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STRESS AND ANXIETY IN UNDERGRAD NURSING STUDENTS

Stress and Anxiety in Undergraduate Nursing Students Within the Clinical Environment:

A Literature Review

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Abstract

The clinical practicum experience is fundamental to nursing education. It's within these learning environments that students have the opportunity to apply their classroom knowledge and skills obtained in lab with patients, families and the interdisciplinary team while enhancing their clinical judgement. The clinical environment is much anticipated by students, but feelings of stress, anxiety and intimidation are common. These feelings of stress, anxiety, and intimidation inhibit their learning and lead to higher attrition rates (Turner, McCarthy, 2015). The main purpose of this paper is to identify specific causes of stress and anxiety faced by undergraduate nursing students and to couple this information with the realities that exist today in education and health care to provide a superior clinical learning experience for future nursing students.

Keywords: stress, anxiety, undergraduate, nursing student, clinical, nurse educator

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Stress and Anxiety in Undergraduate Nursing Students Within the Clinical Environment:

A Literature Review

Background

The clinical environment is where students apply their classroom knowledge, observe clinical manifestations of health, and learn to prioritize and organize nursing work (Ironsides, McNelis & Ebright, 2013). Clinicals are highly anticipated by students. It is here that students can act out the role of a nurse in an authentic context and use their critical thinking to reinforce professional aspirations.

But clinicals can also be highly distressing and anxiety-producing for nursing students. Research has shown that stress negatively affects academic performance and completion rates within nursing programs (Jeffreys, 2007). Nurse educators must gain a better understanding related to the causes of stress and anxiety to successfully improve the learning experience for students. For the purpose of this paper, the clinical environment may include acute care, transitional, laboratory, and community sites such as homeless shelters, clinics, camps, schools and social service agencies (Billings & Hallstead, 2012).

Stress and Anxiety

According to the National Institute of Mental Health ([NIMH], 2018), stress is how your brain and body respond to all demands. Stress can have both positive and negative consequences on health and well-being. In response to danger, stress triggers the autonomic response system that prepares a person for survival. Stress can also be motivational to perform, for example in preparation for an exam (NIMH, 2018). The negative effects of stress can be classified into three groups: psychological manifestations, such as low self-esteem, anger, and anxiety; physical manifestations, such as headaches and digestive symptoms; and behavioral manifestations, such

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as excessive drinking, or absenteeism (Arnold & Boggs, 2006). While stress is a response to a threat within a situation, anxiety is a reaction to that stress. Anxiety is an emotion characterized by feelings of tension, worried thoughts and physical changes such as increased blood pressure, dizziness, sweating, tachycardia or trembling (American Psychological Association, 2018).

To further explore this topic, The American College Health Association (ACHA) biannually publishes a national research survey focused on college students' habits, behaviors, and perceptions related to health entitled the ACHA-National College Health Assessment II (ACHA-NCHA II). The ACHA-NCHA II is the largest known comprehensive data set on the health of college students. In the spring of 2017, 63,474 students from 92 post-secondary schools across the United States completed the survey. The findings of this survey indicate that 60.8% of students reported feeling overwhelming anxiety within the last twelve months, and 20.6% of all students surveyed were diagnosed or treated by a professional for anxiety. In regard to stress, 34.6% of students rated their stress as average, 45% of students felt their stress was above average, and 12% of students reported experiencing tremendous stress (ACHA-NCHA II, 2017).

Prior to beginning nursing course work, nursing students experience high levels of stress and anxiety secondary to the competitive nature of gaining entry into nursing programs (Jeffreys, 2007). Secondary to lack of clinical sites, budget cuts and a shortage of nursing faculty, nursing schools across the country are having to greatly limit the number of students accepted into their programs. According to the American Association of Colleges of Nursing (AACN) report on 2014-2015 Enrollment and Graduations in Baccalaureate and Graduate programs, nursing schools in the United States turned away 68,938 qualified applicants in 2014 (AACN, 2015).

Upon acceptance into a nursing program, students continue to be exposed to stress and anxiety as both didactic and clinical coursework are covered simultaneously. Compared with

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other professional degrees such as medical, social work, physical therapy, and pharmacology, nursing is the only program that does not separate didactic coursework from clinical learning, which only intensifies stress and anxiety (Crary, 2013). According to Turner & McCarthy (2016), nursing students experience more anxiety, especially test anxiety, compared with students from other healthcare disciplines. This anxiety may be related to the fact that nursing students are also expected to maintain a required grade point average to remain in their highly competitive nursing programs. Furthermore, today's nursing students are often non-traditional students who are juggling school along with work and many have families of their own (Crary, 2013).

