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The impact of mentorship, preceptors, and debriefing on the quality of program experiences

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ABSTRACT

With the prevalent problem of nurse retention and the lack of confidence new nurses experience, it is critical for nurse residency programs to have supportive factors that enhance residency experiences. By incorporating mentorship, preceptors, and debriefing components into these programs, skills in communication, organization, clinical reasoning, stress management, and self-confidence increase. This quantitative study was a descriptive analysis of secondary data using a cross-sectional design. Two instruments were used to gather data, the *Demographic Information Survey* and the *Evaluation of the RN Residency Survey*. The sample was comprised of 1078 graduate nurses completing nurse residency programs throughout the United States. The findings indicated that higher residency ratings were significantly related to higher preceptor and debriefing experiences. Results also showed no significant interaction effects of reduced stress due to mentoring on the relationship between preceptorship experiences or debriefing experiences and ratings of nurse residency. Consequently, it is important that new nurses are given the opportunity to take part in programs offering mentorship, preceptors, and debriefing elements, as nursing residents have found them to be highly beneficial. Furthermore, debriefing sessions strengthened their skills and built confidence during their first year of employment.

1. Introduction

The Institute of Medicine (now the National Academy of Medicine) published a report in 2011 that focused on advancing the nursing profession through the care that nurses provide. One key element relates to the implementation of hospital residency programs for recent nursing graduates (IOM, 2011). Such programs support graduates as they adjust to an exciting, yet challenging work environment, ultimately affording a smoother, safer transition for all parties involved (Welding, 2011). In addition, residency programs help with recruitment efforts and retention rates amid nursing shortages and intense work environments (Bakon et al., 2018). Although there is significant variation in how graduate nurse residency programs are structured, the Commission on Collegiate Nursing accredits entry-to-practice nurse residency programs within the United States and its territories.

Residency programs are critically important due to the current shortage of nurses and because the aging population of experienced nurses are approaching retirement. The aging nursing workforce will compound the nursing shortage problem and, therefore, it is vital that new nurses are comfortable and confident in their new roles (Theisen and Sandau, 2013). According to the United States Department of Labor, Bureau of Labor Statistics (2018), employment of registered nurses is expected to grow 15% from 2016 to 2026, which is much faster than the average compared to all other occupations. This figure is aligned with an estimate suggesting that by 2020, there will be a shortage of more than 400,000 nurses in the United States alone (Medas et al., 2015). Consequently, institutions must provide nursing graduates with the support they need to build the confidence and clinical reasoning skills required for the delivery of safe patient care (Little et al., 2013). The United States is not the only country facing this dilemma, as there is an international nursing shortage (NurSearch, 2017). Globally, the World Health Organization (WHO) estimates that by 2035, there will be a shortage of 12.9 million health-care workers. Underinvestment in education and training has been cited as contributing factors (Aluttis et al., 2014), making nurse residency programs particularly important internationally. In fact, four of the National Academy of Medicine recommendations within the report discussed above were relevant to internationally educated nurses, especially to those that practice across borders, including nurse residency programs; interprofessional health care workforce data; leading change to advance health; and lifelong learning (Shaffer et al., 2014). Other countries have developed and implemented versions of nurse residency programs with good outcomes. For example, one study found that graduates in Australia and New Zealand who participated in Nurse Entry to Practice Programs

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(NETP) were more likely to remain on the unit or within the organization where they completed the program (Tuckett et al., 2015).

As optimal teaching methods are sought, determining the characteristics of a high-quality nurse-residency program will help guide coordinators and other stakeholders. Ideal methods will facilitate the evaluation of current residency programs and recognition of their strengths and weaknesses as best practices are developed for the provision of safe, high-quality patient care. The new skills nurses acquire through mentoring, preceptors, and debriefing in the residency program can be effective in producing an environment within which new nurses can experience a positive transition to practice. In a recent study, a one-year nurse residency program equated to better organization and prioritization of work as well as improved communication skills, thereby enhancing the work of the multidisciplinary team (Goode et al., 2013). This is significant because poor interprofessional communication skills may contribute to stress and burnout among new graduate nurses (Hopkins and Bromley, 2016).

2. Literature review

The effectiveness of nurse-residency programs is an important predictor of nurse competency, confidence, and other important outcomes related to job performance. New graduates transition from the stress of nursing school to the stress of the workplace and face many challenges in their new roles. Kramer et al. (2011a) reported that many nurse graduates experience "reality shock" upon entering the workplace. Furthermore, new nurses often lack organizational skills and clinical experience, which results in low self-confidence (Bratt and Felzer, 2012; Cappel et al., 2013; Kowalski and Cross, 2010).

