Anxiety and Coping Styles of First-Year Nursing Students During COVID

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There is an increasing amount of anxiety experienced by college students affecting their mental health and success through college (Turner et al., 2018). The increase in the mental health needs of students is far exceeding current resources on college and university campuses across the United States. Many components impact a student’s mental health including previous educational experience and pressure of choosing their future career. When an individual is psychologically and intellectually ready, they will choose their profession and develop skills and tools allowing them to accomplish their professional goals. To choose a profession, an individual must be psychologically and intellectually ready to accomplish their profession goals by developing the skills and tools they need to be successful. Choosing a profession can be an important factor in the mental health of individuals (Karaca et al., 2019). The importance of this decision and the stress of college life impacts an individual’s mental health and development of coping styles. Students who experience negative emotional feelings often develop coping styles ineffective in dealing with those negative emotions (Sun et al., 2016). Mental health disorders often begin in early adulthood, a delay in diagnosis and treatment of these mental health disorders often leads to more complex disorders which then leads to school dropout, addiction, and self-harm (Duffy et al., 2019). First-year nursing students experience (FYNS) increase anxiety due to being first-time college students, being away from the familiarity of home, exposure to drugs and alcohol, and meeting the demands of their nursing program. The development of positive coping styles can be developed and utilized by nursing students throughout their academic and professional nursing career

**Significance**

Mental health disorders account for the greatest number of negative health repercussions compare to any other physical health conditions among college-aged individuals (Marsh & Wilcoxon, 2015). Anxiety disorders are the largest group of mental health diagnoses among Americans accounting for approximately 31% of all mental health costs making anxiety the most expensive mental health disorder (Coles et al., 2015). According to the American College Health Association (2018), one-third of college freshmen experience mental health problems with 57% feeling overwhelming anxiety and with only 15.8% receiving a diagnosis or treatment over 12-months (Tavakoli et al., 2018). From Fall 2009 to Spring 2015, there was an average increase of 30-40% in the use of counseling centers with only a 5% increase in student enrollment (Center for Collegiate Mental Health, 2019). Anxiety disorders frequently commence during early adulthood, however with timely recognition and intervention anxiety disorders can be prevented from becoming maladaptive and a comorbid condition (Coles et al., 2015). Increased feelings of anxiety and depression among college students are linked to health problems and risk-taking behavior (Coiro et al., 2017). Research has associated students’ overall mental health with their academic performance and educational achievement with nearly 4.3 million individuals not completing college due to onset or continuation of mental health disorders (Marsh & Wilcoxon, 2015). For students who meet diagnostic criteria for mental health disorders, only 20% seek or receive treatment (Duffy et al., 2019). Identifying those students who are experiencing increased levels of stress, a known precursor to anxiety, and teaching them appropriate coping styles to manage anxiety can improve their college experience and ability to be academically successful.

**Anxiety**

Anxiety is a normal part of life but becomes concerning when it begins to impede an individual’s daily life experience and hinders their ability to function normally. Maladaptive anxiety leads to negative behaviors which can ultimately affect student’s success through college and increase risk-taking behaviors. Studies have shown anxiety can significantly impact an individual’s ability to learn due to stimulation of the hypothalamus-pituitary adrenal axis where glucocorticoids are released from the adrenal cortex affecting working memory. Thus, working memory is unequivocally affected by anxiety hormones which leads to deficits in cognition reducing storage and processing space for working memory (Al-Ghareeb et al., 2019). Anxiety results in feelings of apprehension, panic, trembling, shaky, dry mouth, breathing difficulties, increased heartbeat, sweaty palms, concerns about performance, and feelings of losing control (Beiter et al., 2015). These anxiety responses not only impact the student’s ability to perform academically but also their physical health. There are four levels of anxiety: mild, moderate, severe, and panic with the focus being on the higher levels of anxiety which negatively impact a student’s performance (Sun et al., 2016). Previous research shows a strong association between interpersonal stress and the presence of anxiety, depression, health problems, and risk-taking behaviors (Coiro et al., 2017). While preparing students for their future in nursing, their educational experiences require some degree of anxiety and challenges that can be a hindrance in their ability to learn (Al-Ghareeb et al., 2019). Student’s use of positive coping styles results in a reduced level of anxiety and depressive symptoms, while negative coping styles that avoid or deny the stressor result in higher levels of depressive symptoms but not necessary anxiety (Coiro et al., 2017). When students experience moderate to high levels of anxiety their performance decreases while those with mild or moderate levels of anxiety performed well (Al-Ghareeb et al., 2019). Evaluating learning occurs when the student experiences a moderate amount of anxiety (Al-Ghareeb et al., 2019).

**Coping Styles**

 Coping is defined as the effort to control one’s cognitive, behavioral, emotional, or psychological response to stress or a specific stressor (Coiro et al., 2017). Coping is a process in which an individual regulates the demands of person-environment relationships deemed as stressful, and then emotions are generated from these demands (Lazarus & Folkman, 1984). Appropriate coping styles are key to the management of emotional responses based upon the appraisal of the situation allowing individuals to determine which coping style would best manage the situation (Coiro et al., 2017). The utilization of positive coping skills decreases feelings of psychological stress, promotes adaptation, and increases adjustment when adversity is experienced (Houston et al., 2017). Adaptive coping styles can disturb the stress-health link thus lowering the level of anxiety and stress experienced by students (Tran et al., 2020). Individuals who do not detach from their anxiety symptoms by utilizing effective coping styles will continue to struggle with feelings of anxiety (Tavakoli et al., 2019). Sustained exposure to stress and failing to utilize positive coping styles can impact the overall health and well-being of students which leads to emotional and psychological health issues ultimately impacting the future of the labor force (Labrague, McEnroe-Petitte, Papathanasiou, et al., 2018).