High levels of stress and anxiety continue to be reported within the clinical learning environment which can disrupt students' learning and affect patient care (Moscaritolo, 2009). Additionally, Killam, Mossey, Montgomery, and Timmermans (2013) found that students often find themselves overwhelmed in the clinical setting to the point that it influences patient safety. Unfortunately, negative clinical experiences have been shown to have a more significant influence on student attitudes and confidence in the clinical setting than positive ones (Algo & Peters, 2012).

Upon entering the clinical environment, students are faced with numerous sources of anxiety and potential stressors such as fear of the unknown, fear of making mistakes, knowledge deficits, and relationships between students, faculty, and staff. For many of the students, the clinical environment is foreign to them, one they may have only read about in books, or seen on television. Other students may be familiar with the environment secondary to working as a nursing assistant or volunteer, and others may have personal experience with the environment such as through the illness of a loved one. Regardless of these experiences and non-experiences,

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stress and anxiety are largely a universal experience affecting nursing students in the clinical learning environment.

In the ever-increasing nursing shortage, the retention of nursing students, and ultimately their graduation and licensure, is of utmost importance to nursing schools, nurse educators, and the profession of nursing as a whole. Secondary to the diverse nature of both practice environments and the students who are enrolled in nursing programs, it can be challenging to identify and quantify recurrent stressors. Despite this fact, the identification and attention to specific stressors associated within the clinical setting is an essential step in improving the clinical environment for current and future nursing students. Nurse educators must be cognizant of the stress and anxiety experienced by their students and employ activities that decrease these feelings and foster student success. The identification of clinical stressors and engagement in activities that mitigate these feelings may ultimately lead to lower attrition rates among nursing students consequently helping to bridge the nursing shortage gap.

The following literature review explores the most frequently cited stressors students encounter within the clinical learning environment. Attention to the role of the Nurse Educator in mediating these stressors is then discussed.

Literature Review

Stress and anxiety within the clinical learning environment is and will continue to be a factor in nursing education, but the question nurse educators must ask is what are the root causes that lead to stress and anxiety in nursing students, and what can be done to mitigate these within nursing education. A review of the literature seeking to answer this question included a search within the databases of Medline via PubMed and CINAHL. Keywords utilized in the search included: stress, anxiety, undergraduate, nursing student, clinical, nurse educator. Sixty articles

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were identified as relevant to the paper topic. From these sixty articles, nineteen articles were then omitted secondary to research done outside of the United States, outdated information, or data not addressing the paper topic. The remaining forty-one articles were utilized in a systematic review of the literature examining the root causes of undergraduate nursing students' stress and anxiety within the clinical environment and ways in which nurse educators can mitigate these feelings and stressors.

An analysis of the literature to explore triggers for stress and anxiety in undergraduate nursing students identified, but is not limited to: relationships between students, faculty and staff; a disconnect between didactic learning and clinical practice; knowledge deficits and feelings of being unprepared; fear of making mistakes and causing harm to patients; fear of providing personal and intimate patient care; misconceptions about their role and responsibilities as students; difficulties sleeping secondary to anxiety, and balancing simultaneous academic and clinical demands.

Of the various causes of stress and anxiety experienced by undergraduate nursing students, this paper will focus on the relationships between students, faculty, and staff; the perceived lack of professional knowledge and skills/ feeling unprepared; and the fear of making mistakes and causing harm to patients.

Relationships

Relationships within the clinical setting can have a major impact on student learning outcomes. Positive relationships allow students to feel more comfortable and ask questions without feelings of intimidation while exhibiting the confidence needed to participate in new experiences. For the purpose of this literature review relationships include; relationships between

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students, relationships between students and faculty, and relationships between students and nursing staff.

A supportive learning environment is crucial for student learning and success. Numerous studies identify the relationship between students, faculty, and staff as a significant source of stress and anxiety within the clinical setting (O'Mara, McDonald, Gillespie, Brown, & Miles 2013; Killam & Heerschap, 2012; Levett-Jones, Lathlean, Higgins, & McMillan, 2009).

