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Nurses' Self-Efficacy and Academic Degree Advancement

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The last decade has brought about a synergy of influences for registered nurses to advance their academic preparation. Literature indicates that there is correlation between self-efficacy and goal establishment and success. The purpose of this project was to evaluate the relationship between self-efficacy and advancing academic aspirations of registered nurses. Findings indicated that there was a trend toward a difference in the self-efficacy of nurses who began their career with a diploma or associate degree and went on for academic advancement and those who did not.

Bandura (1977, 1986) defined self-efficacy as an individual's self-perception of one's ability to perform competently and to achieve a task or goal effectively. A strong sense of self-efficacy allows for perseverance despite obstacles along the way. Further refinement of this construct identifies perceived self-efficacy as the central trait of understanding an individual's interactions with the environment as the mediator between knowledge and behavior (Bandura, 1994). This key concept is critical in understanding and predicting the potential ability of a person to succeed in achieving goals.

Early studies note that sense of self-efficacy is more predicative than actual experience of performing a behavior in forecasting future behaviors (Harvey & McMurray, 1994). Persons with high self-efficacy view tasks as exciting goals to achieve, versus insurmountable obstacles that cannot be accomplished (Jeffreys & Smodlaka, 1999). The construct of perceived self-efficacy reflects optimism that one can perform even difficult tasks, while coping with adversity (Schwarzer & Jerusalem, 1995). Earlier empirical work correlated perceived self-efficacy with work performance, productivity, career choice, adaptability, and achievement (Gist & Mitchell, 1992).

Background

In the last decade, new influences and mandates have provided a clear indication of the need for registered nurses (RNs) to continue to advance their professional preparation. Research in the field of RN preparation and patient outcomes (Aiken, Clarke, Cheung, Sloane, & Silber, 2003; Kutney-Lee, Sloane, & Aiken, 2013), the American Nurses Credentialing Center's (ANCC, 2008) Magnet Program and the Institute of Medicine (IOM) report on "The Future of Nursing: Leading Change, Advancing Health" (IOM, 2011) are precipitating a renewed focus and energy on RNs' preparation and competency. These three converging influences of outcomes, quality, and safety are creating new forces of emphasis on staff RNs' professional development characteristics and goals.

An ongoing body of nursing research has found a significant relationship between patient outcomes and professional characteristics of the nursing workforce. Research over the past decade has linked academic preparation and professional practice characteristics to patient outcomes including mortality and failure to rescue (Aiken et al., 2003). Further empirical findings have demonstrated these relationships between nursing workforce academic preparation and patient outcomes (Estabrooks, Midodzi, Cunnings, Ricker, & Giovannetti, 2005). This link supports the need for RNs to obtain a baccalaureate education. In response, numerous specialty professional organizations have created position statements supporting Bachelor of Science in Nursing (BSN) as entry-level preparation for nursing practice (AACN, 2000).

In 2008, the ANCC released an updated and revised application manual guiding the rigorous journey for organizations seeking the prestigious Magnet designation (ANCC, 2008). In the 2008 manual, the ANCC established a new source of evidence requiring organizations to establish and meet goals for the nursing workforce based on academic progression advancement of RNs. Other organizations also have begun to encourage, require, or mandate practicing RNs to achieve baccalaureate or higher

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levels of preparation (AACN, 2000; IOM, 2011). Nursing leaders have a responsibility to be mentors and role models in the pursuit of professional development and may direct access to resources (ANA, 2009).

Conceptual Model

Social Cognitive Theory is defined by Bandura as an identified change as a function of one's internal characteristics (perceived self-efficacy), environment (modeling), and reciprocal determinism (person–environment interaction; Bandura, 1977, 1986; Edberg, 2007). This theoretical model is a useful framework to understand how behavioral characteristics guide individual actions (Bandura, 1977). Knowledge can lead to behavior changes but is affected by perceived self-efficacy, which can be moderated by mastery, modeling, persuasion, and anxiety experiences (Bandura, 1986). Self-efficacy then acts as a catalyst to move, or preclude, knowledge and goal setting into individual behaviors or goals. One's self–efficacy can either aid or hinder actions toward goal achievement (see Figure 1).

