

Spring 2017

Relationship Between Self-Efficacy and Work Experience in Baccalaureate Junior and Senior Level Nursing Students

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Recommended Citation

Wilson, Mallory and Byers, Taylor, "Relationship Between Self-Efficacy and Work Experience in Baccalaureate Junior and Senior Level Nursing Students" (2017). *Honors Research Projects*. 429.

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Relationship Between Self-Efficacy and Work Experience in Baccalaureate Junior and Senior
Level Nursing Students

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Author Note

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Abstract

Background: New nursing graduates entering the healthcare fields have demonstrated competency with clinical skills during their education. However, limited experience with skill performance can leave them prone to clinical errors. Higher self-efficacy levels increase competency as individuals create higher goals and are more easily able to perform tasks. Therefore, work experience during nursing school may increase nursing students' self-efficacy as they become comfortable performing clinical skills.

Purpose: The purpose of this study is to examine the relationship between employment in health care facilities and self-efficacy of clinical skills in undergraduate nursing students.

Methods: A non-experimental correlational study using convenience sampling, of (N) junior and (n) senior level baccalaureate nursing students. Clinical self-efficacy was measured with the Clinical Skills Self-Efficacy Scale.

Results: Seniors reported greater confidence than juniors. Employment in a healthcare setting as a nursing student increased students' level of confidence for insertion of Foley catheters. The length of time employed and the number of hours worked per week increased the level of confidence for Foley catheters and nasogastric (NG) tubes.

Recommendations: Further research into this topic should include looking at levels of nursing students employed in healthcare settings at different Universities. In addition, confidence is an important concept for nursing students to have when performing their clinical skills, but increased confidence may not always positively correlate with competence. Future studies should explore competence levels of clinical skills for nursing students working in a healthcare setting.

Relationship Between Self-Efficacy and Work Experience in Baccalaureate Junior and Senior
Level Nursing Students

Each year, 30,000 nursing graduates begin practice in the United States (Saintsing, Gibson, & Pennington, 2011). Although new graduates have met the minimum standards of education and passed the state board exam, they may lack knowledge that comes only with daily clinical practice; this lack of practice experience may contribute to increased prevalence of clinical errors in new graduates (Schoening, 2013). Common errors include medication errors such as giving wrong medications or dosages, patient falls, and using incorrect hospital equipment. Nurse errors may lead to patient harm, or, in worse cases, death (Saintsing, Gibson, & Pennington, 2011). In response, new graduates are required to complete extensive hospital orientations. Essential information, policies, procedures, and preceptor experiences with experienced nurses are presented in orientation; however, those less accustomed to institutional procedures and the demand of clinical nursing may be unsure about how to apply the new knowledge (Schoening, 2013). Extended orientations might be beneficial for new nurses, but it is costly to hospitals (Greene, 2010). Costs to orient new nursing graduates range between \$150,000 and \$1,000,000 annually per hospital (Greene, 2010).

It is important that nursing students develop competency in clinical skill performance to be successful upon graduation. Nursing schools provide students with experiences to develop clinical competency and self-efficacy. For example, educational tools such as clinical rotations, simulations, and senior practicums or preceptorships aim to provide students with clinical exposure, patient interaction, and opportunities to increase abilities to communicate effectively with healthcare professionals (Franklin, Gubrud-Howe, Sideras, & Lee, 2015). Researchers have studied the effects of educational tools and have found that nursing students may feel more

confident of nursing skills if they have more exposure to actual patients and clinical settings (Saintsing, Gibson, and Pennington, 2011). Even though researchers have examined how to increase self-efficacy through educational experiences, none have looked to see if there is a relationship between nursing student employment in clinical settings and self-efficacy of clinical skills. Therefore, the purpose of this study is to examine the relationship between nursing student employment in health care facilities and self-efficacy of clinical skills. The study will answer the following questions: (a) Is there a relationship between employment in health care facilities and self-efficacy in clinical skills in junior and senior level nursing students? (b) Is there a difference in the relationship in junior-level nursing students, compared with senior-level nursing students? This study is important because self-efficacy is related to clinical competency and perceived ability to perform skills increases as confidence in eliciting those skills increases (Bandura, 1997).

Review of Literature

Development of Clinical Skills

Clinical skills laboratories and low-fidelity simulation. Essential parts of baccalaureate nursing curriculum focus on student development of clinical skills and competencies (Ewertsson, Allvin, Holmstrom, & Blomberg, 2015; 2013; Ironside, McNelis, & Ebright, 2014; see Appendix E). In addition to classroom lecture, different strategies to educate students in the realm of clinical practice are implemented throughout undergraduate nursing programs. Clinical skills laboratories (CSL) are where students initially begin to practice clinical skills through simulations. Simulations are artificial representations of a real world process to achieve educational goals through experimental learning (Ewertsson et al., 2015; Rushton, 2013). The CSL facilitates low-fidelity simulation in which students practice clinical skills on task-trainers

such as fake arms for IV starts or phlebotomy (Ewertsson et al., 2015), and traditional mannequins for dressing changes, nasogastric tube, and Foley catheter insertion (Wotton, Davis, Button, & Kelton, 2010). Low-fidelity simulation also includes the use of role-play with standardized patients. Standardized patients (SP) are volunteers who act out given scenarios while the students assess and care for them (Ewertsson et al., 2015). SPs are used to teach students clinical skills such as interpersonal communication, history taking and interviewing, psychological assessments, and patient education (Ewertsson et al., 2015).

High fidelity simulation. A more realistic and sophisticated form of technology is used in high-fidelity simulation (Rushton, 2015). These simulations use technologically advanced manikins called SimMans (Roh, Kim, & Kim, 2013). These machines are manipulated by simulation facilitators (Lewis & Ciak, 2014) and are capable of breathing, talking, and coughing (Wotton et al., 2010). Students can assess lung sounds, bowel sounds, and heart sounds (Rushton, 2015). The operator of the SimMan can create scenarios such as anaphylactic reactions, cardiac arrest, respiratory distress (Rushton, 2015; Roh et al., 2013), and death (Venkatasalu, Kelleher, & Shao, 2015). Simulation gives students the opportunity to learn new information and problem solve in a nonthreatening, safe environment (Rushton, 2015; Wotton et al., 2010).

Clinical rotations and preceptorships. Lastly, nursing curriculum utilizes clinical rotations and preceptorship experiences in acute care and chronic care settings to advance clinical practices (Dobrowolska et al., 2015). In clinical settings, students apply what they learned from the CSL, SPs, and high-fidelity simulations to actual patient care (Ironside et al., 2014). Generally, students start clinical rotations during the second semester of the first year of nursing school (Dobrowolska et al., 2015). Depending on the college or school of nursing,

students spend seven to twelve hours a week caring for one assigned patient (Dobrowolska et al., 2015; Ironside et al., 2014). During clinical experience, five to ten students are assigned per nursing instructor (Ironside et al., 2014); however, during senior year preceptorships, students gradually assume the total nursing role for more patients while being supervised by registered nurse preceptors (Kim, Lee, Eudey, & Dea, 2014).

Establishing Competency of Skills

Researchers have examined the impact of low and high fidelity simulation, preceptorship, and clinical rotations on self-efficacy and confidence of clinical skills in nursing students. Self-efficacy is one's belief in how competent he or she may be in a given situation. Increased feelings of self-efficacy is associated with an increased capability of performing clinical skills (Karaback, Serbest, Onturk, Aslan, & Olgun, 2013; Jones & Sheppard, 2011). Self-efficacy develops when one performs a behavior or task, observes behavior, receives feedback from instructors, and is able to control stress or anxiety while performing a task (Karaback et al., 2013).

Clinical skills labs. Researchers have found that students report that clinical skills labs and low fidelity simulation contribute to their learning (Ewertsson et al., 2015; Morrell & Ridgway, 2014). For example, the labs have been found to allow students opportunities to rehearse their skills until they feel comfortable, and students learn from their mistakes without causing harm to patients (Ewertsson et al., 2015). Practicing skills such as IV and Foley catheter insertions in controlled settings has reduced student anxiety in the clinical setting (Morrell & Ridgway, 2014). Further, repeated practice has led students to familiarity with equipment that they will be using in practice (Ewertsson et al., 2015). Researchers have found that students have been able to reflect on their skills in labs, discuss with instructors how to improve, and practice

communication (Ewertsson et al., 2015; Morrell & Ridgway, 2014). Skills labs have also provided students with increased understanding of why skills should be completed in certain ways and what complications might arise if they are done improperly (Ewertsson et al., 2014). Overall, repetition of specific skills has been found to lead students to feel more prepared for clinical settings (Ewertsson et al., 2015; Morrell & Ridgway, 2014).

