

Peer Mentoring During Practicum to Reduce Anxiety in First-Semester Nursing Students

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ABSTRACT

Background: The clinical setting creates significant anxiety for students that can decrease their ability to learn.

Method: This quasi-experimental study examined whether nursing students who participate in peer mentoring during their first clinical experience ($n = 18$) experienced less anxiety than those in traditional clinical experiences ($n = 19$). Anxiety was measured using the standardized State Trait Anxiety Index and the Clinical Experiences Anxiety Form (CEAF). Data were analyzed using descriptive and nonparametric statistics. **Results:** A significant decrease was demonstrated in clinical situation-specific anxiety, as measured by the CEAF, among students who were peer mentored as compared with students who were not. **Conclusion:** Peer mentoring shows promise as an effective strategy to reduce anxiety among novice nursing students. [*J Nurs Educ.* 2016;55(11):651-654.]

Clinical experiences during nursing education provides students with experiential learning opportunities that bridge theoretical content with the practice environment. These clinical experiences provide students with opportunities to apply their knowledge and practice important clinical skills on patients. However, this essential component of nursing education may produce anxiety for new nursing students. Although all nursing students experience some level of anxiety during nursing education, clinical experiences have been identified as being substantially anxiety producing (Baxter & Rideout, 2006; Kleehammer, Hart, & Keck, 1990; Moscaritolo, 2009; Shipton, 2002). Most important, significant anxiety has been well documented as decreasing a student's ability to learn or think critically (Melincavage, 2011; Moscaritolo, 2009; Shipton, 2002).

Literature Review

Anxiety, the emotional state of being uncomfortable, nervous, or worried (Spielberger, 1983), is often considered a negative state with no positive attributes. Anxiety in small quantities is a desirable experience for learning, yet too much anxiety decreases learning (Bremner, Aduddell, & Amason, 2008; Hutchinson & Janiszewski Goodin, 2013; Melincavage, 2011). The most commonly cited anxiety-producing situations for nursing students during clinical experiences are the first clinical experience, fear of making mistakes, and performing clinical skills (Baxter & Rideout, 2006; Kim, 2003; Kleehammer et al., 1990; Shipton, 2002; Sprengel & Job, 2004). The increased anxiety produced during the initial clinical experience can interfere with the acquisition of valuable knowledge and experience.

Peer mentoring, the planned partnership of an experienced student who works with a less experienced student on academic and clinical growth (Dorsey & Baker, 2004), is one strategy that has been frequently used in educational settings. The outcomes from peer-mentoring programs in nursing education are abundant and include academic, social, professional, and mental health benefits (Wong, Stake-Doucet, Lombardo, Sanzone, & Tsimicalis, 2016). Decreasing anxiety has been identified as a social benefit of peer mentoring (Christiansen & Bell, 2010; Dorsey & Baker, 2004; Giordana & Wedin, 2010; Harmer, Huffman, & Johnson, 2011; Sprengel & Job, 2004; Wong et al., 2016). The reported benefit of decreased anxiety from peer mentoring may be because peer mentors provide support without evaluation (Ford, 2015; Sprengel & Job, 2004). This differs from instructors who may be supportive but are also evaluative.

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Development of a positive relationship and cooperative learning are hallmarks of an effective peer-mentoring relationship (Sprengel & Job, 2004).

Peer mentoring is vigorously researched, yet peer-mentoring research uses inconsistent variables, such as differing intervention lengths, diverse settings, and different outcome measures (Wong et al., 2016). Little research on peer mentoring in the clinical setting has moved beyond descriptive and case studies to provide an empirical basis for implementation (Crisp & Cruz, 2009; Gershenfeld, 2014; Wong et al., 2016; Zentz, Kurtz, & Alverson, 2014). In light of these findings, a quasi-experimental approach was used to evaluate peer mentoring using a singular outcome measure.

Method

To evaluate the effectiveness of a peer-mentoring intervention on anxiety between groups, a nonequivalent comparison groups design with a pre- and posttest was used. Specifically, this research sought to determine the difference in anxiety during clinical experiences between first-semester clinical nursing students who participated in the peer-mentoring intervention as compared with first-semester clinical nursing students who did not participate in the peer-mentoring intervention. Albert Bandura's social cognitive theory provided a framework by which peer mentoring facilitates behavior in the clinical setting and informed the design of the peer mentoring intervention (McAlister, Perry, & Parcel, 2008). For the purposes of this study, a *clinical experience* is defined as the activities and skills experienced during a nursing practicum course occurring in a hospital setting, specifically a medical-surgical ward. A *new nursing student* is defined as one enrolled in the first clinical practicum course in a baccalaureate program and therefore representing their first clinical experiences.