Using an Interpretive Descriptive study design, O'Mara et al. (2013) held focus groups to determine what students constitute as a challenging clinical learning environment. Two main sources were identified: the context within which their learning experiences occurred, and their relationships with others in the clinical learning environment. In regard to relationships as a source of challenge, all students reported relationships with faculty and staff nurses as a substantial challenge. Students reported that some staff nurses ignored them or gossiped about them and were sometimes rude. Students found clinical faculty to be challenging when they were overly critical, played favorites, or were unpredictable in their responses. When experiencing these difficult relationships with staff nurses or clinical faculty, students were less likely to ask questions, or take on additional learning experiences.

In another study, Killam & Heerschap (2013) conducted a focus group of third and fourth-year baccalaureate nursing students to examine the challenges students face within the clinical setting. Students described feeling isolated and intimidated secondary to poor relationships with the clinical educator, staff nurses and other students. Favoritism, strictness, humiliation, demeaning or degrading actions, and singling students out impacted student feelings of intimidation (p. 687). One student in the focus group accounted her relationship with her

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clinical instructor, “I almost dropped out of nursing because of her. . . She singled me out, in front of everyone, almost every day, she humiliated me in front of patients. . .” (p. 687)

Although faculty is positioned to minimize nursing students' stress by creating supportive learning environments, the literature shows that some faculty intensifies students' stress. These findings suggest the pivotal role that faculty-student relationships play in nursing students' education and socialization. (Del Prato, Bankert, Grust, & Joseph, 2011). Faculty can decrease students' anxiety by acting in a friendly, respectful and inviting manner, expressing pleasure in helping students, choosing appropriate patient assignments, and be trusting of students (Cook, 2005).

The concepts of belongingness and learning within the context of the student and staff relationship was explored by Levett-Jones et al. (2009). The authors found that students deprived of belongingness are more likely to experience decreased self-esteem, increased stress and anxiety, depression, and a decrease in general well-being. According to Levett-Jones et al., the interpersonal relationships between the Registered Nurses with whom students interacted with in clinicals exerted the single most important influence on their sense of belonging.

Lack of Professional Knowledge and Skills, Feeling Unprepared

Conceptualizing the vast knowledge and skills necessary to function as a competent nurse in today's healthcare system can be an overwhelming thought for nursing students. Students are expected to apply the information they learned in the classroom to the clinical environment. What may have been understandable on paper can be very difficult, and intimidating, to apply to a real-life patient with multiple co-morbidities. Attainment of professional knowledge never ceases upon entry into the nursing profession, and students quickly find that the learning curve is steep.

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A survey of two hundred and sixty-two first-year baccalaureate nursing students was conducted by Levett-Jones, Pitt, Courtney-Pratt, Harbrow, and Rossiter (2015) to determine their primary concerns as the students prepared for their first clinical experience. The most common concern expressed by students was feeling unprepared. Students described a knowledge deficit and worried they would be unable to recall and apply the information they had learned in the past. Students reported feeling anxious about living up to the expectations of faculty and staff and used language such as “terrified, overwhelmed and stupid.”

In addition to lacking professional knowledge and skills, students also expressed feelings of being ill-prepared for human suffering, death and dying (Parry, 2011). Caring for dying patients can be very rewarding but it can also be emotionally demanding, and student nurses often require support from staff nurses and faculty. Parry (2011) researched nursing students first encounter with a dying patient. Students reported lacking sufficient skills to adequately cope with such situations and also lacked someone to speak with about the situation and their feelings.

Killam & Heerschap (2013) found that students’ feelings of uncertainty within the clinical environment were a barrier to learning and contributed to unsafe care practices.

Fear of Making Mistakes and Causing Harm

One of the main reasons students pursue a career in nursing is to help people. Nursing students are generally empathetic and compassionate people, and the idea of making a mistake that could ultimately cause harm or death to a patient can be a terrifying thought. Without clear expectations regarding their role within the clinical environment, students may enter the clinical learning experience with increased fear and anxiety.

In response to the World Health Organization (WHO) global patient safety agenda, patient safety has been incorporated into the curriculum of undergraduate nursing programs to

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ensure nurses are prepared to make healthcare safer, and to prepare them for the inevitable fact that they will make mistakes in their career (Robson, 2014). Although this is an important topic to discuss within the curriculum, it may ultimately incite additional stress and anxiety into the already stressed nursing student.