New graduates are expected to work within an environment of high acuity, face great performance expectations with unreasonable workloads, perform within negative work environments, and use complex technology with only a brief orientation (Olson-Sitki et al., 2012; Theisen and Sandau, 2013; Trepanier et al., 2012). The traditional nursing orientation model within the contemporary health-care arena is insufficient to prepare new nurses to work with confidence and competence (Bratt, 2013). New graduates are not trained to meet the demands of multiple professional responsibilities. They leave the safety of working with their instructor and a more knowledgeable mentor with whom they may confer, to working independently, making decisions for patients under very stressful circumstances. It is therefore essential to identify factors that predict an enhanced residency experience.

Factors predictive of an enhanced nursing-residency experience are based upon the conceptual framework of the Roy Adaptation Model and Benner's Novice-to-Expert Theory. The Adaptation Model is focused on the individual and how health can be achieved through a changing environment (Rice, 2012). This theory is classified as a middle-range theory and is grounded in concepts that may be generalizable across populations that enhance nursing care (Tomey and Alligood, 2006). Emerging research has focused on the concepts of stress and mentoring, as they relate to nursing graduates who participated in residency programs and discovered the need to adapt to change. The Roy Model includes three stimuli classified as *Focal Stimuli*, which is stimuli an individual is immediately confronted with; *Contextual Stimuli*, which refers to other contributing stimuli; and *Residual Stimuli*, which include factors from the environment, all comprising the combined effect of the adaptation level (Nursing Theories, 2013; Rice, 2012).

The Benner Novice-to-Expert Model is focused on the changes that manifest as nurses progress from the unfamiliarity of a *Novice* (beginners or nurses working in areas of new practice); to an *Advanced Beginner* (prior experience, acceptable performance); and on to *Competence* (learner can decide what is in need of attention and what can wait, generally 2–3 years of experience on the same unit); *Proficiency* (able to make decisions and plans in certain situations); and *Expert* (experienced, confident, highly skilled) (Benner et al., 2010; Nursing Theories, 2013). The Benner Model was formed from the Dreyfus Skill Acquisition Model, which views improvements in nursing practice as dependent on experience and science (Saver et al., 2013). Emerging research has expanded the Roy Adaptive Model and the Benner Novice-to-Expert Theory, adding to the existing body of nursing knowledge (Cappel et al., 2013; Martin and Wilson, 2011; Spiva et al., 2013).

Nursing graduates face many challenges that add stress and anxiety to their daily clinical practice. Because stress is not easily changed in this demanding work environment (Bratt and Felzer, 2012), it is imperative that organizational leaders support new nurses in transition. The effectiveness of nurse-residency programs has been shown to be a predictor of nurse competency, confidence, and other important outcomes related to job performance such as job satisfaction and skill development toward the delivery of safe patient care (Kramer et al., 2011b; Welding, 2011; Zinn et al., 2012). Therefore, the present study examined the need to support residency programs offering mentorship, preceptors, and debriefing to assist nurses as they learn the skills necessary to become competent caregivers with decreased stress levels, enabling them to provide the best possible patient care.

For the purposes of this study, *Mentorship* is defined as a trusting relationship between a novice and a professional with the intent to provide personal, professional, and career support (Billings and Halstead, 2012; Clark et al., 2013). Mentors encourage, listen, and counsel. They are approachable, fulfill a positive teaching role, and possess effective interpersonal skills (Billings and Halstead, 2012). The mentor role varies with each institution and must be clearly defined, so the mentors and mentees have a good understanding of their responsibilities. In several studies, mentorship has been found to promote personal and professional development, increase learning, and ameliorate confidence (Cottingham et al., 2011; Krause-Parello et al., 2013; Mijares et al., 2013; Spiva et al., 2013).

Preceptors are experienced nurses who work with nurse residents to facilitate and expand their clinical education by sharing experiences in patient care and with technology. Preceptors provide guidance to help cultivate clinical reasoning and critical-thinking skills within new nurses (Billings and Halstead, 2012; Early et al., 2013).

Debriefing is a period of time allocated to sharing experiences, feelings, and views from clinical experiences and is conducted within a group setting (Billings and Halstead, 2012; Clark et al., 2013). The practice reinforces concepts and theories learned and provides a time for reflection (Billings and Halstead, 2012). Debriefing improves clinical reasoning by evaluating situations and related occurrences (Billings and Halstead, 2012; Ulrich et al., 2010). Studies have shown that debriefing is essential for support staff working in emergency situations due to its focus on performance improvement and decreasing stress following stressful events or incidents (Corbett et al., 2012; Healy and Tyrrell, 2013; Huggard, 2013). Debriefing provides an opportunity for discussion to reinforce action, provide better understanding, enhance self-efficacy, and stimulate psychological development (Huggard, 2013; Roche and Hefferon, 2013). Debriefing occurs throughout the residency experience.

Nurse Residency Programs are developed for nursing graduates to learn the skills necessary to develop competency and self-confidence within the work environment as they transition to practice from school (Benner et al., 2010; Billings and Halstead, 2012; Cappel et al., 2013; IOM, 2011). Skills developed are related to organization, prioritization, communication, leadership, technology, and professionalism.