**First-Year Nursing Students**

 The American Freshmen National Norms Study showed freshmen have higher levels of stress and decreased emotional well-being compared to other undergraduate students (Garett et al., 2017). Feelings of overwhelming anxiety are often higher in female students (67.7%) compared to male students (47.4%) (Tran et al., 2018). Nursing students are exposed to a higher level of stress compared to other majors (Labrague, McEnroe-Petitte, Gloe, et al., 2017). Nursing programs have two major areas of stress, the academic or didactic section and the clinical portion. The academic burden of assignments, workload, examinations, and large readings assignments coupled with the clinical burden of caring for patients, feelings of incompetence, inexperience in the health care system, death and dying of patients, fear of harming patients, and being unfamiliar with disease processes and treatments all increase FYNS stress. Studies have shown when nursing students struggle with disproportionate levels of anxiety their incentive to study, competence, and drive to become a nurse is negatively impacted (Sun et al., 2016). The goal of this research is to determine if a specific coping style was utilized by FYNS who may or may not experience anxiety then to develop a teachable intervention to help decrease feelings of anxiety.

**Theory**

 In Stress, Appraisal, and Coping (1984), Lazarus and Folkman discussed stress and coping by examining the relationship between how individuals perceive or appraise external and internal demands using personal and social sources. The terms anxiety and stress have been intertangled since the mid 20th century by researchers due to overlapping in research and concepts. It was then later determined the psychopathology of anxiety is a product of stress (Lazarus & Folkman, 1984). Stress has multiple variables and processes in which the person must appraise and adjust to their ever-changing environment. The definition of stress developed by Lazarus and Folkman was described as a particular relationship between the individual and environment appraised by the individual as taxing or exceeding their resources and endangering their well-being (Lazarus & Folkman, 1984). This definition inspired research to examine how anxiety impacts learning, memory, perception, and skill performance based upon the use of coping. Lazarus and Folkman wanted to determine what caused stress in different individuals which led them to examine the person-environmental relationship through cognitive appraisal and coping.

**Methodology**

The study protocol was approved by Purdue University Institutional Review Board (IRB). Students were provided with a description of the study and goals of the study prior to completing the questionnaire.

**Study Design**

This was a mixed-method, cross-sectional study. First-year nursing students were emailed a questionnaire in the middle of the fall semester of 2020. Before beginning, the survey instruction were provided and contact information of the lead researchers. A link within the email allowed students to complete the survey through Qualtrics. The first-page gathered personal demographic information followed by two scales and then the students answered a series of opened-ended questions. Upon completion, students were also able to enter a random drawing upon completing the survey for two $50 Amazon gift cards by clicking on an external link and entering their email addresses. Students were only surveyed one time during the semester.

 ***Personal Health Information***. First-year nursing students answered questions regarding their age, sex, education level, ethnicity, residence, previous nursing experience, interest in nursing, history of anxiety, and if currently taking prescription medication(s). Students also answered questions regarding past or present history in the healthcare field and if they smoke, drink, or use caffeine.

**Inclusion/Exclusion**

 All first or second-semester FYNS were included in the survey. First-year nursing students were defined as those who have declared nursing as their major, students who have changed their major to nursing, and those who have a previous undergraduate degree in the non-nursing field and were in their first year of nursing school. Students who are further along in the nursing program were excluded. Those students who were not 18 years old or older were excluded. There was no exclusion for past or current mental health diagnoses.

**Measures/Variables**

The data gathered in this study included personal demographics, students’ preferred coping styles, and if they are experiencing anxiety or have baseline anxiety. To determine the coping style used by students the Academic Coping Strategies Scale (ACSS) was utilized with 34 questions. The second section of the survey, consisting of 40 questions, used the State-Trait Anxiety Inventory (STAI) scale to determine the presence and severity of current anxiety symptoms and whether there was a tendency to have anxiety as a persisting trait. The last questions were open-ended asking students to rate how successful they feel like they will be in the nursing program based upon their current progress, what have they found to be the most anxious situation of nursing school, and how the pandemic has affected their progress through nursing school.

***Anxiety***. State-Trait Anxiety Inventory contains two subscales each containing 20 questions for a total of 40 questions. The STAI measures two different types of anxiety: state anxiety and trait anxiety. State anxiety is defined as feelings of anxiety felt after a specific event. Trait anxiety examines the general feelings of anxiety of the student, not over a specific time or event (Ok, Kutlu, & Ates, 2020). The questions were obtained from Mind Garden, Inc allowing the retyping of the questions into Qualtrics. Students ranked the intensity of current feelings of anxiety on a scale of 1 (not at all) to 4 (very much so) for state anxiety and feelings of baseline anxiety on a scale of 1 (almost never) to 4 (almost always) for the trait portion. The alpha coefficient overall ranges from 0.86 to 0.95. The scores for each subscale were summed but not combined in a total score. The higher the score the higher amount of anxiety experienced by students. Range of scores for each scale range from 20-80. A score of 39-40 is suggestive of clinically significant symptoms of anxiety on the State Anxiety scale (Julian, 2011). The Trait Anxiety scale measures the proneness or longstanding trait of anxiety with a score of 42 or higher showing levels of general anxiety (Ok, et al., 2020).