In the survey conducted by Levett-Jones et al. (2015) students reported feelings of apprehension and anxiety “fear of failure,” and they worried they would experience performance anxiety. “I am concerned about almost everything to do with clinical. . . I don’t know how I will cope” (p. 307). Students reported worry about making mistakes that would affect patient safety, using words such as “terrified, harm, and kill” (p. 307).

Undergraduate nursing students who participated in the focus group led by O’Mara et al. (2013) reported feeling petrified they would make a mistake, and ultimately questioned their plans to continue in the nursing program.

Sharif & Masoumi (2005) investigated student nurses’ experience regarding clinical practice through the use of a focus group. Students repeatedly expressed feelings of anxiety which were highest in their first year of clinicals and gradually decreased throughout their schooling. Students expressed fear of failure and making mistakes. One student said:

I was so anxious when I had to change the colostomy dressing of my twenty-four-year-old patient. It took me forty-five minutes to change the dressing. I went ten times to the clinic to bring the stuff. My heart rate was increasing, and my hand was shaking. I was very embarrassed in front of my patient and instructor. I will never forget that day. (p. 4)

Fear, anxiety, and stress is prevalent among nursing students. Identifying and further examining the issues students face is the first step in providing a superior clinical learning experience. The following section addresses how the clinical nurse educator has both the responsibility and an

obligation to provide a safe and meaningful learning environment for the nursing student.

Strategies for how to accomplish this are explored.

Implications for Clinical Nurse Educators

Within the clinical environment, stressful situations are abundant, and nursing students are invariably processing complex thoughts and feelings regarding the care of patients and the role they play as students, and eventually nurses. Clinical nurse educators play a significant role in which they can either help or hinder student learning and self-efficacy (Rowbotham & Owen, 2014). Clinical nurse educators must continue to be aware of the various causes of stress and anxiety in students and continue to provide ongoing support and opportunities to reflect and discuss these feelings.

Mitigating Stress and Anxiety in Students: The Nurse Educator's Role

The stress and anxiety that nursing students experience affects not only their well-being but also their learning and performance within the clinical setting. Thus, it is essential that nurse educators not only be aware of nursing students stress and anxiety, but also engage in activities that mitigate these feelings.

Alzayyat & Al-Gamal (2014) identify specific areas that nurse educators should focus on including: minimizing the obligatory paperwork; focusing more attention to clinical areas of training; offering simulation exercises before caring for actual patients; and adequately preparing all professionals involved in the training of nursing students.

As the previous studies indicate, relationships among students and nursing staff is paramount to a positive clinical experience. A positive nursing staff to student relationship is vital to instilling value, inclusiveness and a sense of belonging within the student (Levett-Jones, et al., 2009). Clinical nurse educators can facilitate this relationship by involving staff nurses in

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conversations about optimal learning experiences and sharing data from studies about the effects staff nurses have on students during their clinical experience (O'Mara et al., 2013).

In addition to the above suggestions, the following interventions: simulation, Dedicated Education Units (DEU), and debriefing/ reflection are three ways nurse educators can engage in activities to mitigate students' feelings of stress and anxiety within the clinical setting.

Simulation. If you were to visit any nursing school within the United States, you would more than likely find simulation integrated into the curriculum in some manner or another. Simulation is a technique or device within a controlled learning environment that attempts to create characteristics of the real world (Alden & Fowler-Durham, 2008). Within this environment, nurse educators can control the learning situation by minimizing or introducing environmental distractions and providing feedback. Because simulation can take many forms, there is not a standard framework, but most simulations follow a similar design. There is typically some preparatory work on behalf of the student, followed by implementation of the simulation, which is then followed by a debriefing session (Aebersold, & Tschannen, 2013).

Simulation, as a teaching strategy, provides nursing students an opportunity to practice clinical skills without the risk of causing harm to real patients and allows faculty to provide feedback that students can take with them to the clinical setting. Although simulation can still be a stressful experience in itself, it will enable students to feel more comfortable once they arrive in the clinical setting. Szpak and Kameg (2011) conducted a study and found students' anxiety levels to be decreased following a psychiatric simulation and prior to interacting with psychiatric patients.