This study sought to identify factors that enhance positive nurse-residency experiences. Both direct effects (e.g., reports of positive preceptor and debriefing experiences), and moderating effects (e.g., decreased stress due to mentorship) were examined for any association with positive residency experiences. The identification of factors that enhance nurse-residency experiences must be made a priority in nursing research. Common elements of nurse-residency programs that increase nursing skills and aptitude include mentorship, preceptors, and debriefing (Cappel et al., 2013; Shinners et al., 2016). However, the

relationship between these factors and enhanced nursing-residency experiences remains understudied. The following research questions guided the present study:

1. Is there a significant relationship between higher preceptor ratings associated with higher residency ratings?
2. Is there a significant relationship between higher debriefing ratings associated with higher residency ratings?
3. Does decreased stress due to mentorship moderate the relationship between preceptor ratings and residency ratings?
4. Does decreased stress due to mentorship moderate the relationship between debriefing ratings and residency ratings?

3. Research design

A cross-sectional survey design using secondary analysis comprised of raw survey data from participating institutions was employed to answer the four above stated research questions. Collectively, the research questions relate to the enhancement of nurse-residency programs for the purpose of promoting supportive experiences leading to positive outcomes. Providing residency programs with mentorship, preceptors, and debriefing was examined to determine whether these components would assist nurses in learning the necessary skills to become competent nurses with decreased stress levels. The data were gathered by means of two surveys administered to RNs completing nurse residency programs throughout the United States. Nurses completed the *Demographic Information Survey* during the second week of the program and the *Evaluation of RN Residency Survey* during the final week of their residency.

3.1. Participants

The sample was one of convenience and included 1078 graduate nurses completing a Versant RN Residency Program at various hospitals throughout the United States. The Versant RN Residency was formed in May 2004 by the Children's Hospital Los Angeles and is now the leading program within the United States, helping to ease the transition from school to practice for new nurses. Versant assures that a highly integrated and systematic approach is used at each facility (e.g., defining a baseline set of measurements and outcomes and objective evaluation). The program begins with an in-class portion that ranges from 8 to 18 weeks, depending on the specialty area, and the residency experience continues for 1-year. The duration of engagement between the graduate nurse and the preceptor ranges between 8 and 18 weeks while the mentorship arrangement between the graduate and mentor lasts the full year. An individualized plan is tailored for each nurse resident depending on their unique strengths and weaknesses. The level of engagement between the preceptor and the graduate and the mentor and the graduate is dependent on need (Versant, 2013).

A computer software program indicated that a sample size of 150 would be adequate to detect a medium size effect with power set at 0.80 and a Cronbach's alpha of .05 (Polit and Beck, 2014). The sample included 894 females (83.9%) and 171 males (16.1%) (13 individuals did not report gender). Most participants were White/Caucasian (n = 793; 75.7%), with a baccalaureate degree in nursing (n = 457; 42.9%), and had previous experience working in the healthcare setting prior to receiving RN licensure (n = 622; 58.2%).

3.2. Instrumentation

Two data-collection instruments were used for this study—the *Demographic Information Survey* and the *Evaluation of RN Residency Survey*. The *Demographic Information Survey* was completed during the second week of the residency program. The *Evaluation of RN Residency Survey* was used to assess nurse-residency experience and given during the last week of residency. This instrument is comprised of 52 questions, but for the purposes of this study only four sections relating to nurse residency, preceptors, mentoring, and debriefing were used. With the exception of the general questions section, which only contained Likert-type scale questions, the other sections contained both open and closed-ended questions.

3.3. Data analysis

Data analysis was conducted in three phases. The first phase involved data examination and preparation. Prior to analysis, all data were screened on several levels to ensure data integrity including the data generated by computer plots. The maximum and minimum scores were recorded for each variable. Missing data values were also examined including an analysis of any related patterns. Test assumptions were checked for parametric testing (e.g., normal distributions, outlier scores, linearity, multicollinearity, and independence of errors). When necessary, measures to correct any violation of the test assumptions (e.g. log odds transformations) were conducted. Variables were then assessed descriptively.

During the second data-analysis phase, the relationships between variables were examined at the bivariate level. The bivariate analysis attempted to determine whether any key study variables, such as nurse demographic (e.g., gender, race, and/or age) and professional characteristics (e.g., certifications and job experience), were associated with the residency ratings at a statistically significant level. Any study variable significantly related to the residency ratings was included in the multivariate model as a covariate variable. Finally, the third phase involved a multiple regression to examine the direct effects of independent variables, as well as whether any independent and dependent variable relationships were moderated by reports of reduced stress due to mentoring. Specifically, a 2×2 interaction effect was modeled between nurses that do and do not report reduced stress due to mentorship by the independent variables while controlling for any necessary covariate variables.

3.4. Ethical considerations

Institutional Review Board approval was obtained as was permission from the participating organization, Versant Holdings, LLC, for use of the data. The names of the participants were not revealed to the researchers. All data were stored in a secure, password-protected computer, which was only accessible by the researchers. The data will be destroyed in 2020 by deleting the files from the computer and related printed material will be shredded.

