5-2020

The Effects of Nursing School Peer Tutoring on Tutors

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ACKNOWLEDGEMENTS

I would like to express my gratitude to my mentor, Dr. Greta Marek, for guiding me through this project. I would also like to thank Dr. Kimberly Sell, coordinator of Honors-In-Discipline program at the College of Nursing, and Dr. Melessia Webb for being the reader of this thesis. I also thank Dr. Yan Cao for assisting me with the research analysis.

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Abstract

An integrative review was used to examine the effects of being a tutor versus not being a tutor. The matrix method was used to guide the research process, to identify articles that met the inclusion criteria, and to reduce data into common topics of peer tutoring. The results of the integrative review yielded 20 articles and suggested that students in the position to assist others are more confident in communicating in groups and have higher knowledge in the subject they help with than their fellow peers. The literature showed that students in the position to assist others have defined personal and professional standards and leadership skills. However, there is little research on the benefits of being a tutor when compared with the benefits tutees obtain from coming to tutoring sessions. More research is needed to examine the effects of being a tutor. More specifically, there are no studies where the skills of nursing student tutors are compared with nursing student non-tutors. In this study, the researcher created a survey to evaluate nursing student tutors and non-tutors, their communication and leadership skills, as well as their personal and professional growth. Focus groups were created to provide tutors a means of discussing the personal and professional impact that tutoring has had on them. The study results indicated that tutors have decreased nervousness in public speaking, have higher confidence in their communication skills, share their life experiences to help others more often, and readily reach out to instructors and other tutors for assistance.

Keywords: communication, confidence, interprofessional, leadership, nursing students, peer assisted learning, peer mentor, peer teaching, teaching experience, tutoring

The Effects of Nursing School Peer Tutoring on Tutors

Chapter 1: Introduction

Peer tutoring is an effective way of extending learning for students in nursing school. Learning from experienced students allows newer students to learn complex information in a safe environment where mistakes are viewed as a learning opportunity, while also integrating them into the program's social network (Belsi & Murtagh, 2018; Brown & Rode, 2018; Carey, Chick, Kent, & Latour, 2018; Carr et al., 2016; Khalid, Shahid, Punjabi, & Sahdev, 2018; Li, Petrini, & Stone, 2018; McLeod, Jamison, & Treasure, 2018; Ramm, Thomson, & Jackson, 2015; Rosenau, Lisella, Clancy, & Nowell, 2015). Students in the position to assist others stand out among their fellow peers as they come out of their comfort zones to help less experienced students, and as they expand their knowledge by learning the content in more detail. These more experienced students critically think about how to teach their peers, who have varying learning styles, and how to manage and promote teamwork (Brown & Rode, 2018; Carr et al., 2016; Matthew-Maich et al., 2016; Ramm et al., 2015; Ramsey, Blowers, Merriman, Glenn, & Terry, 2000; Won & Choi, 2017). Students who helped their less experienced peers reported personal and professional growth as they reflected on their skills and beliefs when challenges arose, learned how to communicate their experiences to others, and strove to become positive role models for their fellow students (Belsi & Murtagh, 2018; Carey et al., 2018; Li et al., 2018; Matthew-Maich et al., 2016; McLeod et al., 2018; Ramm et al., 2015; Ramsey et al., 2000; Rosenau et al., 2015; Thomson, Smith, & Annesley, 2014; Won & Choi, 2017). Further knowledge about the effects of being a peer tutor, or student in the position to assist others, on professional growth, leadership, and communication skills needs to be explored, as helping and guiding less experienced peers may have a positive impact on these skills.

Chapter 2: Literature Review

Background

Peer tutoring was introduced in nursing schools to improve retention rates and to help at-risk students in clinical laboratory and didactic courses (Ramsey et al., 2000; Robinson & Niemer, 2005). Although tutors are the leaders of tutoring sessions, there is little research on the benefits of being a tutor. There were only a few articles that examined the benefits of tutoring, and they demonstrated that peer tutoring is a mutual learning experience since tutors re-study the material, search for answers for questions asked, and critically think on how to link the course material to real patient situations (Carr et al., 2016; Havnes, Christiansen, Bjørk, & Hessevaagbakke, 2016; Li et al., 2018; Ramsey et al., 2000; Won & Choi, 2017). Peer tutoring and peer learning have been shown to decrease the anxiety levels of both tutors and tutees as tutors become more comfortable communicating with various types of students and as tutees are able to easily approach tutors for clarification in a nonjudgmental environment (Belsi & Murtagh, 2018; Carey et al., 2018; Li et al., 2018; Matthew-Maich et al., 2016; Ramm et al., 2015; Ramsey et al., 2000; Rosenau et al., 2015). Students in the position to assist others are reported to be less authoritative, more approachable, and give easier to understand feedback than instructors because students believe instructors have high expectations of them in mastering the content, and thus, are afraid to ask questions (Belsi & Murtagh, 2018; Carr et al., 2016; Khalid et al., 2018; Li et al., 2018; Williams, Olaussen, & Peterson, 2015).

Peer Tutoring

Peer-assisted learning (PAL) is a term used to describe a mutual learning experience, while peer tutors and tutees are matched equals who share similar experiences and beliefs, and are often close in age (Carey et al., 2018; Carr et al., 2016; Williams et al., 2015). Although there

are a variety of terms for peer tutoring, such as peer learning and peer mentoring, they all encompass the same idea of an experienced student leading another less experienced student to academic success. The literature evidence indicated that giving senior students the opportunity to help freshmen students would allow a reduction in instructors' heavy student loads, a closer look at students' performance, and a quicker check-off process of students' skills during the clinical skill laboratories (Belsi & Murtagh, 2018; Brannagan et al., 2013; Brown & Rode, 2018; Havnes et al., 2016; Khalid et al., 2018; Krause, Schmalz, Haak, & Rockenbauch, 2017; Li et al., 2018; McLeod et al., 2018; Ramm et al., 2015; Rosenau et al., 2015; Williams et al., 2015). In clinical settings, senior tutors, in addition to faculty, encouraged their tutees to communicate openly with their patients and nurses, providing feedback when assessments needed improvement, and providing emotional support during stressful and busy days (Carey et al., 2018; Carr et al., 2016; Pålsson, Mårtensson, Swenne, Ädel, & Engström, 2017; Smith, Beattie, & Kyle, 2015). Peer tutoring can also be used in the classroom setting, where students act as both tutors and tutees as they both take turns in providing constructive feedback and in receiving it without becoming defensive (Carr et al., 2016). Tutoring centers are another setting that can help tutors organize their schedules. Honors research is another form of tutoring where honor students present their research to aspiring honor students and teach them how to link research to nursing (Thomson et al., 2014).

Theoretical Framework

The framework of Whittemore and Knafl (2005) guided problem identification, literature search, and data analysis. The problem-identification stage included the need to expand knowledge about the effects of tutoring on professional growth, leadership, and communication skills. The literature-search stage included the use of Google Scholar, BioMed Central, CINAHL,

PubMed, ProQuest, ScienceDirect, Ovid, and SAGE. The data analysis stage included data reduction by dividing sources into subgroups based on settings, sample characteristics, and experiences of participants, thus creating topics (Whittemore & Knafl, 2005). Next, data comparison of these topics identified significant patterns, clusters, and contrasting or similar topics (Whittemore & Knafl, 2005). To conclude, the important topics under each subgroup was summarized into a general idea and the accuracy of the intended meaning was verified by comparing it with the sources, which allowed verification of conclusions (Whittemore & Knafl, 2005).

Data Sources

Data sources included Google Scholar, BioMed Central, CINAHL, PubMed, ProQuest, ScienceDirect, Ovid, and SAGE. The literature search was limited to English language and peer-reviewed articles. The search terms “communication,” “interprofessional,” “leadership,” “skills,” “East Tennessee State University,” “peer assisted learning,” “peer mentor,” “peer teaching,” “peer tutor,” “tutoring,” “mentoring,” “nursing students,” “nursing school,” and “teaching experience” were utilized in various combinations. Peer mentoring and peer teaching were included in the literature review due to the small number of articles that directly pertained to peer tutoring. Peer mentoring, peer teaching, and peer tutoring involve students in the position to assist other students. Abstracts were reviewed individually for relevance to peer tutors’ experiences in health-related courses and re-evaluated using inclusion and exclusion criteria to determine suitability for the integrative review. The Google Scholar search yielded 28,100 results and an article from East Tennessee State University (ETSU) was found, which focused on a student population of interest. After applying a time frame of 2014-2018 and adding quotation marks to phrases, 297 results were found. Eight of the articles met the inclusion criteria.

Applying a time frame of 2013-2018 to the ETSU online library yielded 251 articles of which 12 were chosen, for a total of 20 articles.

Inclusion and Exclusion Criteria of Sources

Before a comprehensive review of the articles was completed, inclusion and exclusion criteria were determined. Because only a few articles measured professional growth, leadership, and communication skills among peer tutors, the inclusion criteria were broadened and adjusted to include the effects of peer tutoring on students' knowledge, skill acquisition, and academic experience in health-related courses. Articles were excluded if they were not published in English, if they focused only on the academic outcomes of peer tutoring, and if they were published before the year 2013.

Design

The matrix method included using a table to organize the articles based on their theoretical framework, purpose, sample size, design, setting, intervention, measures for statistical analysis, results, conclusions, and level of evidence (Garrard, 1999, p. 114). Taking short notes on the margins of the articles about important topics allowed efficient abstraction of information needed for later use (Garrard, 1999, pp. 120-121). The matrix method allowed clear visualization of similar themes and gaps in the literature, and provided structure for writing the review (Garrard, 1999, p. 123). Each article was broken down using the same topics and criteria and placed into the matrix to analyze the quality of the data and synthesize it (see Appendix, Table 1). The research articles included in the review were mixed methods: descriptive longitudinal, comparative descriptive, ethnographic, simple descriptive, pretest-posttest design with nonrandom control group, Q-sort, descriptive cross-sectional, Quasi-experimental, observational, and qualitative designs.

Results

The level of evidence criteria was used from Burns and Grove's (2017) *Practice of Nursing Research*, which rates the highest level of evidence possible as a 1 for systemic reviews and meta-analysis (Gray, Grove, & Sutherland, 2017). Articles in the integrative review were rated at 2, 3 or 6, which is acceptable as this allowed the examination of qualitative aspects of being a tutor, such as examining their personal experiences (Gray et al., 2017).

Supportive environment. Peer-assisted learning was associated with a supportive environment that was friendly, informal or formal, and safe for students to make mistakes as peers gave nonjudgmental, constructive, and easy-to-understand feedback based on their personal experiences (Belsi & Murtagh, 2018; Brown & Rode, 2018; Carey et al., 2018; Carr et al., 2016; Khalid et al., 2018; Li et al., 2018; McLeod et al., 2018; Ramm et al., 2015; Rosenau et al., 2015). In articles where more experienced peers, such as senior students, had to pass/fail students based on their clinical skills performance, students reported feeling less anxious and more motivated to ask questions because the environment with the experienced peer was more relaxed when compared to being graded by their instructors (Carr et al., 2016; Ramm et al., 2015; Rosenau et al., 2015). When comparing groups with an experienced peer and instructor versus instructor only, students with the experienced peer rated their self-efficacy higher while skill proficiency was the same for both groups, meaning experienced peers and instructors both provide quality feedback (Belsi & Murtagh, 2018; Khalid et al., 2018; Krause et al., 2017; Li et al., 2018; Pålsson et al., 2017; Ramm et al., 2015). Evidence showed that when experienced peers, who were more advanced in the program, were paired with less experienced students in the clinical setting, in addition to their nurse preceptor or faculty, experienced peers provided a supportive environment by correcting students in a sensitive manner and providing emotional

support during stressful days, while allowing independence for students to learn on their own (Carey et al., 2018; Pålsson et al., 2017; Smith et al., 2015).

