white, non-Hispanic (86.8%). The average age of the sample was 28.3 years ( $SD = 8.7$ ) with an age range from 21 to 62 years. Most of the nurses were single (67.6%) and had been working an average of 19 months as a registered nurse. A significant number ( $n = 119$ ) indicated that their highest level of education was bachelor's degree (87.5%). The majority of the sample worked full-time ( $> 36$  h per week) in Medical/Surgical (36.8%) and Critical Care (18.4%) practice areas. With regard to work environment location, 58.8% worked in an urban setting and indicated that their geographic location was Northeast (68.4%), Southwest (12.5%), West (10.3%), Southeast (6.6%), and Midwest (2.2%). Forty two percent of the sample worked in a setting that had Magnet designation. The demographic characteristics of the sample are summarized in Table 1

The cumulative percent of new graduate nurses with mean scores  $> 3$  was 51.5%. Categorization of the emotional exhaustion subscale (mean score  $> 3$ ) suggest a severe burnout level (Maslach et al., 1996). Table 2 presents the means, and standard deviations of the study's variables and the Cronbach alpha reliability coefficient for all instrument scales and subscales.

Bivariate correlational analysis revealed a negative relationship between psychological capital, authentic leadership in preceptors, and structural empowerment and both outcome variables: burnout and turnover intent ( $p < .01$ ), and a positive relationship between intrapersonal (psychological capital), interpersonal (authentic leadership in preceptors), and organizational (structural empowerment) level influences in new graduate nurses ( $p < .01$ ) (Table 3).

For Model 1 Burnout; age, gender, race, and marital status (step 1) explained 9% of the variance in burnout, which was significant,  $F(4, 131) = 3.40, p = .01$ . Entry of the work-related characteristics (hours worked per week, months working as a RN, magnet designation and shift worked) added a non-significant amount of variance to the model,  $\Delta R^2 = 0.02, F(4, 127) = 0.82$ . After entry of structural empowerment, authentic leadership of preceptors, and psychosocial capital in step 3, the total variance explained by the model was 35%,  $F(11, 124) = 6.17, p < .001$ . Structural empowerment, authentic leadership of preceptors, and psychosocial capital explained an additional 24% of the variance in burnout after controlling for personal and work-related demographic characteristics,  $F(3, 124) = 15.14, p < .001$ . In the final model, age

**Table 1**  
Demographic characteristics of participants (N = 136).

Characteristic	n	%
Gender		
Male	6	4.4
Female	130	95.6
Marital status		
Single	92	67.6
Engaged	10	7.4
Married	29	21.3
Divorced	4	2.9
Widowed	1	0.7
Practice area		
Medical/surgical	50	36.8
Critical care	25	18.4
Emergency room	2	1.5
Peri-operative	15	11
Obstetrics	2	1.5
Mental health	4	2.9
Geriatrics	3	2.2
Pediatrics	14	10.3
Primary care	0	0
Other	21	15.4
Race/ethnicity		
White, non-Hispanic	118	86.8
Black, African American, non-Hispanic	4	2.9
Hispanic, Latino, Spanish origin	7	5.1
Asian	5	3.7
American Indian, or Alaska native	0	0
Hawaiian or other Pacific Islander	0	0
Other	2	1.5
Work environment		
Urban	80	58.8
Rural	6	4.4
Suburban	48	35.3
Geographic location		
Northeast	93	68.4
Southeast	9	6.6
Midwest	3	2.2
Southwest	17	12.5
West	14	10.3
Magnet designation		
Yes	57	41.9
No	79	58.1
Characteristic	n	%
Shift most often worked		
Days	56	41.2
Nights	36	26.5
Evenings	14	10.3
Rotating	30	22.1
Education		
Diploma	0	0
Associate's degree	12	8.8
Bachelor's degree	119	87.5
Master's degree	5	3.7
Doctoral degree	0	0
	M	SD
Age	28.3	8.7
Hours worked per week	35.9	7.2
Months working as a RN	19.0	9.4

( $\beta = -0.30, p = .001$ ) and psychological capital ( $\beta = -0.43, p < .001$ ) were independent predictors of new graduate nurse burnout. Hierarchical regression analysis for study variables influencing burnout are summarized in Table 4.