4. Results

This quantitative study assessed four research questions that examined the nature and relationships between nurse-residency experiences, both in terms of direct effects (i.e., preceptor and debriefing experiences) and moderating effects (i.e., stress management related to mentorship).

The two independent variables were debriefing experiences and preceptor experiences. Debriefing experiences were measured via 14 items (e.g., *Delegation Challenges, Handling Ethical Dilemmas, Organization* and *Prioritization*) rated on a 4-point Likert-type scale (1 = Very Valuable, 4 = Not Valuable). The scale reflected excellent internal consistency (Cronbach's alpha = .99). The preceptorship experiences were measured via 9 items (e.g., *Fostered Transition*, *Devoted Necessary Time*, *Allowed For Progress*) rated on a 4-point Likert-type scale (1 = Strongly Agree, 4 = Strongly Disagree). This scale also reflected excellent internal consistency (Cronbach's alpha = .97). The moderating variable was reduced stress due to mentoring. Reduced stress due to mentoring was measured via a single item (*To What Degree Did The Mentoring Help Decrease Your Stress?*) measured along a 4-point Likert-type scale (1 = A Great Deal, 4 = Not At All). Finally, nurse residency

Table 1
Mean, standard deviation and MIN/MAX values for continous study variables.

Predictor Variable	M (*SD*)	MIN/MAX	Potential Range
Age	30.1 (7.35)	21–73	NA
Nurse Residency Experience	1.38 (.50)	1.00–4.00	1.00–4.00
Nurse Preceptorship Experience	1.40 (.52)	1.00–3.78	1.00–4.00
Nurse Debriefing Experience	1.96 (.86)	1.00–4.00	1.00–4.00

1 is the score reflecting the highest positive experience.

was the dependent variable. Nurse residency experiences were measured via 6 items (e.g., *Facilitates Transition*, *Improves Competence*) rated on a 4-point Likert-type scale (1 = Strongly Agree, 4 = Strongly Disagree). Internal consistency was also excellent (Cronbach's alpha = .95).

Table 1 presents the mean, standard deviation and MIN/MAX values for continous study variables. With regard to the dependent variable, the average score for nurse residency experiences is 1.38 (SD = 0.50; MIN/MAX = 1.00–4.00; potential range = 1.00–4.00). Regarding the independent variables, the average score for nurse preceptorship scores is 1.40 (SD = 0.52; MIN/MAX = 1.00–3.78; potential range = 1.00–4.00) and the average score for nurse debriefing scores is 1.96 (SD = 0.86; MIN/MAX = 1.00–4.00; potential range = 1.00–4.00). Regarding the moderating variable (not listed on Table 1), 59.4% (n = 640) of study participants reported reduced stress due to mentoring, while 40.6% (n = 438) did not.

4.1. Bivariate analysis

Bivariate analysis indicated that nurse residency experiences were not significantly associated with gender, $t(1063) = -21$, $p = .83$, race/ethnicity, $F(3, 1042) = 0.76$, $p = .52$, basic nursing education, $F=(5, 1060) = 2.03$, $p = .07$, additional nursing education, $F(5, 726) = 1.21$, $p = .31$, or having previous paid work experience in a healthcare setting prior to receiving an RN license, $t(1042.87) = 1.79$, $p = .07$. Table 2 presents intercorrelations between the continuous study variables with ratings of nurse residency experiences. Pearson r correlation analysis revealed that nurse residency experiences were significantly associated with debriefing experiences, $r(1076) = 0.34$, $p < .01$, and preceptor experiences, $r(1076) = 0.33$, $p < .01$.

4.2. Multivariate analysis

Table 3 presents the multiple linear regression model explaining nurse residency rating scores. Data indicated that the overall model was statistically significant, $F = 120.58$, df = 1,077, $p < .001$, and explained 18% of the variance in the dependent variable ($R^2 = 0.18$; Adj. $R^2 = 0.18$). In terms of individual predictors, higher nurse debriefing experiences were significantly associated with higher levels of nurse residency experiences, $B = 0.16$, $\beta = 0.28$, $p = .001$. Additionally, higher nurse preceptorship experiences were significantly associated with higher levels of nurse residency experiences, $B = .26$, $\beta = 0.27$, $p = .001$.

Table 2
Intercorrelations between continuous study variables (n = 1078).

Variable	1	2	3	4
1. Nursing Residency Experience	–	-.02	.34**	.33**
2. Age		–	.04	.08**
3. Debriefing Experience			–	.22**
4. Preceptorship Experience				–

**$p < .01$.

Table 3
Multiple linear regression model explaining ratings of nurse residency (n = 1078).

Variable	*B*	SE B	β	*p*
Debriefing Experiences	.16	.02	.28	.001
Preceptorship Experience	.26	.03	.27	.001

Note. Model. $R^2 = 0.18$, Adj. $R^2 = 0.18$, df = 1,077, $F = 120.58$, $p < .001$.