Communication. While in the classroom and/or tutoring center settings, peer tutors and peer tutees learned how to give constructive and detailed feedback to other students in an honest manner, without lowering students' self-esteem levels, and learned how to allow their peers guide the learning sessions to allow knowledge building rather than knowledge telling (Belsi & Murtagh, 2018; Carr et al., 2016; Havnes et al., 2016; Li et al., 2018; Matthew-Maich et al., 2016; Ramm et al., 2015; Rosenau et al., 2015). Peer tutors and peer mentors, who are also in the position to assist other students, learned how to receive feedback when students requested a change in learning methods and learned how to actively listen without becoming defensive, thus learning how to communicate professionally (Matthew-Maich et al., 2016; Won & Choi, 2017). The mentoring and teaching roles can be related to the tutoring role, as tutors may advise students based on previous experiences and promote retention in classes, and as tutors may teach students if they are not knowledgeable with a particular concept (Belsi & Murtagh, 2018; Li et al., 2018; Ramm et al., 2015). Peer mentors, who like peer tutors include students in the position to assist other students, learned to self-reflect as a way to grow as leaders, and peer teachers, who are also in the position to assist other students, learned to be insightful and self-aware (Ramm et al., 2015; Won & Choi, 2017). Since peer tutors and higher level peers wanted students to leave learning sessions well-prepared, they learned how to "break bad news" in a sensitive manner when students failed their skills assessments, and they learned how to give negative feedback when performance was not proficient, which also allowed peer tutors and higher level peers to learn how to sensitively give bad news to their patients (Ramm et al., 2015; Williams et al., 2015; Won & Choi, 2017). When second- and third-year nursing students helped first year

nursing students, the higher-level students explained that the delivery of pass/fail news to their peers was difficult, but they appreciated being in this situation (Ramm et al., 2015). Other higher-level students indicated that being able to tell students bad news was the most valued learning area of this experience (Ramm et al., 2015).

Knowledge. The literature reported that students in the position to assist others reported that their knowledge increased because they had to re-study the content before the sessions, had to critically think about the questions students asked them, and had to search for answers they did not know by asking instructors or going back through notes, all of which lead to a deeper knowledge acquisition (Carr et al., 2016; Khalid et al., 2018; Matthew-Maich et al., 2016; McLeod et al., 2018; Ramsey et al., 2000; Smith et al., 2015; Thomson et al., 2014; Williams et al., 2015; Won & Choi, 2017). In addition, students in the position to assist others solidified their own study strategies as they tried to find ways for others to study appropriately, which allowed these experienced students to evaluate a variety of techniques they themselves could use (Li et al., 2018; Matthew-Maich et al., 2016; Ramsey et al., 2000; Rosenau et al., 2015; Smith et al., 2015; Won & Choi, 2017). Students in the position to assist others learned how to translate complex nursing concepts into simple language (Khalid et al., 2018; Li et al., 2018; Matthew-Maich et al., 2016; Ramm et al., 2015; Ramsey et al., 2000; Thomson et al., 2014; Won & Choi, 2017).

Self-reflection and leadership. The literature showed that those in the position to assist others reported increased leadership skills as they were able to challenge themselves, create their own teaching strategies, and get out of their comfort zones in order to lead group discussions (Belsi & Murtagh, 2018; Brown & Rode, 2018; Ramsey et al., 2000; Rosenau et al., 2015; Williams et al., 2015). In addition, experienced peers acted as role models by encouraging

unmotivated students to engage in their classes and even become leaders themselves, which allowed experienced peers to have a sense of achievement and increased confidence (Belsi & Murtagh, 2018; Brown & Rode, 2018; Khalid et al., 2018; Li et al., 2018; Matthew-Maich et al., 2016; McLeod et al., 2018; Ramm et al., 2015; Ramsey et al., 2000; Thomson et al., 2014; Won & Choi, 2017). Students in the position to help others reported they unexpectedly learned about their strengths and weaknesses and had a transformational, eye-opening experience as they reflected on their beliefs and values when dealing with different types of personalities, which created a foundation for the development of professional and personal standards (Belsi & Murtagh, 2018; McLeod et al., 2018; Ramm et al., 2015; Ramsey et al., 2000; Rosenau et al., 2015; Smith et al., 2015; Thomson et al., 2014; Won & Choi, 2017). Some tutors reported that helping and teaching other students sparked an interest in a future career in education, such as becoming professors in nursing school, preceptors in clinical settings, or mentors for their future nursing colleagues, which is evidence of their increased leadership skills as they are willing to guide others beyond the classroom setting, and thus, possibly decrease nurse turnover rates by providing long term guidance (Brannagan et al., 2013; Khalid et al., 2018; Ramm et al., 2015; Ramsey et al., 2000; Robinson & Niemer, 2005).

Implications of Literature Review

Peer tutoring and peer-assisted learning provides a supportive environment for students, and increases the communication, knowledge, self-reflection and leadership skills of the peers in a position to assist others, making them stand out among their fellow students. However, only a small number of articles explored tutors' experiences as their focus, and there was a gap in the literature in comparing the effects of being a tutor versus not being a tutor. Tutors and students in the position to assist others reported an increased interest in nursing education and mentorship,

indicating these students might take on leadership roles after they graduate, making this a potential area for further research (Brannagan et al., 2013; Khalid et al., 2018; Ramsey et al., 2000; Robinson & Niemer, 2005). Further interventional and mixed methods research is recommended as only a few studies were interventional and most measured only the qualitative aspects of peer learning and tutoring.

Peer tutoring provides mutual benefits for both tutors and tutees because it provides tutees with a safe environment to allow mistakes to occur without judgement, and it allows tutors to learn as they teach. Tutors have increased professional communication skills because they learn how to communicate bad news, how to provide constructive criticism, and how to actively listen without becoming offended. Tutors report increased knowledge because they must search for answers and relate classroom concepts to complex patient situations. Tutors have increased leadership skills because they strive to become role models to guide and motivate others to succeed, while also becoming self-aware of their strengths and weaknesses. However, there was a gap in the literature in directly comparing the effects of being a tutor versus not being a tutor, which is important in order to examine what skills tutors gain that their fellow students may not have.

Chapter 3: Guiding Theory for Study

The nursing theory used to support and frame this study is “Newman’s Theory of Heath as Expanding Consciousness in Nursing Practice” (Alligood, 2010, p. 457). This theory was used because it describes how nurses experience joy when participating in the transformation of others and how they enhance and transform their own lives through discussion with others (Alligood, 2010, p. 457). This concept can be used with tutors as they experience pleasure and fulfillment when they are able to help tutees transform and improve their studying habits. Newman explains

that nurses need to synchronize their rhythms with others, also known as the "rhythm of relating," in order to interact effectively (Alligood, 2010, p. 463). Thus, tutors need to synchronize their rhythms with their tutees' rhythms in order to be aware of their tutees' feelings, and in response, adapt their tutoring strategies as appropriate. The nurse surrenders their need to control the situation and helps the patient make decisions on their own (Alligood, 2010, p. 464). Although tutors take the lead in the sessions, they must also allow tutees' freedom to take charge for them to be actively involved. Tutees can be actively involved by choosing which topics they want to go over and how in-depth the sessions should be, thus making the session more helpful for them.

Newman also describes that for the nurse to get in touch with the other patient, the nurse must sense his/her own pattern of behaviors (Alligood, 2010, p. 464). For tutors to be effective, they must sense their strengths and weaknesses and change their tutoring strategies to fit the learning strategies of a variety of tutees. Furthermore, Newman relates that once the patient recognizes their pattern of behavior and are self-conscious, they sense that nurses can facilitate desired changes in their life (Alligood, 2010, p. 467). Also, the patient can bond with the nurse in a period of chaos and disequilibrium until the patient is stable, and at the end of the nurse-patient relationship, both are transformed by the process (Alligood, 2010, p. 467). Likewise, tutees must recognize their need for help and realize that tutors are able to help them towards academic success. Tutees form a relationship with their tutor in a period of distress, such as poor academic performance. Once they reach their goals, both the tutor and tutee can learn from the experience. Nurses need to be open to whatever arises during their interaction with the patient with an unconditional acceptance of the patient's experience (Alligood, 2010, p. 467). By doing this, the nurse is fully present in the interaction and is in "synch" with the patient (Alligood, 2010, p.

467). Tutors must also be open to suggestions by their tutees and they need to be prepared for unexpected situations, such as tutees' loss of motivation and not wanting to move forward. Tutors must be accepting of their tutees' viewpoints and actively listen in order to best meet their tutees' needs.

Purpose and Specific Aims

The overall purpose of this study is to evaluate the perceptions of nursing-student tutors and non-tutors on communication, leadership skills, and personal and professional growth. More specifically, the purpose is to evaluate any differences and/or similarities that tutors, and non-tutors may have in their confidence with communication, going outside of their comfort zones, asking for help, and reflecting on personal strengths and weaknesses. In addition, the study will examine participants' perception about the future, including where they see themselves in five years after graduating nursing school and whether they would take on a leadership position in the beginning of their nursing career.

The specific objectives of this study include the following: to determine whether tutoring increases communication, leadership, and personal and professional growth in nursing students; to determine whether tutors have higher levels of communication skills, leadership skills, and personal and professional growth when compared to similar students who never tutored before; and to determine whether tutoring has had an impact on the personal and professional lives of nursing student tutors.

Dependent and Independent Variables

For this study, the data analysis focuses on outcome measures such as the dependent variables of communication, leadership skills, and personal and professional growth. The independent variables include being a nursing-student tutor or not being a tutor.

Chapter 4: Study Overview

Research Design

A mixed-method study design was used to increase knowledge of the benefits tutoring has on tutors using both quantitative and qualitative data. The participants completed a questionnaire that evaluated their perceptions on their ability to communicate proficiently, their performance in class presentations, their openness in sharing their life experiences with others, and their ability to adapt to various situations. Two optional free-writing responses were asked at the end of the survey to evaluate which nursing qualities they believe are most important and their descriptions of where they see themselves five years after graduating nursing school. Three focus groups were provided to tutors to allow a deeper insight into their experience and the impact of being a tutor. Using this methodology allowed obtaining information from two different perspectives.

Population

The sample from the population included nursing-student tutors and nursing-student non-tutors at ETSU. All undergraduate nursing students who were in the BSN program at ETSU were sent an e-mail introducing the study, and they were asked to participate if they were a tutor or a non-tutor. There were approximately 1,100 undergraduate nursing students. There were approximately 14 tutors who tutored through the College of Nursing. The inclusion criteria for tutors included that they must work through the College of Nursing, be paid for tutoring, and tutor nursing-college classes. They must have tutored at least once either in the Fall 2018, Spring 2019, or Fall 2019. They also must have tutored either in the Sevierville, Kingsport, or Main campus. The exclusion criteria included tutors who were not working through the College of Nursing and those who did not tutor nursing classes. My inclusion criteria for the control group of non-tutors included nursing students in Kingsport, Sevierville, or Main campus at ETSU who

have never tutored through the College of Nursing and never tutored at ETSU through a paid or formal tutoring job.