Lastly, for Model 2 Turnover Intent; personal demographic characteristics (step 1) explained a non-significant amount of the variance in new graduate nurse turnover intent  $R^2 = 0.02, F(4, 131) = 0.68$ . Entry of the work-related demographic characteristics (step 2) also added a non-significant amount of variance to the model,  $\Delta R^2 = 0.05, F(4, 127) = 1.93$ . After controlling for personal (age, gender, race, marital status) and work-related covariates (hours worked per week, months working as a RN, magnet designation, shift worked) psychological capital, authentic leadership in preceptors, and structural

**Table 2**  
Means, standard deviations, and reliabilities of study variables and instruments.

Variable/instrument	Range	M	SD	Cronbach alpha
Structural Empowerment (CWEQ II)	4–20	14.50	2.61	0.87
Opportunity	1–5	4.20	0.74	0.83
Information	1–5	3.50	0.93	0.90
Support	1–5	3.50	1.04	0.88
Resources	1–5	3.31	0.89	0.85
Authentic Leadership of Preceptor (ALQ)	0–4	3.79	0.76	0.95
Transparency	0–4	3.85	0.77	0.84
Moral/ethical	0–4	3.92	0.85	0.85
Balanced processing	0–4	3.73	0.87	0.79
Self-awareness	0–4	3.63	0.94	0.92
Psychological Capital (PCQ)	1–6	4.43	0.62	0.91
Efficacy	1–6	4.13	0.89	0.86
Hope	1–6	4.65	0.85	0.90
Resiliency	1–6	4.65	0.61	0.68
Optimism	1–6	4.30	0.71	0.72
Burnout-Exhaustion Subscale (MBI-GS)	0–6	3.32	1.46	0.91
Turnover Intent (ATS)	1–7	3.74	1.45	0.91

**Table 3**  
Pearson product-moment correlations between study variables (N = 136).

Variable	1	2	3	4	5
1. Structural empowerment	–	0.56**	0.52**	–0.30**	–0.48**
2. Authentic leadership of preceptor	–	–	0.42**	–0.27**	–0.43**
3. Psychological capital	–	–	–	–0.53**	–0.48**
4. Burnout (emotional exhaustion)	–	–	–	–	0.44**
5. Turnover intent	–	–	–	–	–

Note. \*\*Correlation is significant at the 0.01 level (2-tailed).

**Table 4**  
Hierarchical regression analysis for study variables influencing burnout (N = 136).

Step and predictor variable	B	SE B	Beta	R <sup>2</sup>	$\Delta R^2$
Step 1: Personal demographic characteristics				0.09*	
Age	–0.05	0.02	–0.30**		
Marital status <sup>a</sup>	–0.56	0.31	–0.16		
Gender <sup>b</sup>	–0.24	0.54	–0.03		
Race <sup>c</sup>	–0.55	0.32	–0.13		
Step 2: Work-related demographic characteristics				0.11	0.02
Hours worked per week	–0.01	0.02	–0.04		
Months working as an RN	0.01	0.01	0.05		
Magnet designation <sup>d</sup>	–0.03	0.23	–0.01		
Shift worked <sup>e</sup>	0.08	0.22	0.03		
Step 3: Multilevel influences				0.35***	0.24***
Structural empowerment	–0.03	0.06	–0.05		
Authentic leadership in preceptors	–0.17	0.18	–0.09		
Psychological capital	–0.25	0.05	–0.43***		

Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , betas shown are for the last step.

<sup>a</sup> Coded: 0 = married, 1 = not married.

<sup>b</sup> Coded: 0 = female, 1 = male.

<sup>c</sup> Coded: 0 = white, non-Hispanic, 1 = all other races.

<sup>d</sup> Coded: 0 = yes, 1 = no.

