2018

Designing a Nurse Residency Program for Cultural Fit: A Pilot Project

Melinda Blair
Eastern Kentucky University, melinda_blair15@mymail.eku.edu

Designing a Nurse Residency Program for Cultural Fit: A Pilot Project

Submitted in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice

at Eastern Kentucky University

By

Melinda Blair

Lexington, Kentucky

2018

Abstract

New graduate registered nurse (NGRN) turnover in an acute care setting is estimated between 35% - 61% nationally and is costly to an organization. Costs are estimated between $60,000 – $90,000 dollars to replace one NGRN. A smooth transition from student nurse to professional nurse is fraught with problems, including increased job stress and pressures imposed on the NGRN from a high-paced, uncertain health care environment. The purpose of this project was to design a customized nurse residency program (NRP) curriculum to increase NGRN retention. NRP curriculum elements were identified using findings from the Casey Fink Graduate Nurse Experience Survey© completed by NGRNs working at the agency. Mentorship training for nurse leaders and nurse educators supplemented the curriculum to improve self-perceptions of ability to mentor NGRNs. A pre/post-test design was used to measure differences in mean scores using the Mentoring Competency Assessment (MCA). Five of six MCA subscales demonstrated statistically significant increases post mentor training ($p < .05$). Findings from this pilot project suggest that transition to practice (TTP) needs of NGRNs align well with mentors' ability to mentor. Development of NRPs with strong mentoring have value within a rural community setting.

Keywords: graduate nurse retention, graduate nurse turnover, nurse residency, mentoring

Designing a Nurse Residency Program for Cultural Fit: A Pilot Project

By

Melinda Blair

Jill Cornelison	11-19-2018
DNP Project Advisor	Date
Donna J. Corley	11/19/18
DNP Project Team Member	Date
Mary Clouts	11-19-18
DNP Coordinator	Date
Mary Clouts	11/19/18
Dept. of Baccalaureate & Graduate Nursing Chair	Date

Acknowledgements

I would be remiss if I did not acknowledge those individuals who have supported and encouraged me throughout this journey toward capstone project completion. I wish to express my deepest gratitude to my Project Advisor, Dr. Jill Cornelison and Dr. Donna Corley, Project Team Member. These two women are amazing thought leaders in nursing and have been there every step of the way, guiding, mentoring and encouraging me. I also thank Dr. Mary Clements, DNP program coordinator, who served as my clinical preceptor. Her passion for nursing and higher education is inspiring. I would like to thank Dr. Judy Ponder, Director of Education, for her collaboration and expertise as an agency stakeholder where this project was implemented. Thank you to the entire Doctor of Nursing Practice Faculty and Staff at Eastern Kentucky University. These individuals are truly committed to helping students succeed. Finally, I would not be where I am today if not for the unwavering love and support from some very special people in my life. I want to thank my wonderful husband and my three beautiful children. They have always been my biggest fans, cheering me on throughout all my educational pursuits. I love them very much and am forever indebted to them for their sacrifices and belief in me as a mother, a wife, and a nurse.

Table of Contents

Designing a Nurse Residency Program for Cultural Fit: A Pilot Project

New graduate registered nurses (NGRNs), who make up approximately 10% of the total nursing workforce, leave a position within an acute care setting during the first year of hire at a rate of 35% - 61% (Bratt, 2013; Cochran, 2017; Trepanier, Early, Ulrich, & Cherry, 2012). NGRN turnover is costly to health care organizations and to professional nursing practice. Transition from nursing student to registered nurse can be intimidating at best and may lead to disenchantment (Cochran, 2017). The average cost to hire and train a NGRN is approximately $60,000 – $90,000 dollars (Cochran, 2017; Silvestre, 2017; Trepanier et al., 2012). An acute care hospital setting will spend approximately 125% of a nurse's salary to replace one nurse that has left the organization (Cochran, 2017).

Reasons cited in the literature that contribute to NGRN turnover include a lack of confidence in the new role, morale distress and emotional/physical stress, and feelings of inadequacy in being prepared to care for complex, high-acuity patients (Edwards, Hawker, Carrier, & Rees, 2015; Kramer et al., 2012; Phillips, Kenny, Esterman, & Smith, 2014; Zinn, Guglielmi, Davis, & Moses, 2012). NGRNs are more apt to stay with an organization that provides ongoing support, mentoring, coaching, and the opportunity to build on competency and skills (Barnett, Minnick, & Norman, 2014; Cochran, 2017; Rosenfield & Glassman, 2016). Further, NGRNs who have participated in a formal TTP program, such as a nurse residency program (NRP), report that they would encourage other NGRNs seeking employment to consider an employer that offers a NRP compared to higher wages or better benefits (Barnett et al., 2014; Rosenfield & Glassman, 2016).

Problem Description

Tenured nurses continue to leave the profession, which compounds the problem of NGRN turnover. Approximately 75% of nurses are believed to be between the ages of 50-64 years old, with an estimated 55% of all nurses expected to retire by 2020 (Cochran, 2017). According to Cochran (2017), the nursing shortage is predicted to reach as high as one million nurses by 2020, creating a vacancy of at least 20% in the nursing workforce. With the loss of so many seasoned, experienced nurses to retirement, the organization loses a commodity – "legacy nurses" with practice/institutional wisdom that have the ability to mentor, precept and guide NGRNs through critical thinking and practice development. Aggressive recruitment of NGRNs has become a norm due to a decreased prospective nursing work pool, offering hope to acute care organizations in replenishing a dwindling nursing workforce (Goode, Lynn, Krsek, & Bednash, 2009).

There are safety and quality implications, as well as financial/cost implications, related to NGRN turnover. The cost of NGRN turnover is not only realized in terms of expenses dedicated to recruitment activities and in administering basic orientation and training, but also in dollars lost to the inability to meet value-based measures for safety, quality and experience (Cline, Frentza, Fellman, Summers, & Brassil, 2017; Olson-Sitki, Wendler, & Forbes, 2012). The Affordable Care Act (ACA) has forced hospitals to look at care delivery in a new way. Hospitals are urged to look beyond volume toward the provision of value-based care (Center for Medicare and Medicaid Services [CMS], 2018; Leger & Dunham-Taylor, 2018). Greater demands have been placed on acute care facilities to produce positive outcomes.

The CMS has tied reimbursement dollars to the attainment of established outcome measures for all inpatients insured by the federal government (2014). Decreased

reimbursements, stringent quality standards, and high patient acuity require NGRNs to be prepared to address these challenges head on. NGRNs need to be aligned with the organization's goals and objectives for value-based care not only to ensure positive outcomes, but also to enhance the organization's ability to earn back dollars from payers. Leger & Dunham-Taylor (2018) suggest that 80% of insured individuals fall under CMS coverage. Never events, readmissions, and failure to meet safety/quality measures all impact dollars earned (Leger & Dunham-Taylor, 2018).

Available Knowledge

The Institute of Medicine's (IOM; 2010) report, *The Future of Nursing*, points out that nurses are in prime position to act as change agents in positively influencing patient outcomes while creating solutions that assure the provision of safe, quality care. The IOM recommends nurses be prepared educationally to address the challenges and complexities of health care today. Hospitals share in the responsibility to assist NGRNs in making the transition from student to practitioner to serve in this capacity (Bratt, 2013; Kramer et al., 2012; Zinn et al., 2012).

Turnover rates continue to be highest within the first year of employment as organizations scramble to identify viable solutions which support the smooth transition and retention of NGRNs (Rush, Adamack, Gordon, Lilly, & Janke, 2013). Relying solely on traditional onboarding and orientation training methods to effectively prepare NGRNs for a fast-paced, demanding acute care environment is not enough (Bratt, 2013; Olson-Sitki, Wendler & Forbes, 2012). It is essential that acute care organizations consider interventions that aim to teach, nurture, and develop NGRNs in order to increase retention and enhance care delivery, while assuring optimal nurse staffing for the provision of safe, quality care (Medas et al., 2015).

A growing body of evidence suggests the need to support a smoother transition for the NGRN entering clinical practice for the first time in order to promote quality outcomes, leadership development, and patient safety improvement.

A robust NRP curriculum not only serves to increase retention, but also serves to augment the NGRN's formal education by creating intentional learning related to organizational strategic priorities, goals and objectives which go on to positively impact quality outcomes, and eventually, improve reimbursement (Cline et al., 2017; Kramer, 2012; Medas et al., 2015; Phillips et al., 2014; Silvestre, 2017). Meaningful and purposeful learning experiences during the first year of practice may accomplish this goal serving to increase job satisfaction and retention, while reducing turnover (Bratt, 2013; Cochran, 2017; Kramer et al., 2012). Hospitals have adopted NRPs to assist in easing the transition from academia to practice, therefore, building confidence and critical thinking (Medas et al., 2015). Most NGRNs are able to complete the NRP in 40-50 hours or less during the first year (Edwards et al., 2015). Evidence suggests that NRPs equip the NGRN with knowledge and skills necessary to work within hospitals' complex, rapid pace care environment (Bratt, 2013; Olson-Sitki et al., 2012).