REVIEW OF THE LITERATURE

A systematic literature review was conducted for articles about self-efficacy of RNs published from 2000 to 2012 in the Cochrane Review, the Cumulative Index to Nursing and Allied Health Literature, MedlinePlus, and PsycINFO using the following search terms: self-efficacy, registered nurse, and professional development. Eleven key articles investigating perceived self-efficacy in nursing students and RNs were identified. Studies described correlation and predictability between self-efficacy and nursing behaviors

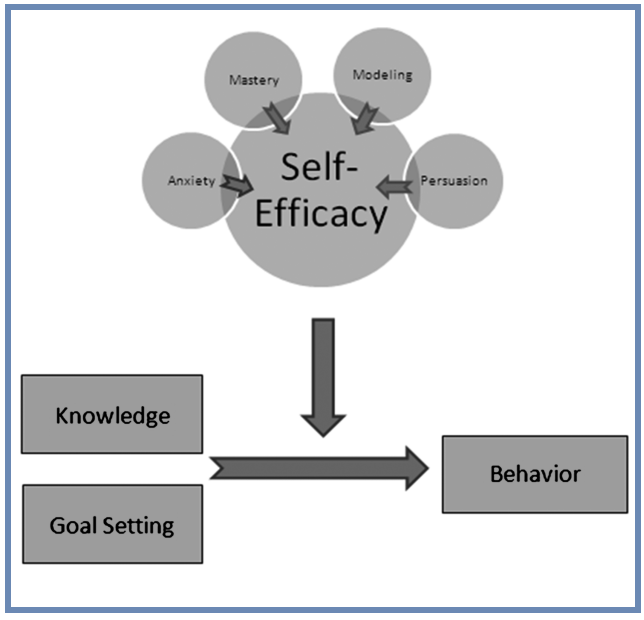

FIGURE 1 Author representation of relationship between self-efficacy as mediator of knowledge and behavior with influencing factors affecting the intensity of the relationship.

for both student nurses and RN samples. Specifically, these studies demonstrated a relationship between perceived self-efficacy and academic course withdrawal or program attrition. The articles included suggestions for future research investigating interventions to improve retention rates by increasing self-efficacy (Harvey & McMurray, 1994; McLaughlin, Moutray, & Muldoon, 2008; Pakieser-Reed, 2006). In addition, Cheraghi, Hassani, Yaghmaei, and Alavi-Majed (2009) developed and tested a new self-efficacy scale on nursing students. The tool was found to be reliable, and the investigators found self-efficacy to significantly predict success with a variety of clinical care tasks.

In a staff nurse population, Manojlovich (2005a, 2005b) measured the relationship between self-efficacy and professional practice behaviors and structural empowerment both with and without nursing leadership mediation and found a significant association between self-efficacy and professional practice behaviors and structural empowerment. Lee and Ko (2010) found a relationship between self-efficacy and individual-level variables and group-level variables in a sample of staff nurses. Chang and Crowe (2011) performed preliminary testing of psychometric properties of two new instruments to measure RNs' self-efficacy and outcome expectancy in regard to evidence-based practice. A moderate level of self-efficacy was noted along with moderate evidence-based practice understanding and outcome expectations. Tyler and colleagues (2012) performed a descriptive study of critical care nurses using a previously tested self-efficacy instrument to describe clinical competency, self-efficacy, and satisfaction. Relationships between clinical competency, self-efficacy, and job satisfaction were noted for RNs. These findings span a decade of work in populations of nursing students and professional nurses and provide evidence of a relationship between self-efficacy and a number of professional characteristics.

The combination of improved patient outcomes related to baccalaureate education and the relationship between nursing self-efficacy and academic and professional achievement warrants continued emphasis on encouraging (and perhaps requiring) RNs to obtain advanced academic preparation in nursing. A strong sense of self-efficacy allows for perseverance with goals despite obstacles along the way. However, although the literature has addressed the clinical question of the relationship of high self-efficacy as a predictive characteristic of staff RNs and student nurses in specific clinical situations (Chang & Crowe, 2011; Cheraghi et al., 2009; Lee & Ko, 2010; Manojlovich, 2005a, 2005b; Tyler et al., 2012), with additional pressure for non-baccalaureate-prepared RNs to pursue higher educational preparation, it is not clear how self-efficacy affects their success. Thus, the purposes of this project were (1) to determine whether perceived self-efficacy is higher in nurses who pursued academic advancement beyond initial licensure preparation and those

who did not and (2) to understand the relationship between perceived self-efficacy and select individual nurse characteristics of age and tenure in their nursing role.