<sup>e</sup> Coded: 0 = days, 1 = evening, nights or rotating.

empowerment explained a significant amount of the variance in new graduate nurse turnover intent  $R^2 = 0.36, \Delta R^2 = 0.29, F(11, 124) = 6.47, p < .001$ . In the final model, months working as a RN ( $\beta = -0.15, p < .05$ ), structural empowerment ( $\beta = -0.27, p = .01$ ) and psychological capital ( $\beta = -0.26, p < .01$ ) were independent predictors of new graduate nurse turnover intent. Hierarchical regression analysis for study variables influencing turnover intent are presented in Table 5.

**Table 5**  
Hierarchical regression analysis for study variables influencing turnover intent (N = 136).

Step and predictor variable	B	SE B	Beta	R <sup>2</sup>	ΔR <sup>2</sup>
Step 1: Personal demographic characteristics				0.02	
Age	−0.01	0.02	−0.09		
Marital status <sup>a</sup>	−0.20	0.31	−0.06		
Gender <sup>b</sup>	−0.46	0.54	−0.07		
Race <sup>c</sup>	−0.39	0.32	−0.09		
Step 2: Work-related demographic characteristics				0.07	0.05
Hours worked per week	−0.02	0.02	−0.11		
Months working as an RN	−0.03	0.01	−0.15*		
Magnet designation <sup>d</sup>	−0.31	0.26	−0.11		
Shift worked <sup>e</sup>	0.18	0.26	0.06		
Step 3: Multilevel influences				0.36***	0.29***
Structural empowerment	−0.15	0.06	−0.27**		
Authentic leadership in preceptors	−0.29	0.17	−0.15		
Psychological capital	−0.15	0.05	−0.26**		

Note. \*p < .05, \*\*p ≤ .01, \*\*\*p < .001, betas shown are for the last step.

<sup>a</sup> Coded: 0 = married, 1 = not married.

<sup>b</sup> Coded: 0 = female, 1 = male

<sup>c</sup> Coded: 0 = white, non-Hispanic, 1 = all other races.

<sup>d</sup> Coded: 0 = yes, 1 = no.

<sup>e</sup> Coded: 0 = days, 1 = evening, nights or rotating.

## 7. Discussion

This study, based on a social ecological perspective, explored the interrelationship and collective impact of intrapersonal, interpersonal, and organizational factors on new graduate nurse transitional outcomes (burnout and turnover intent). Overall, 33% of participants indicated that they agreed slightly, moderately, or strongly with the intention of voluntarily terminating their job. Findings from the current study support the notion that turnover intent in new graduate nurses continues to be a concern for the profession. The newly graduated nurses in this study had only been in the job for just over a year and a half; yet one-third were already considering leaving. The impact of nurse turnover and workforce instability on poor patient outcomes (Aiken et al., 2014) has increased the urgency to mitigate factors that contribute to nurse turnover.

Results provided further evidence of the problem of burnout among new graduate nurses. An alarming 51.5% of participants met the criteria for burnout (mean score > 3). Similar reported severe burnout levels ranged from a high of 66% (Cho et al., 2006) to a low of 48.9% (Laschinger et al., 2010). In light of the established link between burnout and detrimental organizational and individual outcomes (Laschinger, 2012b; Laschinger & Fida, 2014), the development of interventions to combat novice nurse burnout needs to be a priority for nurse researchers. However, the factors that influence new graduate nurses' burnout and job turnover are extremely complex and multifactorial (Brewer, Kovner, Greene, Tukov-Shuser, & Djukic, 2012) and nurse leaders are left wondering where to begin.