Intervention

The intervention consisted of partnering experienced mentors (i.e., senior nursing students) and new nursing students into pairs. The pairs worked together for the first 3 weeks (i.e., 1 day per week) of the nursing student's first clinical experience. The designated intervention length of 3 weeks was determined by receiving input from practicum course instructors and evaluating the availability of peer mentors.

During the intervention, the pairs spent the entire clinical day working together to care for assigned patients by performing clinical skills, communicating with the assigned RN and health care team, and using clinical reasoning. The control group participated in traditional clinical course work. This included working with an assigned RN and an assigned patient. Both groups were supervised by a faculty member. The difference between intervention and control groups was the addition of a peer mentor for each student in the intervention group.

Peer mentors were recruited from among senior nursing students and were chosen by evaluating grade point average (GPA), and clinical decision-making and communication skills. Training for mentors included a 2-hour interactive training session. The training highlighted the necessary qualities of successful mentor-mentee relationships and the clinical objectives and expectations of the mentees. Role-playing was used to

brainstorm and evaluate how to provide support to mentees in a variety of situations. Mentors were also provided with specific daily objectives to guide mentoring. All orientation, training, and administrative expectations of the clinical sites and academic institution were met prior to participation in the mentoring program.

Sample

After gaining institutional review board approval from the university, all first-semester clinical nursing students at a small, private university were introduced to the study during mandatory preclinical orientation. Interested potential participants were contacted via e-mail to ensure inclusion and exclusion criteria were met. Inclusion criteria included first-semester nursing students enrolled in a clinical course and the ability to read and write in English. Exclusion criteria included prior hospital employment or previous enrollment in a clinical nursing course. Sample size, estimated by power analysis, was 70 participants. Recruitment strategies yielded more than 60 interested participants. After screening and discussion of the research study commitment, 41 participants consented to participate. Four of them were subsequently excluded because of administrative issues.

Assignment to peer-mentoring intervention or control group was determined by the nursing student's clinical section. Selection of intervention or control for each clinical section was predetermined by class day, hospital site approval, and available mentors. Mentors and mentees were paired according to experience and schedule availability. Students not enrolled in the research study continued normal coursework alongside study participants. This procedure helped minimize contamination between control and intervention groups.

Data Collection

Participants completed the State Trait Anxiety Index (STAI) and the Clinical Experience Assessment Form (CEAF) at baseline and at the end of the 3-week intervention period. Demographic questions were included at baseline. All assessments were completed using the online Qualtrics® survey system.

The STAI is a 40-item, Likert scale instrument that evaluates state and trait anxiety. Sample items measured include "I feel upset," "I feel worried," and "I feel pleasant." Responses range from 1 = *not at all* to 4 = *very much so*. The STAI is a reliable instrument, with an average alpha coefficient of .93 for college-age female students (Spielberger, 1983). Observed reliability in the current study at pretest was .714 and at posttest was .764. Permission to use the instrument was granted from the authors.

The CEAF is a 16-item, Likert scale instrument that was designed to measure anxiety related to specific clinical experiences or nursing situation-specific anxiety (Kleehammer et al., 1990). Sample items measured include talking with the patient, fear of making mistakes, and hospital equipment. Responses range from 5 = *strongly agree* to 1 = *strongly disagree*. Previously reported Cronbach's alpha demonstrated reliability as .82 (Kleehammer et al., 1990; Sprengel & Job, 2004). Observed reliability in the current study at pretest was .899 and at posttest was .755. Permission to use the instrument was granted from the authors.

Results

Investigators used SPSS version 22 software to calculate descriptive and inferential statistics. The sample in this study was 96.8% women, ranging in age from 19 to 25 years ($M = 19.46$, $SD = 1.38$), and reported GPA from 2.56 to 4.00 ($M = 3.39$, $SD = .43$). Only 29.7% ($n = 12$) of students were employed full or part time. No students were employed in a health care setting.

