

# Student Registered Nurse Anesthetist Stressors and Exercise as a Healthy Coping Mechanism:



## A Quality Improvement Project

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### Abstract

**Objective.** To examine current research and assess the stressors that SRNAs experience, identify coping mechanisms frequently used by SRNAs, and evaluate exercise as a healthy coping mechanism.

**Background.** Studies have revealed that stress in nurse anesthesia school has significant physical and educational consequences. Healthy coping mechanisms, such as exercise, need to be established in order to facilitate learning in the classroom and clinical setting

**Design.** The research was an integrative research review (IRR). Methods. Searched databases included: Google Scholar and CINAHL. Inclusion criteria were publications of peer-reviewed articles within a date range of 2006 to 2020 and incorporated the stressors of nurse anesthesia school, coping mechanisms, and exercise as an effective coping mechanism for perceived stressors of current SRNA’s.

**Results.** The results indicate that exercise may positively affect SRNA performance in the clinical and classroom settings, as well as reduce the negative physiological and emotional manifestations of stress that inevitably accompanies nurse anesthesia school. There are other positive coping mechanisms, however exercise has additional health and wellness benefits that may not be obtained with other coping strategies alone.

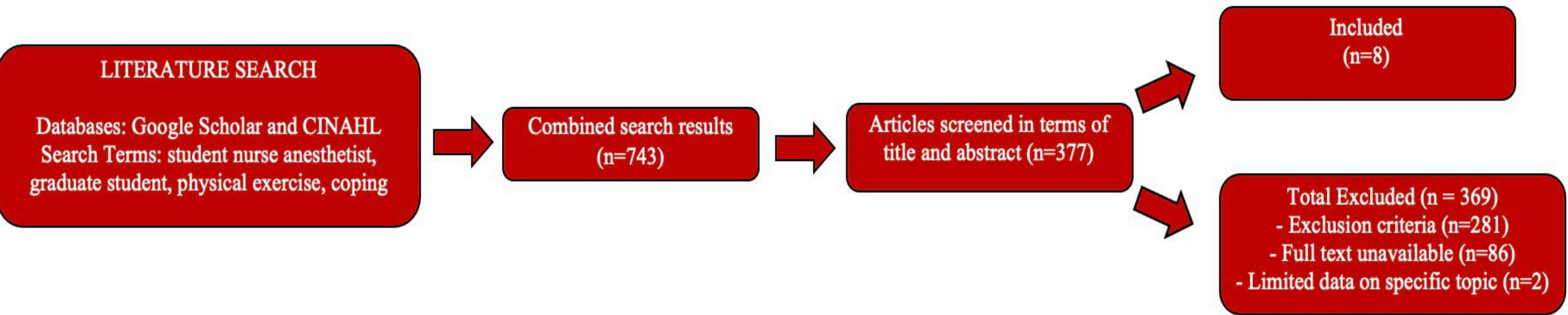
**Conclusions.** This research review revealed that SRNAs experience a heightened level of stress and healthy coping mechanisms, such as exercise, can lead to improved performance in the classroom and clinical setting. However, more research is needed due to the extent of the problem at hand and the limited research currently available.

### Introduction

- SRNA’s often endure significant stress throughout their education and training.
- Stressors:
  - Change in location, finances, personal time, family relationships, sleep schedule
  - Mastery of copious amounts of information;
  - Development of sharp decision-making skills/logical reasoning
  - Learning to work autonomously
  - Being able to clearly communicate in a professional manner under the pressure of life-or-death circumstances
- Overwhelming stress can lead to low self-esteem, helplessness, mental problems, poor academic performance and often to physical problems causing the systems of the body to become chronically over- or under-worked.
- Consistent exercise is a potential healthy mechanism for coping with the stress.