Table 4
Examining the moderating effect of reduced stress due to mentoring on the relationship between preceptorship and nurse residency ratings (n = 1078).

Variable	*B*	SE B	β	*p*
Reduced Stress Due to Mentoring	-.24	.08	-.24	.004
Preceptorship Experiences	.28	.04	.29	.001
Prec. Exp. X Red. Stress Due to Mentor	.05	.06	.08	.37

Note. Model. $R^2 = 0.14$, Adj. $R^2 = 0.13$, df = 1,077, $F = 56.68$, $p < .001$.

4.3. Analysis of moderating effects

Table 4 presents a multiple linear regression model examining the moderating effect of reduced stress due to mentoring on the relationship between preceptorship and nurse residency ratings. Analysis indicated that although the overall model was statistically significant, $F(1,077) = 56.68$, $p < .001$, there was not a statistically significant moderating effect of reduced stress due to mentoring on the relationship between preceptorship experiences and ratings of nurse residency, $B = .05$, $\beta = 0.08$, $p = .37$. Similarly, Table 5 presents a multiple linear regression model examining the moderating effect of reduced stress due to mentoring on the relationship between debriefing and nurse residency ratings. Analysis indicated that although the overall model was statistically significant, $F(1,077) = 50.06$, $p < .001$, there was not a statistically significant moderating effect of reduced stress due to mentoring on the relationship between preceptorship experiences and ratings of nurse residency, $B = .03$, $\beta = 0.06$, $p = .40$.

5. Discussion

Based on the results of the analysis, nurse residency experiences were not significantly associated with study participant demographics. The mean for predictor variables indicated that nurses found the residency experience to be positive along with their preceptor and debriefing experiences. The intercorrelations between the continuous study variables (preceptorship and debriefing) with residency experiences were statistically significant. Results of the multiple linear regression model also indicated that higher nurse preceptorship and debriefing experiences were significantly associated with higher levels of residency experiences. The results of the multiple linear regression that examined the moderating effect of reduced stress due to mentoring on the relationship of preceptorship and debriefing indicated the overall model was statistically significant, but there was not a statistically significant moderating effect of reduced stress due to mentoring on the relationship between preceptorship or debriefing experiences and ratings of nurse residency.

Table 5
Examining the moderating effect of reduced stress due to mentoring on the relationship between debriefing and nurse residency ratings (n = 1078).

Variable	*B*	SE B	β	*p*
Reduced Stress Due to Mentoring	.17	.02	.29	.001
Debriefing Experiences	-.15	.08	-.14	.06
Deb. Exp. X Red. Stress Due to Mentor	.03	.04	.06	.40

Note. Model. $R^2 = 0.12$, Adj. $R^2 = 0.12$, df = 1,077, $F = 50.06$, $p < .001$.

The complexity of healthcare today requires institutions to design residency programs that provide nurses with the support they need to build the confidence and clinical reasoning skills necessary for the delivery of safe patient care (Little et al., 2013). Aligned with previous research, the new skills nurses acquired through mentoring, preceptors, and debriefing in the residency program were found to be effective in producing an environment within which they can experience a positive transition to practice (e.g., Cappel et al., 2013; Clark et al., 2013; DeSilets et al., 2013). Results of this study provide further evidence that supportive elements such as mentorship, preceptors, and debriefing are important components of any residency program, as participants found programs with these components to be significantly beneficial.

Reduced stress due to mentorship was found to be a positive result of the residency program. In several studies, mentoring was found to promote personal and professional development, increase learning, and enhance confidence (Krause-Parello et al., 2013; Mijares et al., 2013; Spiva et al., 2013). As nurses complete residency programs with mentorship they become more competent and prepared to deal with new workplace challenges (Bratt and Felzer, 2011). Based on the results of this study, participants found that decreased stress due to mentorship did not moderate the relationship between preceptor ratings or debriefing ratings and residency ratings. More participants found reduced stress due to mentorship than those who did not and there was a significant relationship with preceptorship and debriefing with the residency program. These results coincide with previous studies that found mentorship, preceptors, and debriefing to be assets for the novice nurse. Preceptors encourage and support new nurses and provide knowledge and skills to increase their confidence and comfort level (e.g., DeSilets et al., 2013). Debriefing is an effective teaching strategy for nurses developing clinical reasoning and clinical judgment by re-examining and reflecting on a clinical encounter (Cant and Cooper, 2011; Corbett et al., 2012). Overall, the findings from the present study are aligned with the Harrison and Ledbetter (2014) study, which found that positive outcomes ensue for nurses who participate in residency programs. Furthermore, this study identified that mentorship, preceptors, and debriefing components enhanced positive nurse residency experiences and provided greater insight on the importance of residency programs offering these elements.