High-fidelity simulation. Researchers have found that high fidelity simulation improves clinical reasoning skills in nursing students (Wotton et al., 2010), as well as psychomotor, communication, and documentation skills (Venkatasalu, Kelleher, & Shao, 2015). Studies have shown that high-fidelity simulation prepares students for real life clinical situations. During simulations, students must analyze, interpret, and respond to cues. Wotton, Davis, Button and Kelton (2010) found that nursing students think critically, make decisions, and apply knowledge that they have learned in the classroom to a semi-real situation. Further, simulations have been found to increase confidence and knowledge because students were able to see how their interventions affected the SimMan, and then understand what actions would be required of them if these situations occurred in clinical settings (Wotton et al., 2010; Venkatasalu et al., 2015). Following simulations, students have reported greater feelings of confidence about the simulations and felt more comfortable for future clinical rotations (Rushton, 2015; Wotton et al., 2010). Researchers have found also that simulations, especially those about death and dying, have helped mentally prepare students for the reality of death (Venkatasalu et al., 2015). Compared to lecture based learning, high-fidelity simulation has better prepared nursing students to recall what they learned in simulations and apply it to practice (Roh et al., 2013; Venkatasalu, et al., 2015). High-fidelity simulation ensures exposure of concepts and situations that students might not encounter during clinical rotations, but will encounter when they are registered nurses

(Wotton et al., 2010). Students are more likely to have increased self-efficacy if they have practiced clinical skills and have learned how to think critically through clinical situations (Rushton, 2015; Venkatasalu et al., 2015; Wotton et al., 2010).

Clinical rotations and preceptorships. Clinical rotations and preceptorships have been found to prepare students to transition into real clinical practice upon graduation (Dobrowolska et al., 2015). Students have reported that with each clinical rotation, they become more confident in their psychomotor and communication skills (Dobrowolska et al., 2015; Ironside et al., 2014). During their rotations, students have become more confident with patient conditions because they have opportunities to observe and assist with real patient care (Ironside et al., 2014). Studies show that students report greater feelings of self-efficacy after performing skills on patients in the clinical settings and more confident the next time they perform that skill (Kim, Lee, Eudey, & Dea, 2014). Preceptorship increases students' confidence by allowing them to fulfill the role of nurses before actually becoming a nurse. Further, preceptorship has been found to give students a glance of what will be expected of them upon becoming new nurses (Kim et al., 2014). Students who participate in preceptorship programs have been found to be more confident to become nurses and report greater feelings of self-efficacy and self-esteem. Studies show that preceptorships increase students' levels of independent functioning (Wieland, Altmiller, Dorr, & Wolf, 2007; Kim et al., 2014). After completing preceptorships, students have reported feeling more accomplished in their abilities to provide patient-centered care with sensitivity, empathy, and respect (Kim et al., 2014).

Gaps in Knowledge

Although many researchers have examined how clinical education effects self-efficacy and clinical skills in nursing students, few have examined clinical job experience and self-

efficacy levels in junior and senior level nursing students. Self-efficacy develops as a result of observation and performance of specific tasks. Having jobs in clinical settings may give students more opportunities to observe patient centered care. Research shows that there are associations between clinical education and students' feelings of self-efficacy as a result of repetition of skills and exposure to clinical situations. Students who have clinical job experience are possibly exposed to clinical situations that they might remember and from which they learn. Therefore, they might be more comfortable in clinical settings since they are exposed to them more often.

Theoretical Framework

Self-efficacy is the degree of belief a person has in their skills and ability to perform those skills (Bandura, 1997). Bandura's self-efficacy theory states that self-efficacy creates changes in people's lives by affecting them in four major areas: cognitive, motivational, mood, and affect (1997). In the cognitive area, a higher level of self-efficacy increases the possibility of a successful outcome in goals that people set because higher self-efficacy levels allow an individual to trust more in one's skills and not focus on doubts or possible problems preventing success. Lower levels of self-efficacy in the cognitive area cause an individual to worry and focus on "ways in which things might go wrong" (Bandura, 1997, p.4). Self-efficacy levels in the motivational area can determine whether individuals are highly motivated and set reachable goals for themselves, as seen with high levels of self-efficacy, or whether individuals are not very motivated and are not able to cope well with setbacks, as seen in low levels of self-efficacy (Bandura, 1997). Mood and affect are closely linked within this theory and self-efficacy determines an individual's coping ability in this area. With mood and affect, if an individual has high levels of self-efficacy, he or she is more easily able to handle threats and stressors that may prevent the completion of a goal. The person is also willing to ask others for support to reach his

or her goal as they are more confident in their abilities and performance of tasks (Bandura, 1997). Individuals with low self-efficacy in contrast are not easily able to handle threats, often do not ask others for help, and are more often unable to complete goals as they do not have confidence in their ability to reach their goals and perform tasks (Bandura, 1997).

Bandura's Self-Efficacy Theory (see Appendix F) says that people with high self-efficacy are more easily able to perform tasks and reach goals they have set for themselves. We expected to find that junior and senior level nursing students who have worked in clinical settings would have higher levels of self-efficacy in their skill performance. We believed these students were more likely to have set goals for themselves, performed these skill tasks, or watched others perform the skills, compared to junior and senior level nursing students who have not worked in clinical settings. As students who work in clinical settings may have more exposure to situations in which clinical skills must be utilized, we expected to see higher levels of self-efficacy in students who have worked or are working in clinical settings than in students whose only exposure to clinical settings has been during clinical education. We expected to see a measurable difference in the levels of self-efficacy between students who have worked in acute care clinical settings as compared to students who have worked in chronic or long-term care facilities. Students in acute care settings may be more likely to experience a diversity of situations in which their skills must be tested.

Methods

Design

This research study was a non-experimental, descriptive, and correlational study using convenience sampling. A survey (see Appendix C) was emailed to junior and senior level traditional nursing students currently enrolled in the baccalaureate nursing program at the

university. In the spring semester of 2016, this proposal was submitted to the university IRB in order to obtain approval of the study protocol. No recruitment emails or surveys were distributed until approval was obtained.

Setting and Sample

The university was a public university located in the Midwest of the United States of America. This university had approximately 25,000 students attending annually and was in an urban setting. The College of Health Professions included a school of nursing. The school was comprised of doctoral and masters graduate programs, as well as baccalaureate programs. Baccalaureate programs included traditional, accelerated, and RN/BSN tracks. The setting was in a baccalaureate nursing program at a large urban public university in the Midwest of the United States. The total number of students at this university for 2013 was 22,122. The number of students in the school of nursing in 2013 was about 1,000 including undergraduate and graduate. There were about 400 graduate students in the nursing program; the types of nursing programs for graduate students were PhD, CRNA, and DNP programs. The undergraduate students made up about 600 students and the undergraduate programs included traditional baccalaureate (BSN) (468), RN to BSN, accelerated, and LPN to BSN.

The sample included junior and senior level traditional nursing students. No subjects were excluded based on ethnicity, race, gender, and age, as long as they were at least 18 years old. Inclusion criteria were: current enrollment as traditional student in the baccalaureate traditional track, junior or senior level standing, and 18 years and older.

Sampling Procedure

A convenience sample was obtained through the use of three waves of recruitment emails (see Appendix D). Each wave was sent out of the college's office of student success. To

maximize response rate (Dillman, Smyth, & Christian, 2014), three waves of recruitment emails were sent approximately three weeks apart. Recruitment emails included a basic description of the study and participation expectations. Potential subjects were then directed to the online survey, where they read the introduction letter describing the study, criteria for participation, and participation expectations, time burden, and rights (see Appendix A). Once potential subjects agreed to participate in the study and gave informed consent, they completed the survey items. Completed and submitted surveys conveyed informed consent.

Data Collection Procedures

As described above, the first page of the online survey was an introductory letter. Following the introductory letter was a page asking subjects to respond to items about their demographics, such as gender, age, whether they currently work, work in a healthcare field, work in acute or chronic care, how long they have worked in their current job, and how many hours per week they work (see Appendix B). After filling out demographic items, subjects were asked to fill out the self-efficacy in clinical skills items (see Appendix C). Online data collection was programmed so subjects were able to move forward and backward through the survey, as well as progress through the survey without responding to every item. Further, to maintain anonymity, no items asked subjects to provide any identifying information. It was estimated that subjects would take approximately 15 minutes to complete the survey, and a symbol was inserted into the survey to show subjects to which extent they had completed the survey. After subjects submitted surveys, results were received via Qualtrics in the form of an Excel spreadsheet. These results were downloaded and stored in a password-encrypted Excel file on the co-investigators' computers in order to protect the confidentiality of the students' answers. The co-investigators and project sponsor were the only individuals with access to the file. The dataset was deleted

once the study was completed. All reports about the study included aggregated data findings, and there was be no way to connect subjects with their data.