Barnett, Minnick, and Norman (2014) found that 46% of NRPs studied were "pre-canned" purchased products, with the remaining 56% homegrown and designed to meet specific needs of employed NGRNs within that particular clinical setting. However, purchased programs may be cost-prohibitive for many small, rural community acute care facilities, creating a need to seek other options in designing an effective TTP program. Implementation of an EB intervention such as a NRP supports a smoother TTP to reduce NGRN turnover, builds NGRN confidence, better prepares NGRNs for the complexities of practice to support safety and quality

goals, and demonstrates positive return on investment (ROI; Cline et al., 2017; Olson-Sitki et al., 2012).

Components of NRP curricula should be organizational-specific and include general constructs such as socialization, reflection, delegation, quality, an introduction to and/or use of EB practice, conflict resolution, change management, skill building support, critical thinking and decision making, as well as prioritization skills (Bratt, 2013; Cochran, 2017; Edwards et al., 2015; Rush et al., 2013). Four main themes emerge from these elements, which serve to frame curricula components for a well-rounded, effective NRP: 1) educational sessions/didactic and simulation; 2) mentorship; 3) preceptorship; and 4) reflective, focused discussions (Barnett et al., 2014; Rosenfield & Glassman, 2016). Mentorship is an essential component of the NRP curriculum in assisting NGRNs through a smooth role transition to registered nurse (Barnett et al., 2014; Halfer, Graf, and Sullivan, 2008; Komaratat & Oumtanee, 2009; Rosenfield & Glassman, 2016).

Literature Review

A search of the literature was performed using Cumulative Index of Nursing and Allied Health Literature (CINAHL), Cochrane Complete, and PubMed (Medline) using the keywords "nurse residency program", "new graduate nurse", "turnover", and "transition to practice". Inclusion criteria for articles included those that were research or EB and reported in English, peer-reviewed, and published between the years of 2000-2018. No articles were returned from the Cochrane database. A total sample of 58 articles were returned from CINAHL and PubMed based on search terms used.

Eight studies were identified as providing evidence and support for the merits of developing and implementing a TTP intervention to build NGRN confidence and competence

while reducing turnover (Clipper & Cherry, 2015; Halfer et al., 2008; Komaratat & Oumtanee, 2009; Little, Ditmer, & Bashaw, 2013; Newhouse, Hoffman, & Hairston, 2007; Olson-Sitki et al., 2012; Pizzingrilli & Christensen, 2015; Silvestre, Ulrich, Johnson, Spector, & Blegen, 2017). Other outcomes evaluated included NGRN satisfaction, retention, knowledge, confidence, anticipated turnover, sense of belonging, and commitment.

Pizzigrilli & Christensen (2015) implemented and evaluated a 12-week NRP for NGRNs, measuring knowledge, confidence, recovery attitudes, and nurse retention. A quasi-experimental mixed methods, pre/post-test design was used to study new nurses hired into the mental health practice setting and enrolled in an intentional 12-week NRP ($N = 10$). A 45-item investigator-developed questionnaire was used to measure knowledge and was set at $p < .05$. Participant confidence level was assessed using the Mental Health Nursing Clinical Confidence Scale (MHNCCS), a 20-item questionnaire utilizing a 4-point Likert scale (1 = not at all, 4 = completely confident) with confidence interval set at $p < .05$. The Recovery Attitudes Questionnaire, a 16-item assessment with a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), was used to determine beliefs about mental health recovery. A paired t-test was performed to measure the difference in mean scores pre- and post-intervention. Mental health nurse mean scores improved for knowledge (t-test -5.58, $p < .05$) with an effect size (ES) of 1.8 (large). Both confidence (ES .94 large) and recovery attitude mean scores (13 out of 16 survey items, or 81%) improved significantly. Only 50% participants were retained after two-year mark. However, attrition was attributed to personal reasons cited by study participants (i.e. moving out of town closer to family; failure to pass national board examination). Although researchers saw no significant improvement in nurse turnover rate, reported improvements in confidence and knowledge of the newly hired nurses may positively affect nurse retention.

Newhouse, Hoffman, and Hairston (2007) studied the effects of a nurse internship program on retention. The Organizational Commitment Questionnaire (OCQ), a 15-item tool with a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) and α = .83 to .92, was used to measure desire to stay within the organization. Sense of belonging was measured using the Modified Hagerty-Patusky Sense of Belonging Instrument (MHPSBI). The MHPSBI, a 32-item tool which uses a 4-point Likert scale (1 = strongly disagree, 4 = strongly agree), consists of two domains: psychological experience (α = .91 to .93, F = 38.6, P = .001) and antecedents (α = .63 to .76, F = 5.69, P = .0111) and was used to measure self-perceptions of fit and involvement within an organization. The Anticipated Turnover Scale (ATS), a 12-item tool using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) and an internal consistency reliability of α = .84, was used to measure NGRNs' perceptions of anticipated voluntary resignation. A quasi-experimental, post-test only, control group design was used to study 3 comparison groups of NGRNs at baseline, then at 6 months and 12 months post intervention (N = 783). Survey response rates were 46% overall at baseline (n = 73/159), 74% at 6-month mark (n = 237/321), and 70% at 12-month mark (n = 212/304). There was a higher retention at 12 months post-NRP implementation (P = .014*)*. NGRNs were more likely to consider leaving than at 6 months (P = .009*)*. There was no significant difference for organizational commitment with an effect size of baseline to 6 months = .01 (small) and baseline to 12 months = .08 (small). Additionally, no significant differences among comparison groups for sense of belonging antecedents (effect size with baseline to 6 months = .3 small; baseline to 12 months = .2 small). There were, however, significant differences among the groups in terms of sense of belonging (psychological being) with an effect size at baseline to 6 months = .2 small; baseline to 12 months = .2 small. A statistically significant difference was seen related to anticipated turnover (F_{2513} = 3.86, P =

.022) with an effect size at baseline to 6 months = .4 small to medium, baseline to 12 months = .2 small). A statistically significant difference was seen related to retention between 12-month group who received NRP and control comparison group ($\chi^2 = 6.032$, $P = .014$). Those NGRNs who completed the NRP were more likely to stay in their current job at the one-year mark versus those who did not complete an NRP.

Little, Ditmer, & Bashaw (2013) studied the effects of two NRPs conducted at two facilities within a larger system in order to identify consistent, successful themes that might be incorporated into one network-wide NRP. A comparative design was used to evaluate retention rates between two facilities with NRPs which offered different curricula to their NGRNs ($N = 172$). Facility A ($n = 138$) was determined to have a 97.8% NGRN retention rate at the 12-month mark compared to all registered nurses (RNs; 91%) while Facility B ($n = 34$) had a 12-month NGRN retention rate of 97.05% compared to the overall rate of 87% for all RNs. There were subtle differences between the two curricula. Facility A offered a phase covering professional development and growth opportunities while Facility B did not. Conversely, Facility B offered EB practice support and encouragement while Facility A did not. Overall, researchers concluded that both NRPs were efficacious in supporting retention of NGRNs at one-year and beyond.

Silvestre, Ulrich, Johnson, Spector, and Blegen (2017) evaluated the return on investment for implementing a TTP using a randomized control, multisite study design. The sample consisted of NGRNs ($N = 1,032$) from over 70 various clinical settings. Non-specified surveys were used to evaluate NGRN turnover and costs associated with training and turnover were analyzed. There was statistical significance in the turnover rate of the TTP group compared to the control group (15.5% TTP versus 26.8% control, $P = .001$). Of all NGRNs participating in

the TTP, 84.5% were still in job by end of first year. Statistically significant differences in turnover by group demographics included Magnet facility (*P* = .001), hospital size *(P* = .021*)*, practice state *(P* = .001), and age *(P* = .017). Turnover cost savings was estimated among those NGRNs completing a TTP to be $11,173/NGRN. It was concluded that a formalized TTP program might assist to reduce turnover of NGRNs while rendering a cost savings for organizations who implement a TTP to support NGRN role transition.

