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Developing an Online Wellness Curriculum for Nurse Anesthesia Students

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<div style="text-align:center">**Executive Summary**</div>

Title

Wellness E-Portal for SIUE Nurse Anesthesia Students

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Introduction to the Problem

Student registered nurse anesthetists (SRNAs) face significant and unique stressors on a daily basis. Escalating, chronic stress can cause unpredictable struggles and maladaptive coping mechanisms among nurse anesthesia students. Without effective stress management and maintenance of personal wellness, students are predisposed to poor academic and clinical performance; the consequences of which could include failure to complete the program or unsatisfactory patient outcomes. Creating an accessible and structured electronic resource which provides evidence-based wellness education and techniques to improve stress management can positively impact academic success of SIUE's nurse anesthesia students and in the long term, positively affect patient outcomes.

Literature Review

SCOPUS, ScienceDirect, PubMed, and CINHAL databases, along with the Southern Illinois University Edwardsville library catalogue were searched for research articles using various combinations of 'stress' plus these key words: nurse anesthesia, graduate students, stress reduction, and wellness. A thorough review of the current literature revealed the need for more high quality studies related to SRNAs and wellness, as well as the links between provider wellness and patient outcomes. However, poorly managed stress and its effects on student registered nurse anesthetists and certified registered nurse anesthetists (CRNAs) has been documented by several studies. Chipas & McKenna (2011) found the average stress level for an

SRNA was 7.2 on a 0-10 scale, significantly higher than the average reported stress score of 4.2 for practicing CRNAs. The study concluded SRNAs begin their career with lingering physical and emotional stress caused by school and suggested the need for better education and techniques regarding stress management (Chipas & McKenna, 2011).

In a follow-up descriptive study, Chipas et al. (2012) specifically assess perceived manifestations of stress, and coping mechanisms among SRNAs. The authors revealed that almost half (47%) of SRNAs reported symptoms of depression and 21.2% reported suicidal ideations (Chipas et al., 2012).   Anesthesia providers who are unable to manage stress effectively are more likely to exhibit poor clinical performance (McKay, Buen, Bohan, & Maye, 2010) and commit serious medication errors (de Oliverias, 2013). Maladaptive coping mechanisms in response to chronic stress in college students has been linked to lower academic performance (Sohail, 2013).

Wellness is broadly defined as the state optimal health maintained using a holistic approach, incorporating emotional, physical, and spiritual well-being (World Health Organization, 2016). Maintenance of personal wellness among health care providers has been linked to improved quality of patient care (Eckleberry-Hunt, Kirkpatrick, Taku & Hunt, 2017). Wellness techniques were researched and a focus on mind-body therapies and mindfulness was established. Mind-body therapy has been shown to improve health outcomes and sustain wellness (Muehsam et al., 2017). Mind-body therapy techniques include meditation, yoga, guided imagery, breathing exercises, and progressive relaxation. Multiple studies have demonstrated stress reduction and improvement in academic performance among medical, nursing and graduate students with the use of mind-body therapy techniques and mindfulness-based stress reduction (MBSR) programs (Schwind et al., 2017; Cho, Ryu, Noh, & Lee, 2016).

SRNAs have identified peer support as a major priority for improving wellness (Chipas et al., 2012). Therefore, peer support was identified as the second major focus for this project. Peer mentoring and support helps novice health care professional students bridge gaps between textbook knowledge, classroom learning, and clinical practice (Dennison, 2010).

Miller & McCartney (2015) recognized the need for a highly structured and collaborative peer support system in highly stressful training specialties such as anesthesia. Hamrin, Weycer, Pachler, & Fournier (2006) found benefits for graduate nursing students transitioning into an advanced practice provider role. Thalluri (2016) reported improved exam scores and confidence levels when graduate students had a peer support network.

IRB information

The institutional review board at Southern Illinois University Edwardsville determined that this project was not considered research and therefore did not require review by the board.

Project Methods

Setting and sample population. The setting of the project was Southern Illinois University Edwardsville campus. Sample population was comprised of second year nurse anesthesia students enrolled in SIUE's Nurse Anesthesia program.

Implementation. Implementation of the project first included an in-service for second-year nurse anesthesia students educating them on the concepts of wellness, stress management, and mindfulness and their specific benefits and implications for nurse anesthesia students. A PowerPoint presentation was utilized as the format for this in-service. The students were then introduced and given a tutorial to a Wellness E-Portal that was created by the authors.

