

Quantitative Research Critique:
New Graduate Nurses Residency Mentoring Programs
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I have neither given nor received any unauthorized aid on this assignment nor am I aware of any infraction of the honor code. Molly Mancini

Title

The title of an article is meant to state what the research was centered around. The title of this article, “New Nurse Graduate Residency Mentoring: A Retrospective Cross-Sectional Research Study ” explains exactly what the main focus of the experiment was (Williams, Scott, Tyndall and Swanson, 2018, p. 121). The title states who the population, the new graduate nurses, are and what the aim of the study was which was to analyze the nurse residency mentoring program. The title also includes what type of research study it is by stating that it is a cross-sectional research study. The title does not include the specific variables being tested in this research study.

Author

There are four authors of this research study. The authors included are Felecia S. Williams, Elaine S. Scott, Deborah E. Tyndall, and Melvin Swanson. At the bottom of the first page, their credentials are listed. All of the authors were professors at East Carolina University in Greenville, NC. Felecia S. Williams is an RN, a CCRN-K certification, and a PhD. At her university, she is a clinical educator and instructor. It would be helpful to explain what a CCRN-K certification is for people who do not know this certification in acutely/critically ill adult patients. Elaine S. Scott is an RN, has a PhD, has a NE-BC certification, and is a member of FNAP. She is a professor and is the chair of the Nursing Science Department at East Carolina University. It would be helpful to explain what the FNAP credential is. Deborah E. Tyndall is an RN, has a PhD and is an Assistant Professor. Melvin Swanson has a PhD and is a professor and statistician at East Carolina University. The inclusion of each of the author’s credentials as well as their positions at East Carolina University help to establish their credibility. It does not state

what their specific roles in the study were. When searching each of the authors online, it can be determined that they have all taken part in research studies before. It does not appear that the authors have any conflicts of interest related to the study as it was not stated.

Abstract

Although there is no section specifically labeled as “Abstract”, there was a section labeled Executive Summary. The Executive Summary included three statements that summarize the findings of the research study. It does not state the purpose, aims, background information, or methods of how the data was collected. It also does not include how the results of this study could be applied to current nursing practice.

Research Problem

The research problem is not specifically stated, but can be inferred based on the purpose. The problem being researched involves residency mentoring programs that help to decrease the newly graduates nurse turnover rate and overall job satisfaction. The study also analyzes the new graduate nurses practice outcomes. The problem being examined in this study is significant to nursing and clinical practice as determining how mentoring programs can be used to help newly graduated nurses transition can be applied to hospitals all over the world.

Purpose

The purpose of this study “was to examine the relative influence of two types of intentional mentoring” on newly graduate nurses as they transition into practice (Williams et al., 2018, p. 122). The two types of mentoring included “one-to-one mentoring, where a single mentor is assigned to a mentee, and group mentoring, where a single mentor is assigned to a

group of mentees” (Williams et al., 2018, p. 122). The purpose helps to establish the main focus of the research study.

Literature Review

The references included in the literature review were from peer-reviewed primary sources. Of the articles used, 60 % (15) were published within the last 5 years and 16% (4) of the articles referenced were published within 10 years. In addition, 24% (6) of the articles cited were 10 years or older. When including information from other research studies, the information was properly cited and included within the references section. The content included directly relates to the concepts of the study including nurse turnover information and the implementation of nursing skills in the practice of newly graduated nurses. The references older than 10 years were often subjective studies. These subjective studies helped with the evaluation of the dependent variable. The information cited added value to the sections and helped to strengthen the rationale behind the research study. The study does not state if it has been critically appraised or synthesized. No summary is provided regarding the theoretical knowledge in the area of the study. The study does address that there is a gap in knowledge related to mentors and new nurse residency programs.

Framework/Theoretical Perspective

The framework is not explicitly stated in this research study. However, the reader can extract the framework from statements located in the introduction and literature review. The authors highlight how “nurse residency programs are designed to promote professional socialization of new graduates with the goals of increasing patient safety, promoting clinical competency, improving job satisfaction, and reducing turnover” (Williams et al., 2018, p. 121).

In fact, “the use of standardized transition to practice programs, such as the University Healthsystem Consortium/American Association of Colleges of Nursing model and the Versant New Graduate Nurse Residency program, is associated with reduced safety events, improved skill development, lowered stress, and greater NGN satisfaction” (as cited in Williams et al., 2018, p. 122). The framework identifies, defines, and helps describe the relationships among the different concepts present in the research study. The framework is related to nursing’s body of knowledge as research into how residency programs can improve will help to influence new graduate nurses concepts of patient safety, clinical competencies, job satisfaction, and turnover rate. There is no proposition from a theory being tested specifically.