Clipper and Cherry (2015) evaluated the effects a formal training program for preceptors has on NGRN turnover rates and perceptions of the ability to deliver safe, quality care. The researchers used a quasi-experimental, mixed methods, control group design to study NGRNs (*N* = 138) from seven different acute care facilities in Central Texas. The study group (*n* = 76) and control group (*n* = 62) were evaluated using a 16-item investigator developed survey tool (*P* = .05*,* α = 0.954). Mann-Whitney *U* test (Wilcoxon rank-sum) was used as the statistical test, with *n* = 59 completing the survey. An overall combined response rate of 42.8% was achieved. NGRNs with trained preceptors had an 89.5% retention rate versus control group with 82.7%. NGRNs' perception of ability to deliver safe, quality care had an overall mean (*M)* higher for study group compared to the control group for all questions except one. Two questions from the 16-item survey showed statistical significance: a) "…preceptor helped develop collegial working relationships and promote a positive work environment in my new unit/department" (*P* = .038); and b) "…preceptor took adequate time with me to ensure a smooth transition from my role as student nurse to that of an independent, professional nurse" (*P* = .016). Study results infer that a structured preceptor training program for RNs who serve as preceptors for NGRNs enhance TTP while improving retention rates.

Olson-Sitki, Wendler, and Forbes (2012) evaluated the effects of a NRP in terms of overall experience related to role transition preparation, satisfaction and retention using descriptive, non-experimental, mixed methods, repeated measures design. A sample of NGRNs from a Magnet® regional medical center (n = 31) participated in both data collection points (6 and 12 months) from a total NGRN prospective participant pool (N = 79). The Casey-Fink Graduate Nurse Experience Survey© ($\alpha = \geq .89$) was used to measure five domains: support, safety, stress, communication/leadership and satisfaction. The Casey-Fink Graduate Nurse Experience Survey© is comprised of five sections. The first section asks the participant to list three skills/procedures the NGRN is uncomfortable performing independently. The next section is a 24-item questionnaire using a 4-point Likert (strongly disagree, disagree, agree, strongly disagree) that solicits participant feedback on NGRN perceived support, comfort, and professional expectations. The third section consists of nine questions to determine job satisfaction using a 5-point Likert scale (very dissatisfied, moderately dissatisfied, neither satisfied or dissatisfied, moderately satisfied, very satisfied). Five questions related to role transition experience from student to registered nurse make up section four, where participants are asked to circle all applicable answers. Section five relates to participant demographics. An investigator-developed tool was used to collect qualitative information related to facility-specific information related to NGRN perceptions of role transition support and challenges. A nonparametric test (Wilcoxon signed-ranks, $p < .05$) was performed to determine differences in mean scores at 6 and 12 month intervals during nursing residency participation. Significant differences were identified in 9 of 24 questions related to comfort, support and/or confidence: confidence communicating with physicians (p = .008), comfortable with dying patient (p = .012), delegation (p = .007), difficulty with prioritization (p = .022), support by nurses on unit (p

= .034), opportunities to practice skills (p = 0.19), comfortable communicating with patients/families (p = .0.24), complete assignments on time (p = .004), prepared (p = 0.25). Confidence/comfort increased significantly at 12 months NRP participation versus 6 months (t (28) = 4.31, p = .001). NGRN turnover rates decreased approximately 3-4% post-implementation of NRP. Themes derived from the qualitative data revealed NGRNs appreciate support and comradery in that they do not feel alone in their struggles to transition to the role of registered nurse.

Komaratat and Oumtanee (2009) studied the effects of formal mentorship on NGRN level of competency after working with a trained nurse mentor. The sample consisted of NGRNs (N = 19) working in an acute care hospital setting. The study was a quasi-experimental, pre/post-test, repeated measures design. Researchers recruited nurses (N = 19) to participate in a formal mentorship training program to learn and build skills in the areas of coaching, adult learning, decision-making, and the role of mentors. Three study instruments were used to measure effects of interventions. The Mentor Knowledge Scale (MKS) is an investigator-developed 15-item questionnaire with a KR-20 coefficient alpha of 1. This scale was used to measure mentor knowledge before and after mentorship training. The Mentor's Activities Scale (MAC), an investigator-developed tool with α = .9, is a 25-item checklist which was used to measure NGRNs' perceptions of mentor effectiveness during work together. The Nurse Competence Scale (NCS), a 20-item questionnaire using a 5-point Likert (highest to lowest competence) with reliability of α = .96, was used to measure the NGRNs' ability to demonstrate competency in the domains of nursing, communication, decision-making, and quality. Findings revealed from the mentor-training program showed an increase in mentor knowledge test score, averaging 8.37/15 points possible at baseline, to 11.76/15 post-training. Trained mentors were then paired with

NGRNs to work together for four weeks. NGRN competency was measured at baseline (pre-intervention A), one month from baseline prior to mentoring (pre-intervention B), and again after a four-week mentorship (post-intervention). Data analysis was then conducted using a nonparametric test (Wilcoxon signed ranks, $p = <.05$) to determine effect of mentoring in improving NGRN competency. There was no statistical significance between mean scores of pre-intervention A and B groups. However, there were significant differences in mean scores noted between pre-intervention time points A and post-intervention ($z = -3.831$) as well as pre-intervention B and post-intervention ($z = -3.825$). Results infer that mentorship is an effective strategy in assisting NGRNs to improve competency, which may lead to increased satisfaction, engagement and organizational commitment.

Halfer, Graf, and Sullivan (2008), studied the relationship between a NGRN internship/ mentoring program to NGRNs' organization commitment, intent to stay and job satisfaction using a descriptive, correlational, repeated measures design. A control group of NGRNs ($n = 84$) working at a 270-bed Magnet designated pediatric medical center were compared to an intervention group of NGRNs ($n = 212$) working at the same facility who had completed a pediatric internship with mentoring component. A 25-item investigator-developed instrument was used with a reported .8962 Pearson-Brown split/half reliability. The instrument consisted of 21 Likert scale items (1 = strongly disagree, 4 = strongly agree) and four open ended questions describing work environment. Seven factors loaded after Varimax rotation of factors and were used in the instrument, including (a) professional respect, (b) competence, (c) professional development, (d) practice support, (e) work schedule, (f) becoming a team member, and (g) resource access. Cumulative logit model was used to analyze Likert scale data, which was treated as ordinal ($p = .05$). The instrument was mailed the pre-intervention group (those

NGRNs not participating in a pediatric internship/mentoring experience) to assess factors without intervention. The post-intervention cohort received the instrument at 3, 6, 12, and 18-month intervals corresponding with NGRNs' time on the job to evaluate effects of a pediatric internship at different time points. The post-internship/mentoring group showed a statistically significant increase in overall job satisfaction than that of the pre-internship group ($p = 0.046$). Turnover rate for NGRNs participating in the internship/mentoring program was calculated at 12% compared to the pre-internship group with a turnover rate of 20%.

All but two studies showed either a decrease in NGRN turnover or an increase in NGRN retention rates when NGRNs participated in a TTP experience. One study showed improvement in NGRNs' competency when exposed to a mentoring experience, which may lead to greater job satisfaction and higher retention rates (Komoratat & Oumtanee, 2009). At least two studies showed an improvement in NGRNs' knowledge, confidence, and overall self-perceptions of ability to deliver safe, quality care after participation in a NRP (Clipper & Cherry, 2015; Pizzingrilli & Christensen, 2015).

Limitations included small sample size for at least four studies (Clipper & Cherry, 2015; Komaratat & Oumtanee, 2009; Olson-Sitki et al., 2010; Pizzingrilli & Christensen, 2015) and a lack of randomization in all but one study (Silvestre et al., 2017). Other limitations included variations in practice settings among all studies selected and a lack of demographic information for study subjects (NGRNs) in at least one study (Little et al., 2013). Overall, the evidence suggests that NGRN turnover is more likely to decrease and NGRN retention is more likely to increase when NGRNs participate in a TTP experience during the first year of hire.

Internal Evidence

The project was implemented in a 105 licensed bed, not-for-profit, faith-based rural community acute care setting, providing both primary and secondary care. This agency employs just over 200 direct care nurses and accepts NGRNs to various patient care units across the facility, including medical/surgical, telemetry, intensive care/critical care, surgical services, women's care, and the emergency room. Organizational need regarding the development of a NRP was discussed with stakeholders – the president, human resources, quality/outcomes department, education department, and other key support personnel– and baseline data were retrieved. Internal evidence evaluated included: NGRN hire rates; NGRN satisfaction level; nurse vacancy rate; NGRN turnover rates within the first year of hire (voluntary and involuntary); nurse compensation (including salary and benefits offered); accrued overtime; nursing missed care; and amount of sick time used.