The National Council of State Boards of Nursing (NCSBN) published an award-winning and ground-breaking study in 2014 which stated that fifty percent of traditional clinical hours

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could effectively be substituted by simulation in all core courses across the prelicensure nursing curriculum. The study also found that replacing the clinical hours with simulation did not affect NCLEX pass rates (Hayden, Smiley, Alexander, Kardong-Edgren, & Jeffries, 2014). According to the Society for Simulation in Healthcare (2015), simulation can take many forms, including virtual and computer-based simulations, human patient simulation using manikins or standardized patients, role play, or simulation done to teach psychomotor skills. The National League of Nursing (NLN) published *A Vision for Teaching with Simulation* (2015) in which they stated:

Today simulation is more than a way to teach and practice psychomotor skills. It is an evidence-based strategy to facilitate high-quality experiences that foster thinking and clinical reasoning skills for students. The emphasis is on creating contextual learning environments that replicate crucial practice situations. Now more than ever with changes in health care access and technological advances in health care delivery, the increasing complexity of patient care, and the growing lack of clinical placements for students- it is imperative to embed quality simulation experiences throughout the program of learning.

(p. 3)

Further research regarding simulation and its effects on the reduction of stress and anxiety are needed, but the current practice of simulation is revolutionizing nursing school training.

In one study, faculty at Southeast Missouri State University developed an experiential learning activity designed specifically for beginning nursing students after observing the fear and anxiety with which nursing students approached their first clinical experience (Ham & O'Rourke, 2004). This experiential learning activity consisted of an innovative skills lab based on a client scenario which was distributed to the students one week prior to the activity. Students had to

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coordinate medication administration along with patient care. A common fear voiced by students is being unable to answer patient questions, so during the activity, faculty asked questions that would typically be asked by patients. Following this simulation, faculty reported an obvious improvement in student comfort levels when communicating with clients and planning care. Students also reported less anxiety and an improved comfort level within the clinical setting.

Dedicated Education Units (DEU). The Dedicated Education Unit (DEU) model began in South Australia in 1997 and has since made its way to the United States. The DEU model is an innovative approach to clinical education that addresses the current nursing faculty shortage while increasing the number of nurses available to provide patient care (Ryan, Shabo, & Tatum, 2011). DEU's are clinical sites in hospitals where staff nurses serve as preceptors for students at all levels of their nursing education. This model is intended to better prepare students within the clinical setting while decreasing the number of faculty required at clinical sites (Dapremont & Lee, 2013).

In the traditional clinical education model, one clinical faculty supervises eight to ten students at a time. During their time on the clinical unit, student nurses may work with several staff nurses, providing limited opportunity to build a trusting relationship. Because of this, students experience anxiety that may inhibit their learning (UNMC College of Nursing, 2018).

Using the DEU model, students are integrated into the clinical environment, ensuring they are an essential part of the unit, thus allowing them to experience a realistic view of nursing practice. Staff nurses are simultaneously required to stay up to date in their roles as mentors (University at Buffalo School of Nursing, 2018).

A supportive clinical learning environment is an essential aspect of student learning. Within the DEU model, there is a strong partnership between nurse clinicians and university

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faculty resulting in a mutualistic relationship where students are provided a meaningful learning experience, and nurse clinicians also benefit. Faculty and nurses work together to maximize the achievement of student learning outcomes, while students take advantage of the expertise of both clinicians and faculty (Edgecombe, Wotton, Gonda, & Mason, 1999).

Limitations of DEU's include preceptor burnout, clinician recruitment, clinicians who are not experts at teaching and evaluation of students, increased workload for students having both faculty and nurse clinician expectations, and the challenge of receiving feedback from clinicians (Budgen & Gamroth, 2008).

Debriefing and Reflection. Benner, Sutphen, Leonard & Day (2010) describe debriefing as a critical conversation used to reframe the context of a situation, and to clarify assumptions and perspectives both objectively and subjectively. The authors go to say that reframing should be the goal of every faculty and student interaction.

Debriefing is a process by which educators facilitate students' re-examination or reflection of a clinical situation. In the context of simulation, debriefing usually involves abstract conceptualization and reflective observation (Billings & Hallstead, 2012). Faculty's role in the debriefing process involves asking students what they saw, touched, heard and smelled. Faculty also guides students to examine their internal sensations, "in their hearts and in their guts" (Billings & Hallstead, 2012). Interactions between faculty and students in this manner strengthens their relationship, ultimately leading to decreased student anxiety.