6. Limitations

One limitation of this study was that data were restricted to the curriculum of the Versant RN Residency program within the United States. Future research should consider expanding the parameters. Another limitation was that the data were collected at one point in time, so it is difficult to infer causality. In addition, participants may not have been honest or comfortable completing the online questionnaire for fear of possible identification. This may be the reason why there was not a wide variation in scores. Another limitation of this study was that it was restricted to one main survey questionnaire. To get a better understanding of stress level and stress management among nurses, future research should consider a qualitative or mixed method design.

7. Recommendations for further research

Recommendations for future research include a more detailed examination of the specific dimensions of mentorship, preceptors, and debriefing nurses found most helpful. Researchers should also consider a qualitative or mixed method design to generate themes that explain the perspectives of participants with regard to their residency experiences. Furthermore, a replication study should include various residency program curricula to see if the results would be similar. In order to promote professional collaboration for safer working environments, additional research on organizations mandating new graduate participation in their residency program would also be beneficial. If residency programs are not implemented in an organization, they are highly encouraged.

8. Implications for practice

The benefits of nurse-residency programs have been higher rates of nurse retention with a decrease in the historical 12-month turnover, professional competency, cost savings, enhanced patient outcomes, and job satisfaction for new nurses (Bratt, 2013). The results of this study reveal the importance of mentorship for stress reduction and preceptors and debriefing sessions were found to be significant to higher residency ratings, which support previous studies that found that these factors build confidence and competence for a successful transition (Kramer et al., 2012; Zinn et al., 2012). Although this study found that decreased stress due to mentorship did not moderate the relationship between preceptorship ratings or debriefing ratings and residency ratings, the supportive elements of the above are important and significant to positive residency ratings and should be incorporated into residency programs. Higher positive residency ratings were associated with both higher preceptor and higher debriefing ratings. In addition, reduced stress due to mentorship alone was reported by 59.4% of the participants. According to Spiva et al. (2013) mentorship must continue after a formal orientation of the residency program to decrease the stress nurses may experience as they separate from this familiarity.

The IOM (2011) presented an important message related to the implementation of hospital residency programs for nursing graduates to ease their transition into practice. Also, the National League for Nursing (2013) encourages future research on the efficacy of residency programs for a smooth shift from school to practice. This study found preceptors and debriefing as positive experiences for nurses, which increased competency and decreased stress, allowing them to provide patient care with confidence. Nurse-residency programs benefit entire organizations through a collaboration that develops a safe working environment leading to quality patient care (Stanton, 2011).

9. Conclusion

This study found factors associated with a positive nurse-residency experience occur when residency programs include preceptors, debriefing, and mentorship. Residents have found it highly beneficial to have a preceptor, mentor, or resource person with whom they can consult. In addition, nurses found debriefing sessions strengthened their skills and helped build confidence along with professional development throughout their first year of employment. Facilities that employ nurses should realize the importance of nurse residency programs that include these supportive factors.

Conflicts of interest

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References

Aluttis, C., Bishaw, T., Frank, M.W., 2014. The workforce for health in a globalized context: global shortages and international migration. Glob. Health Action 7, 1–7.