The agency created an organizational/strategic goal of reducing nurse turnover within the first year of hire. A 37% NGRN turnover was reported for 2017. There is no formal NRP or formal mentorship opportunity for NGRNs extending beyond a basic onboarding preceptor-orientation experience. The agency's nursing workforce is comprised of over 60% associate degree nurses (ADNs), further creating congruence, as most ADN programs do not include community experiences, population health, or transition of care concepts in the curriculum which may go on to support care transitions. The shift in focus from volume-based to value-based care has created a new sense of urgency for provider stakeholders such as physicians, hospital management, chief financial officers, nurse educators, nurse leaders, and chief nursing officers to seek innovative solutions which transform the organization and leverage the capacity of others in order to meet the demands of the new paradigm (Leger & Dunham-Taylor, 2018; Porter-O'Grady & Malloch, 2015).

Rationale

Transformational Leadership Theory

Burns' Transformational Leadership Theory (TL; 1978) was used as a framework to support the planning and implementation of the project. Transformational leadership theory was used as a framework to effectively move others to act and become champions for change in adequately preparing NGRNs for future practice. Burns' Theory (1978) postulates that the leader first explores personal beliefs, values, vision and philosophy regarding change, then creates the opportunity for those who follow to do the same (Doody & Doody, 2012; Drenkard, 2012). The transformational leader is connected to a higher purpose – a greater good – and strives to inspire others to connect with that same "calling" (Doody & Doody, 2012; Drenkard, 2012).

Transformational leadership required leaders within the agency to explore personal internal drivers and motivating factors before attempting to lead others through change (Drenkard, 2012). A careful exploration of personal values and beliefs surrounding the needed change occurred during discussions with team members. Transformational leaders were able to develop a sense of purpose around the work to be done and the goals to be accomplished. This self-exploration served as the guiding principle for healthcare leaders who were committed to excellence and continual improvement, enabling them to inspire and encourage others to make the changes necessary to positively impact outcomes related to NGRN turnover (Doody & Doody, 2012; Hutchinson & Jackson, 2013; Salanova, Lorente, Chambel, & Martinez, 2011).

Implementation Framework

The Model for Improvement (Institute for Healthcare Improvement [IHI], 2018), known as the Plan-Do-Study-Act (PDSA) cycle derived from Edward Deming's 14 principles for total quality improvement (The W. Edwards Deming Institute, n.d.) was used to guide project implementation. This model was useful in testing changes for improvement, whereby a plan was

created for the change (plan), actions were deployed to support the change (do), effects of the change were evaluated (study), and decisions were made whether or not to adopt the new change (act; IHI, 2018). The Model for Improvement provided an effective framework for designing an NRP curriculum and the development and implementation of a mentorship-training program to prepare nurse leaders and nurse educators in confidently mentoring NGRNs through successful role transition.

Plan

Agency stakeholders, including the Education Department, Human Resources, and various nursing practice areas, vested in increasing NGRN retention rates served as team members and/or consultants throughout the planning phase of the project. These stakeholders possessed working knowledge and experience in addressing the needs of NGRNs upon hire into clinical practice. Team members were respectfully asked what was going well, and not so well, with regards to the current model for orienting NGRNs (IHI, 2018). The tenets of shared governance and continuous quality improvement were observed throughout the initial planning phase, including respect and appreciation for different values, perspectives, and contributions of each team member (Deming, 1986; Porter-O'Grady, 1992). Goals and timelines for completion were established for the project to assist the team in staying focused and on task (IHI, 2018).

Do

A gap analysis was conducted using a psychometrically tested survey instrument to measure NGRNs' perceptions of ongoing needs, difficulties and experiences during role transition from student to registered nurse. A mentorship training program was developed and presented to nurse leader and nurse educator participants who serve as NGRN mentors. Self-perceptions of nurse leaders' and nurse educators' ability to mentor NGRNs were measured pre/post-training using a reliable, valid survey instrument.

Study

Data collected from NGRN survey participants were studied and analyzed in order to develop an NRP curriculum to increase NGRN retention rates. Data collected from surveys administered to nurse leaders and nurse educator participants pre- and post-mentor training were analyzed to measure self-perceptions in ability to mentor NGRNs. Required actions to be taken were discussed based on the data and findings obtained after implementation of the project (IHI, 2018).

Act

An NRP curriculum was developed based on findings from the survey instruments. Stakeholders for the agency have decided to adopt the new changes recommended and will implement the newly designed NRP curriculum (IHI, 2018). Nurse leaders and nurse educators will be utilized as mentors for NGRNs to support the NRP curriculum.

Specific Aim

The purpose of this project was to design a customized NRP curriculum to increase NGRN retention. A mentorship training program for nurse leaders and nurse educators supplemented the curriculum to improve self-perceptions of ability to mentor NGRNs.

Methods

Context

This project involved gathering internal evidence through a gap analysis using the Casey-Fink Graduate Nurse Experience Survey© (2004). A descriptive design was used to identify core elements required for developing a customized NRP curriculum to better prepare NGRNs for role transition. The project also included a pre/post-test comparison of nurse leaders' and nurse educators' perceptions of mentoring ability upon completion of a formal mentorship training class using the Mentoring Competency Assessment (MCA; Fleming et al., 2014)

Intervention

An NRP curriculum was designed to augment the NGRN's formal academic education and onboarding basic orientation by creating intentional learning opportunities that align with organizational goals. The goal of the curriculum development was to impact NGRN retention, skills and competency, comfort/confidence level, job satisfaction, role transition difficulties, along with quality outcomes and improved reimbursement (Casey et al., 2004; Cline et al., 2017; Kramer, 2012; Medas et al., 2015; Phillips et al., 2014; Silvestre, 2017). NRP curriculum elements were identified using findings from the Casey Fink Graduate Nurse Experience Survey© completed by NGRNs working at the agency. An NRP curriculum was developed based on these findings.

The newly designed NRP curriculum outlined opportunities for didactic content delivery and participation in hands-on competency and skills building exercises. Additionally, the NRP curriculum included a formal mentoring component to enhance support for NGRNs. A mentoring training class was designed for nurse leaders and nurse educators to address key areas identified by Fleming et al. (2014) as essential to build mentor competency in guiding mentees toward successful transition. The mentoring training program was designed to enhance self-perceptions of mentorship ability through development of skills and competencies for mentoring NGRNs. Areas included maintaining effective communication, aligning expectations, assessing understanding, fostering independence, addressing diversity, and promoting professional development. Mentor training offered both didactic and simulation activities focusing on skill building in the areas which best support mentees' development needs (Fleming et al., 2014; Komaratat & Oumtanee, 2009).

Study of the Intervention

A convenience sample of NGRNs working at the agency was recruited for participation in the project. Inclusion criteria were NGRNs employed by the agency with < 2 years of experience, working full or part-time, ≥ 21 years of age, English speaking, working in a direct patient care role in medical/surgical, telemetry, intensive care/critical care, surgical services, women's care, and emergency room. A list of prospective participants meeting inclusion criteria was obtained from the agency's Human Resource department. Prospective participants (N = 16) were sent an invitation to participate and were provided with a implied consent letter via email explaining risks, benefits and purpose of the project. The Casey-Fink Graduate Nurse Experience Survey© was administered to participants.

Nurse leaders and nurse educators were recruited to participate in mentorship training. A convenience sample (N = 12) was used. Inclusion criteria were adults ≥ 21 years of age, English speaking, nurse directors, nurse managers, and nurse educators serving medical/surgical, telemetry, intensive care/critical care, surgical services, women's care, and emergency room. A list of prospective participants employed by the agency was obtained from Human Resources by the Education Department Director. Nurse leaders and nurse educators meeting inclusion criteria were invited to participate in the completion of a 4-hour mentorship training workshop and completion of the MCA instrument pre/post-training. An informational meeting was held initially for prospective participants to learn about the purpose of the project, the implied consent process, risks/benefits and the option of whether or not to participate was also discussed at that time. The education director reinforced that participation in the project was voluntary and choosing to participate or not participate had no influence on employment status or performance evaluation.

Individuals meeting study criteria and expressing interest in participation were sent an invitation to participate along with the survey link to complete the MCA via email along with an implied consent statement, risks/benefits and purpose of the project. The MCA was administered to individuals who expressed an interest to participate prior to training in order to gauge baseline self-perceptions of skill and competence in mentoring. Completion of the MCA pre-training implied consent to participate in the project, including mentorship training workshop and completion of the post-training MCA. Participants attended a 4-hour mentor training program which consisted of didactic and kinesthetic learning opporunties. Participants were then sent an email invitation to complete the post-mentor training.

Measures

Two instruments were used for measurement. The Casey-Fink Graduate Nurse Experience Survey© (Casey et al., 2004) provided internal evidence to support the development of a customized NRP. An instrument developed by Fleming et al. (2014), known as the Mentoring Competency Assessment (MCA), was used to measure self-perceptions of mentorship skills of personnel who were trained to mentor NGRNs.