DESIGN AND METHODS

A nonexperimental, correlational design was used to address the research purposes, using survey data from RNs employed at a local community hospital. The study design was guided by Social Cognitive Theory (Bandura, 1977) and addressed two of the components of this theory (self-efficacy and individual outcome action) in a population of RNs.

Sample and Setting

A sample of RNs who began practice with a diploma or associate degree in nursing was drawn from the data source of 465 RNs in the spring of 2013 from a Magnet-designated, nonprofit, community hospital in a small southern city. Of the 204 RNs responding to the survey, 124 met the inclusion criteria (i.e., initial preparation as an RN with either a diploma or associate degree) and were considered eligible to participate in the study.

Procedures

The survey request was sent electronically using Survey Monkey to all RNs in the organization using work e-mail accounts with a request for uncompensated participation over the 60-day data collection period. A demographic information questionnaire was sent along with the New General Self-Efficacy Survey (NGSE) instrument (Chen, Gully, & Eden, 2001). The NGSE instrument is a general scale measuring self-efficacy in a broad sense to be used in a variety of settings. The tool is a concise instrument (eight items) with robust construct validity and reliability for measurement of general self-efficacy. The eight-item scale was proposed by Chen et al. and was tested for content validity against a previously published longer instrument and for reliability and validity using psychometric principles as well as application in various cultural samples. Items on the instrument are rated on a 5-point Likert-type scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The score is a mean of the eight-item responses equally weighed. Content and predictive validity was conducted and found to support the NGSE scale including across languages and cultures (Chen et al., 2001).

Data Analysis

The Statistical Package for the Social Sciences 20.0 was used for statistical analysis. Means and ranges were analyzed to describe continuous key study variables, and a frequency analysis was performed for categorical variables. To address purpose 1, if perceived self-efficacy is higher in those nurses who pursued academic advancement beyond their initial licensure preparation than those who did not, a Mann–Whitney *U* test was used, because of the nonnormal distribution of the data, to compare the mean of perceived self-efficacy of those nurses with an initial diploma or associate degree who did not go on for additional preparation with those who did. A significance level of $p < .05$ was used for all tests. To address purpose 2, the relationship between perceived self-efficacy and individual nurse characteristics of age and tenure, Pearson correlation coefficient was used to assess the strength and significance of each relationship to self-efficacy. Institutional review board exempt status was obtained.

RESULTS

Two hundred four nurses responded to the survey request, which was a 43.9% participation response rate. One hundred twenty-four sample respondents who met study criteria of initial RN licensure of a diploma or associate degree were included in the findings. This met the desired target minimum of 64 to support medium effect size (Cohen, 1992). A demographic description of the sample characteristics is presented in (see Table 1).

Most of the sample was middle-aged, White, female nurses who began practice with an associate degree. Tenure of the respondents was a mean of 17.9 (SD = 12.8). Current role selection indicated that most were staff nurses or permanent charge nurses. Of the sample participants, 31.4% had obtained a subsequent degree with a small percentage having achieved more than one subsequent degree. One third of the participants indicated they were in admitted to or currently attending a BSN or Master of Science in Nursing program. Use of tuition reimbursement and scholarships was consistently reported by all nurses. Approximately one third of the participants held a professional certification in nursing. Fifty-three had advanced to the optional upper levels on the clinical ladder program; the clinical ladder was available to 82.3% of respondents eligible via their staff nurse or permanent charge nurse role.

Many respondents listed barriers to returning to school. Cost was the most frequently cited barrier, closely followed by responses of "too many responsibilities," "too close to retirement," "no incentive from work," and "not interested." The survey allowed for selection of "other," and respondents provided free text responses.

One hundred twenty-one respondents replied to the eight NGSE self-efficacy questions using the Likert scale provided. Items are rated on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The results for this scale had a nonnormal distribution. The self-efficacy score is the mean of the eight items equally weighted. A Mann–Whitney *U* test was done to compare the self-efficacy scores of the nurses with a beginning diploma or associate degree, who were pursuing or had achieved a secondary degree, versus those who did not (see Table 2). In all cases, the nurses who pursued a subsequent degree scored higher in self-efficacy scores than those nurses who did not.