The Wellness E-Portal consists of three major components: wellness, mind-body therapy and peer support. Each of these components were given a separate tab on the Wellness E-Portal

homepage. Clicking on the link for the "Wellness" tab directs students to the educational PowerPoint provided to them during the educational in-service on the concept of wellness and stress management. Clicking on the "Mind-Body Therapy" tab directs students to the educational PowerPoint provided to them during the educational in-service on mindfulness and mind-body therapy. Both of the above listed PowerPoint presentations include voiceover from the authors of the project to further emphasize particular concepts and add more detail to the presentation. The "Mind-Body" resource tab also includes suggestions for mindfulness smartphone applications that can be used by students to begin incorporating mindfulness and mind-body techniques into their daily routines.

The third major component of the Wellness E-Portal is the peer support feature. Clicking on the link labeled "peer support" directs students to a comprehensive list of each clinical site, along with a list of students (from both cohorts) who either have completed or will complete clinical rotations at each site, along with each student's university email address. The purpose of this tab is to facilitate communication between students of different cohorts, who are otherwise not allowed much opportunity to interact or network.

The Wellness E-Portal also contains miscellaneous resources related to health and wellness. These resources include direct links to the SIUE Counseling Services website and the AANA Health & Wellness and Peer Support website, links to free, anonymous online mental health screening tools. The E-Portal homepage also provides students with the phone number and webpage links for the National Suicide Prevention Hotline. Lastly, the E-portal contains contact information and photos of each class's Wellness Representatives and the faculty chairperson for student wellness.

Evaluation

After second-year nurse anesthesia students were given a live tutorial of the Wellness E-Portal and the in-services on wellness and mindfulness, students were asked to evaluate the in-service and their opinions of the Wellness E-Portal by completing an anonymous survey (see Appendix A). Twenty-four completed surveys were returned to the authors. The survey consisted of six questions on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The survey assessed whether the presentation improved understanding and awareness of wellness and stress management, user-friendliness of the Wellness E-Portal, likelihood of use of both the mind-body therapy resources and the peer support resource as an SRNA, likelihood of future use of the mind-body therapy techniques as a CRNA, and whether or not the introduction of the Wellness E-Portal would be valuable as part of the new student orientation for incoming SIUE nurse anesthesia students.

All twenty-four audience members returned a completed survey. For questions numbered 1through 6, the mean responses were 4.2, 4.6, 3.9, 3.8, 4.2, and 4.7, respectively. Based upon the responses, it is reasonable to assume that this project was successful in educating SRNA's on the importance of wellness, and mind-body therapy as well as creating a user-friendly wellness resource that students are likely to utilize and incorporate into their academic careers as SRNA's.

Goal and Objectives. The goal of this project was to promote wellness and stress management among SRNA's enrolled in SIUE's nurse anesthesia program. Objectives of the project included:

1) Educating second-year students in the Nurse Anesthesia program at SIUE about the importance of wellness and stress management, emphasizing mindfulness and peer support

2) Creating an online wellness resource for SIUE's nurse anesthesia students which includes a peer support resource, mindfulness education and resources, as well as other wellness resources

3) Making the wellness resource available to all SIUE nurse anesthesia students utilizing the Blackboard platform (Blackboard Wellness E-Portal)

Resources/supports and risks/threats. The potential benefits of this project include improved wellness among SIUE SRNA's and potentially improved outcomes for the patients they care for. Weakness and threats include student unwillingness to participate and the failure of students to utilize the E-portal.

Impact on Practice

This project has the potential to benefit student registered nurse anesthetists and the patients they serve in both long term and short term capacities. Immediate benefits include improved wellness and stress management techniques among SRNAs in order to improve overall health and wellness. This should help facilitate success both academically and clinically, since poorly managed stress leads to poor performance. Since evidence has shown that providers who maintain personal wellness and manage stress effectively benefit their patients by providing better quality of care, the patients that these SRNAs care for can be positively impacted as well. This project can be expanded upon by the addition of other aspects of health and wellness onto the E-Portal, such as nutrition and fitness tips, or effective study habits. The project could be easily replicated and utilized by other nurse anesthesia programs. It can also be easily adjusted to fit the specific needs of students in these programs. The authors wish to improve the project's sustainability by gaining approval from the faculty of SIUE's Nurse Anesthesia Program to incorporate a tutorial of the Wellness E-Portal into the incoming student orientation, including a viewing of the voiceover presentations.

Conclusions.

This project shows that the introduction of a Wellness E-Portal can effectively improve SRNAs' knowledge and awareness of provider wellness. It also demonstrates that a Wellness E-Portal can be user-friendly and that a resource such as this is likely to be utilized by students. A review of current literature reveals the need for more studies documenting the effects of chronic stress and poor wellness among SNRAs, and the potential outcome improvement for patients cared for by providers who incorporate wellness into their daily lives.

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