The Casey-Fink Graduate Nurse Experience Survey© consists of five focus areas, which include demographics, skill performance, comfort/confidence, job satisfaction, and work environment/difficulties with role transition. This instrument has undergone two revisions since its development in 1999. The first section of the instrument asks the NGRN to list skills and/or procedures he/she is most uncomfortable in performing independently. A list of 20 preset skills makes up this section. The second section contains a 24-item questionnaire, using a 4-point Likert scale ranging from strongly disagree, to strongly agree to determine a sense of NGRN concerns related to support received, comfort, and professional expectations. One additional

question (item 25) solicits feedback related to NGRN stressors in personal life and is dependent on the participant answering "strongly agree" or "agree" to item 24 related to experiencing stress. Section three consists of nine items, using a 5-point Likert scale, with higher numbers indicating greater job satisfaction. Section four consists of five questions (circle all that apply) related to difficulties, support provided and most satisfying elements of the role transition experience from student to registered nurse. Section five relates to participant demographics, including degree obtained, age, length of orientation, scheduled work pattern, preceptor and/or work experience, previous health care experience, practice area, ethnicity, and gender. Content was derived based on extensive literature review and content validity was established through use of a nurse expert panel review. Cronbach's alpha of $\geq$ .89 reported for internal consistency reliability when all items are summed, including stressor item (Casey et al., 2004). Permission was granted by the authors prior to use of the Casey-Fink Graduate Nurse Experience Survey©. The instrument is readily available for download and use on the UCHealth website (https://www.uchealth.org/professionals) once intent for use was submitted to authors through Survey Monkey® application. Scoring instructions were provided on the website as reference. The Casey Fink Graduate Experience Survey© items were converted to Survey Monkey® and a survey link was created to send to prospective NGRN participants.

The MCA is a 26-item questionnaire which evaluates mentor self-perception of mentoring skills, competency and ability in working with mentees. The MCA is divided into six subscales: a) effective communication; b) alignment of expectations; c) assessing understanding; d) acknowledging diversity; e) promotion of professional development; and f) encouraging independence (Fleming et al., 2013). The instrument uses a 7-point Likert scale (1 = not at all skilled, 4 = moderately skilled, 7 = extremely skilled). Internal consistency reliability was

achieved with a reported α of $\geq$ .91 (Fleming et al., 2013). Confirmatory factor analysis was used to establish construct validity. The MCA instrument is available on University of Wisconsin-Madison's (UWM) website (https://ictr.wisc.edu) and requires permission to administer within the context intended for the purpose of this project. Permission was obtained from UWM prior to use of the MCA for this project. Three items (#10, #13, and #14) were excluded from the survey, as they were research related questions and were not relevant to the project. The MCA survey items were converted to Survey Monkey® and a survey link was created to send to prospective nurse leader and nurse educator participants.

Analysis

Data were analyzed using the Statistical Package for Social Science (SPSS) Version 25. Descriptive statistics used to describe the characteristics of the participants and Casey-Fink scores included frequencies, percentages, means and standard deviations. Differences in pre- and post-mean scores for the MCA were analyzed using an independent-samples *t*-test. Based on the small sample and environment, no data were collected to allow pairing of pre- and post-sample data, making the independent-samples *t*-test most appropriate for analysis.

Ethical Considerations

Internal Review Board (IRB) approval was granted by the health care agency following deferral from the sponsoring university. Data were collected via online anonymous surveys and aggregated to ensure anonymity. Both survey instruments were electronically formatted using Survey Monkey® online survey system and links to both surveys were created. Both surveys were sent via the organization's encrypted Microsoft Outlook® email system. The Education Department Director sent invitation letters and links for each respective survey to prospective participants. All written and verbal information reinforced the voluntary nature of participation

and that choosing to participate or not participate did not influence employment status or performance evaluation. Submission of the completed survey served as implied consent to participate. No data were collected that could link an individual participant with the data provided. All data were stored in password protected files using the agency's encrypted, secure network. Data analysis using an independent-samples *t*-test further assured anonymity.

Results

Casey Fink Graduate Nurse Experience Survey©

A total of 69% (11 of 16) of NGRNs working at the agency and meeting inclusion criteria participated in the Casey Fink Graduate Nurse Experience Survey©. All respondents were female, Caucasian, and 64% were $\geq$ 30 years old. Sixty-four percent had an associate degree in nursing (ADN). Over 50% of participants worked night shift and had previous health care work experience before becoming a registered nurse. Eighty-two percent of participant reported the length of their basic orientation ranging 0 – 12 weeks, with 36% reporting having less than 8 weeks of orientation length (Table 1).

Table 1

Demographic Characteristics of NGRNs Participants (N = 11)

Characteristics	*n*	*%*
Degree		
ADN	7	64.0
BSN	4	36.0
Shift worked		
Straight days	4	36.0
Straight nights	7	64.0
Specialty area		
Adult Medical/Surgical	3	27.0
Adult Critical Care	1	9.0
OB/Post-Partum	2	18.0
Emergency Department	5	46.0
Length of orientation		
< 8 weeks	4	36.0
9 – 12 weeks	5	46.0
13- 16 weeks	1	9.0
17 – 23 weeks	1	9.0
Previous healthcare work experience		
Volunteer	3	27.0
Nursing Assistant	7	64.0
Medical Assistant	1	9.0
Unit Secretary	2	18.0
Student externship	3	27.0

Note. ADN, associate degree nursing; BSN, bachelor's degree nursing; OB, obstetrics

All NGRNs (*N* = 11) reported the top three skills/procedures they were most uncomfortable performing independently from a list of suggested skills. No respondents reported feeling confident performing all skills independently. Nine skills out of 20 total skills

(45%) were selected by NGRNs as posing the most challenge. Of those nine, the top three skills identified as most challenging during NGRNs' role transition were chest tube care (91%), ventilator care and management (64%), and ability to manage codes/emergency response (55%).

Participants were asked to rate level of comfort and confidence for 24 items using a 4-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). Areas where NGRNs felt most confident and/or comfortable included (a) preceptor provided encouragement and feedback (M = 3.82, SD = 0.40) and being supported by nurses on their unit (M = 3.82, SD = 0.40). Items scoring lower related to NGRN comfort/confidence were level of comfort in making changes to the nursing care plan (M = 3.27, SD = 0.79), level of comfort in knowing what to do for a dying patient (M = 3.00, SD = 0.77), opportunities to practice skills and procedures (M = 3.36, SD = 0.50), and feeling overwhelmed with workload (M = 3.18, SD = 0.75). Fifty-five percent reported experiencing stressors in their personal lives which might impact comfort/confidence during role transition from student to RN (M = 2.54, SD = 0.93; Table 2).

Table 2

NGRN Level of Comfort and Confidence (N = 11)

Variable	*n*	*M*	*SD*
I feel confident communicating with physicians	11	3.36	.674
I feel comfortable knowing what to do for a dying patient	11	3.00	.776
I am comfortable delegating tasks to the nursing assistant	11	3.45	.522
I feel at ease asking for help from other RNs on the unit	11	3.73	.467
I am having difficulty prioritizing patient care needs *	11	3.64	.505
I feel my preceptor provides/provided encouragement and feedback about my work	11	3.83	.405
I feel staff is available to me during new situations and procedures	11	3.73	.467
I feel overwhelmed by my patient care responsibilities and workload *	11	3.18	.751
I feel supported by the nurses on my unit	11	3.83	.405
I have opportunities to practice skills and procedures more than once	11	3.36	.505
I feel comfortable communicating with patients and their families	11	3.73	.467
I am able to complete my patient care assignment on time	11	3.55	.522
I feel the expectations of me in this job are realistic	11	3.45	.522
I feel prepared to complete my job responsibilities	11	3.55	.522
I feel comfortable making suggestions for changes to the nursing plan of care	11	3.27	.786
I am having difficulty organizing patient care needs *	11	3.55	.522
I feel I may harm a patient due to my lack of knowledge and experience *	11	3.55	.522
There are positive role models for me to observe on my unit	11	3.55	.522
My preceptor is helping/helped me to develop confidence in my practice	11	3.55	.522
I am supported by my family/friends	11	3.73	.467
I am satisfied with my chosen nursing specialty	11	3.73	.467
I feel my work is exciting and challenging	11	3.73	.467

Table 2

(continued)

I feel my manager provides encouragement and feedback about my work	11	3.45	.687
I am experiencing stress in my personal life *	11	2.55	.934

Note. *Variable recoded; RN, registered nurse

Table 3 shows all stressors identified by NGRNs which affect role transition, with the top stressor being student loans (50%).