Measures

Self-efficacy of clinical skills was measured with the Clinical Skills Self-Efficacy Scale. Permission was obtained to use this tool from its author via email. This tool was a 9 item tool in which subjects were asked to respond to each question on a 0-10 Likert scale with zero equaling no confidence and ten equaling total confidence in ability to perform the task in question. Each item in the tool was an ordinal level of measurement. Examples of items included: How confident are you right now that you can independently administer an intramuscular injection; How confident are you right now that you can insert a nasogastric tube with correct placement?; How confident are you right now that you can independently hang an intravenous piggyback medicine and program the pump accurately? Self-efficacy ratings from each question were summed and coded as total clinical skill self-efficacy. These ratings were entered into correlation software to calculate total clinical self-efficacy scores. A content validity index (CVI) “above .80 was found for all items by the panel of clinical experts, indicating content validity for all of the items on the scale. Cronbach alphas for the four subscales were found to be as follows: Subscale 1 (items 1, 2, 4, 6), .70; Subscale 2 (Items 7, 8), .88; Subscale 3 (Items 3, 10, 14), .54; Subscale 4: Items 12, 13), .64. Scales with reliability estimates greater than or equal to .70 were considered to have internal consistency” (Oetker-Black, Kreye, Underwood, Price, & DeMetro, 2014, p.255).

Work experience in clinical settings was measured with six questions found on the demographics page. Examples of work experience questions students were asked to identify included: Are you employed in a healthcare setting? How long in number of months have you

been employed in this healthcare setting? How many hours do you work per week in this healthcare setting? Identification of work in clinical settings, length of time working in that setting, and number of hours worked per week in that setting were measured at the interval level of measure. Whether or not the care setting is an acute care setting or a chronic care setting, whether or not the student works, and whether or not the job of the student who works is in a healthcare setting were measured at the nominal level of measure. These answers were entered into correlation software to calculate measures of central tendency for the interval measures and to determine relationships between the nominal levels of measure items.

Demographic variables were measured as gender at the nominal level of measure (female or male), age at the interval-ratio level of measure (number of years), race/ethnicity at the nominal level of measure (white/Caucasian, black/African American, Hispanic/Latino, Asian, or other), marital status at the nominal level (single, married, separated, widowed, divorced), and current grade level at the ordinal level (junior, senior). These answers were entered into correlation software in order to determine relationships with the research variables.

Data Analysis Procedures

Data from the survey was imported into SPSS for analysis. This statistical analysis software program was used to generate descriptive statistics about the sample and variables. The first research question was: Is there a relationship between employment in health care facilities and self-efficacy in clinical skills in junior and senior level nursing students? Pearson's correlation coefficients were used to calculate relationships between self-efficacy scores and employment status, duration at the site of employment, and whether the employment facility deals in acute or chronic care. The second research question was: Is there a difference in the relationship in junior-level nursing students, compared with senior-level nursing students?

Pearson's correlation coefficient was used to calculate any likenesses or differences between the two grade levels of students in the relationships described above. Further analysis was performed based on guidance from the study's sponsor. Level of statistical significance was set at p-values less than 0.05.

Results

Table 1 shows the demographics of the 86 students in the sample. The seniors and juniors had similar demographics in regards to age, race, marital status, and employment. More seniors worked in acute healthcare settings than juniors, while juniors worked in chronic health care settings more than seniors. Senior nursing students had been employed in health care longer than juniors and also worked more hours per week.

Table 1
Demographics of Junior and Senior Nursing Students

| Demographics | | Juniors (n=49) | Seniors (n=37) |
|----------------------|---------|---------------------------|---------------------------|
| Age in Years | | 21 | 22 |
| Sex | Male | 6 (12%) | 2 (5%) |
| | Female | 43 (88%) | 35 (95%) |
| Race | White | 47 (96%) | 36 (97%) |
| | Other | 2 (4%) | 1 (3%) |
| Marital | Single | 47 (96%) | 35 (95%) |
| | Married | 2 (4%) | 2 (5%) |
| Employed Yes | | 44 (90%) | 35 (95%) |
| In Healthcare? | | 23 (52%) | 24 (68%) |
| Acute HC? | | 15 (65%) | 22 (88%) |
| Chronic HC? | | 9 (39%) | 2 (8%) |
| Months of Employment | | 4.79 (mean) | 6.92 (mean) |
| Hours per week | | 7.16 (mean) | 12.76 (mean) |

Table 2 compares the significance of junior and senior nursing students' confidence levels of clinical skills. Both juniors and seniors had high mean levels of confidence for IM injections, insulin administration, sterile dressing changings, IV insertion, and patient transfer. Both groups had lower confidence scores for Foley catheter insertion, NG insertion, IVPB

administration and PEG tube feedings. In addition, there was a significant difference in confidence for these lower scored skills with the seniors claiming more confidence than the juniors.

Table 2
Confidence of Clinical Skills

| Confidence of Skill | t-test | Significance | Mean Junior | Mean Senior |
|----------------------------|---------------|---------------------|--------------------|--------------------|
| IM | -1.463 | 0.147 | 8.73 | 9.43 |
| Insulin | -0.256 | 0.799 | 9.47 | 9.59 |
| Sterile | -1.565 | 0.121 | 7.02 | 7.86 |
| Foley | -3.383 | 0.001 | 5.41 | 7.46 |
| NG | -2.143 | 0.035 | 3.65 | 4.92 |
| IV start | -1.443 | 0.153 | 6.24 | 7.03 |
| Transfer | -0.258 | 0.797 | 9.31 | 9.43 |
| IVPB | -3.012 | 0.003 | 5.98 | 7.84 |
| PEG feed | -3.844 | 0.000 | 4.73 | 7.22 |

Table 3 compares skills that juniors and seniors have actually performed in a clinical setting. Seniors reported doing more IM injections, Foley insertions, and dressing changes than junior students. The skill that had been performed the most by both juniors and seniors was an IM injection.

Table 3
Percentage of Juniors and Seniors Who Have Done the Clinical Skill

| Skill Performed | Juniors | Seniors |
|------------------------|----------------|----------------|
| IM | 76% | 95% |
| Foley Insertion | 20% | 57% |
| Dressing Change | 43% | 62% |

Table 4 shows a correlation between-doing a clinical skill and level of confidence one has with that skill. Juniors and seniors were compared. For juniors, there was a significant, moderate, positive correlation between performing Foley catheter insertion and dressing changes and confidence. For seniors, there was a significant, moderate, positive correlation between performing IM injections, Foley catheter insertion, and dressing changes and confidence.

Table 4
Performing a Clinical Skill and Associated Confidence

| Clinical Skill Juniors | Pearson | Significance |
|-------------------------------|----------------|---------------------|
| IM | 0.142 | 0.330 |
| Foley Insertion | 0.543 | 0.000 |
| Dressing Change | 0.41 | 0.004 |
| Clinical Skill Seniors | | |
| IM | 0.528 | 0.001 |
| Foley Insertion | 0.533 | 0.001 |
| Dressing Change | 0.622 | 0.000 |

Table 5 identifies relationships between confidence levels in skill performance of all students and the number of months they have been employed in a healthcare setting as well as the number of hours the student works per week. There was a small, positive, significant relationship between months of employment and confidence in Foley catheter insertion. There was a small, positive, significant correlation between hours worked per week and confidence in performing Foley insertion and NG insertion.

Table 5
Confidence levels of students correlated with months of employment in healthcare and hours of employment in healthcare per week

| Skills | Pearson | Significance |
|--|----------------|---------------------|
| <i>Months of Employment in Healthcare</i> | | |
| Insulin | 0.008 | 0.944 |
| Dressing | 0.157 | 0.153 |
| Foley | 0.319 | 0.003 |
| NG | 0.171 | 0.121 |
| IV | 0.100 | 0.363 |
| Transfer | 0.176 | 0.109 |
| IVPB | 0.066 | 0.549 |
| Peg | 0.114 | 0.301 |
| <i>Hours Worked per Week in Healthcare</i> | | |
| Insulin | -0.063 | 0.576 |
| Dressing | 0.077 | 0.492 |
| Foley | 0.397 | 0.000 |
| NG | 0.390 | 0.000 |
| IV | 0.188 | 0.092 |
| Transfer | 0.202 | 0.071 |
| IVPB | 0.016 | 0.889 |

| | | |
|-----|-------|-------|
| Peg | 0.106 | 0.345 |
|-----|-------|-------|

Discussion

Demographics

Participants in the study represented the normal nursing student population: young adult white, single women.

Confidence of Clinical Skills

Intramuscular injections, insulin injections, sterile dressing changes, and transfers are practiced often in clinical skills labs. Student nurses are often encouraged to practice these in the clinical setting as well, and have multiple opportunities to do so. This can explain the higher mean value for juniors and seniors in regard to these skills. As seniors have completed more clinical rotations than juniors, they have had more opportunities to perform these skills than juniors. The mannequins in the high-fidelity simulations, while advanced, may not be completely realistic when it comes to performing more advanced skills such as Foley or NG insertion. While clinical instructors may encourage students to place these tubes or perform these more advanced skills, students may not feel as comfortable placing these invasive devices in an actual patient who will respond to the process.