In a study completed by Pai (2016), the author observed the associations between anxiety, self-reflection and learning effectiveness and how these factors affect student nurses' clinical performance. The study highlights that self-reflection with insights into the clinical

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experience may help students deflect anxiety that may influence the progression of clinical competence.

The NLN along with the International Nursing Association for Clinical Simulation and Learning (INACSL) agree that integrating debriefing across the curriculum-not just simulation-has the ability to transform nursing education (NLN, 2015). Debriefing, according to the NLN, encourages nurses to be critically reflective practitioners in today's health care system. The process of examining why an action was taken attributes meaning to the information by revealing assumptions, values, beliefs, knowledge, and feelings behind the action (NLN, 2015). The way in which students process their feelings following their clinical experiences is pivotal to students' decisions to withdraw from or remain enrolled in nursing programs (Killam & Heerschap, 2013).

The clinical learning environment is fraught with variables including relationships among students, clinical staff and faculty, opportunities for students to learn, and the characteristics of the clinical placement. Nurse educators should utilize simulation, DEU's, debriefing and reflection to minimize stress and anxiety among nursing students within the clinical environment.

Conclusion

Nurse educators are tasked with the challenge of integrating didactic and clinical learning to ensure students understand the skills, attitudes, knowledge, and ethics required for professional nursing practice (Benner, Sutphen, Leonard & Day, 2010). Finding these meaningful clinical experiences is not always an easy task. Hospitals are not able to keep up with the current demand to provide training for unlicensed nursing students within their facilities.

The National League for Nursing states that the most significant challenge to expanding enrollment capacity within the BSN programs is the lack of clinical sites (NLN, 2018). And to

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further complicate this, according to The Bureau of Labor Statistics' Employment Projections 2014-2024, Registered Nurses are listed among the top occupations in terms of job growth through 2024. The RN workforce is projected to grow by 16% by 2024 which is much faster than other industries in the country (Bureau of Labor Statistics, 2015). As the generation of Baby Boomers age, the nursing shortage will only be intensified as the need for healthcare will grow and current baby boomer Registered Nurses will be retiring.

Nursing schools must keep up with the high demand for nurses in the future, while also dealing with the current lack of clinical sites, budget cuts, and the shortage of nursing faculty. The complexity of the current healthcare system requires that new nurses be better prepared to enter the workforce and to practice in ways that reflect their full scope of practice (IOM, 2011). Higher education must ask how they can provide quality hands-on learning for students given the realities that exist today. Nurse educators must continue to apply the research regarding anxiety in nursing students and ask themselves what actions can be taken to provide meaningful and effective clinical education while working to decrease stress and anxiety.

Nurse educators cannot control how students will react to the clinical environment, but having a better understanding of the common causes of stress and anxiety experienced by nursing students during their clinical rotations will better prepare nurse educators to develop interventions to minimize these feelings. Ultimately, decreasing stress and anxiety in nursing students may help to alleviate the nursing shortage as more nursing students complete their education. And, through the use of simulation, DEU's, and debriefing, nursing schools can creatively approach the issues related to lack of clinical sites and demand for more nurses while addressing students' stress and anxiety within the clinical setting.

References

- Aebersold, M., & Tschannen, D. (2013). Simulation in Nursing Practice: The Impact on Patient Care. *Online Journal of Issues in Nursing, 18*(2), 6.
- Alden, K., Fowler-Durham, C. (2008). *Patient safety and quality: an evidence-based handbook for nurses*. Chapter 51: Enhancing Patient Safety in Nursing Education Through Patient Simulation. Rockville, MD: Agency for Healthcare Research and Quality.
- Algozo, M., Peters, K. (2012). The experiences of undergraduate assistants in nursing. *Nurse Education Today, 32*(3), 192-202.
<https://www.sciencedirect.com/science/article/pii/S0260691711002012?via%3Dihub>
- Alzayyat, A., & Al-Gamal, E. (2014). A review of the literature regarding stress among nursing students during their clinical education. *International Nursing Review, 61*(3), 406-415.
Retrieved from
<https://pdfs.semanticscholar.org/3f03/9755f82302a12b497ae39f42e93d358213e2.pdf>
- American College Health Association (2017). American college health association national college health assessment: Spring 2017 reference group executive summary. Retrieved from http://www.acha-ncha.org/docs/NCHA-II_SPRING_2017_REFERENCE_GROUP_EXECUTIVE_SUMMARY.pdf
- American Psychological Association (2018). Anxiety. Retrieved from <http://www.apa.org/topics/anxiety/index.aspx>
- Arnold, E. & Boggs, K. (2006) *Interpersonal Relationships: Professional Communication Skills for Nurses*, 5th ed. Elsevier Health Sciences, Maryland Heights, MO.