Table 3

NGRN Identified Stressors Impacting Role Transition (N = 11)

Variable	*n*	*%*
Finances	4	66.7
Child care	3	50.0
Student loans	5	83.3
Personal relationships	4	66.7
Job performance	1	16.7

Participants rated job satisfaction in section three of the Casey-Fink survey using a 5-point Likert scale (1= very dissatisfied, 3 = neither satisfied nor dissatisfied, 5 = very satisfied). NGRNs were most satisfied with hours worked (M = 4.50, SD = 0.52) and least satisfied with opportunities for career advancement (M = 3.45, SD = 0.69). Table 4 shows items most satisfying to NGRNs related to their job.

Table 4

NGRN Job Satisfaction (N = 11)

Variable	*n*	*M*	*SD*
Salary	11	3.64	1.12
Vacation	11	4.00	1.18
Benefits package	11	3.82	1.08
Hours that you work	11	4.45	.522
Weekend off per month	11	4.00	1.00
Your amount of responsibility	11	4.36	.505
Opportunities for career advancement	11	3.64	1.03
Amount of encouragement	11	4.27	.650
Opportunity for choosing shifts worked	11	4.18	.874

NGRNs were asked to identify items that support and/or impede a successful TTP. Seventy-three percent of participants cited difficulties with transition from student to RN role, with expectations regarding autonomy with more responsibility (38%) and fears related to patient safety (38%) as top concerns for role transition. Fifty percent of NGRNs reported more could be done to help them feel supported or integrated into the unit through an improved work environment, such as the need for gradual increases in patient-nurse ratios, more assistance from unlicensed personnel, and involvement in schedule and committee work. NGRNs (N =11) were most satisfied with peer support, team approach from helpful and friendly staff (73%) and the ability to practice professional nursing (73%). Among the least satisfying were ongoing learning through unit role models and mentorship (55%). NGRN perceptions related to TTP are listed on Table 5.

Table 5

NGRN Perceptions of Transition to Practice (N = 11)

Variable	*n*	*%*
Difficulties experienced in transitioning from student to RN		
Role expectations (e.g. autonomy, more responsibility)	3	37.5
Lack of confidence (e.g. MD communication skills, delegation)	2	25.0
Workload (e.g. organizing, prioritizing, rations, patient acuity)	2	25.0
Fears (e.g. patient safety)	3	37.5
Orientation issues (e.g. information overload, unit familiarization)	1	12.5
What could have been done to help feel more supported or integrated into unit		
Improved orientation (e.g. orientation extension, skills practice)	2	25.0
Increased support (e.g. manger, RN, and educator feedback and support)	2	25.0
Unit socialization (e.g. being introduced to staff and MDs, socialization)	3	37.5
Improved work environment (e.g. gradual ration change)	4	50.0
Aspects of work environment most satisfying		
Peer support (e.g. belonging, team approach, helpful and friendly staff)	8	72.7
Patients and families (e.g. making a difference, positive feedback)	6	54.5
Ongoing learning (e.g. preceptors, unit role models, mentorship)	6	54.5
Professional nursing role (e.g. challenge, fast pace, empowerment)	8	72.7
Positive work environment (e.g. good ratios, available resources)	6	54.5

Note. RN, registered nurse; MD, medical doctor

Mentoring Competency Assessment (MCA)

Nurse leaders and nurse educators who met inclusion criteria completed the MCA pre-test, mentor training, and MCA post-test survey ($N = 12$). Demographic information was provided by 11 of 12 participants. Seventy-three percent of participants completed an undergraduate degree in nursing, and had $\leq$ 20 years nursing experience. The majority of participants (82%) have been in their current position $\leq$ 10 years. It is important to note that, while almost three quarters (73%) had not attended a formal mentor training program in the past, they had served as mentors for NGRNs. Table 6 provides demographic characteristics for pre- and post-MCA and mentoring training participants.

Table 6

Demographics Characteristics for Pre/Post MCA and Mentor Training (N = 11)

Characteristics	*n*	%
Degree obtained		
Undergraduate Degree in Nursing (i.e. ADN, BSN)	8	72.7
Graduate Degree in Nursing (i.e. MSN, PhD, DNP)	3	27.3
Number of Years Nursing Experience		
0-10 years	5	45.4
11-20 years	3	27.3
21-30 years	3	27.3
Length of time in current position		
0-10 years	9	81.8
11-20 years	1	9.1
21-30 years	1	9.1
Previously attended formal mentorship training		
Yes	3	27.3
No	8	72.7
Previously served as mentor for NGRN		
Yes	8	72.7
No	3	27.3

Note. ADN, associate degree nursing; BSN, bachelor's degree nursing; MSN, master's degree nursing; PhD, doctor of philosophy; DNP, doctor of nursing practice; NGRN, new graduate registered nurse

Participants (*N* = 12) completing the pre- and post-mentor training MCA reported self-perceptions of their competency and ability to mentor a NGRN using a 7-point Likert scale (1 = not at all skilled, 4 = moderately skilled, 7 = extremely skilled). Twenty-three of 26 MCA items were used for analysis as they were relevant to the project. Three items (#10, #12, and #13) specific to mentoring in research were deemed not relevant to the project and were removed

prior to administering the survey. Pre- and post-test MCA scores were analyzed for differences in means. Statistically significant differences in pre- and post-test scores were found in five of six MCA subscales. Table 7 displays the differences in MCA pre- and post-mentor training mean scores.

Table 7

MCA Mean Differences Pre- and Post-Mentor Training (N = 12)

	Pretest		Post-test	
Subscales Independent Variables	*n*	*M* (*SD*)	*n*	*M* (*SD*)
Maintaining effective communication				
Active listening	12	5.42 (0.99)	12	6.17 (0.72)*
Providing constructive feedback	12	5.00 (1.28)	12	5.58 (0.90)
Developing a trusting relationship	12	5.92 (1.16)	12	6.08 (0.79)
Accommodating communication styles	12	4.50 (1.38)	12	6.08 (0.67)*
Pursuing strategies to improve communication	12	4.58 (1.24)	12	6.25 (0.62)**
Coordinating with other mentors	12	4.58 (1.08)	12	5.75 (0.87)*
Aligning expectations				
Setting clear relationship expectations	12	4.67 (1.37)	12	6.25 (0.87)*
Aligning expectations	12	5.08 (1.08)	12	6.25 (0.75)*
Considering mentor-mentee differences	12	5.33 (1.15)	12	6.50 (0.67)*
Developing strategies to meet goals	12	5.00 (1.48)	12	6.25 (0.87)*
Assessing understanding				
Assessing mentee knowledge	12	5.25 (1.48)	12	6.08 (0.99)
Fostering independence				
Motivating mentees	12	5.25 (1.36)	12	6.08 (0.67)
Building confidence	12	5.58 (1.44)	12	6.17 (0.72)
Stimulating creativity	12	5.00 (1.48)	12	5.58 (0.67)
Acknowledging mentees' professional contributions	12	5.50 (1.24)	12	6.33 (0.65)*

Table 7

(continued)

Negotiating path to independence	12	5.00 (1.48)	12	5.91 (1.16)
Addressing diversity				
Accounting for biases and prejudices	12	4.83 (1.19)	12	6.25 (0.75)*
Accounting for different backgrounds of mentees	12	5.67 (1.30)	12	5.67 (0.51)
Promoting professional development				
Helping network effectively	12	5.00 (1.54)	12	6.33 (0.89)*
Setting career goals	12	5.17 (1.59)	12	6.08 (1.16)*
Helping establish a work/life balance	12	4.92 (1.24)	12	6.00 (0.95)*
Understanding impact as a role model	12	5.33 (1.37)	12	6.42 (0.67)*
Helping mentees acquire resources	12	5.25 (1.42)	12	6.58 (0.51)

Note. Indicates statistical significant difference
*$p < .05$; **$p < .001$

An independent-samples t-test using Levene's test for equality of variances was performed to compare the differences in mean scores of nurse leaders' and nurse educators' self-perceptions of ability to mentor. Means scores were compared for 23 different MCA items within six subscales. Cohen's *d* was calculated for all items to determine magnitude of effect (Cohen, 1992). Four of six items in subscale *Maintaining Effective Communication* revealed statistically significant findings ($p < .05$). The most significant item was participants' perception of ability to pursue strategies to improve communication, with a mean increase of 1.67 from pre-test ($M = 4.58$, $SD = 1.24$) to post-test ($M = 6.25$, $SD = 0.62$). The magnitude of effect was large ($d = 1.77$).