Research Objectives

There were no hypotheses specifically stated within this research study. Although there were no objectives specifically stated, the reader can infer that the research objectives were to determine which type of mentoring, one-on-one or group, would yield the best outcomes when compared to the new graduate nurses skills outcomes, turnover rate, and comfort in the position. The main question being asked throughout the study is which type of mentoring will yield the best results related to nursing skills, turnover rate, and confidence in their new staff position. The outcomes and question are linked directly to the framework of the study as the framework suggests that newly graduate nurses have better outcomes when they take part in a nurse residency program.

Variables

The demographic variables for the participants in the study include education, previous healthcare experience, gender, races, and year respondent stated residence. The independent

variable of this research study includes the two different methods at which mentoring was given to the new graduate nurses. The independent variable is the method at which the newly graduated nurses receive mentoring. The independent variable is defined conceptually. One method was to have a nursing mentor paired one-on-one with a newly graduated nurse. The other method was to have a nursing mentor paired with a group of nursing students as compared to one-on-one mentoring. The type of mentoring given influences the new graduate nursing students' turnover rate and practice outcomes. The study does not specify how many newly graduated nurses are in a group setting. The dependent variable is the analyzing the newly graduate nurses' understanding of patient safety, their clinical competency, job satisfaction, and turnover rate. The variables are reflective of the concepts identified by the framework present in the research study. The conceptual definition of the dependent variable is that a new graduate nurse's understanding of patient safety, their clinical competency, job satisfaction, and turnover rate directly correlate to how their nurse residency program provides mentoring. The operational definition was not specifically stated in the article. It can be assumed that the operational variable is measured through the use of surveys. The variables are clearly defined and based on previous research studies. The variables reflective of the concepts identified in the framework.

Research Design

The research was conducted using a cross-sectional research design. This research design was used to evaluate a database of 3,484 newly graduated nurses who participated in the Versant New Graduate Nurse Residency Program. All of the nurses included in the database have less than two years of experience. There are five components present in this nurse residency program including “preceptor-guided clinical immersion, education and curriculum, formal

mentoring, formal debriefing classes, and looping (visiting each portal that patients move through during the hospital experience)” (Williams et al., 2018, p. 122-123). The mentors were not matched with their mentee(s) based on compatibility. The research design provided a way to examine the objectives and questions asked in the study. The research design used in this study is the most appropriate for the data that the researchers were looking to gather.

The study does include an intervention which involves the type of mentoring being provided to the new graduate nurses in the nurse residency program. The intervention applied is clearly described in the research study. The intervention is appropriate for examining the study purpose, as the point of the study is to evaluate the effects that different types of mentoring have on the newly graduated nurses. It is not stated whether a protocol was developed to promote consistent implementation of the treatment. If the mentoring was not consistently implemented, the findings can be skewed depending on how often the different mentoring groups met and if the mentees actually went to those meetings with their mentor.

The study involved the use of two groups. The groups consisted of one-on-one mentoring and group mentoring. The participants were randomly assigned to the group before the study began. A pilot study was not stated to have occurred so no pilot study findings were used in the design of the study. The researchers did not define threats against design validity of the data provided by the study’s participants.

Sample

The sample included newly graduated nurses who took part in the Versant New Graduate Nurse Residency program between 2011 and 2014. The sample was a non probability sampling and it was identified and was appropriate. A total of 3,484 nurses took part in the study. The

nurses in the sample were from 102 different hospitals in 24 hospital systems. The sampling exclusion criteria excluded people who were not a part of the Versant Residency program. The sample criteria was identified as appropriate. The inclusion criteria included new graduate nurses who were taking part in the Versant Residency program. The study says that the nurses were from 14 different states in the US, but does not specify what states were included. Percentages were included to show the demographics of the nurses participating. 84% were female and 71% were Caucasian. The acceptance and refusal rates were not included in the study. The attrition and retention rates were not addressed. There was no power analysis reported in the study. The study lacks diversity as the majority of the participants did not vary in gender or race. Researchers defined the target and accessible populations for the study as only newly graduate nurses in the Versant Residency program in the database selected. There was no mention of how informed consent was obtained.

Setting

The 3,484 new graduate nurses were from the United States. The study took place in 14 states. The research study does not specify which states the data was collected from. The study also did not specify if the nurses were from specific units. The setting is appropriate for the study purpose as the data was obtained from nurses taking part in a nurse residency program.