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Benner, P. Sutphen, M. Leonard, V. & Day, L (2010). *Educating nurses: a call for radical transformation*. San Francisco, CA: Jossey-Bass.

Billings, D., & Halstead, J. (2012). *Teaching in Nursing: A Guide for Faculty*. Elsevier Health Sciences.

Budgen, C., Gamroth, L., (2008). An overview of practice education models. *Nurse Education Today*. 28 (3), 273-283

Bureau of Labor Statistics (2015). Occupational employment projections to 2024. Retrieved from <https://www.bls.gov/opub/mlr/2015/article/occupational-employment-projections-to-2024.htm>

Cook, L. (2005). Inviting teaching behaviors of clinical faculty and nursing students' anxiety. *The Journal of Nursing Education*, 44(4), 156-61.

Crary, P. (2013). Beliefs, Behaviors, and Health of Undergraduate Nursing Students. *Holistic Nursing Practice*, 27(2), 74-88.

Dapremont, J., Lee, S., & Jeffries, P. (2015). *Partnering to educate: Dedicated education units*. Philadelphia, Pennsylvania; Thorofare, New Jersey: Elsevier B.V; SLACK Incorporated. doi:10.1016/j.nepr.2013.02.015; 10.3928_01484834-20151016-09

Del Prato, D., Bankert, E., Grust, P., & Joseph, J. (2011). Transforming nursing education: A review of stressors and strategies that support students' professional socialization. *Advances in Medical Education and Practice*, 2, 109. doi:10.2147/AMEP.S18359

Edgecombe, K., Wotton, K., Gonda, J., and Mason, P. (1999). Dedicated education units: A new concept for clinical teaching and learning. *Contemporary Nurse: A Journal for the Australian nursing Profession*. 1999;8: 166-171

STRESS AND ANXIETY IN UNDERGRAD NURSING STUDENTS

- Etheridge, S. A. (2007). Learning to think like a nurse: Stories from new nurse graduates. *Journal of Continuing Education in Nursing, 38*(1), 24.
- Hayden, J.K., Smiley, R.A., Alexander, M., Kardong-Edgren, S., & Jeffries, P.R. (2014). Supplement: The NCSBN National Simulation Study: A longitudinal, randomized, controlled study replacing clinical hours with simulation in prelicensure nursing education. *Journal of Nursing Regulation, 5*(2), C1-S64.
- Ham, K., & O'Rourke, E. (2004). Clinical preparation for beginning nursing students: An experiential learning activity. *Nurse Educator, 29*(4), 139-141. doi:10.1097/00006223-200407000-00006
- Institute of Medicine (2011). *The future of nursing: Leading change, advancing health*. Washington, DC: The National Academies Press.
- Ironside, P. M., McNelis, A. M., & Ebright, P. (2014). *Clinical education in nursing: Rethinking learning in practice settings* doi://doi-org.pearl.stkate.edu/10.1016/j.outlook.2013.12.004
- Jeffreys, M.R. (2007). Tracking students through program entry, progression, graduation, and licensure: assessing undergraduate nursing student retention and success. *Nurse Education Today, 27*(5), 406-419.
<https://www.sciencedirect.com/science/article/pii/S0260691706000955?via%3Dihub>
- Killam, L. A., & Heerschap, C. (2013). Challenges to student learning in the clinical setting: A qualitative descriptive study. *Nurse Education Today, 33*(6), 684-691. doi://doi-org.pearl.stkate.edu/10.1016/j.nedt.2012.10.008
- Killam, L.A., Mossey, S., Montgomery, P., & Timmermans, K. (2013). First year nursing students' viewpoints about compromised clinical safety. *Nurse Education Today, 33*(5), 475-480. DOI: <https://doi.org/10.1016/j.nedt.2012.05.010>