All items within the subscale *Aligning Expectations* showed statistically significant differences in mean scores ($p < .05$). The most significant item was participants' self-perceptions of ability to set clear expectation with a mean increase of 1.58 from pre-mentor (M = 4.67, SD = 137) to post-mentor training (M = 6.25, SD = 0.87). The magnitude of effect was large (d = 1.44). The three remaining items in this subscale (aligning expectations, considering mentor-mentee differences, developing strategies to meet goals) also showed statistically significant difference in pre- and post-test mean scores and large effect sizes, as demonstrated in Table 8.

One item within the subscale *Fostering Independence* showed a statistically significant difference in pre- and post-test MCA mean scores ($p <.05$). The item related to participants' perceptions about their ability to acknowledge mentee's professional contributions had a mean increase of .83 from pre-mentor (M = 5.50, SD = 1.24) to post-mentor training (M = 6.33, SD = .65). The magnitude of effect was large (d = 0.88).

Both *Addressing Diversity* and *Promoting Professional Development* subscales had at least one or more items with a statistically significant difference in pre- and post- MCA mean scores ($p < .05$). All items within these subscales had a medium to large magnitude of effect (d = 0.51 to 1.16). The item with the most statistically significant difference between pre- and post-MCA mean score was related to mentors' ability to account for biases and prejudices they may bring to the mentoring relationship. This item revealed a mean increase of 1.42 from pre-mentor (M = 4.83, SD = 1.19) to post-mentor training (M = 6.25, SD = 0.75). The magnitude of effect was large (d = 1.30).

The remaining subscale, *Assessing Understanding*, did not render a statistically significant difference in pre- and post-MCA mean scores for the item related to assessing mentee

knowledge. However, the magnitude of effect was medium (d = 0.69), suggesting clinical significance. All results are displayed in Table 8.

Table 8

MCA Independent-Samples t-test Using Levene's Test for Equality of Variances

	Equal variances assumed		t-test for equality of means		
Subscales	F	Sig.	*t*	*df*	*d*
Independent Variables					
Maintaining effective communication					
Active listening	2.63	.12	-2.12*	22	0.92
Providing constructive feedback	1.01	.33	-1.29	22	0.55
Developing a trusting relationship	2.21	.15	-0.41	22	0.17
Accommodating communication styles	5.54	.02	-3.57*	22	1.52
Pursuing strategies to improve communication	4.80	.04	-4.17**	22	1.77
Coordinating with other mentors	1.44	.24	-2.91*	22	1.24
Aligning expectations					
Setting clear relationship expectations	4.91	.04	-3.38*	22	1.44
Aligning expectations	2.56	.12	-3.06*	22	1.31
Considering mentor-mentee differences	3.53	.07	-3.02*	22	1.29
Developing strategies to meet goals	3.45	.08	-2.52*	22	1.08
Assessing understanding					
Assessing mentee knowledge	3.31	.08	-1.61	22	0.69
Fostering independence					
Motivating mentees	10.49	.01	-1.90	22	0.81
Building confidence	4.42	.04	-1.25	22	0.53
Stimulating creativity	5.28	.03	-1.24	22	0.53
Acknowledging mentees' professional contributions	4.37	.04	-2.05*	22	0.88
Negotiating path to independence	1.23	.28	-1.68	22	0.72
Addressing diversity					
Accounting for biases and prejudices	1.19	.29	-3.47*	22	1.48
Accounting for different backgrounds of mentees	7.96	.01	-1.85	22	0.79

Table 8

(continued)

Promoting professional development					
Helping network effectively	2.54	.12	-2.60*	22	0.95
Setting career goals	2.56	.12	-1.61	22	0.69
Helping establish a work/life balance	3.43	.07	-2.39*	22	1.02
Understanding impact as role model	8.69	.01	-2.46*	22	1.04
Helping mentees acquire resources	21.50	.01	-3.05*	22	1.30

***** $p < .05$; ** $p < .001$

Discussion

Summary

NGRNs completing the Casey-Fink Graduate Nurse Experience Survey© ($N = 11$) identified strengths of the agency in supporting a smooth TTP. Barriers to NGRNs' successful role transition to RN were also identified. Strengths of the agency identified by NGRNs as supportive for role transition included ability to reach out to other RNs for help, peer support, amount of encouragement, professional practice and empowerment, hours worked and amount of responsibility. Participants reported the need for mentoring and more support beyond basic orientation in the areas of skill building, role expectations (i.e. autonomy) assuring patient safety, work-life balance to deal with stressors, identifying resources, and professional growth and development. The lowest scoring item for NGRN job satisfaction was opportunities for career advancement ($M = 3.64$, $SD = 1.03$). Participants identified the need for additional TTP support, albeit most respondents ($n = 10$) reported having previous health care work experience. This finding reinforces the need for nurse mentors to assist NGRNs in acclimating to the specialized role of professional nursing. The NRP curriculum elements identified for this agency will include opportunities for skill building practice, didactic strategies to augment learning on how

to work through stressors, and the addition of a formal mentorship component that allows for intentional, meaningful encounters with trained mentors.

Nurse leaders and nurse educators (N = 12) showed an increase in mean scores in all 23 survey items within the six subscales post-mentor training. The subscale *Promoting Professional Development* showed an increase in mean scores post-mentor training for four out of five items. Statistically significant increases in post-test scores compared to pre-test were revealed for (a) helping establish a work/life balance, (b) understanding impact as role model, and (c) helping mentees acquire resources, along with large effect sizes. The subscale *Fostering Independence* showed a statistically significant mean increase of .83 from pre-mentor (M = 5.50, SD = 1.24) to post-mentor training (M = 6.33, SD = .65) related to acknowledging the mentee's professional contributions. The magnitude of effect was large at d = 0.88. This finding is relevant in terms of the NGRNs' reported lower job satisfaction score related to opportunities for career advancement. Mentors who are competent in initiating conversations and exploring career goals/aspirations are better equipped to tap into NGRNs' talents and find stretch opportunities which lead to growth and development, increasing job satisfaction and ultimately, helping to mitigate NGRN turnover. Most impressive were the increases in post-test scores compared to pre-test within the subscale *Aligning Expectations*. All four items for this subscale showed statistically significant increases and large effect sizes (d = 1.08 – 1.44). Nurse leaders and nurse educators participating in the mentor training program improved self-perceptions in ability to effectively mentor a NGRN in setting clear expectations, aligning expectations, considering mentor-mentee differences, and developing strategies to meet goals. These results support the needs expressed by NGRNs completing the Casey-Fink Graduate Nurse Experience

Survey© related to difficulties with role expectations (i.e. autonomy) and a need for role modeling.

Interpretations

Results of this project identified the importance of formal mentor training, linking NGRNs' identified needs for additional support during TTP with nurse leaders' and nurse educators' need for development in mentoring. Therefore, mentor training is an effective strategy for preparing nurse leaders and nurse educators as mentors for NGRNs in meeting TTP challenges which may impede smooth role transition. Mentors who are confident in ability to assist with the aforementioned NGRN support needs during role transition further supports NGRN turnover reduction goals (Barnett et al., 2014; Halfer et al., 2008; Komaratat & Oumtanee, 2009; Rosenfield & Glassman, 2016). Mentorship training should be considered an integral part of NRP curriculum development. Results from the Casey-Fink Graduate Nurse Survey© reinforce the need for acute care agencies to design, implement, and support NRP curricula which offer extended TTP support beyond general orientation for NGRNs upon hire. NGRN turnover rates decrease, while job satisfaction and intent to stay rates increase, when NRPs are implemented (Clipper & Cherry, 2015; Halfer et al., 2008; Komaratat & Oumtanee, 2009; Little, Ditmer, & Bashaw, 2013; Newhouse et al., 2007; Olson-Sitki et al., 2012; Pizzingrilli & Christensen, 2015; Silvestre et al., 2017). The majority of studies used as supporting evidence to advocate the need for NRPs to reduce NGRN turnover were conducted within larger, tertiary care agencies. However, findings from this project suggest the ability to translate the evidence within a small, rural community setting.

Limitations

Project limitations include small samples sizes for both NGRN (N = 11) and mentor (N = 12) groups, interfering with the ability to generalize the findings for other populations and/or

settings. Time constraints did not allow for full implementation and evaluation of the NRP curriculum content which would have provided evidence regarding the efficacy of NRP programs in reducing NGRN turnover. The NGRN group was not equally distributed to represent all specialty areas where NGRNs are hired. There were more emergency department NGRNs participating in the project than any other practice area. There were no NGRN participants from surgical services, therefore, no assumptions could be made for that department regarding the efficacy of the NRP curriculum.