Percentage of Juniors and Seniors Who Have Done the Clinical Skill

Seniors have had more clinical time and thus have had more opportunities to perform IM injections, Foley catheter insertion, and dressing changes. This can explain why the seniors had a higher percentage of performance of all three skills when compared to juniors.

Performing a Clinical Skill and Associated Confidence

A small positive correlation was found between performance of the skill and confidence, with the exception of IM injections for juniors. IM injections are very invasive, and their purpose

varies including the administration of vaccines, antibiotics, pain medications, vitamin supplements, and others. As each injection can be uniquely different, more would be needed to increase confidence. Various drugs administered through IM injections require further education and experience.

Confidence Levels of Clinical Skills Related to Employment in Healthcare

Regarding the relationship of work experience and skill confidence, a small positive correlation between months of employment in healthcare and confidence with Foley insertion was noted. Many nursing technician positions allow employees to do Foley insertions after they have demonstrated competence in school. Therefore it is likely that the longer a student is employed the more chance they have had to get experience with the skill. IMs and dressing changes are not usually the scope of practice for nursing student technicians; therefore, employment would not increase their confidence with these specific skills.

NG insertion confidence was also positively correlated with hours worked per week. Many nursing technician positions do not include NG management in the scope of practice. Working more hours per week in the healthcare setting will increase the exposure of NGs and the nursing interventions associated with them. The increased exposure to NGs may increase a student's level of confidence.

Conclusion

Key Findings

Participants represented in this study reflected a normal nursing student population for Northeast Ohio. Senior students were much more confident than junior students. Those students who worked in healthcare settings had more confidence with those skills they were capable of

performing in their scope of practice. The length of employment in and hours worked per week had a minor effect of increasing students' confidence.

Limitations

The findings of this study are limited due to a small sample size that lacks diversity. The participants who worked in healthcare settings had varied opportunities that were not identified through the study.

Further Research

Further research into the difference in confidence between varying programs, or research into the overall population of nursing students nationwide, may show different results than were found in this study. Other schools and their diverse nursing programs should be included in a later study to see how confidence differs among universities. It is also necessary to research whether confidence in performing a skill leads to increased competence and proficiency. While this study was based on Bandura's theory of self-efficacy saying that there is a correlation between confidence and competency, it does need to be researched more thoroughly. A student may be confident in a skill, but in order to ensure patient safety and positive health outcomes, the student needs to be competent in performing that skill.

Timeline

This proposal was submitted to the University of Akron Honors College for approval in late April, 2016. Readers for this study were contacted and included Cheryl Owen, MSN, RN, CNS, OCN, and Lori Kidd, PhD, RN, CNS. The sponsor for this project was Carrie Scotto, PhD, RN. Once the project received approval from the Honors College, submission to the IRB followed. Submission to the University of Akron's IRB occurred in early May, 2016. Enrollment for the senior honors project independent study occurred in April, 2016, and was completed

during the Fall semester of 2016 and Spring Semester of 2017. Data was collected during September, October, and November of 2016 and analyzed throughout November and December of 2016. The results and discussion of the study were written in late March and early April of 2017.

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Appendix A

Informed Consent Form

Title of Study: Relationship Between Self-Efficacy and Work Experience in Junior and Senior Level Nursing Students

Introduction: You are invited to participate in a research project being conducted by Taylor Byers and Mallory Wilson, junior nursing students in the College of Health Professions, School of Nursing at The University of Akron.

Purpose: The purpose of this study is to examine the relationship between employment in health care facilities and self-efficacy of clinical skills in undergraduate nursing students.

Procedures: If you agree to participate in this study, you will be asked to complete a short, online survey about work experience and self-efficacy of clinical skills. It will take about 15 minutes to complete the survey. Additionally, you will be asked to give some information about your gender, race/ethnicity, age, marital status, whether you currently work, and if so, whether you work in a healthcare field, work in acute or chronic care, how long you have worked in your current job, and how many hours per week you work. You will not be asked to give any identifying information at any time.

You are eligible to participate in the study if you are a junior or senior enrolled in traditional undergraduate nursing program and at least 18 years old. You are not eligible if you are an accelerated nursing student or a student in the RN/BSN, LPN/RN, or graduate nursing programs. No persons will be excluded based on gender, ethnicity, race, sexual orientation, marital status, or age as long as they are 18 years or older.

Benefits and Risks: You will receive no direct benefit from your participation in this study, but your participation may help us better understand the relationship between employment in health care facilities and self-efficacy of clinical skills in undergraduate nursing students. There are no known risks to completing this survey, however in the unlikely event that any risk is incurred from participation counseling is available at The Counseling Center (see below). Although we hope you respond to every item on the survey, whether or not you do is up to you. Because no identifying information is collected in the survey and because survey distribution and submission occur anonymously and online, there is very minimal risk of participant identification. You will complete the survey at your leisure and in a comfortable, secure, and private environment. In case you feel the need to talk with a counselors and health care provider after completing this survey, please contact: (1) The Counseling Center, Simmons Hall 306, Phone: 330-972 7082, Website: <http://www.uakron.edu/counseling/> and/or (2) Student Health Services, Student Recreation and Wellness Center, Suite 260, Phone: 330-972-7808 Website: <http://www.uakron.edu/healthservices/>

Right to refuse or withdraw: Participation is voluntary. Refusal to participate or withdraw from the study at any time will incur no penalty. Failure to participate in no way affects your academic standing.

Anonymous and Confidential Data Collection: No identifying information will be collected, and your anonymity is further protected by not asking you to sign and return the informed consent form.

Confidentiality of Records: Data are collected with an online survey. The survey is loaded into Qualtrics, an electronic survey software program. You will complete the survey electronically and at your own convenience. Electronic survey completion means that data are automatically

entered into a data set. Disconnecting participants from their surveys is also related to protection of human participants.

Who to Contact with Questions: If you have any questions about this study, you may contact Taylor Byers (tjb118@zips.uakron.edu), Mallory Wilson (mjw132@zips.uakron.edu), or Carrie J. Scotto, PhD, RN (Associate Professor, Sponsor) at (330) 972-7885 or cscotto@uakron.edu.

This project has been reviewed and approved by The University of Akron Institutional Review Board. If you have any questions about your rights as a research participant, you may call the IRB at (330) 972-7666.

Acceptance & Signature: I have read the information and voluntarily agree to participate in this study. My completion and submission of this survey will serve as my consent. I may print a copy of this consent statement for future reference.

You may now begin the survey!

Appendix C

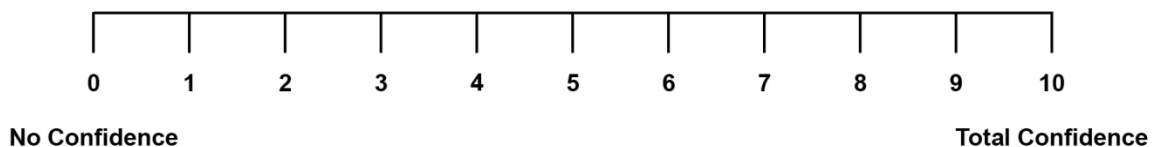
Clinical Skills Self-Efficacy Scale

DIRECTIONS: This questionnaire should take no more than 10-15 minutes to complete.

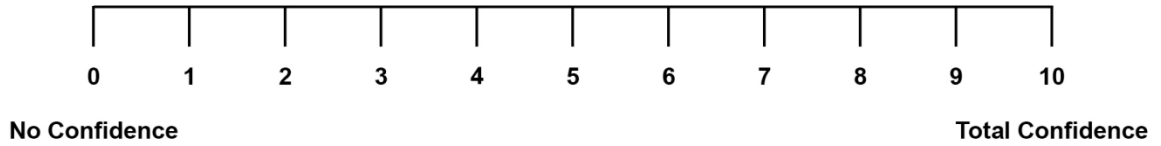
Each of the statements below is written so nursing students can describe their perceptions of their confidence in performing certain skills that they are routinely expected to do in their clinical settings.

Please **circle the number** that identifies how confident you are **right now** of your ability to perform each of the behaviors. Remember there is no right, or wrong answers but it is very important that you answer the questions honestly.

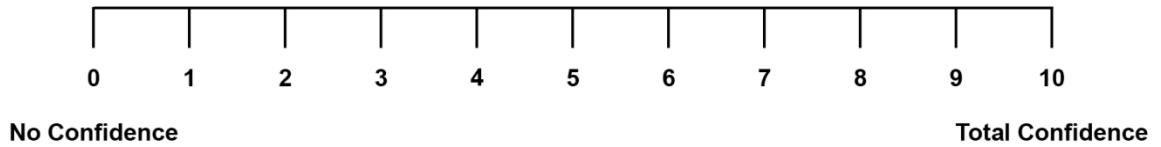
1. How confident are you **right now** that you can independently administer an intramuscular injection?