***Coping Style.*** The ACSS is a 34-item questionnaire developed to assess college students’ coping styles within a specific academic stressor (Sullivan, 2010). When answering questions, the prompt was given “Are you getting significantly lower grades in nursing courses than what you usually get?” Each question is then answered with the prefix of, “How often are you using this strategy?” Students then rate on a scale of 1 (never) to 5 (almost always) for each of the 34 questions. This questionnaire had three subscales. These questions were used to determine if students use the approach factor, avoidance factor, or social support factor. Specific questions assessed which coping style students used and scores were then summed together to determine which coping style was used most often. The alpha scores for each factor were: Approach = 0.91, Avoidance = 0.82, and Social Support = 0.81 (Sullivan, 2010). Approach factor had 15 items with a score ranging from 15 to 75 assessing student’s attempts to change the problem, their reaction to the problem, or preparing to handle the problem. Avoidance factor had 11 items with a score ranging from 11 to 55 assessing the cognitive or behavioral venture in escaping or disengaging from a stressful situation or environment with no attempt to solve the problem. Social support factor had eight items with a score ranging from 8 to 40 assessing how students seek support from other people to handle or deal with the stress of the problem (Sullivan, 2010). Each subscale was summed but not combined with high scores indicating the use of a particular coping style.

**Results**

 There was a 64 surveys completed with 15 missing data or incomplete for state anxiety and additional two surveys were missing data for trait anxiety.

**Descriptive Statistics**

 There was 49 surveys completed. The majority of those students who completed the survey were 19-20 years old (77.6%, N=38) and were female (98.0%, N=48). Students had either just started college or had some college experience (85.7%, N=42) although 14.3% (N=7) had already received a college degree before completing the survey. The ethnic background was 79.6% white (N=39), 14.3% Asian (N=7), 4.1% Black/African American (N=2), and 2.0% Hispanic/Latino (N=1). Most students lived on campus (63.3%, N=31) while 32.7% (N=16) live off-campus, and 4.1% lived with their parents (N=2). The majority of students do not have any family members in healthcare (71.4%, N=35). Most students do not have any nursing experience (91.8%, N=45) and are not currently working in healthcare (81.6%, N=40). Students considered themselves in good to excellent health (87.7%, N=43) with only 2.0% (N=1) considered their health poor. Current prescription use was 42.9% (N=21) answered yes while 57.1% (N=28) did not. Most had only been taking prescription medications for less than a year (69.3%) while (30.6%) had been taking medication for greater than a year. Vastly students were non-smokers (98.0%, N=48) and do not consume alcohol (71.4%, N=35). Caffeine was consumed by 85.7% (N=42) of students. Personal history of anxiety was present in 49.0% (N=24) and family history of anxiety was 46.9% (N=23).

**Medications**

Students were asked if they were taking any prescriptions and then to list those medications. Of those students who answered, nine (42.9%) students were taking medications for anxiety or depression and 1 student was taking medication for attention deficit hyperactivity disorder/attention deficit disorder (ADHD/ADD). The list of anti-depression medications included: Viibryd, Lexapro (2), Prozac (3), Trazodone, Luvox, and Strattera. The student taking ADHD/ADD medication Strattera could also be using the medication to manage anxiety due to it has been shown to decrease symptoms of anxiety while helping manage ADHD (Snircova et al., 2016). Other medications taken by students included oral birth control, antibiotics, asthma medication, acne medication, over-the-counter allergy medication, and prescription allergy medication.

**Means**

 Examining dispersion of students’ responses to state and trait anxiety and the three different coping styles the means were attained. State anxiety subscale had five students who did not answer any questions in this subscale. The scores for state anxiety ranged from 52 to 66 (score range 20-80) with a mean score of 59.94, a median score of 60.00, and a standard deviation (SD) of 3.030 (N=49). Trait anxiety had seven students who did not complete. Scores ranged from 48 to 72 (score range 20-80) with a mean score of 59.72, a median score of 58.00, and a SD of 5.937 (N=47). Examining the SD between the two subscales shows there is a smaller deviation of scores in the state anxiety subscale compared to trait anxiety indicating a smaller and tighter range of scores. The mean score for state anxiety was greater than 40 indicating clinically significant symptoms among students. Trait anxiety mean score was greater than 42 demonstrating longstanding anxiety among students.

 Coping styles were measured in three subscales with 54 students completing the survey questions. Approach scores ranged from 34 to 68 (score range 15-75) with a mean of 52.15, a median score of 52.00, and a SD of 7.747 (N=54). When ranking the scores there were 25 students whose scores were less than the mean, while 29 students’ scores were greater than the mean. Ten of the students used approach coping at least 80% of the time. Avoidance scores ranged from 28 to 41 (score range 11-55) with a mean of 35.78, a median score of 36.00, and a SD of 2.859 (N=54). Thirty-three students’ scores were less than the mean with 21 students’ scores greater than the mean. None of the students used avoidance coping 80% of the time. Social scores ranged from 19 to 35 (score range 8-40) with a mean of 27.79, a median score of 27.50, and a SD of 3.142 (N=54). There were 27 students whose scores were less than the mean and 27 students with scores greater than the mean. Five students used social coping 80% of the time. The higher the score for each subscale indicates the use of a particular coping style.