https://doi.org/10.3402/gha.v7.23611.
Bakon, S., Craft, J., Wirihana, L., Christensen, M., Barr, J., Tsai, L., 2018. An integrative review of graduate transition programmes: developmental considerations for nursing management. Nurse Educ. Pract. 28, 80–85. https://doi.org/10.1016/j.nepr.2017.10.009.
Benner, P., Sutphen, M., Leonard, V., Day, L., 2010. Educating Nurses: A Call for Radical Transformation. Jossey-Bass, San Francisco, CA.
Billings, D.M., Halstead, J.A., 2012. Teaching in Nursing: A Guide for Faculty, fourth ed. Elsevier Saunders, St. Louis, MO.
Bratt, M.M., 2013. Nurse residency program: best practices for optimizing organizational success. Journal for Nurses in Professional Development 29 (3), 102–110. https://doi.org/10.1097/NND.0b013e318292649f.
Bratt, M., Felzer, H., 2011. Perceptions of professional practice and work environment of new graduates in a nurse residency program. J. Cont. Educ. Nurs. 42 (12), 559–568. https://doi.org/10.3928/00220124-20110516-03.
Bratt, M.M., Felzer, H.M., 2012. Predictors of new graduate nurses' organizational commitment during a nurse residency program. J. Nurses Staff Dev. 28 (3), 108–119. https://doi.org/10.1097/NND.0b013e31825515c4.
Cant, R.P., Cooper, S.J., 2011. The benefits of debriefing as formative feedback in nurse education. Aust. J. Adv. Nurs. 29 (1), 37–47. Retrieved from. http://www.ajan.com.au/Vol29/29-1.pdf.
Cappel, C.A., Hoak, P.L., Karo, P.A., 2013. Nurse residency programs: what nurses need to know. Penn. Nurse 68 (4), 22–28. Retrieved from. http://psna.org/who/pennsylvania-nurse/.
Clark, C., LaVigne, R., Mallory, C., Shinners, J., 2013. Supportive Components Workshop: ANCC CNE Information. Versant Holdings, LLC, St. Petersburg, FL.
Corbett, N., Hurko, P., Vallee, J.T., 2012. Debriefing as a strategic tool for performance improvement. J. Obstet. Gynecol. Neonatal Nurs. 41 (4), 572–579. https://doi.org/10.1111/j.1552-6909.2012.01374.x.
Cottingham, S., DiBartolo, M.C., Battistoni, S., Brown, T., 2011. Partners in nursing: a mentoring initiative to enhance nurse retention. Nursing Education Research 32 (4), 250–255. https://doi.org/10.5480/1536-5026-32.4.250.
DeSilets, L.D., Dickerson, P.S., Shinners, J., Mallory, C., Franqueiro, T., 2013. Preceptorship today: moving toward excellence. J. Cont. Educ. Nurs. 44 (11), 1–2. https://doi.org/10.3928/00220124-2013.
Early, S., Franqueiro, T., Mallory, C., 2013. Preceptor Essentials Workshop: ANCC CNE Information. Versant Holdings, LLC, St. Petersburg, FL.
Goode, C.J., Lynn, M.R., McElroy, D., Bednash, G.D., Murray, B., 2013. Lessons learned from 10 years of research on a post-baccalaureate nurse residency program. J. Nurs. Adm. 43 (2), 73–79. https://doi.org/10.1097/NNA.0b013e31827f205c.
Harrison, D., Ledbetter, C., 2014. Nurse residency programs: outcome comparisons to best practices. Journal for Nurses in Professional Development 30 (2), 76–82. https://doi.org/10.1097/NND.0000000000000001.
Healy, S., Tyrrell, M., 2013. Importance of debriefing following critical incidents. Emerg. Nurse 20 (10), 32–37. Retrieved from. http://www.jenonline.org/.
Hopkins, J.L., Bromley, G.E., 2016. Preparing new graduates for interprofessional teamwork: effectiveness of a nurse residency program. J. Cont. Educ. Nurs. 47 (3), 140–148. https://doi.org/10.3928/00220124-20160218-10.
Huggard, J., 2013. Debriefing: a valuable component of staff support. Int. J. Palliat. Nurs. 19 (5), 212–214. Retrieved from. https://www.internurse.com/cgi-bin/go.pl/library/contents.html?uid=4855 journal_uid=14.
Institute of Medicine, 2011. The Future of Nursing: Leading Change, Advancing Health. The National Academies Press, Washington, DC.
Kowalski, S., Cross, C., 2010. Preliminary outcomes of a local residency programme for new graduate registered nurses. J. Nurs. Manag. 18 (1), 96–104. https://doi.org/10.1111/j.1365-2834.2009.01056.x.
Kramer, M., Brewer, B.B., Maguire, P., 2011a. Impact of healthy work environments on new graduate nurses' environmental reality shock. West. J. Nurs. Res. 35 (3), 343–383. https://doi.org/10.1177/0193945911403939.
Kramer, M., Maguire, P., Halfer, D., Brewer, B., Schmalenberg, C., 2011b. Impact of residency programs on professional socialization of newly licensed registered nurses. West. J. Nurs. Res. 35 (4), 459–496. https://doi.org/10.1177/0193945911415555.
Kramer, M., Maguire, P., Halfer, D., Budin, W., Hall, D., Goodloe, L., Lemke, J., 2012. The organizational transformative power of nurse residency programs. Nurs. Adm. Q. 36 (2), 155–168. https://doi.org/10.1097/NAQ.0b013e318249fdaa.
Krause-Parello, C.A., Sarcone, A., Samms, K., Boyd, Z.N., 2013. Developing a center for nursing research: an influence on nursing education and research through mentorship. Nurse Educ. Pract. 13 (2), 106–112. https://doi.org/10.1016/j.nepr.2012.08.004.
Little, J.P., Ditmer, D., Bashaw, M.A., 2013. New graduate nurse residency: a new approach. J. Nurs. Adm. 43 (6), 361–566. https://doi.org/10.1097/NNA.0b013e3182942c06.