Study Site

The study site for the focus groups was in the main campus at ETSU in the College of Nursing building. Rooms were reserved for three focus groups. One focus group was planned to be in person and two via ZOOM, an online video conference website.

Instruments

One survey was created for the purpose of this study in order to address the skills of communication, leadership, and personal and professional growth. The survey contained a demographic section and 20 questions on a 4-point Likert scale. At the end, there were two optional questions where the students were asked to type in their answer. The focus group questions were also created for the purpose of this study in order to gain deeper insight into tutors' experiences. Another survey containing three questions was created for tutors via SurveyMonkey in order to find an appropriate time and location for the focus groups. In order to maintain clarity, the first survey mentioned will be called 'main survey,' and the second survey with the dates, times, and locations for the focus groups will be called 'SurveyMonkey.'

Recruitment Process

After receiving approval from the Internal Review Board (IRB) at ETSU, recruitment via e-mail began (see Appendix, figures 1 & 2). Students were asked to read the purpose of the study and the consent form on the main survey link, and then choose to agree to participate. The participants were recruited using convenience sampling. The e-mails of nursing student tutors from Fall 2018, Spring 2019, and Fall 2019 were collected from the College of Nursing tutoring center, and the researcher e-mailed them the approved documents. The e-mail for the non-tutors

was sent to all class presidents on each campus (Main Campus, Sevierville, and Kingsport) who are in the undergraduate level of nursing school. The class presidents sent out the e-mail to the students in their classes. This allowed all undergraduate nursing students to read the e-mail and participate if they are non-tutors. The separate e-mail that was sent to tutors introduced the study and provided the links to the main survey and to SurveyMonkey. The SurveyMonkey contained three questions for tutors to pick the best time to attend a focus group and the best way to attend (via ZOOM or in person). Another e-mail was sent out afterwards with the times and location of the focus groups. Nursing student non-tutors were sent only one e-mail, which introduced the study and provided participants with the link to the main survey, but not the SurveyMonkey as the focus groups were only offered to tutors.

Data Collection and Analysis

The main survey link was sent to the students' e-mail via the CheckBox Survey platform, which uses the Secure Sockets Layer (SSL) encryption software and does not collect Internet Protocol (IP) addresses. The main survey results were collected by the statistician in the College of Nursing. The SurveyMonkey link was also sent through e-mail, but only to tutors. The SurveyMonkey data collection was completed through its website by the researcher. For the focus groups, nursing student tutors were asked to take a seat and informed consent was obtained. In order to protect the participants, they were informed that if they got physically or psychologically fatigued, they could leave the meeting at any time. The study's purpose was explained, and students were informed that the focus groups would be digitally recorded in order to create a transcript and allow a review of the discussion. The rules for the focus group were reviewed with the students, and included: one person speaking at a time, confidentiality of participants and topics discussed during the focus group, acknowledgement of everyone's

feelings and beliefs, and cellphones turned on silent. For the ZOOM focus groups, the rules included that participants were asked to go to a room where they could be by themselves in a quiet place, as noise would disrupt the meeting. Prepared questions were asked in order to allow consistency in all three focus groups.

Role of the Researcher

The researcher created the survey and focus group questions in order to allow the collection of all relevant information. The researcher sent out the e-mails to tutors and class presidents, which introduced and explained the purpose of the study. The researcher reserved the rooms for the focus groups and conducted the meetings. During the focus groups, the researcher explained the purpose of the study, obtained informed consent, presented the focus group rules, recorded the focus group, and asked the focus group questions.

Chapter 5: Results

Demographics of Main Survey

The results for the main survey included 20 completed surveys. Two of these included nursing-student tutors who were either part of the Main or Kingsport campus. Eighteen of the nursing-student non-tutor participants never tutored through ETSU through a paid/formal tutoring job. Three of the participants were male nursing students and 17 were female. Fifteen of the participants were within the age range of 18-25, four were within the age range of 26-35, and one was within the age range of 36-45. Three of the participants were from the Kingsport campus and 17 were from Main Campus. Eight participants from first semester, four participants from second semester, two participants from fourth semester, and six participants from fifth semester nursing classes completed the survey. There were no participants from third semester nursing

students. Tutors indicated that they had tutored at least once during either Spring 2019 or Fall 2019 semester. One tutor had more than 25 sessions, while the other had 6-10 sessions.

Main Survey Results

The two tutor participants from Main and Kingsport campuses chose "4-Strongly Agree" to the statements of believing proficient communication is an important skill to have (question 1), feeling confident in their communication skills (question 6), and sharing their life experiences to help others (question 7). In addition, they chose "4-Strongly Agree" to seeking opportunities to improve their communication skills (question 11), wanting to become a charge nurse or to be in another leadership position after the first year of working (question 12), and feeling confident in communicating with nurses and health care providers while in the clinical setting (question 13). While 94% of non-tutors chose "4-Strongly Agree" to believing proficient communication is an important skill to have (question 1), the results to the other previously mentioned questions included 50% of non-tutors choosing "3-Agree" to question 6, 72% choosing "3-Agree" to question 7, 50% choosing "3-Agree" to question 11, 61% choosing "3-Agree" to question 12, and 50% choosing "3-Agree" to question 13.

For the statement "If I feel misunderstood, I voice my concern immediately" (question 4), one tutor chose "1-Strongly Disagree," while the second tutor chose "3-Agree." However, the 50% of non-tutors chose either "1-Strongly Disagree" or "2-Disagree." Both tutors chose "1-Strongly Disagree" about feeling nervous when having to speak in public (question 8), whereas 67% of non-tutors chose they either "3-Agree" or "4-Strongly Agree." Similarly, both tutors chose "1-Strongly Disagree" to having trouble remembering what to say during class presentations (question 9), whereas 61% of non-tutors either chose "3-Agree" or "4-Strongly Agree."

For the statement of ease of discussing concepts which are not fully understood (question 2) all tutors either agreed or strongly agreed to feeling this was an easy task. Similarly, 78% of non-tutors chose the same answers. All tutors and the 78% of non-tutors agreed or strongly agreed to seeking opportunities to come out of their comfort zones (question 3). All tutors chose "3-Agree" or 4-Strongly Agree" to asking instructors for clarification when they do not understand a concept in class, whereas 56% of non-tutors either "2-Disagree" or "1-Strongly Disagree" to this statement (question 5). All tutors "3-Agree" or "4-Strongly Agree" to communicating freely with another student when a concern arises, whereas 50% of non-tutors would do the same (question 10). One tutor strongly agreed to putting more effort than other classmates on tests, projects, and assignments, whereas the other tutor strongly disagreed with this statement (question 14). 50% of non-tutors disagreed or strongly disagreed to putting more effort than other classmates. All tutors "3-Agree" or "4-Strongly Agree" to attending tutoring sessions when they need help, whereas 56% of non-tutors either "2-Disagree" or "1-Strongly Disagree" to attending tutoring sessions (question 15). All tutors either "2-Disagree" or "1-Strongly Disagree" to becoming nervous when having to give negative feedback to patients and/or classmates about unsatisfactory performance, whereas 56% of non-tutors "3-Agree" or "4-Strongly Agree" to becoming nervous (question 18).

All tutors and 72% of non-tutors seek insight from instructors on projects and assignments (question 16). Similarly, all tutors and 67% of non-tutors spent time reflecting on their strengths and weaknesses as a student (question 17). All tutors and 67% of non-tutors easily translate class and textbook concepts into real patient situations (question 20). All tutors and 56% of non-tutors "2-Disagree" or "1-Strongly Disagree" to having a difficult time adapting when something does not go as planned (question 19) (see Appendix, Table 2).

Main Survey Free-Writing Results

There were two optional questions that allowed the participants to free-write their response at the end of the main survey. The first question asked participants which of the listed qualities are most important for nurses to have. The qualities listed included compassion and concern for others; good communication skills with patients and health care providers; and the ability to proficiently guide others. Participants were then asked to explain why they chose their answer. Five out of 20 participants answered this question, including one tutor. Three of the participants chose compassion and concern for others as the most important quality for a nurse to have. One reason for this choice included that being a nurse is not a profession for everyone, thus, the person must be compassionate in order to be fit for the job. Another explanation for this choice included that the most important task by nurses is to care for their patients, thus, having compassion shows that they care. Another explanation included that compassion shows patient-centered care as the nurse puts the patient first. Two of the participants, including one tutor, chose good communication skills with patients and health care providers as the most important skill for nurses to have. One reason behind this included that good communication is the foundation to the other two choices in the question, compassion and the ability to guide others. Another reason for this choice included that good communication skills are important with patients as they need to understand the care they receive, as well as to improve their process of healing. A participant also said that good communication skills with the provider allows the nurse to understand the care they are providing for their patient. This helps nurses when asking questions from the provider and allows them to choose the best action for their patient.

The second optional question was answered by 14 out of 20 participants, including both tutors. This question asked the participants to describe where they see themselves in five years

after graduating from nursing school and allowed them to free-write their response. Four participants specifically mentioned they wanted to work at an office or in a private setting, rather than in a hospital setting. Two participants specifically mentioned they wanted to work at a hospital, including one non-tutor participant who also mentioned they wanted to work near the beach. Two participants mentioned they wanted to work in a dermatological or plastic surgery office setting. Nine out of 14 participants, including both tutors, explained they wanted to further their education or to be in a leadership role, such as charge nurse. Four of the 14 participants, including one tutor, answered that they wanted to become nurse practitioners. One tutor answered that they will be working as a nurse practitioner and will be providing health care data to their community, with a focus on migrant workers. Another tutor said that they want to become a charge nurse and receive a master's degree in order to teach. A non-tutor participant included that they will be working in the neonatal intensive care unit (NICU) or adult intensive care unit (ICU), like another non-tutor participant who also wrote they will be working in the ICU. One non-tutor participant included they will be in the Doctor of Nursing Practice (DNP) program. Another non-tutor participant explained they would like to join the United States Airforce pararescuemen, and afterwards, to further they education. One non-tutor participant explained they will be overseas in order to work in medical missions. Another non-tutor participant explained they wanted to be in a leadership role in a private, higher education, or research hospital setting.

SurveyMonkey Results

A three-question SurveyMonkey was sent out to tutors for them to pick the best method of a focus group (ZOOM or in-person) and the best date. Tutors were given one week to

complete the SurveyMonkey. Two out of approximately 14 tutors completed the SurveyMonkey. Both tutors chose a ZOOM meeting instead of an in-person focus group.

Focus Group Results

The objective of the focus groups was to determine whether tutoring has had an impact on tutors' personal and professional lives. One out of 14 tutors chose to participate in the focus group. There were three focus groups provided including one in-person focus group at the main campus of ETSU, and the other two focus groups were provided via ZOOM, an online video conferencing website. Focus groups via ZOOM were provided in order to allow tutors from all three campuses to attend. One tutor attended the in-person focus group at main campus. There were no tutors present at the ZOOM meetings. The focus group was recorded and transcribed, as stated in the informed consent. The focus group questions were divided into four parts including tutoring experience, skills, skills for school, and future prospects.