TABLE 1 Summary of Demographic Characteristics (n = 124)

Characteristics	Range	Mean
Age	21–66	46.1
Tenure as RN	1–46	17.9
	Frequency	Percent
Gender		
Female	115	92.7
Male	8	6.5
Nonresponders	1	0.8
Race		
Caucasian	114	91.9
African American/Black	4	3.2
Asian	3	2.4
American Indian	2	1.6
Nonresponder	1	0.8
Initial degree		
ADN	106	85.5
Diploma	18	14.5
Current role		
Staff nurse or permanent charge	99	79.8
Nurse manager or supervisor	14	11.3
Educator or CNS	9	7.3
Nurse practitioner	1	0.8
Nonresponder	1	0.8
Subsequent degree		
No	92	74.2
Yes	32	25.8
Type of subsequent degree		
BSN	26	21.0
ADN	7	5.6
MSN	6	4.8
More than one subsequent degree		
No	112	90.3
Yes	9	7.3
Nonresponder	3	2.4
Currently in a program		
No	86	69.4
BSN	29	23.4
MSN	8	6.5
ADN	1	0.8
Financial support (not exclusive categories)		
Scholarship	24	19.4
Tuition reimbursement	11	8.9
Loans	2	1.6
Grants	1	0.8
Barriers		
Cost	27	21.8
Responsibilities	24	19.4
Too close to retirement	24	19.4
No incentive	23	18.5
Other	21	16.9
Not interested	20	16.1
Certification		
No	85	68.5
Yes	35	28.2
Nonresponder	4	3.2
Nonresponder	4	3.2
Clinical ladder level (if eligible)		
Clin I	6	4.8
Clin II	43	34.7
Clin III	22	17.7
Clin IV	24	19.4
Clin V	7	5.6

Note. RN = registered nurse; CNS = clinical nurse specialist; BSN = Bachelor of Science in Nursing; ADN = Associate Degree in Nursing.

Continued

TABLE 2 Comparison of Nurses' Self-Efficacy Scores (n = 121)

	Number	Mean	p value*
Item 1: I will be able to achieve most of the goals that I have set for myself.			
Nurses without subsequent degree	90	4.37	.397
Nurses with subsequent degree	31	4.48	
Item 2: When facing difficult tasks, I am certain that I will accomplish them.			
Nurses without subsequent degree	90	4.19	.197
Nurses with subsequent degree	31	4.35	
Item 3: In general, I think that I can obtain outcomes that are important to me.			
Nurses without subsequent degree	90	4.28	.037**
Nurses with subsequent degree	31	4.58	
Item 4: I believe I can succeed at most any endeavor to which I set my mind.			
Nurses without subsequent degree	89	4.35	.125
Nurses with subsequent degree	31	4.55	
Nonresponders	1		
Item 5: I will be able to successfully overcome many challenges.			
Nurses without subsequent degree	90	4.22	.021**
Nurses with subsequent degree	31	4.55	
Item 6: I am confident that I can perform effectively on many different tasks.			
Nurses without subsequent degree	90	4.37	.096
Nurses with subsequent degree	31	4.61	
Item 7: Compared with other people, I can do most tasks very well			
Nurses without subsequent degree	90	4.20	.223
Nurses with subsequent degree	31	4.35	
Item 8: Even when things are tough, I can perform quite well.			
Nurses without subsequent degree	89	4.30	.222
Nurses with subsequent degree	31	4.52	
Nonresponders	1		
Mean of all items evenly weighted			
Nurses without subsequent degree	90	4.27	.091
Nurses with subsequent degree	31	4.50	

Note. n = number of participants.
*$p < .05$, Mann–Whitney U test, one-tailed.
**Met significance of <.05.

Pearson's correlation coefficients were used to assess the strength and significance of the relationship between perceived self-efficacy and individual nurse characteristics of age and tenure. As shown in Table 1, the mean age of all sample respondents was 46.1, and the mean tenure of all sample respondents was 17.9. The Pearson correlation

coefficients with age and tenure were not significant, $p = .796$ and $p = .462$ respectively, indicating that there was no significant association between the variables of age and tenure and perceived self-efficacy.