Targeting contributing factors across multiple levels of the social ecologic model can provide essential structure to a path forward. Results of the bivariate correlational analysis support the presence of a conceptual relationship between the different levels of influences on new graduate nurse transition. This provides additional evidence that the association between characteristics of individual nurse, workplace interpersonal relationships, and the work environment is dynamic and reciprocal. Furthermore, in both hierarchical regression models, the collective effect of structural empowerment, authentic leadership of preceptors, and psychosocial capital explained a significant amount of the variance in both burnout and turnover. These results reinforce the interpretation of the complexity of the phenomenon of new graduate

nurse transition and suggest that future research continue to explore how intrapersonal, interpersonal, and organizational level factors interact and collectively influence transitional outcomes. Although authentic leadership in preceptors did not independently influence new graduate nurse burnout or turnover intent, previous research suggests that interpersonal workplace support is vital to the well-being of new nurses (Beecroft et al., 2008; Dwyer & Hunter Revell, 2016). Additional research is needed to better understand what specific interpersonal processes impact transition and how workplace relationships contribute to both the health of nursing work environments, and to new nurses' psychological capabilities.

Nurse researchers and leaders in public health often tackle complex multifactorial public health issues using a social ecological perspective. Using this perspective, interventions are designed, and implemented to target individual, interpersonal, organizational, community, and policy levels of influence (Stokols, 1996). Nurse researchers and leaders looking to better understand and support new graduate nurses during transition into practice can learn quite a bit from our public health colleagues. Findings from this study emphasize that similar multilevel targeted interventions may help support new graduate nurses' transition into to practice. New graduate transition programs should consider including interventions that target the intrapersonal, interpersonal, and organizational influences. Interventions that reinforce one another will have a greater impact than interventions that target only one or two levels of influence (Lewis, Fitzgerald, Zulkiewicz, Peinado, & Williams, 2017).

Currently, much attention within the profession is focused on creating and maintaining healthy work environments (American Association of Critical-Care Nurses, 2005) and research endorses that organizational level factors unquestionably impact transition (Dwyer & Hunter Revell, 2016). These efforts are extremely important; yet, it is equally important to pay attention to the growing body of research which highlights the importance of fostering intrapersonal resources such as psychological capital which are open to development and change (Boamah & Laschinger, 2015; Laschinger & Fida, 2014; Laschinger & Grau, 2012; Luthans et al., 2015).

Psychological capital was an independent predictor of decreased burnout and turnover intent in both hierarchical regression models and supports the importance of psychological capital as an emerging concept which fosters positive transitional outcomes. An essential feature of this intrapersonal factor is that psychological capital is considered a state-like trait. According to Luthans, Avolio, Avey, and Norman (2007), state-like traits are relatively malleable and responsive to interventions that foster their development. Today's increasingly demanding practice environment will require innovative support programs to help novice nurses cope with these stresses. An explicit focus of improving a new graduate nurses' hope, self-efficacy, resiliency and optimism could be vital to their well-being.

### 7.1. Limitations

This study had several limitations related to its design, recruitment strategies, and data collection procedures. New graduate nurses were recruited through Facebook and direct email invitation to BSN nursing graduates. Although these recruitment procedures provided an adequate sample in a short timeframe, it contributed to the homogeneity of the sample in terms of race/ethnicity, geographic location, and educational preparation and thus limits generalizability. Moreover, new graduate nurses who do not check their alumni email account, have a Facebook page, or have the technical skills necessary to complete an online survey were excluded.

The study may be susceptible to response bias due its self-select nature and the use of self-report survey instruments (Polit & Beck, 2012). Another important consideration relates to the use of the ALQ. Participants were asked to assess their past or present preceptors' authentic leadership behaviors. Mean scores on the ALQ were quite high.

Since the inclusion criteria allowed nurses working for up to three years, it is quite possible that novice nurses' perceptions of their preceptors changed over time or may have been dependent on whether they were still working one on one with a preceptor.

Despite clear use of inclusion/exclusion criteria and deletion of participants who answered outside the stated criteria to the question, "How many months have you been working as a registered nurse," there was no way to verify if participants met the criteria outlined.

Another limitation of the study was the inability to determine response rates and participant burden related to length of the survey. Since this was a web-based survey, the researcher was unable to track how many potential participants viewed the Facebook survey invitation (Dillman, Smyth, & Christian, 2014). Of those participants that started the survey, 76% completed it. However, 42 participant responses were discarded because of large amounts of missing data. In general, these participants exited the survey at the mid-way point suggesting survey length may inadvertently introduced sample bias. Lastly, the cross-sectional, correlational design limits causality of the findings.