Preliminary analysis focused on differences between groups and relationships among baseline measures. There was a significant relationship between working status and group, $\chi^2(1) = 5.82$, $p = .016$, Cramer's $V = .396$. Students in the control group were significantly less likely to be employed. More than 80% of the intervention group was unemployed and only 47% of the control group was unemployed. In addition, a significant relationship between GPA and group was also determined, $F(1, 34) = 6.63$, $p = .015$, $\eta^2 = .163$. Students in the intervention group had significantly higher GPAs ($M = 3.56$, $SD = .37$), compared with those in the control group ($M = 3.22$, $SD = .43$). Despite these differences, pretest scores on the standardized STAI and the CEAF demonstrated no significant differences between groups prior to intervention.

A nonparametric Mann-Whitney U test was used to evaluate differences in students' levels of anxiety as measured by state anxiety and nursing situation-specific anxiety on the CEAF across time and group. The overall posttest state anxiety scores were found to be lower in both the control ($M = 41.35$, $SD = 13.48$) and intervention group ($M = 33.12$, $SD = 8.67$) when compared with the pretest control ($M = 48.82$, $SD = 15.52$) and intervention group ($M = 43.12$, $SD = 8.67$) results. At posttest, a statistically significant difference was noted between groups in nursing situation-specific anxiety scores as measured by the CEAF ($M = 1.90$, $SD = 0.31$) compared with those in the control group ($M = 2.32$, $SD = .72$, $U = .92$, $p = .04$). Specifically, those in the peer mentor group had significantly lower levels of anxiety related to using equipment ($U = 75.00$, $p = .01$) and providing patient care ($U = 90.50$, $p = .03$) at posttest.

Discussion

Results suggest that the peer-mentoring program led to greater reductions in nursing students' situation-specific anxiety on the CEAF rather than general anxiety on the STAI, compared with those who did not receive peer mentoring. In addition, compared with students in the control group, those who received peer mentoring experienced less anxiety when using equipment and providing patient care. These results support the efficacy of peer mentoring during the first 3 weeks of clinical experiences.

Participants' self-reported nursing-specific situational anxiety in this study is similar to the published literature. Although the literature does not agree on the single most anxiety-producing situation during clinical experiences, the performance of clinical skills, fears about making mistakes, providing patient care, using equipment, and the initial clinical experience are designated as highly anxiety-producing situations (Kim, 2003; Kleehammer et al., 1990; Sprengel & Job, 2004). The peer-mentoring intervention had a significant effect on anxiety overall, but specifically in the areas related to using equipment and providing care. These findings support the framework on which the peer-

mentoring intervention was developed, implemented, and the research hypothesis derived. More important, during training, using equipment and providing care are the two scenarios that peer mentors identified, discussed, and role-played as needed to provide support to mentees.

Although nursing situation-specific anxiety was decreased in the peer-mentoring intervention group, general anxiety as measured by the STAI was not significantly decreased. It is important to note that the STAI reliability in this study was reduced from established reliability. This finding suggests the STAI may not have been the most appropriate instrument for the type of anxiety measured in this research.

Limitations

This study has limitations, including the quasi-experimental study design and a small sample size from one nursing school, reducing generalizability. The logistics of conducting a true experimental study with random assignment proved unrealistic and group assignment per clinical section was more practical, improving the feasibility of the study. An additional limitation in this study was the inability to measure anxiety over a longer period of time. Anxiety was measured immediately after the intervention, rather than at intervals after the intervention, and again at the end of the semester. A longitudinal approach would have allowed for a more thorough assessment of the effect of the peer-mentoring intervention. Despite these limitations, the significant results from peer mentoring demonstrating improvement in anxiety among new nursing students are encouraging.

Future Research and Recommendations

Future research may include larger scale studies to validate results and explore additional evaluation variables, such as clinical performance and learning. To improve on the research design, researchers may include stratified random sampling, piloting of a more specific general anxiety measure, and a longitudinal design. Continued development of peer mentor training will potentially enhance the outcomes of a peer-mentoring intervention, as well as advance the feasibility of peer mentoring in the clinical setting. In addition, research that focuses on peer mentor outcomes would be beneficial. Continued research on the process and outcomes of peer mentoring in the clinical setting needs to be studied using rigorous scientific methods.

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