Measurement

Variable Measured	Name of Measurement Method	Type of Measurement Method	Level of Measurement	Reliability or Precision	Validity or Accuracy
New graduate nurse comfort in their position	Versant Evaluation of the RN Residency	Likert Scale	Ordinal	<p>Precision was not clearly stated in the article.</p> <p>The surveys used were somewhat reliable but there is always some presence of human error. These surveys are also difficult to replicate.</p>	Validity and accuracy were not clearly discussed in the article.
New graduate nurse self confidence and skills competency	Versant Self-Competency Self Confidence	One-way analysis of variance	Nominal	<p>The surveys used were somewhat reliable but there is always some presence of human error. These surveys are also difficult to replicate.</p>	Validity and accuracy were not clearly discussed in the article.
New graduate nurse turnover intention	Turnover Intention	Likert Scale	Ordinal	<p>The surveys used were somewhat reliable but there is always some presence of human error. These surveys are also difficult to replicate.</p>	Validity and accuracy were not clearly discussed in the article.

The instruments being used are clearly described in the research study and brand names are used when appropriate. It was not stated if the researcher reexamined the validity and reliability of the instruments for the present sample. The instrument development process is not described despite the instruments being developed specifically for this research study. The dependent variable is clearly identified and defined and the techniques for recording observations was clearly stated. Interrater reliability is described and is also listed in Table 1. The interview questions addressed concerns expressed in the research problem and are relevant to the research purpose. The accuracy, precision, and error of the instrument are not mentioned in the study. The instruments are appropriate for the research purpose and objectives. The methods for recording data from the instruments are clearly described and consistent throughout the study. The measurement methods do adequately measure the study variables. However, additional options on the Likert scale could have been included to improve the quality of the study outcomes. Reliability would involve issuing the same instruments to the same people again, after a period of time to determine if the participants react the same way. This was not done in this study. The measurement methods had accurate validity.

Data Collection

Before beginning the study, approval was obtained from the Institutional Review Board. “Secondary data analysis was performed on a variety of data collected following the conclusion of the Versant New Graduate Nurse Residency Program” (Williams et al., 2018, p. 123). The data for this study was collected from previous researchers and put into a database. That being said, there is no information about who collected the data or the training they received. “Two evaluation surveys, the Versant Evaluation of the RN Residency and the Versant Self

Competency Self Confidence survey, were used to collect NGN data within a 2-week window of when the 14-week formal program ended” (Williams et al., 2018, p. 123). The data collected addresses the research objectives. The data collection process was clearly described in the method section. The data collected helps to support the research objectives and questions. The study data was collected through a pre-existing database developed by the Versant New Graduate Nursing Residency Program. That being said, it does not specify which of the researchers collected the data. The training of the data collector was not clearly mentioned or described. Standardized surveys were used to evaluate the new graduate nurses’ confidence level and nursing turnover rate. The data collection methods were ethical. No adverse events were stated to have occurred during the data collection process. The data analysis procedures are clearly described and are appropriate for the type of data being collected.

Data Analyses

For this study, SPSS 24, a statistical software, “was used to analyze descriptive and inferential statistics” (Williams et al., 2018, p. 123) . The data analysis techniques address the study purpose. “Descriptive statistics examined sample characteristics, type and frequency of mentoring, NGN perceptions of comfort in the role of staff nurse, helpfulness of mentoring, and intent to turnover. (Williams et al., 2018, p. 123) “Correlational analyses and chi-square test of independence” were used to analyze the significance of the data (Williams et al., 2018, p. 123). Some data analysis procedures were not clearly described, such as the values in some of the tables. The researcher does not address any problems with missing data. Level of significance was identified. The sample size is sufficient to detect differences if they are present. A power analysis was not conducted for nonsignificant results. The results are presented in an

understandable way including tables and narrative descriptions of significant information. The results are interpreted appropriately.