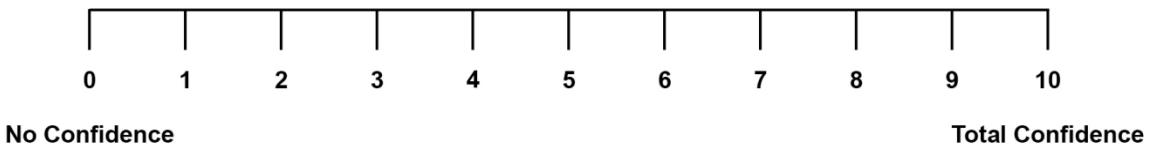
2. How confident are you **right now** that you can independently administer an insulin injection?



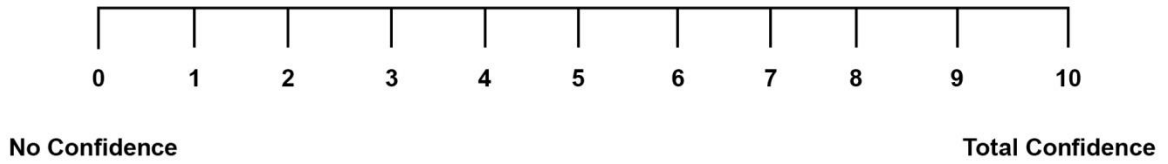
3. How confident are you **right now** that you can independently change a dressing maintaining sterile technique?



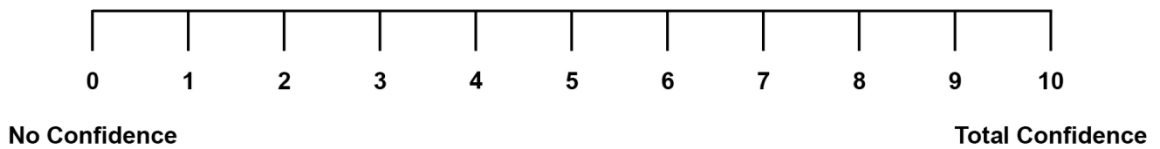
4. How confident are you **right now** that you can independently insert a Foley catheter using sterile technique?



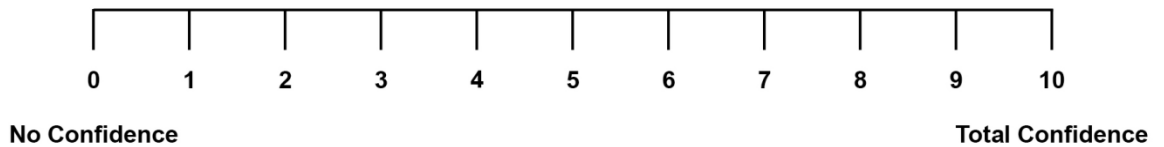
5. How confident are you **right now** that you can insert a nasogastric tube with correct placement?



6. How confident are you **right now** that can independently start an intravenous line?



7. How confident are you **right now** that you can correctly transfer an immobile patient from bed to chair using correct technique?



8. How confident are you **right now** that you can independently hang an intravenous piggyback medicine and program the pump accurately?



9. How confident are you **right now** that you can administer a tube feeding through a PEG tube using correct technique?



Before finishing this questionnaire, please fill in all of the blank spaces in this section:

1. What is your age? _____

2. Male _____ Female _____

3. Clinical course currently enrolled in _____

4. Have you ever administered an intramuscular injection?
Yes _____ No _____

5. Have you ever changed a dressing using sterile technique?
Yes _____ No _____

6. Have you ever inserted a Foley catheter?
Yes _____ No _____

Thank You for completing this questionnaire!

Today's Date _____

Appendix D

Hello Junior and Senior Nursing Students!

You are invited to participate in a nursing honors research project entitled “Relationship Between Self-Efficacy and Work Experience in Baccalaureate Junior and Senior Level Nursing Students”. This study is by senior nursing students Taylor Byers and Mallory Wilson at The University of Akron. If you are interested in participating, go to [online survey site to be completed at later date] to learn more and complete the online survey, which should take about 15 minutes to complete. All data are collected anonymously.

Thank you in advance for your time and commitment to supporting research by undergraduate students in our nursing program! We appreciate your time and support!

Taylor Byers and Mallory Wilson

Appendix E

Research Review of Literature Summary Table

| | | | | | | | |
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| <p>1. Dobrowolska, B., McGonagle, I., Jackson, C., Kane, R., Cabrera, E., Cooney-Miner, D., & Palese, A. (2015). Clinical practice models in nursing education: implication for students' mobility. <i>International Nursing Review</i>, 62(1), 36-46 11p. doi:10.1111/inr.12162</p> | <p>>Problem: The increasing prevalence of international mobility of qualified nurses causes confusion and error when nurses travel to different areas/hospitals</p> <p>>Purpose statement: To describe and compare models of clinical education among different countries</p> <p>>Research question: How do different countries conduct clinical rotations, and do students feel about how they are conducted?</p> | <p>>Theoretical Framework: Clinical nursing education is aimed at the development of professional competencies based on acquire theoretical knowledge and the development of personal characteristics such as the capacity for reflection</p> | <p>>Design: Qualitative; Descriptive</p> <p>>Site: Annual meeting in Belgrade, 2011</p> <p>>Population: UDINE-C members</p> <p>>Sampling method: Convenience</p> <p>>Sample size: Eleven members from the UDINE-C network</p> | <p>>Independent variable: Different nursing programs across the country</p> <p>>Dependent: Nursing curriculum and clinical rotations</p> <p>>Tool: The Nominal Group Technique</p> | <p>>Findings/Conclusions: Differences among different international nursing programs include: clinical learning requirements across countries, the prerequisites and clinical learning process patterns, and the progress and final evaluation of the competencies achieved of nursing students</p> <p>>>There are major differences in nursing curriculum around the world including time dedicated to clinical, student to teacher ratios, and systems of accreditation</p> | <p>>Implications: Wider discussion regarding nursing student exchange and internationalization of clinical education is needed</p> <p>>>A global nursing accreditation strategy should be explored</p> | <p>>Limitations: Cross sectional nature and process of country inclusion prevents any generalizations</p> <p>>The local rather than the national perspective might have been emphasized due to stakeholders representing the UDINE-C network</p> |
| <p>2. Ewertsson, M., Allvin, R., Holmström, I. K., & Blomberg, K. (2015). Walking the bridge: Nursing students' learning in clinical skill</p> | <p>>Problem: There is little evidence on the impact of simulated skills on clinical practice</p> | <p>>Theory of Experimental Learning</p> <p>>Students' learning is enhanced when they are actively</p> | <p>>Design: qualitative descriptive design</p> <p>>Site: University in</p> | <p>>Semi-structured interviews were performed to understand students' perceptions of clinical skills</p> | <p>>CSL created opportunities for practicing</p> <p>>Through repetitive practicing of skills, students became more</p> | <p>>Observational studies are needed to explore knowledge of how students' taught knowledge and skills transfers</p> | <p>>Gender limitations; more females than males</p> <p>>Only one University was included in the</p> |

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| <p>laboratories. Nurse Education In Practice, 15(4), 277-283 7p.doi:10.1016/j.nepr.2015.03.006</p> | <p>>Purpose statement: To describe nursing students' perception on clinical skills lab and how well it prepares them for clinical practices >Research question: Do clinical skills labs increase understanding of clinical skills in fourth semester nursing students?</p> | <p>involved in gaining knowledge through experience with problem solving and decision making</p> | <p>Sweden >Population: Fourth semester nursing students >Sampling method: Strategic sample >Sample size: 16; 12 women and 4 men</p> | <p>labs >Interviews were analyzed with qualitative content analysis >Interviews were transcribed verbatim by a professional; interviews were then read over several times to gain a sense of the whole >All authors scrutinized and repeatedly discussed the coding and interpretations</p> | <p>confident in their skills >Students feel more confident performing in a skills lab where making mistakes does not have high consequences >Students considered learning in the CSL a preparation for practice for their future careers >Students reported deepened knowledge as a result of CSL >CSL allows for reflection periods on what students can do better or do next time they perform that skill</p> | <p>to the clinical setting</p> | <p>study</p> |
| <p>3. Ironside, P. M., McNelis, A. M., & Ebright, P. (2014). Clinical education in nursing: Rethinking learning in practice settings. Nursing Outlook, 62(3), 185-191 7p. doi:10.1016/j.outlook.2013.12.004</p> | <p>>Problem: The complexity of the healthcare system today demands that new nursing graduates be better prepared to enter the profession >Purpose: Understand the nature of contemporary clinical education by describing the experiences of students and faculty</p> | <p>>Theoretical Framework: none identified</p> | <p>>Design: descriptive qualitative, multi method design, including direct observation and interviews >Site: 3 Universities: A major research university (East), private not for profit research intensive university (Midwest), smaller not for</p> | <p>>Research Variable: nursing students experiences on a medical surgical floor from three different universities >Tool: Observation: during day, evening, and night shifts for three hours >Tool: Interviews: used cognitive task interview</p> | <p>>Findings/Conclusions: >Focus of faculty was whether or not students completed their assigned work and accurately documented what they did during the day >Interactions between staff and students did not focus as much on overall understanding of patient</p> | <p>> This study suggests the need for investigation and innovation into how students can be best prepared for practice >Efforts must begin with rethinking clinical education</p> | <p>> Descriptive rather than explanatory design and participants were not randomly selected >Only the final medical surgical course of nursing programs were evaluated; other areas were not examined >Observation was limited to a three hour time slot; its important to keep in mind that other</p> |