DISCUSSION

The purpose of this project was to evaluate the relationship between perceived self-efficacy of RNs in a Magnet-designated community hospital and success in advancing academic professional development goals. The data indicated that there was higher self-efficacy in those nurses who advanced their academic preparation than in those who did not. A secondary purpose was to understand the relationship between perceived self-efficacy and the individual nurse characteristics of age and tenure. The data revealed that there was no significant relationship between age and self-efficacy or tenure and self-efficacy in this sample of RNs.

The study findings indicate that perceived self-efficacy in RNs who began their career with a diploma or associate degree and earned a subsequent degree have higher self-efficacy than those nurses who did not. However, the finding for the overall mean of self-efficacy does not meet the level of significance of $p < .05$ set for the study despite the clinical implications of the findings. The respondents cited a variety of barriers and provided intriguing commentary as to why they were not currently pursuing advanced preparation. The most commonly cited barrier was cost (21.8%), closely followed by upcoming retirement (19.4%), juggling too many responsibilities (19.4%), and other barriers (16.9%). Tuition reimbursement was available in the study setting through supported workplace initiatives with defined time commitment and payback periods. These findings indicate an appropriate role for hospital-based leaders to further investigate perceived barriers or misconceptions and to design initiatives directed toward reducing obstacles for staff who desire or need to pursue further academic preparation.

This study supports the relationship between self-efficacy and academic pursuit in nursing. This is not surprising because the concept of self-efficacy is applicable to a variety of goal-oriented behaviors.

There was a relationship between self-efficacy and academic advancement for this sample of nurses, who began their nursing career with an associate degree or diploma preparation. Therefore, it seems appropriate to investigate further how to increase self-efficacy by implementing new programs to enhance goal mastery, role modeling, leadership persuasion, and reduction of anxiety experiences. Because self-efficacy acts as a catalyst to move knowledge and goal setting into individual actions, new programs may enhance the willingness of nurses to advance their academic preparation to support BSN nursing workplace goals.

Limitations

The study was conducted with nurses in an ANCC Magnet twice-designated hospital. To obtain and sustain Magnet designation, an organization must demonstrate and verify specific nurse leader and staff characteristics of transformation leadership; structural empowerment; exemplary professional practice; and new knowledge, improvement, and innovation (ANCC, 2008). It is possible that nurses employed in Magnet facilities have higher self-efficacy overall than nurses in non-Magnet settings or that nurses in general have higher self-efficacy than other populations. Overall mean self-efficacy scores on studied populations of undergraduate psychology students, graduate industrial and organizational psychology, and Israeli organizational behavior graduate students were lower than both samples of nurses with or without a subsequent academic pursuit than in this particular study (Chen et al., 2001; Scherbaum, Cohen-Charash, & Kern, 2006).

The return rate on the survey was 43.9% of all possible RNs in the community hospital setting data set. Of the survey respondents, 124 met the inclusion criteria of initial diploma or associate degree preparation; it is possible that a larger sample size would have contributed to the significance of the findings. Repeating this study with a larger sample size might result in higher significance. Confounding variables of survey bias in participation, timing of the survey, the participants' relationship to the survey researcher, or interest in the topic could all be factors affecting the data.

Application to Nursing Professional Development

Overall, this study contributes to the body of nursing evidence in the area of predictive characteristics of staff nurses advancing their academic preparation. Application to nursing professional development is important in the consideration of adapting organizational strategies to survey nurses preparing to return to school for their level of self-efficacy and to create programs or interventions that would enhance lower self-rated staff. Interventions led by nurses in professional development on the moderating components of mastery, modeling, persuasion, and anxiety experiences (Bandura, 1986) such as mentoring programs could potentially have this effect. The prospect for enhancement of self-efficacy in nurses at a lower level of individual self-efficacy could be an important variable in their future success with professional development goals related to academic attainment and is appropriate.

Future Implications

The convergence of forces influencing the preparation of the RN workforce is changing the nation's academic preparation for RNs. Multidimensional strategies of forecasting future academic advancement and providing support are in the best interest of healthcare organizations, providers, and patients.

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