## 8. Conclusion

This study helps address several significant gaps in the literature and provides a deeper understanding of the complex factors that influence new graduate nurse transition. It is the first study to report the incidence of burnout in new graduate nurses from the United States and examine the simultaneous influence of structural empowerment, authentic leadership in preceptors and psychological capital. Results highlight that new graduate nurse transitional outcomes are influenced by their workplace environment, workplace relationships and intrapersonal characteristics.

Findings provide important insights for the design of transitional support programs that target all three levels of influence and further illuminate the need to foster psychological capital in students and newly licensed nurses. Lastly, the results support the expansion of Kanter's structural theory of organizational behavior with concepts from social ecological theory. The expanded theoretical model provides a framework for the investigation of intrapersonal, interpersonal, and organizational level influences on transitional outcomes. It also provides a powerful theoretical lens to explore the interaction between intrapersonal, interpersonal, and organizational factors which is an essential next step in new graduate nurse transition research.

## Conflict of interest

None declared.

## Funding

The work was partially supported by a research funding grant from Theta Kappa Chapter of Sigma Theta Tau International.

## References

Aiken, L. H., Sloane, D. M., Bruyneel, L., Van den Heede, K., Griffiths, P., Busse, R., ... Sermeus, W. (2014). Nurse staffing and education and hospital mortality in nine European countries: A retrospective observational study. *Lancet*, 383(9931), 1824–1830. doi: [https://doi.org/10.1016/S0140-6736\(13\)62631-8](https://doi.org/10.1016/S0140-6736(13)62631-8).

American Association of Critical-Care Nurses (2005). AACN standards for establishing and maintaining healthy work environments. <http://www.aacn.org/WD/HWE/Docs/HWEStandards.pdf>.

Auerbach, D. I., Buerhaus, P. I., & Staiger, D. O. (2014). Registered nurses are delaying retirement, a shift that has contributed to recent growth in the nurse workforce. *Health Affairs*, 33(8), 1474–1480. <https://doi.org/10.1377/hlthaff.2014.0128>.

Avolio, B. J., Gardner, W. L., & Walumbwa, F. O. (2007). *Authentic Leadership Questionnaire (ALQ)*. Mind Garden Inc., Retrieved October 8, 2015, from <http://www.mindgarden.com/69-authentic-leadership-questionnaire#horizontalTab2>.

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

Barlow, K. M., & Zangaro, G. A. (2010). Meta-analysis of the reliability and validity of the anticipated turnover scale across studies of registered nurses in the United States. *Journal of Nursing Management*, 18(7), 862–873. <https://doi.org/10.1111/j.1365-2834.2010.01171.x>.

Beecroft, P. C., Dorey, F., & Wenten, M. (2008). Turnover intention in new graduate nurses: A multivariate analysis. *Journal of Advanced Nursing*, 62(1), 41–52. <https://doi.org/10.1111/j.1365-2648.2007.04570.x>.

Boamah, S., & Laschinger, H. (2015). Engaging new nurses: The role of psychological capital and workplace empowerment. *Journal of Research in Nursing*, 20(4), 265–277. <https://doi.org/10.1177/1744987114527302>.

Brewer, C. S., Kovner, C. T., Greene, W., Tukov-Shuser, M., & Djukic, M. (2012). Predictors of actual turnover in a national sample of newly licensed registered nurses employed in hospitals. *Journal of Advanced Nursing*, 68(3), 521–538. <https://doi.org/10.1111/j.1365-2648.2011.05753.x>.

Bronfenbrenner, U. (1979). Basic concepts. *The ecology of human development* (pp. 16–42). Cambridge, MA: Harvard University Press.

Casey, K., Fink, R., Laschinger, H., & Propst, J. (2004). The graduate nurse experience. *Journal of Nursing Administration*, 34(6), 303–311.