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| | <p>>Research question: Does clinical education provide adequate learning opportunities for student nurses to become competent with their clinical skills?</p> | | <p>profit university (Northwest); all in the United States</p> <p>>Population: Nursing students and faculty members from 3 universities</p> <p>>Sampling method: Convenience</p> <p>>Sample size: 30 students; 6 faculty members</p> | <p>techniques; face to face; digitally recorded</p> <p>>R/V: Experienced transcriptionists transcribed all observation and interview data; removed all participant identifiers to protect confidentiality</p> | <p>conditions, or implications for nursing care</p> <p>>Majority care that students were providing was care that CAN's usually provide; not nurses</p> <p>>Students described that there was much downtime during clinical experience</p> <p>>Doing tasks was equated with "learning" nursing skills</p> | | <p>educational experiences could have happened elsewhere</p> |
| <p>4. Jones, A., & Sheppard, L. (2011). Self-efficacy and clinical performance: A physiotherapy example. <i>Advances In Physiotherapy</i>, 13(2), 79-83 5p. doi:10.3109/14038196.2011.565072</p> | <p>>Problem: Physiotherapy students do not feel prepared before their clinical rotations due to lack of exposure to clinical situations</p> <p>>Purpose statement: To examine the relationship between self-efficacy scores of physiotherapy students who received simulation training, and those that did</p> | <p>>Theoretical Framework: Bandura's Social Cognitive Theory</p> <p>>>Increased self-efficacy is associated with increased competence in the clinical setting, leading to decreased errors and better patient care</p> | <p>>Design: Quasi-Experimental/Correlational</p> <p>>Site: James Cook University</p> <p>>Population: Third year Bachelor of Physiotherapy</p> <p>>Sampling method: Convenience</p> <p>>Sample size: 32</p> | <p>>Independent: Pre-clinical, simulation training</p> <p>>Dependent: Self-efficacy of students</p> <p>>Tool: Assessment of Physiotherapy Practice</p> <p>>>Intraclass correlation coefficient: 0.96</p> | <p>>Findings/Conclusions: Positive correlations between the control group and self efficacy scores</p> <p>>Negative correlation was found between the intervention group and self-efficacy scores</p> <p>>Not possible to rule out that the findings are a statistical artefact</p> | <p>>Implications: Further investigation is required in order to determine if the positive correlation remains</p> <p>>Interviews might be useful in providing more details as to students self-efficacy after simulations/interventions</p> | <p>>Limitations: small sample size</p> <p>>no interviews were conducted</p> |

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| | not | | | | | | |
| | >Research question: Does simulation before clinical experiences increase levels of self-efficacy among physiotherapy students? | | | | | | |
| <p>5. Karabacak, Ü., Serbest, Ş., Kan Öntürk, Z., Eti Aslan, F., & Olgun, N. (2013). Relationship between student nurses' self-efficacy and psychomotor skills competence. International Journal Of Nursing Practice, 19(2), 124-130 7p. doi:10.1111/ijn.12051</p> | <p>>Problem: Students need to have positive self-efficacy of their nursing skills, or else they will not be as confident or competent upon graduation</p> <p>>Purpose statement: To determine general self-efficacy levels of students studying for undergraduate degrees in nursing and to examine the relationship between skills development and self-efficacy</p> <p>>Research question: Does skills training improve student self-efficacy of IM injections?</p> | <p>>Albert Bandura's Social Cognitive Theory</p> <p>>>An individual's belief in themselves reflects his or her abilities to perform a particular behavior</p> <p>>>Nursing student's self-efficacy of their skills, demonstrates how well they can perform the skill</p> | <p>>Design: Descriptive</p> <p>>Site: Department of Nursing in the Faculty of Medical Sciences at a University in Istanbul</p> <p>>Population: Students enrolled in the nursing (first year) program for the fall semester of the 2009-2010 academic year; between ages 18-24; 90% female, 45% graduated from high school, 59% from Istanbul</p> <p>>Sampling method: Convenience</p> <p>>Sample size: 100 students</p> | <p>>Research Variable: Self-Efficacy</p> <p>>Research Variable: Intramuscular injection competence</p> <p>>Tool(1): Self-Efficacy Scale</p> <p>>>Cronbach's alpha: 0.91 before skills training; 0.84 after skills training</p> <p>>Tool: Intramuscular Injection Procedure checklist</p> <p>>>16 step checklist for giving IM injection based on a review of the literature; students were evaluated on each check point by "needs improvement" or "is satisfactory"</p> | <p>>Findings/Conclusions: Mean self-efficacy scores were 90.73 (+/-) 14.78 before the skills training and 90.41 (+/-) 11.18 which is not statistically significant</p> <p>>>The mean general score of self-efficacy for students was high, but there was not significant difference of mean scores before and after the IM skills training</p> | <p>>Implications: Self-efficacy levels of students were high, but not correlation was observed between personal characteristics and self-efficacy; therefore, education in injection technique had the same influence on all students' skills</p> <p>>>Classroom interaction should be established to develop self-efficacy for students</p> <p>>>Other studies should be conducted to evaluate the relationship between laboratory and clinical environments</p> <p>>>Strategies to</p> | <p>>Limitations: -Sample size -Only one psychomotor skill was evaluated -</p> |

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| | | | | | | <p>develop self-efficacy should be employed in educational environments</p> <p>>>>Students with low self-efficacy should be encouraged and supported</p> | |
| <p>6. Kim, K., Lee, A., Eudey, L., & Dea, M. (2014). Improving clinical competence and confidence of senior nursing students through clinical preceptorship. <i>IJN International Journal of Nursing</i>, 183-209. doi:10.15640/ijn.v1n2a14</p> | <p>>Problem: Senior nursing students feel stressed and unprepared when they do not have adequate transitions from their preceptorship experiences</p> <p>>Purpose: To evaluate preceptorship experience and relationships of students with their preceptors</p> <p>>Research question: Does the preceptorship experience increase confidence and competence for senior nursing students?</p> | <p>>Theoretical Framework: QSEN: quality and safety education for nurses</p> <p>>Used to evaluate nursing students progression during preceptorship in the areas of patient centered care, team work, evidence based practice, quality improvement, safety, and informatics</p> | <p>>Design: Descriptive study</p> <p>>Site: One of the state funded California Universities</p> <p>>Population: Senior nursing students enrolled in their final clinical course of a BSN program</p> <p>>Sampling method: Convenience</p> <p>>Sample size: 95 senior nursing students</p> | <p>>Independent: degree of interaction of student with preceptor</p> <p>>Dependent: perception of BSN senior nursing students level of competence and confidence in providing care using the nursing process</p> <p>>Tool(1): Senior Nursing Preceptorship Experience Questionnaire</p> <p>>>evaluation of this tool was conducted by nursing staff at the University to establish content validity</p> <p>>>Alpha reliability coefficients ranged from 0.86-0.97</p> <p>>>Cronbach's alpha: 0.866-0.977</p> | <p>>Findings/Conclusions:</p> <p>>Clinical preceptorship with an experience very close to actual RN work, with a less threatening atmosphere</p> <p>>Students feel its important have a primary preceptor on the unit</p> <p>>Students' perceived competency was positively correlated with interaction with the preceptor</p> | <p>>Implications: More interaction with the preceptor, leads students to feel more confident about their transition into the nursing profession</p> | <p>>Limitations: Use of only two preceptor sites under one nursing program</p> <p>>>uncontrollable variables such as diversity of preceptors, individual students' work experiences, and different clinical specialty placements</p> |