Martin, K., Wilson, C.B., 2011. Newly registered nurses' experience in the first year of practice: a phenomenological study. Int. J. Hum. Caring 15 (2), 21–27. Retrieved from. http://www.humancaring.org/journal/.
Medas, J.C., Amato, S., Grimm, D., Radziewicz, R., Rhodes, C., VanHorn, C., McNett, M., 2015. Outcomes of a comprehensive nurse residency program. Nurs. Manag. 46 (11), 41–48. https://doi.org/10.1097/01.NUMA.0000469353.71942.5b.
Mijares, L., Baxley, S.M., Bond, M.L., 2013. Mentoring: a concept analysis. J. Theor. Construct. Test. 17 (1), 23–28. Retrieved from. http://tuckerpub.com/jtct.htm.
National League for Nursing, 2013. NLN Research Priorities in Nursing Education 2012-2015. Retrieved from. http://www.nln.org/researchgrants/priorities.htm.
NurSearch, 2017. Worldwide Nursing Shortage-10 Countries with a Nursing Shortage Crisis. Retrieved from. https://nursearch.org/worldwide-nursing-shortage-10-countries-nursing- shortage-crisis/.
Nursing Theories, 2013. Current Nursing. Retrieved from. http://currentnursing.com/nursing_theory/.
Olson-Sitki, K., Wendler, M.C., Forbes, G., 2012. Evaluating the impact of a nurse residency program for newly graduated registered nurses. J. Nurses Staff Dev. 28 (4), 156–162. https://doi.org/10.1097/NND.0b013e31825dfb4c.
Polit, D.F., Beck, C.T., 2014. Essentials of Nursing Research: Appraising Evidence for Nursing Practice, eighth ed. Wolters Kluwer Health/Lippincott Williams & Wilkins, Philadelphia, PA.
Rice, V.H., 2012. Theories of stress and its relationship to health. In: Rice, V.H. (Ed.), Handbook of Stress, Coping, and Health: Implications for Nursing Research, Theory, and Practice. Sage Publications, Thousand Oaks, CA, pp. 22–42.
Roche, B., Hefferon, K., 2013. The assessment needs to go hand-in-hand with the debriefing: the importance of a structured coaching debriefing in understanding and applying a positive psychology strengths assessment. Int. Coach. Psychol. Rev. 8 (1), 20–34. Retrieved from. http://www.sgcp.org.uk/sgcp/publications/international-coaching-psychology- review/international-coaching-psychology-review_home.cfm.
Saver, C., Habel, M., Alfaro-LeFevre, R., 2013. Novice to Expert through the Stages to Success in Nursing. Retrieved from. http://ce.nurse.com/course/ce556/novice-to-expert- through-the-stages-to-success-in-nursing/.
Shaffer, F.A., Davis, C.R., Dutka, J.T., Richardson, D.R., 2014. The future of nursing: domestic agenda, global implications. J. Transcult. Nurs. 25 (4), 388–394. https://doi.org/10.1177/1043659614523474.
Shinners, J., Africa, L., Hawkes, B., 2016. Debriefing as a supportive component for registered nurses in transition. Journal for Nurses in Professional Development 32 (4), 212–218. https://doi.org/10.1097/NND.0000000000000273.
Spiva, L., Hart, P.L., Pruner, L., Johnson, D., Martin, K., Brakovich, B., Mendoza, S.G., 2013. Hearing the voices of newly licensed RNs: the transition to practice. Am. J. Nurs. 113 (11), 24–32. https://doi.org/10.1097/01.NAJ.0000437108.76232.20.
Stanton, C., 2011. Developing the nursing workforce. (2011). Association of operating room nurses. AORN J. 94 (3) C1, C8, C9. Retrieved from. https://aornjournal.onlinelibrary.wiley.com/doi/pdf/10.1016/S0001-2092%2811%2900851-9.
Theisen, J.L., Sandau, K.E., 2013. Competency of new graduate nurses: a review of their weaknesses and strategies for success. J. Cont. Educ. Nurs. 44 (9), 1–9. https://doi.org/10.3928/00220124-20130617-38.
Tomey, A.M., Alligood, M.R., 2006. Nursing Theorists and Their Work, sixth ed. Mosby Elsevier, St. Louis, MO.
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 (4), 207–214. Retrieved from. http://europepmc.org/abstract/MED/22970551.
Tuckett, A., Eley, R., Ng, L., 2015. Transition to Practice Programs: what Australian and New Zealand Nursing and Midwifery Graduates Said. A Graduate eCohort Sub-study, vol. 24. Australian College of Nursing Ltd, pp. 101–108. https://doi.org/10.1016/j.colegn.2015.10.002.
Ulrich, B., Krozek, C., Early, S., Ashlock, C., Africa, L., Carman, M., 2010. Improving retention, confidence, and competence of new graduate nurses: results from a 10-year longitudinal database. Nursing Economic$ 28 (6), 363–375. Retrieved from. http://www.ndcenterfornursing.org/linked/versant_10_year_article_nec_2010.pdf.
United States Department of Labor, Bureau of Labor Statistics, 2018. Occupational Outlook Handbook: Registered Nurses. Retrieved from. https://www.bls.gov/ooh/healthcare/registered-nurses.htm.
Versant, 2013. Transitioning Experienced RNs to New Clinical Practice Areas. Versant Holdings, LLC, St. Petersburg, FL Retrieved from. http://www.versant.org/professional-services/versant-nurse-transition-residency.html.
Welding, N.M., 2011. Creating a nursing residency: decrease turnover and increase clinical competence. Medsurg Nurs. 20 (1), 37–40. Retrieved from. http://www.ncbi.nlm.nih.gov/pubmed/21446293.
Zinn, J., Guglielmi, C., Davis, P., Moses, C., 2012. Addressing the nursing shortage: the need for nurse residency programs. AORN J. 96 (6), 652–657.