**Correlation**

 Using SPSS, a Pearson correlation was used to understand the strength and direction of the relationship between the three different coping styles. There were no violations of assumptions of normality, linearity, and homoscedasticity. Approach and avoidance showed a strong, positive relationship that was statistically significant (r=0.538, p=0.000). Approach and social showed a small, positive relationship with no statistical significance (r=0.242, p=0.078). Avoidance and social (r=0.269, p=0.049) had a small, positive relationship shown to be statistically significant. The shared variance between approach and avoidance was 28.94%. The shared variance between approach and social was 5.85%. The shared variance between avoidance and social was 7.23%. In small sample sizes, there may be moderate correlations that are not statistically significant due to the small sample size.

Examining the relationship between approach and avoidance coping styles there was a strong, positive correlation showing as students increase their use of approach, they also increase their use of avoidance. Avoidance and social coping styles showed a weak, positive correlation that was statistically significant indicating as students use social coping styles there a slight increase in their use of avoidance coping styles but was not statistically significant.

**Linear Regression**

Multiple linear regression was used to explore the relationship between the dependent variables (state or trait anxiety) and independent variables (approach, avoidance, and social coping). This approach determines the variance of state or trait anxiety among students and the effect of approach, avoidance, and social coping styles.

 **State Anxiety**. State anxiety is defined as feelings felt or experienced after a specific event. This section of the survey was completed by 49 students using SPSS to analyze state anxiety and three coping styles. Multiple linear regression was used with approach, avoidance, and social coping styles as the predictors (independent variables) and state anxiety as the dependent variable. Tolerance (avoidance=0.795, approach=0.783, social=0.964) and variance inflation factor (avoidance=1.257, approach=1.278, social=1.037) both demonstrate no possibility of multicollinearity, normality, linearity, and homoscedasticity assumptions were violated between the independent variables. Adjusted *R2* for this sample was 0.111 demonstrating coping styles only explain 11.1% of variance or effect on state anxiety. When evaluating adjusted *R2* the variance in state anxiety is not explained by the different coping styles. Approach showed a slight contribution (β=0.170, p=0.275) but was not statistically significant. Avoidance made the largest contribution to state anxiety (β=-0.455, p=0.005) and was statistically significant. While social (β=0.055, p=0.691) did not contribute to explaining state anxiety and was not statistically significant. The sig. value for avoidance (0.005) making a significant contribution to the prediction of state anxiety. Both approach (sig. value=0.275) and social (sig. value=0.691) were not significant in the contribution to state anxiety. The semi partial correlation coefficient was identified for approach (2.28%), avoidance (16.48%), and social (0.29%) showing avoidance demonstrated the largest total variance.

**Trait Anxiety.** Trait Anxiety is defined as the general feeling of the student not related to a specific time or event. Multiple linear regression was performed using SPSS with approach, avoidance, and social coping styles as the predictors (independent variable) and trait anxiety as the dependent variable. Forty-seven students completed this section of the survey. The tolerance (approach=0.799, avoidance=0.811, social=0.929) and variance inflation factor (approach=1.252, avoidance=1.234, social=1.076) both demonstrate no possibility of multicollinearity, normality, linearity, and homoscedasticity assumptions were violated between the independent variables. Adjusted *R2* for this sample -0.060. The adjusted *R2* trait anxiety experienced by students was not explained by the different coping styles used when experiencing trait anxiety. Comparing the independent variables with trait anxiety, approach (β=-0.007, p=0.968) and avoidance (β=0.034, p=0.842), did not contribute and were not statistically significant. Social coping made the strongest contribution (β=0.083, p=0.601) although not statistically significant. Examining the significance of the independent variables (approach p=0.968, avoidance p=0.842, social p=0.601) on trait anxiety there was not a significant contribution to trait anxiety. The semi partial correlation coefficient for approach, avoidance, and social were all less than zero. Semi partial correlation coefficient demonstrates total variance for the dependent variables (approach, avoidance, and social) was not uniquely explained.

**Open-Ended Questions & Rating Scale Question**

 Students were asked what their most anxious situation had been in nursing school there were 44 responses. Students responded with feelings of increased anxiety regarding increased workload, preparing for exams, feeling the lack of ability to do well in the future, not knowing how to properly prepare for upcoming midterm exams, and instructors not knowing how to properly use Bright Space. Most students voiced concerns about the overall workload associated with nursing school and prerequisites. Some mentioned difficulty learning online versus being in person and how this might affect their ability to be successful in the nursing program.

 Nursing students were then asked how the pandemic had affected their progress through nursing school there were 43 responses. Students responded with concerns about staying on track with the workload, inability to focus, decrease in socialization, not feeling connected to campus and other students, feeling like classes were more challenging due to being online format, and struggling to learn new concepts in an online format. Students felt classes were more challenging, were unable to develop a routine due to the pandemic and were concerned about changes occurring within the university. Students believed it was harder to learn new concepts and were having difficulty teaching themselves through an online format.

Finally, students were asked to rank how successful they thought they would be in the nursing program. Students ranked success on a zero to ten scale with zero being not successful and ten being very successful. Fifty-four students answered the question with the lowest score being five and the highest score being ten with an average score of 7.39.

**Discussion**

Starting college is an exciting period, however, changes in routine and environment including cultural, demographic, societal, and technology can contribute to emotional or psychological problems. Focusing on teaching students how to appraise these changes and develop positive coping can lessen their stress. The goals of this study were to determine if there was a correlation between a particular coping style and whether or not students experienced anxiety. Then utilizing that information to develop interventions to help students manage anxiety related to college. In this study, FYNS were surveyed in the fall of 2020 amidst the COVID pandemic. The impact of the pandemic changed the normal college experience for students to an environment which had never occurred before in modern times. This turn of events left students feeling uncertainty about how their college experience was going to look and progress.