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| | | | | <p>>Tool(2): Graduate Nurse Survey- used to assess confidence level in newly acquired skills before and after preceptorship program</p> <p>>>Alpha reliability coefficients were 0.72-0.97</p> <p>>>Cronbach's alpha: 0.723-0.945</p> <p>>Tool(3): Quality and Safety Competency Questionnaire: used evaluate 6 core competencies</p> <p>>>Reliability coefficient ranged from 0.920-0.956</p> <p>>>Cronbach's Alpha: 0.920-0.946</p> | | | |
| <p>7. Lewis, D. Y., & Ciak, A. D. (2011). The impact of a simulation lab experience for Nursing Students. <i>Nursing Education Perspectives</i>, 32(4), 256-258 3p.doi:10.5480/1536-5026-32.4.256</p> | <p>>Problem: Students do not receive enough exposure to high risk situations in Pediatric and Obstetric health and are therefore not prepared to handle these types of situations when they arise</p> | <p>>Theoretical Framework: none identified</p> | <p>>Design: Quasi-Experimental</p> <p>>Site:</p> <p>>Population: Students enrolled in the course Growing Family Nursing</p> | <p>>Independent: Simulation</p> <p>>Dependent: Self-Confidence of nursing students/Learned knowledge</p> <p>>Tool(1): 13 Item Student Satisfaction and Self-Confidence in Learning</p> | <p>>Findings/Conclusions: For all 63 students, the retest score was 0.664 with a 95% confidence interval</p> <p>>62 students completed the posttest survey and the mean test score was 0.823 with a 95%</p> | <p>>Implications: Better information would have been obtained if critical thinking skills in students would have been assessed before and after the simulation</p> <p>>The findings of knowledge, satisfaction, and self-confidence</p> | <p>>Limitations: small sample size</p> <p>>The study/simulation was only a one time event which may not have been enough time to gain significant critical thinking patterns</p> <p>>Critical thinking may be hard to measure in a multiple choice, standardized test,</p> |

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| | <p>>Purpose statement: To investigate the effectiveness of a simulation lab experience</p> <p>>Research question: Does simulation based teaching improve student outcomes and confidence?</p> | | <p>>Sampling method: Convenience</p> <p>>Sample size: 63</p> | <p>>>Cronbach's Alpha: 0.94 for satisfaction and 0.87 for self-confidence</p> <p>>Tool(2): The Nursing Care of Children and Maternal Newborn Test</p> <p>>>Alpha Reliabilities: 0.65 and 0.68 for nursing care of children and maternal newborn nursing respectively</p> | <p>confidence interval</p> <p>>no definitive conclusions can be drawn regarding critical thinking and experience in high fidelity simulation</p> | <p>were encouraging</p> | <p>format</p> |
| <p>8. Morrell, N., & Ridgway, V. (2014). Are we preparing student nurses for final practice placement?. British Journal Of Nursing, 23(10), 518-523 6p.</p> | <p>>Problem: Significant change in nursing education and increased demands of student nurses, has caused new graduates to experience a difficult transition into the healthcare setting</p> <p>>Purpose statement: To explore student nurses' perception of final practice placement and to discover what supported or hindered their preparation for their nursing career</p> | <p>>Theoretical Framework: phenomenological perspective</p> | <p>>Design: Phenomenological; qualitative</p> <p>>Site: UK Higher Education Institution</p> <p>>Population: Adult branch nursing students completing their final 10 week clinical placement</p> <p>>Sampling method: Nonprobability, Purposive</p> <p>>Sample size: 8 students</p> | <p>>Research Variable: nursing students feelings towards their final practice placement</p> <p>>Research Variable: what factors contribute to these feelings (stress, competence, and confidence, of lack of)</p> <p>>Tool: personal diaries from nursing students</p> <p>>>Instruction to participants asked them to write something every day for the first 4 weeks of their 10 week rotation</p> | <p>>Findings/Conclusion: 8 themes were identified from the diaries; students felt that:</p> <p>>>they were just an extra set of hands</p> <p>>>practice assessment documentation seemed to be unimportant</p> <p>>>staff expectations were high</p> <p>>>a good mentor is important</p> <p>>>lack of knowledge</p> <p>>>stress related to lack of support</p> <p>>>simulation everyday helped</p> <p>>>Achievement</p> | <p>>Implications: Student nurses need more support from their instructors</p> <p>>>Students feel stressed if they do not complete documentation on time, which may take away from patient care</p> <p>>>Students seemed to be prepared for practice and working at appropriate levels</p> | <p>>Limitations: Was completed on a small scale</p> <p>>>Only one institution was involved in the study</p> |

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| | >Research question: How can we improve nursing students feelings of confidence upon their final practicum placement? | | | | t of tasks was difficult during a short amount of time | | |
| <p>9. Roh, Y. S., Kim, S. S., & Kim, S. H. (2014). Effects of an integrated problem-based learning and simulation course for nursing students. <i>Nursing & Health Sciences</i>, 16(1), 91-96 6p. doi:10.1111/nhs.12069</p> | <p>>Problem: Students do not have enough hands on learning in the classroom and inadequate time to practice the skills that they have learned</p> <p>>Purpose statement: Identify the effects of an integrated course with problem based learning and simulation by evaluating stress, student perceptions of competence, and small group learning</p> <p>>Research question: What do students gain from high fidelity simulation and does the stress of getting a good grade in the course, inhibit their learning</p> | >Theoretical Framework: none identified | <p>>Design: One group post test only</p> <p>>Site: Red Cross College of Nursing, Chung-Ang University, Seoul, Korea</p> <p>>Population: Second year nursing students in a circulo-respiratory course</p> <p>>Sampling method: Convenience</p> <p>>Sample size: 280-224 returned the questionnaires- 185 were valid for analysis</p> | <p>>Independent: Problem Based Learning and Simulation</p> <p>>Dependent: Student perceptions and stress levels</p> <p>>Tool(1): 39 Item College-based Stress Scale for Korean Nursing Students</p> <p>>>Alpha Coefficient: 0.94</p> <p>>Tool(2): 16 Item Student Perceptions of Learning Scale</p> <p>>>Cronbach's Alpha: 0.94</p> | <p>>Findings/Conclusions: Students evaluated stress as moderate with academia being the highest stressor</p> <p>>>Students reported favorable perceived competence and small group learning</p> <p>>>Students viewed problem based learning with simulation favorably, no matter what their grade was</p> | >Implications: Nursing students could gain sufficient knowledge, skills, and attitude through positive learning experiences such as clinical reasoning process, self-directed learning, and deliberate practice from problem based learning process and simulation | <p>>Limitations: Post test group design limited ability to infer improvement in outcomes of the integrated nursing course</p> <p>>>Future studies should include not only a control group but a simulation alone group, PBL along, integrated and PBL group, control group.</p> |

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| | capabilities? | | | | | | |
| <p>10. Rushton, M. (2015). Simulation and the student pathway to critical care. British Journal Of Cardiac Nursing, 10(2), 93-98 6p.</p> | <p>>Problem: Students often lack knowledge and confidence in relation to critical-care</p> <p>Purpose statement: To increase nursing students' confidence prior to their critical care rotation</p> <p>Research question: Does simulation increase nursing student confidence in the critical care area?</p> | <p>>Theoretical Framework: qualitative perspective</p> | <p>Design: Qualitative; descriptive</p> <p>Site: University of Salford; School of Nursing and Midwifery and Social Work</p> <p>Population: nursing students from one University in their second year, third semester, of a three year course</p> <p>Sampling method: Volunteers/Networking</p> <p>Sample size: 8 students</p> | <p>>Independent: high fidelity simulation</p> <p>>Dependent: student confidence</p> <p>>Tool: 3 questionnaires, the third which was a phone questionnaire</p> <p>>>used open ended questions</p> <p>>>questionnaires were pretested before use by a small group, to check for clarity and validity</p> | <p>>Findings/Conclusions: Apprehension and lack of confidence before simulation and an increase in confidence after</p> <p>>More positive about the upcoming CCU placement</p> <p>>Useful in providing an environment where students can practice safely without causing patient harm</p> | <p>>Implications: Simulation can be effective to learning and can help in increasing students confidence prior to their clinical rotations</p> <p>>>Recommendations include simulating the exercise with a greater sample size and collect data with a pre-validated tool</p> | <p>>Limitation: small number of participants; findings cant be generalized</p> <p>>>Students were volunteers; this can be seen as bias</p> |
| <p>11. Venkatasalu, M. R., Kelleher, M., & Chun Hua, S. (2015). Reported clinical outcomes of high-fidelity simulation versus classroom-based end-of-life care education. International Journal Of Palliative Nursing, 21(4), 179-186 8p. doi:10.12968/ijpn.2015.21.4.179</p> | <p>>Problem: Nursing students do not often face death in their clinical settings, and are therefore ill prepared to handle such situations upon graduation.</p> <p>>Purpose statement: To design, use, and assess the effectiveness of high-fidelity simulation</p> | <p>>Theoretical Framework: phenomenological perspective</p> | <p>>Design: Phenomenographic methodological</p> <p>>Site: University in England</p> <p>>Population: First year, full time, adult nursing students</p> <p>>Sampling method:</p> | <p>>Independent: Simulation of a dying patient</p> <p>>Independent: Seminar based teaching on end of life care</p> <p>>Dependent: students feelings of competency and emotional preparedness to deal with end of life situations</p> | <p>>Findings/Conclusions: Students in the simulation group reported greater confidence in applying their learned skills than those in the seminar group</p> <p>>Simulation group had an easier time recalling and applying what they learned</p> | <p>>Implications: The study suggests that using simulation based end of life care teachings, produced positive outcomes in terms of recognizing death and dying, increasing students' ability to perform end of life care skills, and enhance emotional preparedness for first year</p> | <p>>Limitations: small sample size</p> <p>>authors do not know the authenticity of the data, especially since these were first year nursing students who may be new to the nursing curriculum</p> <p>>students reported that they used social media to discuss these teaching methods</p> <p>>seminars were student led and the length and depth of</p> |