Tutoring experience. The participant was asked to compare their first tutoring experience to the most recent one. The participant explained that the "first tutoring experience was a little rough (laughs), because I did not know what I was doing." However, they explained that tutoring improved after that as they figured out a way to help tutees. The participant was then asked to state the most challenging aspect of being a tutor. To this question, they answered, "trying to get them to participate…they don't like to ask questions, so it's hard for me to like drag it out of them so I try to ask questions…because they show up, but then, they don't say anything." The participant was then asked if they ever tutored unmotivated tutees, to which they answered, "I don't think so…I feel like if they're showing up that's pretty good."

Skills. The participant was asked if they think being a tutor has had an impact on their communication skills. To this, the participant answered they have gotten better at explaining

concepts to patients and tutees. The participant was also asked if they think tutoring has had an impact on leadership skills. The participant answered, “I feel like it has just made me more comfortable like talking in front of groups of people.” The participant was then asked if tutoring has had an impact on their personal life. The participant explained, “I don’t think it has impacted it…but I feel like it’s rewarding…It makes me feel good if I help them understand something they didn’t get before.”

Skills for school and future prospects. The participant was asked if they think being a tutor will help with their current and future classes. To this the participant answered, “I feel like it helps remind me of what I have learned and like helps me tie everything together…it keeps it fresh in my head…I would have forgotten by now.” The participant was asked how being a tutor will impact their life once they become a professional nurse. The participant answered, “…[I will] be able to teach my patients better like in a more concise way…in a way that they are going to be able to understand instead of like how I understand it, like simplify it down.” The participant was asked if they would like to teach in a school in the future. The participant answered they were not sure about teaching, but they have looked over graduate school options and graduate assistantship (GA) jobs. In addition, the participant was asked if they would like to become a mentor or leader in the clinical setting once they become a professional nurse. To this, the participant answered, “Yeah, I think so…it’s always good to help the people who are coming up after you and it keeps your skill fresh.” When asked if the participant would apply for leadership positions, like charge nurse, the participant explained, “maybe preceptor or something, for like the students…or a new nurse.” When the participant was asked whether they would like to share anything else, they answered, “I also like having a relationship with the

faculty, like the teacher I tutor for…I feel like I have a really good relationship…so that's been nice, because it's sometimes hard where we don't have the same teachers every semester."

Chapter 6: Discussion

Similarities in Communication Skills

Based on the results, tutors and non-tutors had the same belief that proficient communication is an important skill for nurses to have. Both groups agreed that it is easy for them to discuss concepts they do not fully understand with peers. Thus, tutors and non-tutors showed no difference in their ability to discuss concepts with peers. Both tutors and non-tutors sought opportunities to improve their communication skills, indicating that both tutors and non-tutors desire to improve their communication skills. In addition, both tutors and non-tutors felt confident when communicating with nurses and other health care providers, indicating that there may be no difference in communication skills of tutors and non-tutors when in the clinical setting.

Differences in Communication Skills

The main difference identified between tutors and non-tutors was the amount of nervousness felt during public speaking, as tutors indicated they felt less nervous. For example, all tutors chose that they do not feel nervous when they must speak in public, whereas 67% of non-tutors chose that they do feel nervous when they must speak in public. Tutoring may reduce nervousness when speaking in public as tutors must speak in public during tutoring sessions. Results indicated that tutors do not have trouble remembering what they have to say during class presentations, whereas 61% of non-tutors do have trouble remembering what they have to say, again indicating tutoring may help decrease nervousness during public speaking. Results indicated that tutors do not become nervous when they must give negative feedback to patients

and/or classmates, whereas half of non-tutors do get nervous when they must give negative feedback, showing that tutoring may reduce nervousness when communicating. The ability of tutors to give negative feedback without becoming nervous is consistent with other findings in which tutors learned how to give negative feedback in a sensible manner when performance was not proficient (Carr et al., 2016; Li et al., 2018; Ramm et al., 2015; Rosenau et al., 2015; Williams et al., 2015; Won & Choi, 2017). All tutors in this study 'strongly agree' that they feel confident in their communication skills, while 33% of non-tutors 'strongly agree' to this statement, indicating that tutors may be more confident when communicating versus non-tutors. This is consistent with other findings in which tutors were found to be confident as a result of being able to help others (Brown & Rode, 2018; Khalid et al., 2018; McLeod et al., 2018; Ramm et al., 2015; Thomson et al., 2014).

Similarities in Leadership Skills

Tutors and non-tutors equally seek opportunities to come out of their comfort zones; being a tutor may not affect a nursing student's ability to come out of their comfort zone. The finding that tutors seek to come out of their comfort zones is consistent with other research (Brown & Rode, 2018). If tutors and non-tutors felt misunderstood, half would voice their concern immediately, therefore, there were no differences between groups in their ability to speak up if needed. Both tutors and non-tutors indicated their desire to be in a leadership position after their first year of working as a registered nurse. This is consistent with the findings that tutors would choose a leadership position, such as being a preceptor or mentor in the clinical setting (Brannagan et al., 2013; Khalid et al., 2018; Ramm et al., 2015; Ramsey et al., 2000; Robinson & Niemer, 2005; Rosenau et al., 2015). There was not a difference between tutors and non-tutors when discussing future plans. 40% of participants indicated their desire to continue

their education after becoming a registered nurse, regardless of tutoring status. However, only one participant, a tutor, reported that they wanted to teach, which is consistent with the finding that nursing students who tutored experienced a new interest in a career in education (Brannagan et al., 2013; Khalid et al., 2018; Ramm et al., 2015; Ramsey et al., 2000; Robinson & Niemer, 2005; Rosenau et al., 2015).

Differences in Leadership Skills

Based on the results, tutors share their life experiences more often than non-tutors. According to the Institute for Healthcare Improvement (IHI), "sharing information, listening to others, and being approachable" are leadership skills which require humility (Institute for Healthcare Improvement [IHI], n.d., para. 3). In addition, when tutors have a concern with another student, they communicate freely about this, while only half of non-tutors would do the same, showing that tutors may not be afraid to speak up when they have a concern with another student. This may also indicate tutors are not afraid to "break bad news" when performance is not satisfactory, which is consistent with other findings (Carr et al., 2016; Li et al., 2018; Ramm et al., 2015; Rosenau et al., 2015; Williams et al., 2015; Won & Choi, 2017).

Similarities in Personal and Professional Growth

Based on the results, tutors and non-tutors put an equal amount of effort on tests, projects, and assignments, indicating being a tutor may not affect how a nursing student performs in classes. Tutors and non-tutors both seek insight from instructors on projects and assignments; thus, the ability to work with instructors may not be affected by being tutors. Both tutors and non-tutors spend time reflecting on their strengths and weaknesses as students. Although this is consistent with the finding that tutors reflect on their strengths and weaknesses, this was seen in both groups (Belsi & Murtagh, 2018; McLeod et al., 2018; Ramm et al., 2015; Ramsey et al.,

2000; Rosenau et al., 2015; Smith et al., 2015; Thomson et al., 2014; Won & Choi, 2017). Tutors and non-tutors easily translate class and textbook concepts into real patient situations, which may indicate that being a tutor does not affect performance in classes. The ability of tutors to easily translate textbook concepts into real patient situations is consistent with other findings; however, this was seen in both groups (Khalid et al., 2018; Li et al., 2018; Matthew-Maich et al., 2016; Ramm et al., 2015; Ramsey et al., 2000; Thomson et al., 2014; Won & Choi, 2017).

Differences in Personal and Professional Growth

The study results indicated that tutors ask instructors for clarification if they do not understand a concept in class, while less than half of non-tutors would do the same, indicating that tutors may reach out more often for help when compared to non-tutors. Tutors reported they attend tutoring sessions when they need help with classes, while less than half of non-tutors would attend tutoring sessions, showing that tutors may be more open to receiving help when needed. These actions may also indicate that tutors are open to learning more about their strengths and weakness, thus allowing personal and professional growth (Belsi & Murtagh, 2018; McLeod et al., 2018; Ramm et al., 2015; Ramsey et al., 2000; Rosenau et al., 2015; Smith et al., 2015; Thomson et al., 2014; Won & Choi, 2017). Tutors do not have a difficult time adapting when something does not go as planned, whereas slightly more than half of non-tutors report the same, indicating that tutors may be able to adapt more easily to unexpected circumstances.

Chapter 7: Conclusion

The first objective of this study was to determine whether tutoring increases communication, leadership, and personal and professional growth in nursing students. Based on this study, being a tutor may reduce nervousness during public speaking, as tutors often must publicly speak during tutoring sessions indicating increased communication skills. It was also

found tutors have high levels of confidence in their ability to communicate. For leadership skills, tutors were found to share their life experiences to help others, which may be tutors share their studying experiences to help their tutees. Such behaviors show an increase in leadership skills as tutors can use their personal learning experiences to guide others. Tutors also communicate freely about their concerns, which may show they can speak up when needed. The ability to speak up is an important leadership skill in order to guide others in the right direction. As for personal and professional growth, tutors were found to ask for clarification from instructors if a concept was not understood that demonstrated professional growth as tutors make sure they have a solid knowledge base before they become professionals. Tutors attend tutoring sessions when needed which allows for both personal and professional growth as they learn studying skills and clinical skills from more experienced students. Tutors can adapt to unexpected circumstances, possibly due to having to adapt their tutoring sessions to a variety of tutees. Being able to adapt to unexpected circumstances may help with tutors' professional growth in the clinical setting, as they will need to learn to adapt to a variety of patients and/or unexpected events.

The second objective of this study was to determine whether tutors have higher levels of communication skills, leadership skills, and personal and professional growth when compared to similar students who never tutored before. When focusing on communication skills, tutors were found to have less nervousness in public speaking when compared to their non-tutor peers, possibly allowing tutors to perform class presentations with more ease than students who never tutored before. Tutors are also more confident in their communication skills than non-tutors. When focusing on leadership skills, tutors share their life experiences more often than non-tutors, which may be related to tutors using their experiences to guide their tutees. Tutors speak up more often than non-tutors if they have a concern with another student. When focusing on

personal and professional growth, tutors, more often than non-tutors, ask for clarification from instructors for concepts that are difficult to understand. This may allow tutors to have increased knowledge in comparison to their non-tutor peers, as tutors make sure to leave class with clear understanding. If help is needed, tutors attend tutoring sessions more often than non-tutors. Attending tutoring sessions, when needed, may help tutors understand concepts in more detail.

The third objective of this study was to determine whether tutoring has had an impact on the personal and professional lives of nursing student tutors. Based on the focus group results, being a tutor seems to be difficult in the beginning; however, with time the tutor finds a way to guide others, indicating personal growth as tutors discover their personal strengths and weaknesses. Being a tutor helps with communicating with tutees and with patients. The tutor explained that this may be due to learning how to explain difficult concepts in a simple way. The personal impact of being a tutor includes that it feels rewarding to help others understand a difficult concept. The tutor also mentioned that tutoring keeps skills fresh as it allows a review of previously learned concepts, which may help with tutors' professional lives as they keep their skills updated. In addition, being a tutor may help to create a bond with the instructor of the class being tutored. This may help a tutor's self-esteem as they have someone to talk to in the College of Nursing if they need support.