Conclusion

The adoption of a formal NRP may offer EB solutions to assist acute care facilities, as well as other practice settings, in developing and retaining nursing talent, while assisting to prepare nurses to perform at the highest level to ensure safe, quality care for the patients. NRPs pose minimal risk in terms of implementation, including less than minimal risk of harm to participants (NGRNs) and minimal startup costs for the organization. While more studies are needed in order to draw more definitive conclusions regarding the efficacy of NRPs, current evidence suggests that implementing this type of EB intervention is effective in reducing NGRN turnover, improving retention, while enhancing confidence and competence.

Funding

Costs associated with the implementation of the project were both direct and indirect. The project required funding support of the agency to cover salary costs for stakeholders during planning of a NRP curriculum and participants' time spent to complete the surveys and the mentorship training program. The facility provided meeting space for planning meetings and the mentorship training class, which was considered an indirect expense. Direct costs covered by the

agency included allocation of supplies such as paper, binders, folders, copier ink and other office supplies to support the planning and in carrying out the mentor training program.

Most of the costs associated in executing the NRP will involve salary costs for instructors and NGRN participants, plus material and food. There were no capital cost needs involved with this project, as the organization was well-equipped with audiovisual technology in each classroom. Sustainability might be impacted if changes to system and agency budgets are made going forward.

References

Barnett, J.S., Minnick, A.F., Norman, L.D. (2014). A description of U.S. post-graduation nurse residency programs. *Nursing Outlook, 62,* 178-184.

Bratt, M.M. (2013). Nurse residency program: Best practices for optimizing organizational success. *Journal for Nurses in Professional Development, 29*, 102-110. doi: 10.1097/NND.obo13e318292649f

Burns, J.M. (1978). *Leadership.* New York: Harper & Row.

Casey, K., Fink, R., Krugman, M., & Propst, J. (2004). The graduate nurse experience. *JONA, 34*, 303-311.

Center for Medicare & Medicaid Services (2018). *Hospital Value-Based Purchasing*. Retrieved from https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/HVBP/Hospital-Value-Based-Purchasing.html

Cline, D., Frentza, K., Fellman, B., Summers, B., & Brassil, K. (2017). Longitudinal outcomes of an institutionally developed nurse residency program. *Journal of Nursing Administration, 47*, 384-390. doi: 10.1097/NNA.0000000000000500.

Clipper, B., & Cherry, B. (2015). From transition shock to competent practice: Developing preceptors to support new nurse transition. *Journal of Continuing Education in Nursing, 46*, 448-454.

Cochran, C. (2017). The effectiveness and best practice of nurse residency programs: A literature review. *MEDSURG Nursing, 26*, 53-63.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112,* 155-159. Retrieved from http://www.bwgriffin.com/workshop/Sampling%20A%20Cohen%20tables.pdf

Deming, W. E. (1986). *Out of the crisis*. Cambridge, Mass: Massachusetts Institute of Technology, Center for Advanced Engineering Study.

Doody, O., & Doody, C. (2012). Transformational leadership in nursing practice. *British Journal of Nursing, 21,* 1212-1218.

Drenkard, K. (2012). The transformative power of personal and organizational leadership. *Nursing Administration Quarterly, 36,* 147-154.

Edwards, D., Hawker, C., Carrier, J., & Rees, C. (2015). A systematic review of the effectiveness of strategies and interventions to improve the transition from student to newly qualified nurse. *International Journal of Nursing Studies, 52,* 1254-1268.

Fleming, M., House, S., Shewakramani, V., Yu, L., Garbutt, J., McGee, R.…Rubio, D. (2014). The mentoring competency assessment: Validation of a new assessment instrument to evaluate skills of research mentors. *Academic Medicine, 88,* 1002-1008. doi:10.1097/ACM.0b013e318295e298.

Goode, C.J., Lynn, M.H., Krsek, C., & Bednash, G. (2009). Nurse residency programs: An essential requirement in nursing. *Nursing Economic$, 3,* 142-148.

Goodman, D., Ogrinc, G., Davies, L.G., Baker, G.R., Barnsteiner, J., Foster, T.C., Gali, K., Hilden, J.…Thor, J. (2016). Explanation and elaboration of the SQUIRE (standards for quality improvement reporting excellence) guidelines, v.2.0: Examples of SQUIRE elements in the healthcare improvement literature. *BMJ Qual.Saf.* 1-24. doi:10.1136/bmjqs-2015-004480.

Halfer, D., Graf, E., & Sullivan, C. (2008). The organizational impact of a new graduate pediatric nurse mentoring program. *Nursing Economic$, 26,* 243-249.

Hutchinson, M., & Jackson, D. (2013). Transformational leadership in nursing: Towards a more critical interpretation. *Nursing Inquiry, 20,* 11-22. doi:10.1111/nin.12006

Institute for Healthcare Improvement (2018). *How to Improve.* Retrieved from http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx

Institute of Medicine (2010). *The future of nursing: Leading change, advancing health*. Retrieved from http://books.nap.edu/openbook.php?record_id=12956&page=R1

Komaratat, S. & Oumtanee, A. (2009). Using a mentorship model to prepare newly graduated nurses for competency. *Journal of Continuing Education in Nursing, 40,* 475-480.

Kramer, M., Maguire, P., Halfer, D., Budin, W., Hall, D., Goodloe, L., …Lemke, J. (2012). The organizational transformative power of nurse residency programs. *Nursing Administration Quarterly, 36¸* 155-168.

Leger, J.M., & Dunham-Taylor, J. (2018). *Financial management for nurse managers: Merging the heart with the dollar* (4th ed.). Burlington, MA: Jones & Bartlett Learning, LLC.

Little, J.P., Ditmer, D., & Bashaw, M.A. (2013). New graduate nurse residency: A network approach. *Journal of Nursing Administration, 43,* 361-366.

Medas, J.C., Amato, S., Grimm, D., Radziewicz, R., Rhodes, C., VanHorn, C., & McNett, M. (2015). Outcomes of a comprehensive nurse residency program. *Nursing Management, 46,* 40-48.

Newhouse, R.P., Hoffman, J.J., & Hairston, D.P. (2007). Evaluating an innovative program to improve new nurse graduate socialization into the acute healthcare setting. *Nursing Administration Quarterly, 31,* 50-60.

Olson-Sitki, K., Wendler, C., & Forbes, G. (2012). Evaluating the impact of a nurse residency program for newly graduated registered nurses. *Journal of Nurses in Professional Development, 28*, 156-162.

Phillips, C., Kenny, A., Esterman, A., & Smith, C. (2014). A secondary data analysis examining the needs of graduate nurses in their transition to a new role. *Nurse Education in Practice, 14*, 107-111.

Pizzingrilli, B. & Christensen, D. (2015). Implementation and evaluation of a mental health nurse residency program. *Journal of Nursing Education and Practice, 5*, 76-84.

Polit, D. & Beck, C. (2012). *Nursing research: Generating and assessing evidence for nursing practice* (9th ed.). Philadelphia: Wolters Kluwer.

Porter-O'Grady, T. (1992). *Implementing shared governance: Creating a professional organization*. St. Louis: Mosby Year Book.

Porter-O'Grady, T. & Malloch, K. (2015). *Quantum leadership: Building better partnerships for sustainable health* (4th ed.). Burlington, MA: Jones & Barlett Learning.

Rosenfield, P., & Glassman, K. (2016). The long-term effects of a nurse residency program, 2005-2012. *Journal of Nursing Administration, 46*, 336-344.

Rush, K.L., Adamack, M., Gordon, J., Lilly, M., & Janke, R. (2013). Best practices for formal new graduate nurse transition programs: An integrative review. *International Journal of Nursing Studies, 50*, 345-356.

Salanova, M., Lorente, L., Chambel, M., & Martinez, I., (2011). Linking transformational leadership to nurses' extra-role performance: The mediating role of self-efficacy and work engagement. *Journal of Advanced Nursing, 67*, 2256-2266. doi:10.1111/j.1365-2648.2011.05652.x

Silvestre, J.H., Ulrich, B.T., Johnson, T., Spector, N., & Blegen, M.A. (2017). A multisite study on a new graduate registered nurse transition to practice program: Return on investment. *Nursing Economic$, 35*, 110-118.

The W. Edwards Deming Institute (n.d.). Retrieved from https://deming.org/explore/fourteen-points

Trepanier, S., Early, S., Ulrich, B., & Cherry, B. (2012). New graduate nurse residency program: A cost-benefit analysis based on turnover and contract labor usage. *Nursing Economic$, 30*, 207-214.

Zinn, J., Guglielmi, C., Davis, P., & Moses, C. (2012). Addressing the nursing shortage: The need for nurse residency programs. *AORN Journal, 96*, 652-657.