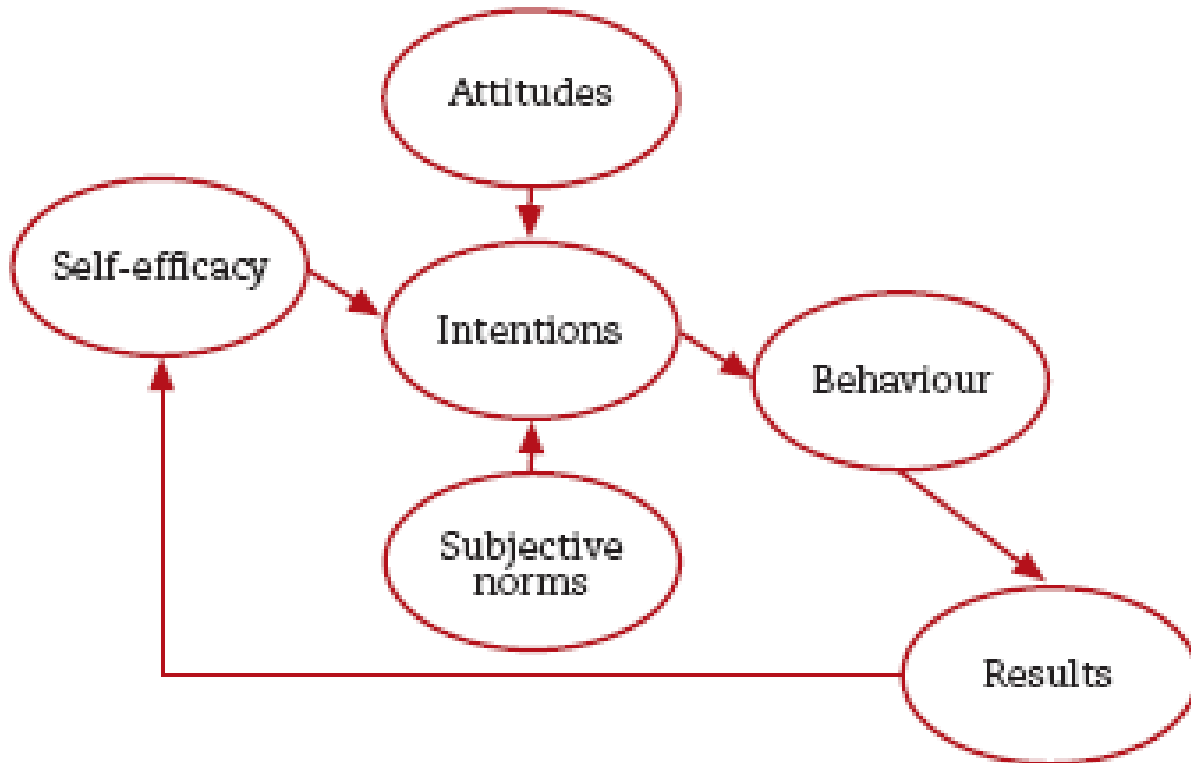
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| | <p>teaching sessions in comparison with seminar based learning in the area of end of life care</p> <p>>Research question: Can high fidelity simulation be used to improve nursing students feelings of confidence and competence towards end of life care?</p> | | <p>Convenience with random assignment to 8 groups; 2 groups received simulation training, the other six received seminar sessions</p> <p>>>Only 12 students ended up participating in the study; all were female; 7 attended the simulation and 5 attended the seminar learning</p> <p>>Sample size: 187; 12 participants</p> | <p>>Tool(1): Semi-structured individual interviews</p> <p>>>an interview topic guide was developed to ensure the objectives of the study were covered while allowing participants to raise new issues</p> <p>>>Interviews were digitally recorded</p> | <p>>Simulation reduced anxiety about death and dying patients</p> <p>>Simulation provided skills of knowledge, communication, and self-confidence</p> <p>>Simulation based teaching helps students in facing expected and unexpected outcomes</p> | <p>students.</p> | <p>the seminars were not able to be controlled</p> |
| <p>12. Wieland, D., Altmiller, G., Dorr, M., & Wolf, Z. (2007). Clinical transition of baccalaureate nursing students during preceptored, pregraduation practicums. <i>Nursing Education Perspectives</i>, 28(6), 315-321 7p.</p> | <p>>Problem: New nurses often feel overwhelmed upon graduation due to lack of experience in clinical settings</p> <p>>Purpose statement: To describe the preceptorship and practicum experience of graduating nursing students</p> <p>>Research question: From the perspectives of students, liaison faculty,</p> | <p>>Theoretical Framework: none identified</p> | <p>>Design: Triangulated, Descriptive</p> <p>>Site: La Salle University School of Nursing, Philadelphia, Pennsylvania</p> <p>>Population: Senior nursing students in their last rotation which was an adult care/medical surgical rotation</p> <p>>Sampling method:</p> | <p>>Research Variable: experience of practicums for senior nursing students</p> <p>>Tool(1): Journals of students and preceptors</p> <p>>>Journals were directed towards: describe your patient assignment (comply with HIPAA guidelines and do not include identifying information); number of patients</p> | <p>>Findings/Conclusions: Preceptorship allowed students to expand knowledge and skill base</p> <p>>Students developed increase independence and confidence during their experience</p> <p>>Students developed skills with communication with staff and teamwork</p> | <p>>Implications: A pretest posttest design is recommended for further research</p> <p>>A possible tool to use in the future is the Yonge and Trojan's Six Dimensional Scale of Nursing Performance</p> <p>>Future research should implement comparison of traditional and nontraditional programs and students</p> | <p>>Limitations: Small sample size</p> <p>>Different clinical locations of students</p> <p>>Different preceptors could have provided different experiences</p> |

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| | and clinical preceptors, what is the clinical transitional experience for BSN students who participate in an intensive preceptorship, three days per week for three weeks, during the senior year? | | Convenience Sample size: 14 | assigned; gender; diagnosis; comments on changes you are experiencing; your goals and additional comments. >Tool(2): Daily Feedback Sheet on Transition to the Graduate Nurse Role | >Improvement in time management | | |
| 13. Wotton, K., Davis, J., Button, D., & Kelton, M. (2010). Third-year undergraduate nursing students' perceptions of high-fidelity simulation. Journal Of Nursing Education, 49(11), 632-639 doi:10.3928/01484834-20100831-01 | Problem: Teaching and learning approaches to undergraduate nursing students do not always transfer to clinical practice Purpose statement: To explore perceptions of third year nursing students to high fidelity simulation using a SimMan Research question: Does high fidelity simulation increase nursing students' ability to carry out clinical skills and think critically? | >Theoretical Framework: Bandura Social Learning Theory >>High fidelity simulation increases students confidence in their skills which then increase retention and transference of knowledge to the clinical setting | Design: Evaluative Qualitative Site: Flinders University Population: Third year nursing students Sampling method: Convenience with random assignment to groups Sample size: 300 >Three groups of simulations | >Research Variables >>Simulations >>Student Perceptions >Evaluation form >>11 standardized questions; 3 open ended questions | >Findings/Conclusions: 94.7% of students reported that the simulation maintained their attention >95% said the simulation was useful to what they were learning >Students said high-fidelity simulations increased the reality of the theory of the course >31.5% agreed and 18.2% strongly agreed that they felt lost at some point in the simulation >97% said that the simulation gave useful knowledge that | >Implications: High fidelity simulation must be incorporated into education and not be seen as a "stand alone" tool >High fidelity simulation ensures learning and helps students identify rationales for practice >Debriefing after simulations is necessary because it helps students with clinical decision making and pattern recognition >High-fidelity simulation can be a bridge between theory and practice; it enhances cognitive, associative, and autonomous | >Limitations: >Students did not have time to become familiar with the SimMan >Not all 300 students completed the survey/evaluation |

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| | | | | | <p>would be applied in clinical</p> <p>>Students liked learning through seeing a patient's response and their actions after interventions</p> <p>>95% enjoyed/learned a lot from debriefing sessions</p> | skills | |
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Appendix F

Model of Bandura's Self-Efficacy Theory



Source: Larsen, J., & Zwisler, A. D. O. (2014). Lifestyle intervention. In *Cardiac*

Rehabilitation (chapter 3). Retrieved from:

http://www.cardiacrehabilitation.dk/rehab_uk/html/index5.html#top