Data gathered showed the majority of FYNS have a longstanding presence of trait anxiety and clinically significant presence of state anxiety symptoms with most students using approach or social coping styles to manage their anxiety. The study was unable to determine where trait anxiety originated from, but possible explanations could be related to their past pandemic experience in high school and changes that occurred before starting college. Many students recently graduated from high school where most had not been in a classroom since the beginning of the year due to social distancing policies and completed their senior year online or hybrid format. Many students did not have a normal ending to their high school careers and a normal transition to college due to the pandemic. There was also a clinically significant presence of state anxiety suggesting clinically significant symptoms of anxiety related to their current situation.

Examining coping styles used under pandemic circumstances showed approach was the most used coping style with 10 students using approach 80% of the time. Correlation of the three coping styles showed when students increase their use of approach there was also an increase in avoidance. This relationship was statistically significant showing a strong, positive relationship. Approach was the most used coping style but when it is not successful this led students to resort to avoidance. There was a weak, positive correlation between approach and social coping styles, but this relationship was not statistically significant. Students identified with increased use of approach students were also seeking social support to properly cope. There is a weak, positive correlation between avoidance and social coping styles, and was found to be statistically significant. This relationship was because social coping was limited due to social distancing measures in place due to the pandemic. Students were not able to form relationships and social supports needed to manage the stress and anxiety of college and academics thus causing them to increase their use of avoidance. Pandemic restrictions could have drastically impacted the results of the survey and coping styles used by students.

**State Anxiety**

Results of this study examined individual coping styles and the relationship to state anxiety. Approach did have a slight contribution to state anxiety but was not statistically significant. Demonstrating the use of approach only slightly contributed to state anxiety but was not statistically significant. Avoidance significantly predicted and contributed to state anxiety. The increased use of avoidance increased feelings of state anxiety. A study by Karaca, et al (2019), showed students who used avoidance were at higher risk for mental health problems. Social coping did not have a contribution to state anxiety and was not statistically significant. Social coping did not contribute to increased feelings of state anxiety.

**Trait Anxiety**

Approach did not contribute to trait anxiety and was not statistically significant. Avoidance did not contribute to trait anxiety and was not statistically significant. Social made the strongest contribution although small to trait anxiety but was not statistically significant. This relationship could be explained by the increased use of social coping to manage increase trait anxiety but student’s inability to develop social support and relationships because of pandemic restrictions.

**Overall**

Most students had minimal college experience. Comparing first-year college students to final-year students, first-year students struggled more with anxiety (Li et al., 2018). In a study comparing FYNS to senior nursing students the year of study strongly influenced their level of stress with more experienced nursing students using positive coping styles and having decreased levels of stress (Labrague, McEnroe-Petitte, Papathanasiou, et al., 2018). Lazarus and Folkman’s theory regarding appraisal showed a pattern in the way an individual appraises a situation greatly influences their coping process and how they react emotionally. Individuals use two basic forms of appraisal. Primary appraisal determines what is at stake for the person regarding threats posed, harm, or significant gains and potential cost and/or benefit to the individual. A secondary appraisal is used to evaluate which coping style to use depending on resources and options available (Lazarus & Folkman, 1984). Freshmen students, who do not have past college experiences and the ability to accurately appraise the stress of school limits their ability to determine which coping style is limited. Whereas senior nursing students are able to use past appraisals and experiences within the nursing program to accurately assess stressors and develop positive coping styles.

Purdue University COVID restrictions do not allow any in-person classes during the 2020 fall semester. Students were isolated to their residence preventing them from establishing normal social supports between other students, educators, and faculty. Social isolation is the inadequate quality and quantity of social interaction between individuals, groups, or communities (Ray et al., 2018). Most Americans found themselves lonely before the pandemic, but Generation Z and Millennials were shown to be lonelier and in worse health compared to older generations (Ray et al., 2018). A study by Vora and Kinney (2018), found in medical schools whose curriculum included more distance learning there was a decrease in student connectivity, a sense of community, and academic satisfaction (Ray et al, 2018). Ray et al, (2018) also noted an increase in social isolation among nursing students compared to other health science students. With the increase in distance learning and social isolation, the social support needed to manage anxiety and stress of being a college student was not developed throughout the semester.

 Previous research showed coping styles used by nursing students was typically problem-based (approach) coping versus emotional-based coping (Bhurtun et al., 2019). Problem-solving coping styles are most effective in dealing with stress (Labrague, McEnroe-Petitte, Papathanasiou, Edet, et al., 2018). Problem-based coping includes problem-solving, positive attitude, using previous experience, seeing things objectively, and establishing clear objectives and goals. Students who experience high levels of stress use less positive coping and demonstrate increased levels of anxiety and depression (Coiro et al., 2017). Nursing students who use emotional-based coping are under moderate to high levels of stress and tend to be younger nursing students (Bhurtun et al., 2019). In a study by Coiro et al. (2017), students’ effort to use avoidance as a coping style may not always be adaptive or maladaptive. Avoidance coping was found to be used by students who were experienced increased levels of stress due to the need to disengage from the stressor.

The limited resources of mental health on college universities and campuses will continue to negatively impact student’s mental health. Increasing accessibility and services available to college students can improve their college experience and help these young adults develop effective coping. Mental health services need to be readily available and easy to access to prevent anxiety from developing into maladaptive anxiety which then leads to negative behaviors ultimately leading to students being unsuccessful.