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- Levett-Jones, T., Lathlean, J., Higgins, I., & McMillan, M. (2009). Staff - student relationships and their impact on nursing students' belongingness and learning. *Journal of Advanced Nursing*, 65(2), 316-324. doi:10.1111/j.1365-2648.2008.04865.x
- Levett-Jones, T., Pitt, V., Courtney-Pratt, H., Harbrow, G., & Rossiter, R. (2015). What are the primary concerns of nursing students as they prepare for and contemplate their first clinical placement experience? *Nurse Education in Practice*, 15(4), 304-309.
doi:10.1016/j.nepr.2015.03.012
- Moscaritolo, L. M. (2009). Interventional strategies to decrease nursing student anxiety in the clinical learning environment. *The Journal of Nursing Education*, 48(1), 17.
doi:10.3928/01484834-20090101-08
- National League for Nursing (2018). Nursing shortage 2013-2014. Retrieved from <http://www.nln.org/newsroom/nursing-education-statistics/nursing-shortage>
- National League for Nursing (2015). Debriefing across the curriculum. Retrieved from [http://www.nln.org/docs/default-source/about/nln-vision-series-\(position-statements\)/nln-vision-debriefing-across-the-curriculum.pdf?sfvrsn=0](http://www.nln.org/docs/default-source/about/nln-vision-series-(position-statements)/nln-vision-debriefing-across-the-curriculum.pdf?sfvrsn=0)
- National Institute of Mental Health (2018). 5 things you should know about stress. Retrieved from <https://www.nimh.nih.gov/health/publications/stress/index.shtml>
- NLN Releases: A Vision for Teaching with Simulation. (2015). *Nursing Education Perspective*, 36(3), 202.
- O'Mara, L., McDonald, J., Gillespie, M., Brown, H., & Miles, L. (2013). Challenging clinical learning environments: Experiences of undergraduate nursing students. *Nurse Education in Practice*, 14(2), 208-213. doi://doi-org.pearl.stkate.edu/10.1016/j.nepr.2013.08.012

- Pai, H. (2016). An integrated model for the effects of self-reflection and clinical experiential learning on clinical nursing performance in nursing students: A longitudinal study. *Nurse Education Today*, 45: 156-162. DOI: [http://www.nurseeducationtoday.com/article/S0260-6917\(16\)30131-9/fulltext](http://www.nurseeducationtoday.com/article/S0260-6917(16)30131-9/fulltext)
- Parry, Maria. (2011). Student nurses' Experience of their first Death in Clinical Practice. *International journal of palliative nursing*, 17(9):446-51.
- Robson, W., (2014). Eliminating avoidable harm: time for patient safety to play a bigger part in professional education and practice. *Nurse Educ. Today* 34 (5), e1-e2. Retrieved from [http://www.nurseeducationtoday.com/article/S0260-6917\(12\)00191-8/pdf](http://www.nurseeducationtoday.com/article/S0260-6917(12)00191-8/pdf)
- Rowbotham, M., & Owen, R. M. (2015). The effect of clinical nursing instructors on student self-efficacy. *Nurse Education in Practice*, 15(6), 561-566. doi:10.1016/j.nepr.2015.09.008
- Ryan, C., Shabo, B., Tatum, K. (2011). Using experienced clinicians to facilitate clinical education. *Nurse Educator* 36 (4), 171-174.
- Sharif, F., & Masoumi, S. (2005). A qualitative study of nursing student experiences of clinical practice. *BMC Nursing*, 4, 6.
- Society for Simulation in Healthcare. (2014). Accreditation standards. Retrieved from www.ssih.org/About-Simulation
- Szpak, J.L., & Kameg, K.M. (2011). Simulation decreases nursing student anxiety prior to communication with mentally ill patients. *Clinical Simulation in Nursing*, 9(1), doi:10.1016/j.ecns.2011.07.003

STRESS AND ANXIETY IN UNDERGRAD NURSING STUDENTS

Turner, K., & McCarthy, V. L. (2017). *Stress and anxiety among nursing students: A review of intervention strategies in literature between 2009 and 2015*//doi-org.pearl.stkate.edu/10.1016/j.nepr.2016.11.002 Retrieved from <http://www.sciencedirect.com.pearl.stkate.edu/science/article/pii/S1471595316301779>

University of Nebraska Medical Center: College of Nursing (2018). Dedicated education unit. Retrieved from <https://www.unmc.edu/nursing/programs/dedicated-education-unit/index.html>

University at Buffalo School of Nursing (2018). Dedicated Education Unit. Retrieved from <https://nursing.buffalo.edu/research/areas-of-research/dedicated-education-unit.html>