Limitations of the Study

This study was performed with a small population, which included nursing student tutors who worked through the College of Nursing and nursing students who never tutored before at ETSU. The two comparison groups in this study were not equivalent as there is a larger number of non-tutors than tutors in the College of Nursing, and there was a larger number of non-tutor participants than tutor participants in the main survey. The survey was created by the researcher;

thus, it was not tested for validity and reliability. In addition, only one tutor out of approximately 14 tutors attended the focus group. Therefore, there is limited qualitative data from tutors and themes could not be found.

Implications for Nursing Education, Research and Practice

The findings of this study are important to nursing education because being a tutor seems to provide benefits for the nursing student tutor. The possible benefits of being a nursing student tutor versus not being a tutor include decreased nervousness during public speaking, and the increased ability to share life experiences to help others, to speak up when needed, and to ask for help from instructors and tutors if needed. These communication skills are important in nursing practice because nurses need to have proficient public speaking skills as they must speak with patients' families and the interprofessional team. Nurses also must be able to speak up when needed in order to truly advocate for their patients. In addition, being a tutor keeps skills fresh as tutors review content from previous classes. Nurses need to have a solid knowledge base in the concepts they learned in school in order to understand why nurses intervene in a certain way. The ability to keep skills fresh from previous semesters may help the future nurse to know how to perform procedures in an evidence-based manner. These findings should encourage nursing schools to advocate for nursing students to become tutors. This is in order to improve aspects of nursing students' communication and leadership skills and to help with areas of their personal and professional lives.

Further research is needed with a larger number of nursing student tutors and an equivalent number of nursing student non-tutors. A survey with high validity and reliability would ensure accurate results. Providing a larger number of focus groups for tutors in future research may help with gaining deeper insight into the impact tutoring has had on tutors. In

addition, providing a larger number of focus groups would allow themes to be found. Further research is recommended with a focus on registered nurses who were previously tutors in nursing school in order to evaluate how being a tutor has affected their professional careers. These findings could then be compared to the findings from other registered nurses who were not tutors in nursing school.

References

Alligood, M. R. (2010). *Nursing theory: Utilization and application* (4th ed.). Maryland Heights, MO: Elsevier.

Belsi, A., & Murtagh, G. M. (2018). Peer tutoring in clinical communication teaching : the experience of 1st year students and their peer tutors, 1–11.

Brannagan, K. B., Dellinger, A., Thomas, J., Mitchell, D., Lewis-Trabeaux, S., & Dupre, S. (2013). Impact of peer teaching on nursing students: Perceptions of learning environment, self-efficacy, and knowledge. *Nurse Education Today*, *33*(11), 1440–1447. https://doi.org/10.1016/j.nedt.2012.11.018

Brown, K. M., & Rode, J. L. (2018). Leadership Development Through Peer-Facilitated Simulation in Nursing Education. *Journal of Nursing Education*, *57*(1), 53–57. https://doi.org/10.3928/01484834-20180102-11

Carey, M. C., Chick, A., Kent, B., & Latour, J. M. (2018). An exploration of peer-assisted learning in undergraduate nursing students in paediatric clinical settings: An ethnographic study. *Nurse Education Today*, *65*(March), 212–217. https://doi.org/10.1016/j.nedt.2018.03.014

Carr, S. E., Brand, G., Wei, L., Wright, H., Nicol, P., Metcalfe, H., & Foley, L. (2016). Helping someone with a skill sharpens it in your own mind: A mixed method study exploring health professions students experiences of Peer Assisted Learning (PAL). *BMC Medical Education*, *16*(1), 1–10. https://doi.org/10.1186/s12909-016-0566-8

Garrard, J. (1999). *Health sciences literature review made easy: The Matrix Method*. Gaithersburg, Maryland: Aspen Publishers.

Gray, J. R., Grove, S. K., & Sutherland, S. (2017). *The Practice of Nursing Research: Appraisal,*

Synthesis, and Generation of Evidence (8th ed.). St. Louis, Missouri: Elsevier.

Havnes, A., Christiansen, B., Bjørk, I. T., & Hessevaagbakke, E. (2016). Peer learning in higher education: Patterns of talk and interaction in skills centre simulation. *Learning, Culture and Social Interaction*, *8*, 75–87. https://doi.org/10.1016/j.lcsi.2015.12.004

Institute for Healthcare Improvement. (n.d.). Building trust, respect, and inclusion. In *PS 203: Pursuing professional accountability and a just culture*. Retrieved from http://app.ihi.org/lmsspa/#/6cb1c614-884b-43ef-9abd-d90849f183d4/789d9cbb-7dd3-4fe9-8df2-e0c63725b350/lessonDetail/2ed066ef-5f93-4c38-affd-d7bac5d7f10e/page/2

Khalid, H., Shahid, S., Punjabi, N., & Sahdev, N. (2018). An integrated 2-year clinical skills peer tutoring scheme in a UK-based medical school: perceptions of tutees and peer tutors. *Advances in Medical Education and Practice*, *Volume 9*, 423–432. https://doi.org/10.2147/AMEP.S159502

Krause, F., Schmalz, G., Haak, R., & Rockenbauch, K. (2017). The impact of expert- and peer feedback on communication skills of undergraduate dental students – a single-blinded, randomized, controlled clinical trial. *Patient Education and Counseling*, *100*(12), 2275–2282. https://doi.org/10.1016/j.pec.2017.06.025

Li, T., Petrini, M. A., & Stone, T. E. (2018). Baccalaureate nursing students' perspectives of peer tutoring in simulation laboratory, a Q methodology study. *Nurse Education Today*, *61*(December 2017), 235–241. https://doi.org/10.1016/j.nedt.2017.12.001

Matthew-Maich, N., Martin, L., Hammond, C., Palma, A., Pavkovic, M., Sheremet, D., & Roche, C. (2016). Nursing students' perceptions of effective problem-based learning tutors. *Nursing Standard*, *31*(12), 48–59. https://doi.org/10.7748/ns.2016.e10318

McLeod, F., Jamison, C., & Treasure, K. (2018). Promoting interprofessional learning and

enhancing the pre-registration student experience through reciprocal cross professional peer tutoring. *Nurse Education Today*, *64*(January), 190–195. https://doi.org/10.1016/j.nedt.2018.01.036

Pålsson, Y., Mårtensson, G., Swenne, C. L., Ädel, E., & Engström, M. (2017). A peer learning intervention for nursing students in clinical practice education: A quasi-experimental study. *Nurse Education Today*, *51*. https://doi.org/10.1016/j.nedt.2017.01.011

Ramm, D., Thomson, A., & Jackson, A. (2015). Learning clinical skills in the simulation suite: The lived experiences of student nurses involved in peer teaching and peer assessment. *Nurse Education Today*, *35*(6), 823–827. https://doi.org/10.1016/j.nedt.2015.01.023

Ramsey, P., Blowers, S., Merriman, C., Glenn, L. L., & Terry, L. (2000). The NURSE Center: A peer mentor-tutor project for disadvantaged nursing students in Appalachia. *Nurse Educator*, *25*(6), 277–281. https://doi.org/10.1097/00006223-200011000-00012

Robinson, E., & Niemer, L. (2005). A peer mentor tutor program for academic success in nursing. *Nursing Education Perspectives*, *31*, 286–289.

Rosenau, P., Lisella, R., Clancy, T., & Nowell, L. (2015). Developing future nurse educators through peer mentoring. *Nursing: Research and Reviews*, *5*, 13. https://doi.org/10.2147/NRR.S73432

Smith, A., Beattie, M., & Kyle, R. G. (2015). Stepping up, stepping back, stepping forward: Student nurses' experiences as peer mentors in a pre-nursing scholarship. *Nurse Education in Practice*, *15*(6), 492–497. https://doi.org/10.1016/j.nepr.2015.03.005

Thomson, P., Smith, A., & Annesley, S. (2014). Exploration of the effects of peer teaching of research on students in an undergraduate nursing programme. *Journal of Research in Nursing*, *19*(5), 415–430. https://doi.org/10.1177/1744987113519444

Whittemore, R., & Knafl, K. (2005). The integrative review: Updated methodology, *52*(5), 546–553. https://doi.org/10.1111/j.1365-2648.2005.03621.x

Williams, B., Olaussen, A., & Peterson, E. L. (2015). Peer-assisted teaching: An interventional study. *Nurse Education in Practice*, *15*(4), 293–298. https://doi.org/10.1016/j.nepr.2015.03.008

Won, M. R., & Choi, Y. J. (2017). Undergraduate nursing student mentors' experiences of peer mentoring in Korea: A qualitative analysis. *Nurse Education Today*, *51*, 8–14. https://doi.org/10.1016/j.nedt.2016.12.023

Appendix

Table 1

Literature Review Analysis

Problem Focused Research: Title/Author/Date & Journal	***Theoretical/ Conceptual Framework***	***Research Question(s) / Hypothesis(s)***	***Design/Sample Sample size/ Setting***	***Intervention***	***Measures/ Statistical analysis***	***Results***	***Conclusions***	***Level of Evidence***
1) Peer tutoring in clinical communication teaching: The experience of 1st year students and their peer tutors/ Belsi & Murtagh/ June 20, 2018, *MedEdPublish.*	No theoretical/ conceptual framework.	**Purpose:** 1. Evaluate student experience of the peer tutor program in clinical communication course by comparing students' views of peer tutors vs. course tutors. 2. Explore views of peer tutors on their teaching experience.	**Design:** Mixed methods design. **Sample:** N=275 year 1 medical students. N=17 year 3 medical students. **Setting:** Imperial College London	**Intervention:** 1. After simulated patient interview, year one students were asked to fill out questionnaire. 2. After two tutoring sessions, tutors were asked to fill out questionnaire combined with open ended questions.	**Measures:** 1. Year one student questionnaire had seven statements with Likert scale and space for free-text comments. 2. Tutors had questionnaire with five statements with Likert scale and three open ended questions. 3. Quantitative data was compared between students' taught by course tutors vs. peer tutors using chi-square and	**Results:** 1. There were no differences in results between course tutor and peer tutor groups. 2. First year students reported a friendly, safe and supportive environment with easy to understand feedback. 3. Students enjoyed that tutors shared their experiences. 4. Peer tutors reflected on their skills and reported increased leadership skills.	**Conclusions:** 1. First year students equally benefited from peer tutors vs. course tutors and reported a safe and comfortable environment with peer tutors. 2. Being a tutor might aid in transitioning from 'teacher' medical student to 'teacher' doctor.	VI

					Fisher's exact tests. 4. Framework methodology for qualitative responses.	5. Time management during sessions was a challenge for tutors.		
2) Impact of peer teaching on nursing students: Perceptions of learning environment, self-efficacy, and knowledge/ Brannagan, Dellinger, Thomas, Mitchell, Lewis-Trabeaux, & Dupre/ 2013, *Nurse Education Today.*	**Theory:** 1. Social cognitive theory.	**Purpose:** 1. Examine the impact of peer-teaching learning experiences on nursing students in roles of tutee and tutor in a clinical lab.	**Design:** Descriptive longitudinal design. **Sample:** Tutees N=179 Tutors N=51 **Setting:** South Central University	**Intervention:** 1. After learning postoperative wound care with theory and demonstration a half hour practice lab followed. 2. The intervention group had a faculty member, peer tutor and tutee. 3. The control group had a faculty member and tutee only.	**Measures:** 1. Demographic questionnaire. 2. Cognitive Evaluation to measure knowledge of surgical dressing change procedures (taken before and after intervention). 3. Clinical Learning Laboratory Preference Questionnaire-Instructors (CLLPQ-I). 4. Clinical Learning Laboratory Preference Questionnaire-Peer Tutors (CLLPQ-PT) for intervention group. 5. Tutor's Teaching Experience	**Results:** 1. Tutees were more anxious about the peer tutor being present than the instructor only, possibly due to the fear of being incompetent in the skill. 2. Students received a greater gain in critical thinking and problem solving skills with the instructor than with peer tutors. 3. Tutors said past positive experiences in tutoring motivated them to tutor. 4. Tutors strongly agreed that peer teaching would be of value in their future practice of nursing.	**Conclusions:** 1. Long term benefits include participants will likely seek mentors early in career and become a mentor, thus reducing nurse turnover rates. 2. Tutors increased their interpersonal communication skills.	VI