Purpose of Analysis	Analysis Techniques	Statistic	Result	Probability
Influence of type of mentoring on NGN outcomes	A chi-square test of independence	x^2	Transition to practice: 15.68 Professional Development: 12.71 Stress management: 15.58	$p < 0.001$ $p < 0.001$ $p < 0.001$
Relationship between comfort in the role of staff nurse and turnover intention	Correlational analyses and chi-square test of independence	x^2	24.91	$p \leq 0.001$
Influence of mentoring frequency on NGN outcomes	A chi-square test of independence	x^2	3.85	$p < 0.005$

Interpretation of findings

The findings of this research study are consistent with previous research findings. The findings are discussed in relation to the objectives, being confidence level, practice outcomes, and turnover rate. “There were significant but weak relationships between type of NGN mentoring and the perceived value of mentoring. Individuals receiving one-to-one mentoring rated the mentoring experience higher in helping in transition to practice” (Williams et al., 2018 p. 124). Explanations for significant and nonsignificant findings are examined. The findings are clinically important. The interpretation of the findings are linked directly to the framework and

support the interpretation by the reader. One question that comes to mind is if the mentors, both one-on-one and in person, were required to meet with their mentees a number of times. The researcher does not address any questions that emerged from the findings. Explanations were not given as to why information was or was not significant.

Limitations

The researchers did not specifically state any limitations of the study. One limitation of this study is that only 16% of the nurses involved in the study were male. Due to a majority of the nurses being female, there is a disproportionate amount of data for male nurses. If more males were included in the study, the data could tell whether or not mentoring programs like this work better for both genders. This study could have specified which states were included in the study as well. This study does have limitations not expressed by the researchers.

Conclusions

The study concluded that the “efficacy of mentoring as a transition strategy and determined there was no association between mentoring and turnover intention unless NGNs were mentored in groups with a low frequency of contact” (Williams et al., 2018, p. 127). The different mentoring types also had no effect on the skill outcomes or comfort level of newly graduated nurses. “A significant but weak relationship between mentoring and transition to practice, professional development, and stress management was found, particularly when new graduates received one-to-one mentoring” (Williams et al., 2018, p. 124). Based on the results of the research study, it was determined that altering the type of mentoring offered “may be a costly and less effective component in accomplishing these goals during the initial phases of a

transition program” (Williams et al., 2018, p. 127). The researchers generalized the findings and did it appropriately.

Nursing Implications

The data collected from this research study could be directly applied to hospitals everywhere. The feedback given by the nurses can be used to improve existing mentoring programs as well as to help in the development of new mentoring programs. This data can also be used to decrease the nursing turnover rate, practice outcomes, and improved overall residency program satisfaction. The identified implications for practice were appropriate based on the study practice.

Future research

Although there is no section heading, there is some discussion of future research implications in the “Discussion” section. In this section, they highlight that in future studies, the researchers might consider implementing formal classes, peer support groups, and debriefing activities and evaluating how the new graduate nurses feel about these programs and the nurse turnover rate. Quality suggestions were made for future researchers. The description of the study is sufficiently clear for replication. As the data was secondarily analyzed, the study would be feasible but difficult to replicate because the data came from a previously created database. A new study would require new participants and new data.

Critique summary

To begin, the title of the research study could have been more descriptive on what aspects of the nurse residency mentoring program the study would be analyzing. The different types of

mentoring offered were the independent variables of the study and they were not included in the title. Also, the dependent variables being measured in the study were not included in the title. Although the title does express that the study is a cross sectional research study, it does not highlight the types of mentoring being offered or the dependent variables that are supposed to change as a result of the type of mentoring being implemented.

The study does not include an abstract. A short abstract that highlights important aspects of the study including the purpose, design highlights, methods, and results would help to summarize the key points as compared to an Executive Summary including only the results. Also, labeling the important pieces including the purpose would help to better highlight the most important aspects of the research study. The research study should include the states where these newly graduated nurses work as well as the types of facilities they are employed at.

The study also does not detail how many mentees are in each of the mentor groups. This is an important detail as a group could be 3 new nurses or 60 new nurses. Another important aspect of the mentoring is that a compatibility test was not provided for the new graduate nurse nurses to match with their mentor. A compatibility test could have made the one-on-one mentoring more successful then the newly graduate nurses would have had more in common with their mentors. When placed into groups, people often can find at least one person that they have something in common with. Even if the newly graduate nurse did not bond with their mentor, they would have most likely bonded with some other member of their nursing group. This could have made the experience more valuable to them, possibly skewing the data.

Although there was a large sample size, there was a lack of diversity present. A lack of diversity skews that data against minorities and males as there were not as many of them participating in the study.

The rights of human subjects were protected. The study findings should not be viewed with confidence as the researchers did not have much control over the data collection as it was a secondary analysis of an existing database. All relevant components were covered with adequate detail and clarity, but the data collection hinders the validity of the study.

Overall, the research study was well written but had some difficulty involving the hypothesis and framework. The information from this study can be used to improve mentoring in current nurse residency programs and also aid in the creation of new residency programs, but the research should not be given full confidence until more follow up studies support the results.

References

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