**Limitations**

There were some limitations to the information gathered in this study. Surveying students only once instead of multiple times through their college experience did not provide a full picture of student’s mental health. Following students throughout their nursing career to monitor changes as they learn and mature. Comparing results as they progress through college and mature as individuals to better understand how their appraisal process changes and the use of different coping styles develop. Individuals of this age have limited insight due to their lack of world experience. Insight requires individuals to maneuver through situations with understanding and having direct introspective access to higher cognitive processes (Harrison, 1996). Limited insight is not always considered a flaw but can be described as the lack of awareness, consequences, and how best to manage the situation. Students surveyed were an average age 18-19 years old and have none too little college experience limiting their ability to use previous experiences manage anxiety they were experiencing. Surveying multiples schools of nursing instead of only one would give a better representation of all nursing students and their experience in nursing school. The results of this study may not apply to non-pandemic periods due to being conducted amid a pandemic. The results may have been impacted by the student’s experience related to precautions established on campus.

**Implications**

**Systems**

Overall, the mental health system has struggled to keep up with the demands and overcoming the stigma associated with mental health problems. This can be seen by the lack of resources on not only college and university campuses but also meeting the needs of the public. There has been a longstanding stigma associated with those individuals who struggle with anxiety or depression which can led individuals to not seeking treatment.

Universities and colleges need take a larger role in the development of student’s mental health (Duffy et al., 2019). Universities need to address the well-being of their students in the same way they cultivate academic and professional success (Beiter et al., 2015). The systematic and steady monitoring of the mental health of students in universities should be done with utmost importance (Beiter et al., 2015).

In a past national survey, college counseling centers noted an increase in the number of students with severe psychological concerns related to increasing stressors and challenges with services available being inadequate to meet the demands of students causing a mental health crisis on college campuses (First et al., 2018). The function of counseling centers should be to provide direct counseling to students whose mental health is directly interfering with their ability to be successful in academia (Marsh & Wilcoxon, 2015). The biggest system barriers to the access of counseling services are cost, availability, accessibility, and acceptability (Marsh & Wilcoxon, 2015). Student barriers related to poor utilization of counseling services include type and severity of psychological distress, privacy concerns, attitudes, fears, and personal beliefs related to receiving mental health counseling or services (Marsh & Wilcoxon, 2015).

Nursing faculty are prime resources to help nursing students deal with anxiety and stress with the use of positive coping styles. There coping styles can help students complete school and continues to be utilized when they enter the workforce (Labrague, McEnroe-Petitte, Gloe, et al, 2017). Faculty should understand the impact on students learning and academic success by aiding and assisting students in developing skills that will impact the rest of their lives and careers. Although the focus of this study was FYNS, many colleges and universities have developed interventions and education to help new students adjust to college life but there also needs to be support for older students as they begin the process of transitioning from college life to the real world. Providing students with positive coping styles to manage these stressors can ease this transition.

**Policy**

 Establishing policies within colleges, universities, and individual Schools of Nursing to screen students throughout their college career for changes in mental health and allowing for early interventions before changes become pathologic. The American College Health Association has developed the National College Health Assessment used to identify the mental health demands of college students allowing universities and colleges examine and develop programs to prevent and reduce mental health disorders among college students (Li et al., 2018). Colleges and universities should work together using data gathered from the health assessment to develop and implement strategies to impede and decrease mental health disorders among college students.

Nursing students have a unique experience by being in numerous clinical agencies allowing them to interact with multiple members of the healthcare team. Clinical agencies need to invest in the mental health of nursing students coming to their facilities since they are going to be their future employees. By helping to prepare them for the stressors of healthcare, it may decrease the rate of burnout currently being experience in the nursing profession. Nurses who are precepting nursing students should understand the important role they have in the development of future nurses. Student nurses observe how their preceptor appraises a stressful situation and how to cope with the stress as part of their learning experience These interactions and experiences nursing students have with nursing staff can affect their overall stress. If this interaction is positive, it will decrease student’s stress levels (Cowen, et al., 2016). Some hospitals have started mentor and internship programs to help ease the transition from nursing school to practice.

 Studies show a positive relationship between faculty and students can reduce the amount of anxiety experienced by students (Sun et al., 2016). Faculty need to focus on moments during the semester deemed to be more anxiety-driven for example prepping before tests, midterms, and finals to help students reduce levels of anxiety thus helping their academic performance. A faculty goal needs to be to establish a trusting relationship with students to increase their confidence and decrease their anxiety (Sun et al., 2016). Group discussions allow students to discuss concerns and anxiety among their peers and faculty and determine how to best cope with anxiety and prepare for future stress. Faculty need to mentor students teaching them problem-based coping styles to manage the stress of nursing compared to emotional-based coping.

**Economics**

 Young adults report higher levels of stress regarding money related to living expenses, tuition, academic expenses, overspending or credit card debt, student loan debt, work-school life balance, financial pressures from family, and uncertainty of employment after graduation (Tran et al., 2018). Financial stress has been linked to mental health issues like anxiety and depression (Tran et al., 2018). There is a correlation between increase financial difficulties and higher rates of mental health problems (Beiter et al., 2015).

 The majority of counseling centers function with limited funding hindering their ability of campus outreach programs and influencing decisions related to the utilization of services among afflicted students (March & Wilcoxon, 2015). In a study done by Marsh & Wilcoxon (2015), the cost of mental health services was shown to the strongest predictor of why college students do not seek mental health services. In this study, even a small fee was a deterrent due to students accessing mental health services (Marsh & Wilcoxon, 2015). The impact of poor mental health not only affects students but the institution in lost income/tuition and ultimately future employers and society (Turner et al., 2018).