Cho, J., Laschinger, H. K. S., & Wong, C. (2006). Workplace empowerment, work engagement and organizational commitment of new graduate nurses. *Nursing Research*, 19(3), 43–60.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159. <https://doi.org/10.1037/00332909.112.1.155>.

Cone, J., & Foster, S. (2006). *Dissertations and theses from start to finish* (2<sup>nd</sup> ed.). Washington: American Psychological Association.

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, mail, and mixed-mode surveys: The tailored design method* (3rd ed.). Hoboken, NJ: Wiley & Sons.

Dwyer, P. A., & Hunter Revell, S. M. (2016). Multilevel influences on new graduate nurse transition. *Journal for Nurses in Professional Development*, 32(3), 112–121. <https://doi.org/10.1097/NND.0000000000000265>.

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. <https://doi.org/10.1111/j.1365-2834.2010.01126.x>.

Hinshaw, A. S., & Atwood, J. R. (1984, August). *Anticipated turnover among nursing staff study. Final report: Grant # 1 Ro1 NU 00908*.

Jones, C. B. (2008). Revisiting nurse turnover costs: Adjusting for inflation. *Journal of Nursing Administration*, 38(1), 11–18.

Kanter, R. M. (1977). *Men and women of the corporation*. New York, NY: Basic Books.

Kanter, R. M. (1993). *Men and women of the corporation* (2nd ed.). New York, NY: Basic Books.

Kovner, C. T., Brewer, C. S., Fairchild, S., Poornima, S., Kim, H., & Djukic, M. (2007). Newly licensed RNs' characteristics, work attitudes, and intentions to work. *American Journal of Nursing*, 107(9), 70–71.

Kovner, C. T., Brewer, C. S., Greene, W., & Fairchild, S. (2009). Understanding new registered nurses' intent to stay at their jobs. *Nursing Economic\$, 27(2)*, 81–98.

Kramer, M. (1974). *Reality shock: Why nurses leave nursing*. St. Louis, MO: Mosby.

Laschinger, H. K. S. (2012a). Job and career satisfaction and turnover intentions of newly graduated nurses. *Journal of Nursing Management*, 20(4), 472–484. <https://doi.org/10.1111/j.1365-2834.2011.01293.x>.

Laschinger, H. K. S. (2012b). *Conditions for workplace effectiveness questionnaire I and II: User's manual*. Ontario, Canada: Western University.

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

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. *The Journal of Nursing Administration*, 31(5), 260–272.

Laschinger, H. K. S., Finegan, J., & Wilk, P. (2009). New graduate burnout: The impact of professional practice environment, workplace civility, and empowerment. *Nursing Economic\$, 27(6)*, 377–383.

Laschinger, H. K. S., & Grau, A. L. (2012). The influence of personal dispositional factors and organizational resources on workplace violence, burnout, and health outcomes in new graduate nurses: A cross-sectional study. *International Journal of Nursing Studies*, 49(3), 282–291. <https://doi.org/10.1016/j.ijnurstu.2011.09.004>.

Laschinger, H. K. S., Grau, A. L., Finegan, J., & Wilk, P. (2010). New graduate nurses' experiences of bullying and burnout in hospital settings. *Journal of Advanced Nursing*, 66(12), 2732–2742. <https://doi.org/10.1111/j.1365-2648.2010.05420.x>.

Laschinger, H. K. S., Grau, A. L., Finegan, J., & Wilk, P. (2012). Predictors of new graduate nurses' workplace well-being: Testing the job demands-resources model. *Health Care Management Review*, 37(2), 175–186. <https://doi.org/10.1097/HMR.0b013e31822aa456>.

Laschinger, H. K. S., Wong, C. A., & Grau, A. L. (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. <https://doi.org/10.1016/j.ijnurstu.2012.05.012>.

Lewis, M. A., Fitzgerald, T. M., Zulkiewicz, B., Peinado, S., & Williams, P. A. (2017). Identifying synergies in multilevel interventions: The convergence strategy. *Health Education & Behavior*, 44(2), 236–244.