					Questionnaire (TTEQ) for tutors.	5. Being a tutor will enhance their profession and collaboration among peers.		
3) Leadership Development Through Peer-Facilitated Simulation in Nursing Education/Brown & Rode/ July 10, 2017, *Journal of Nursing Education.*	**Conceptual Framework:** 1. Learning outcomes model. 2. The construct of authentic leadership.	**Purpose:** 1. Explore student satisfaction with Human Patient Simulation (HPS). 2. Developing leadership skills in a peer-facilitated learning environment.	**Design:** Comparative descriptive design. **Sample:** N=79 sophomores N=69 juniors N=62 seniors **Survey response:** 94% sophomores 100% juniors & seniors **Focus groups:** Group 1=6 seniors Group 2=8 sophomores and juniors **Setting**: Midwestern U.S. university	**Intervention:** 1. Senior nursing students led small-group simulation experiences. 2. Seniors conducted debriefing discussions afterwards.	**Measures:** 1. Self-Confidence in Learning Scale (SSLC). 2. Mean scores based on 5-point Likert Scale. 3. Focus groups after peer-facilitated HPS experience.	**Results:** 1. Students enjoyed how senior facilitators taught and promoted a relaxed setting. 2. Seniors had increased confidence as nurse leaders and got out of their comfort zones.	**Conclusions:** 1. Potential for leadership development in simulated clinical environment. 2. Peer facilitated learning increases confidence, satisfaction and leadership opportunities.	VI
4) An exploration of peer-assisted learning in undergraduate nursing students	**Conceptual Framework:** 1. Interpretivist research paradigm.	**Purpose:** 1. Report the findings of a study on peer-assisted learning (PAL) in	**Design:** Qualitative ethnographic approach. **Sample:**	**Intervention:** 1. Non-participant observations of 65 h.	**Measures:** 1. Framework analysis based on tool from Ritchie and Spencer (1994)	**Results:** 1. Peer facilitators develop learning based on their experiences.	**Conclusions:** 1. Future nurse education should consider PAL in clinical settings.	VI

in paediatric clinical setting: An ethnographic study/ Carey, Chick, Kent & Latour/ March 15, 2018, *Nurse Education Today*.		undergraduate nursing students in a pediatric clinical setting. 2. Explore learning development in PAL. 3. Explore if PAL optimizes education in clinical practice. 4. Observe interactions.	Nursing students across two clinical site (purposefully selected) N=17 **Setting:** Two different teaching hospitals within same region of England.		created a matrix output with rows and columns of summarized data. 2. Key themes were drawn from field notes and recorded data of observations.	2. Working together decreases workload and errors. 3. Positive support and interaction enhances networking and working structures as students feel less stressed when they interact with others and form mutual respect.	2. Students have much to gain from each other. 3. Students have complex challenges to overcome when learning in the real world and PAL can contribute to future models of learning.	
5) "Helping someone with a skill sharpens it in your own mind": A mixed method study exploring health professions students experiences of Peer Assisted Learning (PAL)/ Carr, Brand, Wei, Wright, Nicol, Metcalfe, Saunders, Payne, Seubert, & Foley/ January 28, 2016, *BioMed Central.*	No theoretical/ conceptual framework.	**Purpose:** 1. Evaluate effectiveness of PAL training and influence on skills. 2. Gain deeper understanding of students' experiences of PAL in classroom and clinical settings.	**Design:** Mixed methods design. **Sample:** N=149 health professional students across six courses. **Setting:** Faculty of Medicine, Dentistry, and Health Sciences at University of Western Australia.	**Intervention:** 1. Qualitative and quantitative data was collected over 14 weeks of PAL integration in clinical and classroom settings.	**Measures:** 1. Pre PAL survey of six pilot projects. 2. Survey to evaluate training. 3. Direct observation with field notes over 16 hours. 4. Post PAL survey. 5. Post PAL focus group and interview with students. 6. Post PAL focus group with staff.	**Results:** 1. Deeper learning by teaching because had to search data to answer questions. 2. Open to giving and receiving feedback without being defensive and actively listening. 3. Promoted safe informal environment to ask questions and make mistakes without stress. 4. Fostered social network by	**Conclusions:** 1. PAL enhanced learning experience and contributes to future career competence. 2. Training before PAL enhanced peer tutor confidence.	VI

						developing communication skills such as giving constructive criticism to team. 5. Received relevant feedback as peers had similar experiences and were honest.		
6) Peer learning in higher education: Patterns of talk and interaction in skills centre simulation/ Havnes, Christiansen, Bjørk, & Hessevaagbakke / January 27, 2016, *Learning, Culture and Social Interaction.*	**Conceptual Framework:** 1. Erickson's ethnographic approach.	**Purpose:** 1. Identifying core dimensions of the relationship between peer interaction and learning. 2. Explore peer learning in a concrete, local practice in which third year nursing students tutor first year students.	**Design:** Ethnographic approach. **Sample:** N=1 group of 6-9 tutees with 2 tutors. **Setting:** Simulation laboratory at Oslo and Akershus University College of Applied Science, Norway.	**Intervention:** 1. Video record a pre-training group discussion of tutors and tutees about the skill to be performed.	**Measures:** 1. The video recording was transcribed verbatim and four researchers searched patterns based on linguistic cues of how statements related to each other.	**Results:** 1. Patterns of interaction include dispute-exploratory, which was when tutees' engaged in discussions by questioning standard guidelines. 2. Cumulative-exploratory is when tutees and tutors put their ideas together to come up with solutions. 3. Question-and-answer is the most common approach, which is when tutors have pre-specified	**Conclusions:** 1. Although question-and-answer interactions are common in tutoring, it does not allow an active exploration of concepts, as compared to dispute- and cumulative-exploratory interactions.	VI

						answers to questions.		
7) An integrated 2-year clinical skills peer tutoring scheme in a UK-based medical school: Perceptions of tutees and peer tutors/ Khalid, Shahid, Punjabi, & Sahdev/ 2018, *Dovepress.*	No theoretical/ conceptual framework.	**Purpose:** 1. Examine tutees' satisfaction with peer tutoring, how confident they feel being taught by peer tutors, and whether they prefer being taught clinical skills by peer tutors or faculty. 2. Perspectives of peer tutors on own learning and teaching progression.	**Design:** Simple descriptive design. **Sample:** N=48 responses from tutees. N=11 responses from tutors. **Setting:** St. George's Hospital Medical School London, UK.	**Intervention:** 1. After being involved in a two year clinical skills peer tutoring scheme, questionnaires were sent out to tutees and tutors.	**Measures:** 1. Questionnaire with 5-point Likert scale and comment boxes for free text responses sent out via social media platforms and word of mouth. 2. Thematic analysis completed for qualitative data.	**Results:** 1. Preclinical tutees believe peer tutoring is the most effective method of clinical skills learning due to comfortable environment and more personalized teaching than from faculty. 2. Tutees believe peer tutoring prepared them for clinical placements. 3. Tutors felt increased confidence about their skills performance exam and made them consider teaching.	**Conclusions:** 1. Tutees have higher levels of satisfaction, confidence and engagement with peer tutors than faculty.	VI
8) The impact of expert- and peer feedback on communication skills of undergraduate dental students – a single-blinded, randomized, controlled clinical trial/	**Conceptual Framework:** 1. Berlin Global Rating	**Purpose:** 1. Evaluate the effects of individual video-feedback on the communication skills of undergraduate students in dentistry	**Design:** Pretest-Posttest design with nonrandom control group. **Sample:** N=23 peer group	**Intervention:** 1. A simulated patient interview was rated and used as the pre-test. 2. Then real patient interviews were videotaped and	**Measures:** 1. Global rating form was used to measure empathy, degree of coherence, verbal and nonverbal expression from a real and	**Results:** 1. Significant improvement in communication was seen by both groups but no difference between the groups.	**Conclusions:** 1. Communication skills are improved no matter if an expert in communication or peer student is giving the feedback.	III

Krause, Schmalz, Haak, & Rockenbauch/ June 16, 2017, *Patient Education and Counseling.*		influenced by the experience of the feedback provider.	N=23 expert group **Setting:** University of Leipzig, Leipzig, Germany.	students received feedback either from peers (group 1) or from an expert (group 2) a total of three times. 3. Finally, another simulated patient interview was rated as the post test.	simulated patient interview. 2. Pre- and post-tests were compared between peer and expert groups.			
9) Baccalaureate nursing students' perspectives of peer tutoring in simulation laboratory, a Q methodology study/ Li, Petrini, & Stone/December 1, 2017, *Nurse Education Today.*	No theoretical/ conceptual framework.	**Purpose:** 1. Identify the perspectives of baccalaureate nursing students towards peer tutoring in the simulation laboratory.	**Design:** Q-sort methodology **Sample:** N=40 baccalaureate nursing students **Setting:** HOPE School o Nursing, Wuhar University, China.	**Intervention:** 1. Students attended peer tutoring for the first time in a simulation laboratory. 2. Students were interviewed individually for 60 minutes in which they completed a Q-sort chart and expressed their thoughts.	**Measures:** 1. Predesigned Q-sort chart used an 11-point bipolar scale form with a range from -5 (strongly disagree) to +5 (strongly agree) for 58 items.	**Results:** 1. Peer tutors facilitate or empower knowledge acquisition by summarizing simulation experiences and allowing students to ask questions by not being as authoritative as teachers. 2. Tutors provide a safety net and supportive environment by forming friendships with tutees. 3. Tutors act as mentors and role	**Conclusions:** 1. Peer tutoring is a useful supplement for simulation as they share similar learning experiences and create an active learning environment. 2. Formal and informal communication create a supportive safety net.	VI

						models by teaching tutees how to study appropriately and harder. 4. Tutors help translate the simulation experience into clinical reality.		
10) Nursing students' perceptions of effective problem-based learning tutors/ Matthew-Maich, Martin, Hammond, Palma, Pavkovic, Sheremet, & Roche/ November 16, 2016, *Nursing Standard.*	No theoretical/ conceptual framework.	**Purpose:** 1. Explore baccalaureate nursing students' perceptions of what makes an effective tutor in problem-based learning courses. 2. The influence of effective teaching on students' learning, experience, and success.	**Design:** Simple descriptive design. **Sample:** N=511 nursing students completed survey. N=19 students attended focus groups. **Setting:** Nursing program in south-western Ontario, Canada.	**Intervention:** 1. Online surveys were e-mailed to 1,215 students. 2. Seven focus groups were conducted.	**Measures:** 1. The survey included three open ended questions on what makes an effective problem-based learning tutor. 2. Responses from surveys and focus groups were analyzed using descriptive content and thematic analysis.	**Results:** 1. Tutors need to be prepared, knowledgeable and skilled on what they are teaching, and able to lead a group conversation. 2. They need to be person-centered and be interested and care for students' success. 3. They need to be passionate about teaching because this motivates others to learn and engage in their profession. 4. They need to be professional when communicating, and be punctual when coming to sessions.	**Conclusions:** 1. The multifaceted role of problem-based learning tutors is essential on students' motivation to learn. 2. If a tutor is not effective, the session becomes a waste of time.	VI