 Mental health disorders affect the quality and quantity of nurses who are entering the profession. Addressing the mental health of nursing students allows for capable nurses to enter the healthcare field and improve patient standards and outcomes (Li, et al., 2017). This does not just impact the healthcare system and patients but society in general and the demands placed upon it (Li, et al., 2017).

**Practice**

Current mental health services within universities and colleges impact the academic success of students. Current mental health demands exceed services available, complex mental health needs are increasing, current resources are fragmented, services available differ between institutions, and are not systematically evaluated (Duffy et al., 2019). Stress and anxiety are the top two concerns noted by college counseling centers (Tran et al., 2018). College students are a unique population to treat due to their short-term residence and the stressors they experience are often short-term duration. Community mental health systems are not set up to manage this transient population and specific stressors affecting this population. One course of action would be to survey student’s psychological health on an incremental basis the same as students are surveyed for teacher performance and/or drug/alcohol use. Encouraging universities and colleges to assess students’ needs and then develop programs and interventions to positively impact their success. Also establishing a relationship with community mental health resources for those students who exceed college or university resources would allow for better utilization of campus services. Integrated care between primary care and mental health teams would allow for better open communication between care providers enhancing the care students receive (Turner et al., 2018).

Nursing faculty need to be leaders by having conversations with nursing students early in their education regarding how to manage the anxiety and stress of being in healthcare. Healthcare is an ever-changing field and developing positive coping styles to manage the stressor and changes will decrease burnout. Faculty should lead by example and have open dialogues with students about what they will face when caring for patients and the anxiety related to being in healthcare.

**Interventions**

 Defining a single specific intervention for FYNS is an impossible task. Schools of Nursing need to develop a process to assess nursing students’ entry-level anxiety and their current coping style. Each class is slightly different and understanding the needs of each class and its individuals allows faculty to support and meet the needs of the group. The needs of each class will change as they progress through the nursing program whereas a freshman completing prerequisites, meeting the academic demands, and adjusting to college life is a major source of anxiety compared to graduating seniors who are anxious about passing NCLEX and finding their first job. Assessing each class at the beginning and end of each semester allows faculty to evaluate students’ mental health status and the changes over the semester and allowing faculty to identify any potential concerns before impacting the students’ ability to be successful in the nursing program.

 There are specific scales used to assess nursing educational stress and specific coping styles. Nursing Education Stress Scale (NESS) uses two different subscales to identify clinical stress and academic stress with a higher score indicating increase levels of stress. Coping Behavior Inventory (CBI) has four subscales identifying which coping style is being used by nursing students including optimistic behavior, transference behavior, problem-solving behavior, and avoidance with a higher score on a particular subscale indicating the use of a specific coping style. Both assessment tools use a Likert-scale for students.

**Coping Styles**

Educating students on the differences between each coping technique allows for appropriate use of coping styles in regard to anxiety and stressors. Nursing students who engage in positive coping styles experience lower levels of anxiety and have higher levels of self-esteem (Savitsky et al., 2020). This includes behaviors such as setting objectives, using multiple strategies and experience to solve the problem (Bhurtun et al., 2019). Positive coping styles allow students to manage the problem head-on and not delay the resolution of the problem. Nursing students who use emotional-based coping which includes avoidance, transference, and seek diversions do not solve the problem but delay addressing the stress instead of handling it head-on (Bhurtun et al., 2019). Students who seek social support were found to have a low risk for mental health concerns (Karaca et al., 2019). Social support is typically from family, spouses, and partners allowing students to share their stress with others making it more tolerable and helping their mental health (Karaca et al., 2019). Developing mentoring programs between younger and older nursing students encourages social coping. This interaction allows younger nursing students to talk with upperclassmen about their anxiety and concerns gaining a better understanding of the expectations of the situation

**Other Strategies**

 There are other non-coping strategies shown to help decrease student’s anxiety including humor, peer instructors/mentors, structured learning, self-reflection, and mindful learning (Sun et al., 2016). Humor is used to make learning fun and help cultivate relationships with other students and faculty. A study by Savitsky et al. (2020), showed severe anxiety was able to be lower by almost two times when humor was used. Peer instruction and mentors allow students to advance their knowledge or skills while helping others increase their comfort level. Structured learning allows students to become comfortable with the skills they are learning and increase their level of confidence. Decreasing changes in the teaching schedule, keeping students updated on changes, and supplying information promptly help in establishing stable structured learning. Self-reflection allows students to reflect on their experiences and attain self-awareness to better prepare them for future experiences. Providing students with a trusted place to express their emotions and share concerns through reflection allows a better understanding of their anxiety and increase their awareness and capacity to manage anxiety. Mindful learning encourages students to focus on the current situation and how best to manage (Sun et al., 2016).

**Conclusion**

Anxiety can be decreased with positive coping styles. Teaching students positive coping techniques to manage the anxiety and stress of school is not only important to the mental health of the student but their academic success. Colleges and universities need to take an active role in the mental health of their students through surveys, interventions, and support systems offered to their students through their entire college experience. The role of faculty is to teach students how to appraise situations and develop positive coping when they are students. Overall students who participated in this study felt they would be successful in the nursing program. The goal of this research is to understand the anxiety experienced by FYNS and tailor interventions to help students learn and understand how specific coping styles can help them manage anxiety. The future direction of this research is to publish within Nursing Educational Perspectives.