Li, Y., & Jones, C. B. (2013). A literature review of nursing turnover costs. *Journal of Nursing Management*, 21(3), 405–418. <https://doi.org/10.1111/j.1365-2834.2012.01411.x>.

Luthans, F., Avolio, B. J., & Avey, J. B. (2007). *Psychological Capital Questionnaire (PCQ)*. Mind Garden Inc., Retrieved October 1, 2015, from <http://www.mindgarden.com/136-psychological-capital-questionnaire#horizontalTab1>.

Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological

- capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, 60, 541–572. Retrieved October 1, 2015, from <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1010&context=leadershipfacpub>.
- Luthans, F., Youssef-Morgan, C. M., & Avolio, B. J. (2007). *Psychological capital: Developing the human competitive edge*. New York, NY: Oxford University Press.
- Luthans, F., Youssef-Morgan, C. M., & Avolio, B. J. (2015). *Psychological capital and beyond*. New York, NY: Oxford University Press.
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *Maslach burnout inventory manual* (3rd ed.). Retrieved October 15, 2015, from <http://www.mindgarden.com/maslach-burnout-inventory/184-mbi-manual.html>.
- McLeroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly*, 15, 351–377.
- Munro, B. H. (2005). *Statistical methods for health care research* (5th ed.). Philadelphia, PA: Lippincott, Williams & Wilkins.
- Park, M., & Jones, C. B. (2010). A retention strategy for newly graduated nurses: An integrative review of orientation programs. *Journal for Nurses in Staff Development*, 26(4), 142–151. <https://doi.org/10.1097/NND.0b013e31819aa130>.
- Pineau Stam, L. M., Laschinger, H. K. S., Regan, S., & Wong, C. A. (2015). The influence of personal and workplace resources on new graduate nurses' job satisfaction. *Journal of Nursing Management*, 23(2), 190–199. <https://doi.org/10.1111/jonm.12113>.
- Polit, D. F., & Beck, C. T. (2012). *Nursing research: Generating and assessing evidence for nursing practice* (9th ed.). Philadelphia, PA: J. B. Lippincott, Williams & Wilkins.
- Rush, K. L., Adamack, M., Gordon, J., Lilly, M., & Janke, R. (2013). Best practices of formal new graduate nurse transition programs: An integrative review. *International Journal of Nursing Studies*, 50(3), 345–356. <https://doi.org/10.1016/j.ijnurstu.2012.06.009>.
- Schaufeli, W. B., Leiter, M. P., Maslach, C., & Jackson, S. E. (1996). *The Maslach burnout inventory-general survey (MBI-GS)*. Mind Garden Inc.. Retrieved October 15, 2015, from <http://www.mindgarden.com/maslach-burnout-inventory/172-mbi-remote-online-survey-license.html>.
- Scott, E. S., Engelke, M. K., & Swanson, M. (2008). New graduate nurse transitioning: Necessary or nice? *Applied Nursing Research*, 21(2), 75–83. <https://doi.org/10.1016/j.apnr.2006.12.002>.
- Stokols, D. (1996). Translating social ecological theory into guidelines for community health promotion. *American Journal of Health Promotion*, 10, 282–298.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston, MA: Pearson Education.
- Thomson, S. (2011). Transition into practice: A comparison of outcomes between associate- and baccalaureate-prepared nurses participating in a nurse residency program. *Journal for Nurses in Staff Development*, 27(6), 266–271. <https://doi.org/10.1097/NND.0b013e3182309914>.
- Unruh, L., & Nooney, J. (2011). Newly licensed registered nurses' perceptions of job difficulties, demands and control: Individual and organizational predictors. *Journal of Nursing Management*, 19(5), 572–584. <https://doi.org/10.1111/j.1365-2834.2011.01239.x>.
- Unruh, L., & Zhang, J. (2014). Newly licensed registered nurse job turnover and turnover intent. *Journal for Nurses in Professional Development*, 30(5), 220–230. <https://doi.org/10.1097/NND.000000000000079>.