### Literature Review

Author/Year/ Population	Findings
<b>Belk (2016)</b> <b>n = 165</b>	Recognizing the manifestations of stress, stressors, and coping mechanisms may lead to an increased ability to concentrate, comprehend, and learn material. Decrease in income (78.7%) and a change in work hours (50.9%) were identified as the largest stressors. Stressors from school triggered changes in sleep habits (52.1%), personal habits (47.9%), social activities (43%), and recreation (69.7%) which negatively affected student’s abilities to cope with stress. Personal habits such as taking a bath or shower, communication with a spouse or friend, exercise, and recreational activities were the most used coping mechanisms used by SRNAs.
<b>Chipas et al. (2012)</b> <b>n = 1,374</b>	The overall stress level was a 7.2/10 Likert type scale for all SRNAs. Females had statistically higher stress levels (7.6) than male students (7.1). Divorced students with or without children had notably higher mean levels of stress when compared to other civil status. African American and Hispanics students had higher perceived level of stress than in White/non-Hispanic students. Level of stress in students enrolled in integrated program is significantly higher than those in front loaded program (7.9 vs. 7.1). Meditating, seeing a psychiatric professional and exercise were the top three coping mechanisms. Thirteen key suggestions were made by SRNAs to AANA to help students cope with the stressors of their anesthesia programs.
<b>Chipas &amp; McKenna (2011)</b> <b>n = 7, 537</b>	The average stress for CRNAs was 4.7/10 and 7.2/10 for SRNAs. Stress was described to be positive and negative. Physical manifestations of stress included hypertension, headaches, agitation, impatient, cravings, teeth grinding, inability to concentrate.
<b>Griffin, Yancey, &amp; Dudley (2017)</b> <b>n = 75</b>	The study demonstrated a positive correlation between self-efficacy and higher perceived levels of wellness. Students with higher levels of self-efficacy and wellness were better able to set goals, overcome obstacles, and recover from setbacks. Emotional and physical well-being are undoubtedly linked to the overall health of a person.
<b>Hicks (2015)</b> <b>n = 12</b>	The majority (75%) of SRNAs perceived themselves as highly stressed. Relative scores indicated that the eight coping ways used by the SRNAs were almost equally distributed. Most SRNAs favored planful problem solving (15% of the time) followed by self-controlling (14%), seeking social support and accepting responsibility (tied at 13%), distancing and positive reappraisal (tied at 12%), escape-avoidance at 9% and confrontive coping at <1%). Four (25%) of the participants reported drinking to relieve stress with other stress relievers being prayer, eating more, exercising, recreational reading, and dancing.
<b>Philips (2010)</b> <b>n = 12</b>	The results indicated that individual experiences with school were very different both physically and emotionally. The overall stress response was also varied. Stressors and coping methods were identified, and recommendations were made.
<b>Tunajek (2006)</b> <b>n/a</b>	Unaddressed stress can negatively affect learning environments. Some stress is needed to help students perform and achieve goals but too much stress can cause a decline in performance. The obstacle is finding the ideal level of stress to achieve success in an anesthesia program.
<b>Varner (2011)</b> <b>n/a</b>	Students who regularly ran during their anesthesia program noticed decreasing stress levels, improved functioning in the clinical setting, and better performance in the classroom setting.



### Clinical Practice Relevance

Clinical practice should focus educating future SRNAs about the stressors of anesthesia school and the importance of developing healthy coping mechanisms to prevent the negative consequences of stress and promote success throughout their education and careers.

### Results

- More research and education is needed in the area of anesthesia school stressors and healthy coping mechanisms to facilitate success throughout a NAT program.
- Pathophysiological effects of stress:
  - Low self-esteem
  - Helplessness
  - Poor academic performance
  - Hypertension
  - Headaches
  - Agitation
  - Impatient
  - Cravings
  - Teeth grinding
  - Inability to concentrate
- Exercise increases the release of endogenous endorphins that can counteract the negative effects of stress.
- It is imperative that programs educate potential students and current students about the overwhelming expectations of anesthesia school and the stress that accompanies it.
- Respondents in this study reported an increase in stress during their nurse anesthesia program and felt they would have been better prepared for their program had they been more informed of the nature of the stress and the importance of developing coping mechanisms.

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