						5. They need to prepare students for success by showing them what to expect in future classes and bringing the information back to the practice setting.		
11) Promoting interprofessional learning and enhancing the pre-registration student experience through reciprocal cross professional peer tutoring/ McLeod, Jamison & Treasure/ January 31, 2018, *Nurse Education Today.*	**Theory:** 1. Reciprocal peer learning model among physiotherapy and nursing students, developed at Plymouth University.	**Purpose:** 1. Explore experiences of nursing and physiotherapy students in two peer tutored workshops created to increase clinical skills and interprofessional understanding.	**Design:** Descriptive cross-sectional, mixed methods. **Sample:** Nursing students N=67 Physiotherapy students N=53 **Setting:** Plymouth University, UK.	**Intervention:** 1. Two focus groups for attendants of peer tutored workshops. 2. One focused group of tutors. 3. Three personal interviews. 4. Survey before and after workshop.	**Measures:** 1. Focus groups. 2. Interviews. 3. Readiness for Interprofessional Learning Scale questionnaire (RIPLS) using five point Likert scale.	**Results:** Themes of focus groups: 1. Benefits of cross-professional peer tutoring included relaxed environment and knowledge of others' roles in health care. 2. Personal and professional development of tutors. 3. Increased teamwork. 4. Quality of care for patients increases with collaboration among professions. 5. Factors influencing delivery of peer tutoring includes getting more	**Conclusions:** 1. Cross professional peer tutoring helps students learn about others' roles. 2. Improved future collaborative practice. 3. Future possibility of integrating different professions in same clinical class. 4. Tutors build confidence in representing their careers and skills and inspire other students.	IV

						disciplines involved. Quantitative results: 1. Students agreed strongly after tutoring that patients will benefit greatly if clinical skills are learned together.		
12) A peer learning intervention for nursing students in clinical practice education: A quasi-experimental study/ Pålsson, Mårtensson, Swenne, Ädel, & Engström / January 17, 2017, *Nurse Education Today*.	**Theory:** 1. Kanter's theory of structural empowerment (1993). 2. Spreitzer's psychological empowerment theory (1995).	**Purpose:** 1. Investigate the effects of a peer learning model during clinical practice on nursing students' self-rated performance.	**Design:** Quasi-experimental design. **Sample** N=42 nursing students in intervention group answered questionnaires. N=28 nursing students in comparison group answered questionnaires. **Setting:** Clinical practice in Sweden.	**Intervention:** 1. The intervention group formed peer groups on top of receiving traditional supervision during the last two weeks of clinical placement. 2. The comparison group only had traditional supervision.	**Measures:** 1. Baseline questionnaire before intervention, and two weeks later a follow up questionnaire was given. 2. Included Critical Thinking Likert scale, Collaborative Behavior scale, Thriving scale, Nurse-specific Satisfaction with Care questionnaire, Nursing Self-Efficacy scale, Empowerment scale and Conditions of Work Effectiveness questionnaire.	**Results:** 1. The only significant difference between the groups was the intervention group rated their self-efficacy as improved, while the comparison group rated theirs as deteriorating.	**Conclusions:** 1. Peer learning increases nursing students' self-efficacy more than traditional supervision.	III

13) Learning clinical skills in the simulation suite: The lived experiences of student nurses involved in peer teaching and peer assessment/ Ramm, Thomson, & Jackson/ January 27, 2015, *Nurse Education Today.*	**Theory:** 1. Framework method by Ritchie and Spencer.	**Purpose:** 1. Examine first, second and third year nursing student experience of peer teaching and learning initiative, and to find potential advantages and disadvantages. 2. Explore experiences of second and third year nursing student volunteers as peer teachers and assessors.	**Design:** Simple descriptive design. **Sample:** First year students N=13 Second and third year students N=6 **Setting:** Adult Nursing Program, University of Lincoln, UK.	**Intervention:** 1. After peer tutors taught and passed or failed first year students on skills assessment, the study sent out an open-ended questionnaire to all participants.	**Measures:** 1. Open ended questionnaire via survey monkey for first year students. 2. Hard copy of same questionnaire for second and third year students. 3. Data was analyzed using the framework method by Ritchie and Spencer.	**Results:** 1. Students reported the environment was relaxed but professional. 2. Smaller groups were beneficial because cohort peers helped each other out. 3. Tutors realized how frustrating teaching can be and their strengths and weaknesses. 4. Tutors learned how to give constructive criticism and communicate bad news. 5. Tutors formed a strong team with students and became more confident in their teaching skills.	**Conclusions:** 1. First year students enjoyed working with experienced students. 2. Tutors described improved communication skills and professional development. 3. This approach can prepare students for their role as teachers and clinical leaders.	VI
14) The NURSE Center: A peer mentor-tutor project for disadvantaged nursing students in Appalachia/ Ramsey, Blowers, Merriman,	No theoretical/ conceptual framework.	**Purpose:** 1. Assist disadvantaged students in academic success.	**Design:** Observational design. **Sample:** N=21 mentors N=33 mentees N=17 tutors N=69 tutees	**Intervention:** 1. Describe the project, first year of operation and future directions by observing and collecting data from surveys	**Measures:** 1. Exit interviews. 2. Personal opinions of students involved in project.	**Results:** 1. First year exit interviews of tutees indicated they felt prepared, learned content instead of memorizing, understood	**Conclusions:** 1. Peer mentoring and tutoring is a valuable student resource as seen in numerous enthusiastic student comments and tears of joy	VI

Glenn, & Terry/ 2000, *Ovid.*			**Setting:** East Tennessee State University (ETSU).	and student opinions.		content in lay language and through various perspectives in small-group discussions. 2. Tutors solidified their knowledge, felt positive in helping, communicated with various future nurses, explored teaching as a future profession, and exercised leadership.	over passing final examinations.	
15) A peer mentor tutor program for academic success in nursing/ Robinson & Niemer/ September-October 2010, *Nursing Education Perspectives.*	No theoretical/ conceptual framework.	**Purpose:** 1. Describe the outcomes of a peer-based mentor tutor program (PMTP) for at-risk nursing students. 2. Look at course grades to determine outcome differences between control and intervention groups.	**Design:** Descriptive longitudinal design. **Sample:** Mentor-tutors N=17 Mentees N=97 **Setting:** BSN program a Northern Kentucky University.	**Intervention:** 1. Weekly PMTP sessions offered for the first four semesters of nursing courses. 2. Scholarship incentives ($200) were given to mentees if they earned an A or B in class and attended 75% of sessions.	**Measures:** 1. Course grades, including summative and final grades, were compared to a control group that qualified for the program but did not participate. 2. Grade point average (GPA). 3. Attrition rates.	**Results:** 1. Out of 97 mentees, 7 earned A's, 46 earned B's, 36 earned C's, and 8 did not pass the class. 2. Mentees scored higher than the control and class cohorts in beginning medical-surgical nursing exams. 3. Mentees scored better than control group but equivalent to the class cohort	**Conclusions:** 1. Mentor-tutors discovered an interest in a nursing education career. 2. PMTP model can be used at the beginning of any program where attrition is a concern.	IV

						on obstetrical nursing exams. 4. GPA of mentees was 2.8 in comparison to control group 2.76. 5. Mentees accounted for less than 1% of the attrition from nursing courses.		
16) Developing future nurse educators through peer mentoring/ Rosenau, Lisella, Clancy, & Nowell/ 2015, *Dovepress.*	**Theory:** 1. Experiential learning theory.	**Purpose:** 1. Understand how peer mentorship fosters the development of nursing education leadership in senior undergraduate students.	**Design:** Simple descriptive design. **Sample:** N=17 senior undergraduate nursing students. **Setting:** University of Calgary, Canada.	**Intervention:** 1. Senior students enrolled in *Introductory Concepts in Nursing Education and Leadership Through Peer-Led Learning* course taught theory and skills lab three times for 3 hours each. 2. The study analyzed the critical reflections and online discussions after the seniors taught.	**Measures:** 1. Data analyzed using seven-step phenomenological method by Colaizzi. 2. Researchers cross checked each step and findings were confirmed with the seniors to ensure correct interpretation. 3. Critical reflections and online discussions were divided into four themes.	**Results:** 1. Benefits of peer mentorship is being a positive role model, decreasing anxiety and creating a supportive learning environment. 2. Helping others discover their strengths and become leaders themselves. 3. Developed their own teaching philosophies and pedagogies by reflecting on their values and beliefs, which allowed an understanding of various types of learners.	**Conclusions:** 1. Peer mentorship increases leadership and teaching skills. 2. Promotes professional responsibility forming nurse educator leaders of the future.	VI

						4. Learning teaching strategies such as storytelling developed critical thinking skills. 5. Supportive peer relationships decreased anxiety due to similar challenges.		
17) Stepping up, stepping back, stepping forward: Student nurses' experiences as peer mentors in a pre-nursing scholarship/ Smith, Beattie, & Kyle/ March 22, 2015, *Nurse Education in Practice.*	No theoretical/ conceptual framework.	**Purpose:** 1. Explore the experiences of final year student nurses who were peer mentors to aspiring student nurses during a pre-nursing scholarship programme.	**Design:** Simple descriptive design. **Sample:** Peer mentors N=15 **Setting:** University of Stirling, Scotland, UK.	**Intervention:** 1. Each peer mentor (final year student nurse) had one pre-nursing "buddy" over ten months to show them about nursing.	**Measures:** 1. Two focus groups for peer mentors lasting one hour each. 2. Thematic analysis of transcripts was conducted.	**Results:** 1. Stepping up: mentors felt responsible for pupils and had to set up the whole clinical experience by themselves. 2. Stepping back: mentors had to let pupils get out there and not be shy, and learn to communicate with patients on their own. 3. Stepping forward: mentors learned how complex mentoring as a nurse will be.	**Conclusions:** 1. Final year mentors benefitted by affirming their own nursing knowledge and skills, and realized the complexity of their future mentor role. 2. There are mutual benefits for both pupils and peer mentors as one receives help in transitioning into nursing school and the other into becoming a registered nurse.	VI
18) Exploration of the effects of peer teaching of research on	No theoretical/ conceptual framework.	**Purpose:** 1. Increase understanding of the effects of	**Design:** Simple descriptive design.	**Intervention:** 1. Peer tutors from the honors	**Measures:** 1. Questionnaire for learners adapted from a	**Results:** 1. Students understood the research process	**Conclusions:** 1. Peer teaching increases understanding of	VI

students in an undergraduate nursing programme/ Thomson, Smith, & Annesley/ 2014, *Journal of Research in Nursing.*		peer teaching of research in an undergraduate nursing programme.	**Sample:** Peer tutors N=7 Student learners N=151 **Setting:** University of Stirling, Scotland, UK.	program presented their research individually in sessions lasting 45-75 minutes. 2. Questionnaires were given to peer learners afterwards. 3. Five peer tutors attended a focus group.	small group peer-assisted tutorial in engineering, using a 5-point Likert scale. 2. Four open ended questions with the opportunity to comment on additional thoughts by learners. 3. Focus group lasting 90 minutes for peer tutors. 4. Thematic analysis was done for focus group.	better and learned why it is relevant in clinical practice. 2. Students realized that they could also become researchers and that it is achievable. 3. Peer tutoring should have been used earlier in the program. 4. Peer tutors gained self-confidence which promoted a sense of achievement for their research. 5. Tutors evaluated themselves and had personal reflections, and felt empathy for their peers.	research and promotes interest as well as relevance to practice. 2. Peer tutors increased their learning and confidence. 3. Peer teaching is an alternative teaching and learning method.	
19) Peer-assisted teaching: An interventional study/Williams, Olaussen & Peterson/ March 22, 2015, *Nurse Education in Practice.*	**Theory:** 1. Development theory (social interactions) by Vygotsky and Piaget.	**Purpose:** 1. Examine the effects of an educational intervention on students' peer-assisted learning (PAL) experiences as peer teachers.	**Design:** Descriptive cross-sectional design. **Sample:** N= 38 students were peer-teachers Males=68.4%	**Intervention:** 1. Two one-hour workshops were provided to tutors prior to PAL teaching sessions.	**Measures:** 1. Teaching Style Survey (TSS). 2. Participant confidence in public speaking, teaching, and tutorial facilitation based on five	**Results:** 1. Peer teachers set high standards for students. 2. Peer teachers gave negative feedback when performance was unsatisfactory. 3. Peer teachers want students to	**Conclusions:** 1. Peer teachers and students are both learning. 2. The skill of how to teach is important in the paramedic role.	IV

			Age 25 or less= 73.7% **Setting:** Paramedic Bachelor program at Monash University in Australia.		and six-point Likert scale.	leave course well prepared for further work in that area.		
20) Undergraduate nursing student mentors' experiences of peer mentoring in Korea: A qualitative analysis/ Won & Choi/ December 29, 2016, *Nurse Education Today.*	**Conceptual Framework:** 1. Focus group method by Morgan (1998).	**Purpose:** 1. Explore the experiences of mentors. 2. Offer evidence based resources for nursing educators to develop mentoring programs and use mentorship as an educational method.	**Design:** Focus group qualitative design. **Sample:** N=15 nursing student mentors **Setting:** Two nursing schools in South Korea.	**Intervention:** 1. Four focus groups each 60-90 minutes.	**Measures:** 1. Qualitative content analysis of digitally recorded data transcribed verbatim.	**Results:** 1. Core theme was self-growth as a leader by managing and encouraging mentees, solving challenges and reflecting on own skills. 2. Taking pride by becoming responsible, mature, being a role model, feeling accomplishment and dignity. 3. Guiding mentees included studying before teaching and learning in depth by teaching. 4. Coping with challenges with different personalities and	**Conclusions:** 1. Undergraduate mentors develop self-growth and leadership skills.	VI

						unmotivated mentees. 5. Leadership by reflecting on own skills and not blaming mentees for challenges but improving self.		

Table 2

Main Survey Results in Percentages

Survey Question	Participants (Total Number)	Likert Score Result Percentages			
		1-Strongly Disagree	2-Disagree	3-Agree	4-Strongly Agree
1. I believe proficient communication is an important skill for nurses to have.	Tutors (2)	0%	0%	0%	100%
	Non-tutors (18)	0%	0%	5.6%	94.4%
2. It is easy for me to discuss concepts I do not fully understand with peers during discussions.	Tutors (2)	0%	0%	50%	50%
	Non-tutors (18)	5.6%	16.7%	72.2%	5.6%
3. I seek opportunities to come out of my comfort zone.	Tutors (2)	0%	0%	50%	50%
	Non-tutors (18)	0%	22.2%	44.4%	33.3%
4. If I feel misunderstood, I voice my concern immediately.	Tutors (2)	50%	0%	50%	0%
	Non-tutors (18)	5.6%	44.4%	38.9%	11.1%
5. When I do not understand a concept in class, I make sure to ask the	Tutors (2)	0%	0%	50%	50%

instructor for clarification before I leave.	Non-tutors (18)	5.6%	50%	33.3%	11.1%
6. I feel confident in my communication skills.	Tutors (2)	0%	0%	0%	100%
	Non-tutors (18)	11.1%	5.6%	50%	33.3%
7. I often share my life experiences to help others.	Tutors (2)	0%	0%	0%	100%
	Non-tutors (18)	5.6%	16.7%	72.2%	5.6%
8. I feel nervous when I have to speak in public, such as during class presentations.	Tutors (2)	100%	0%	0%	0%
	Non-tutors (18)	16.7%	16.7%	22.2%	44.4%
9. During class presentations, I have trouble remembering what I am supposed to say.	Tutors (2)	100%	0%	0%	0%
	Non-tutors (18)	16.7%	22.2%	33.3%	27.8%
10. When I have a concern with another student, I communicate with them freely about this.	Tutors (2)	0%	0%	50%	50%
	Non-tutors (18)	5.6%	44.4%	38.9%	11.1%
11. I seek opportunities to improve my communication skills.	Tutors (2)	0%	0%	0%	100%
	Non-tutors (18)	0%	16.7%	50%	33.3%

12. If I was given the opportunity to become a charge nurse or to be in another leadership position after my first year of working as a registered nurse, I would take the job.	Tutors (2)	0%	0%	0%	100%
	Non-tutors (18)	11.1%	0%	61.1%	27.8%
13. I feel confident communicating with nurses and health care providers when I am in my clinical site.	Tutors (2)	0%	0%	0%	100%
	Non-tutors (18)	5.6%	11.1%	50%	33.3%
14. I put more effort than my classmates on tests, projects, and assignments.	Tutors (2)	50%	0%	0%	50%
	Non-tutors (18)	16.7%	33.3%	44.4%	5.6%
15. I attend tutoring sessions when I need help with my classes.	Tutors (2)	0%	0%	50%	50%
	Non-tutors (18)	11.1%	44.4%	27.8%	16.7%
16. I often seek insight from instructors on projects and assignments.	Tutors (2)	0%	0%	50%	50%
	Non-tutors (18)	0%	27.8%	55.6%	16.7%
17. I spend time reflecting on my strengths	Tutors (2)	0%	0%	50%	50%

and weaknesses as a student.	Non-tutors (18)	0%	33.3%	55.6%	11.1%
18. I become nervous when I have to give negative feedback to patients and/or classmates when their performance is not proficient.	Tutors (2)	50%	50%	0%	0%
	Non-tutors (18)	5.6%	38.9%	44.4%	11.1%
19. When something does not go as planned, I have a difficult time adapting.	Tutors (2)	50%	50%	0%	0%
	Non-tutors (18)	11.1%	44.4%	38.9%	5.6%
20. I easily translate class and textbook concepts into real patient situations.	Tutors (2)	0%	0%	50%	50%
	Non-tutors (18)	5.6%	27.8%	50%	16.7%

Figure 1: *IRB approval letter (initial)*

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Phone: (423) 439-6053

IRB APPROVAL – Initial Exempt with Limited IRB Review

June 20, 2019

Yelyzaveta Soboleva

RE: The Effects of Nursing School Peer Tutoring on Tutors
IRB#: 0619.13e
ORSPA#:

On **June 20, 2019**, an exempt approval was granted in accordance with 45 CFR 46. 101(b)(2). It is understood this project will be conducted in full accordance with all applicable sections of the IRB Policies. No continuing review is required**. However, an annual administrative check-in must be submitted for this study.**

The exempt approval will be reported to the convened board on the next agenda.

- New exempt submission xform, CV of PI, Tutor and nontutor survey consent version 6/11/19, Tutor informed_consent_template webex version 6/6/19, Tutor in-person focus group consent version 6/11/19, Latest "email for non-tutors" 6/6/19, Latest "email for tutors" 6/6/19, reminder email for non-tutors 6/6/19, Reminder email for tutors 6/6/19, survey monkey email 6/6/19, Questions for focus group, SurveyMonkey questions, survey

Projects involving Mountain States Health Alliance must also be approved by MSHA following IRB approval prior to initiating the study.

Unanticipated Problems Involving Risks to Subjects or Others must be reported to the IRB (and VA R&D if applicable) within 10 working days.

Proposed changes in approved research cannot be initiated without IRB review and approval. The only exception to this rule is that a change can be made prior to IRB approval when necessary to eliminate apparent immediate hazards to the research subjects [21 CFR 56.108 (a)(4)]. In such a case, the IRB must be promptly informed of the change following its implementation (within 10 working days) on Form 109 (www.etsu.edu/irb). The IRB will review the change to determine that it is consistent with ensuring the subject's continued welfare.

Sincerely,
George Youngberg, M.D., Chair
ETSU/VA Medical IRB
Cc: Greta Marek

Accredited since December 2005

Figure 2: *IRB approval letter (modification)*

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IRB APPROVAL – Minor Modification

October 4, 2019

Yelyzaveta Soboleva

RE: The Effects of Nursing School Peer Tutoring on Tutors
IRB #: 0619.13e

On October 4, 2019, a final approval was granted for the minor modification listed below. The minor modification will be reported to the convened board on the next agenda.

- xform modification request to expand my participants from 26, to about 1100. I want to include all of the undergraduate students for my survey, rather than choosing a small group. This will allow me to compare a greater number of nontutors to tutors, and get more diverse results. I also want to remove the email reminders to complete the online survey to BOTH tutors and nontutors. This is because there will be a larger number of participants and it will be easier to manage without the reminder email. Also, the video conference platform for the focus groups has changed from "WebEx" to "Zoom." The College of Nursing has switched to Zoom, so I will use that instead.
- Documents provided:
- -Tutor informed consent (approved version 6/6/19, tracked version, revised version 10/3/19)
- -Tutor in-person focus group consent (approved version 6/11/19, tracked version, revised version 10/3/19)
- -email for tutors (approved version 6/6/19, tracked version, revised version 10/3/19)
- -survey monkey email (approved version 6/6/19, tracked version, revised version 10/3/19)

The **stamped, approved ICD(s)** listed below has been stamped with the approval and expiration date and must be copied and provided to each participant prior to participant enrollment:

• Informed Consent Document(s) Tutor in-person focus group consent version 10.3.19 stamped approved 10.4.2019 ;
Tutor informed_consent_ZOOM version 10.3.19 stamped approved 10.4.2019 ;
Tutor and nontutor survey consent version 6.11.19 stamped approved 6.20.2019

Accredited since December 2005

Federal regulations require that the original copy of the participant's consent be maintained in the principal investigator's files and that a copy is given to the subject at the time of consent.

Unanticipated Problems Involving Risks to Subjects or Others must be reported to the IRB (and VA R&D if applicable) within 10 working days.

Proposed changes in approved research cannot be initiated without IRB review and approval. The only exception to this rule is that a change can be made prior to IRB approval when necessary to eliminate apparent immediate hazards to the research subjects [21 CFR 56.108 (a)(4)]. In such a case, the IRB must be promptly informed of the change following its implementation (within 10 working days) on Form 109 (www.etsu.edu/irb). The IRB will review the change to determine that it is consistent with ensuring the subject's continued welfare.

Sincerely,
Rachel Walden, MLIS, Vice-Chair
ETSU/VA Medical IRB