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 **Demographics**

|  |  |  |
| --- | --- | --- |
| **Age** | **Total** | **Percent** |
| 18 | 21 | 42.9 |
| 19 | 17 | 34.7 |
| 20 | 4 | 8.2 |
| 21 | 1 | 2.0 |
| 22 | 4 | 8.2 |
| 23 | 1 | 2.0 |
| 24 | 0 | 0.0 |
| 25+ | 1 | 2.0 |
| **Total** | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| Sex: | Total | Percent |
| Male | 0 | 0 |
| Female | 48 | 98.0 |
| Unknown | 1 | 2.0 |
| Total: | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| Level of Education | Total | Percent |
| High School | 18 | 36.7 |
| Some College | 24 | 49.0 |
| Undergraduate Degree | 7 | 14.3 |
| Total | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| Ethnicity | Total | Percent |
| American Indian/Alaska Native | 0 | 0 |
| Asian | 7 | 14.3 |
| Black/African American | 2 | 4.1 |
| Native Hawaiian/Other Pacific Islander | 0 | 0 |
| White | 39 | 79.6 |
| Hispanic/Latino | 1 | 2.0 |
| Total | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| Race | Total | Percent |
| White | 42 | 85.7 |
| Black/African American | 2 | 4.1 |
| American Indian/Alaska Native | 0 | 0.0 |
| Asian | 5 | 10.2 |
| Native Hawaiian/Pacific Islander | 0 | 0.0 |
| Total | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| Residence | Total | Percent |
| Off-Campus | 16 | 32.7 |
| On-Campus | 31 | 63.3 |
| With Parents | 2 | 4.1 |
| Total | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| Immediate Family in Health Care | Total | Percent |
| Yes | 14 | 28.6 |
| No | 35 | 71.4 |
| Total | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| Previous Nursing Experience | Total | Percent |
| Yes | 4 | 8.2 |
| No | 45 | 91.8 |
| Total | **49** | 100 |

|  |  |  |
| --- | --- | --- |
| Interest in Nursing | Total | Percent |
| Yes | 48 | 98.0 |
| No | 1 | 2.0 |
| Total | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| Currently Working in Health Care | Total | Percent |
| Yes | 9 | 18.4 |
| No | 40 | 81.6 |
| Total | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| Current General Health Status | Total | Percent |
| Excellent | 23 | 46.9 |
| Good | 20 | 40.8 |
| Average | 5 | 10.2 |
| Poor | 1 | 2.0 |
| Terrible | 0 | 0 |
| Total | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| Currently Taking Prescription Medications | Total | Percent |
| Yes | 21 | 42.9 |
| No | 28 | 57.1 |
| Total | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| **Length of Time Taking Medication** | **Total** | **Percent** |
| 0-3 months | 28 | 57.1 |
| 4-6 months | 3 | 6.1 |
| 6-12 months | 3 | 6.1 |
| 1-2 years | 4 | 8.2 |
| 2+ years | 11 | 22.4 |
| **Total** | **49** | **100** |

|  |  |
| --- | --- |
| **Class of Medication** | **Name of medication** |
| Antidepressants | Viibryd, Lexapro (2), Prozac (3), Trazodone, Fluvoxamine |
| Birth Control | Sprintec, Yaz, Oral Birth Control (4) |
| Asthma | Albuterol |
| ADHD/ADD | Strattera |
| Allergy medication | Singular, Cetirizine, Allergy medication |
| Other | Azathioprine, Propranolol, Zofran, Sulfasalazine, Omeprazole |

|  |  |  |
| --- | --- | --- |
| **Smoking (nicotine)** | **Total** | **Percent** |
| Yes | 1 | 2.0 |
| No | 48 | 98.0 |
| **Total** | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| **Alcohol Consumption** | **Total** | **Percent** |
| Yes | 14 | 28.6 |
| No | 35 | 71.4 |
| **Total** | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| **Caffeine Consumption** | **Total** | **Percent** |
| Yes | 42 | 85.7 |
| No | 7 | 14.3 |
| **Total** | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| **Personal History of Anxiety** | **Total**  | **Percent** |
| Yes | 24 | 49.0 |
| No | 25 | 51.0 |
| **Total** | **49** | **100** |

|  |  |  |
| --- | --- | --- |
| **Family History of Anxiety** | **Total** | **Percent** |
| Yes | 23 | 46.9 |
| No | 26 | 53.1 |
| **Total** | **49** | **100** |

**Anxiety Means**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Range** | **Mean** | **Median** | **SD** |
| **State Anxiety (N=49)** | 52-66 | 59.94 | 60.00 | 3.030 |
| **Trait Anxiety (N=47)** | 48-72 | 59.72 | 58.00 | 5.937 |

**Coping Styles Means**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Range** | **Mean** | **Median** | **SD** |
| **Approach (N=54)** | 34-68 | 52.15 | 52.00 | 7.747 |
| **Avoidance (N=54)** | 28-41 | 35.78 | 36.00 | 2.859 |
| **Social (N=54)** | 19-35 | 27.78 | 27.50 | 3.142 |

**Coping Styles-Correlations**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Approach** | **Avoidance** | **Social** |
| **Approach** |  |  |  |
| Pearson Correlation | 1 | 0.538\*\* | 0.242 |
| Sig. (2-tailed) |  | 0.000 | 0.078 |
| N | 54 | 54 | 54 |
| --------------------- | ------------ | ------------- | ---------------------- |
| **Avoidance** |  |  |  |
| Pearson Correlation | 0.538\*\* | 1 | 0.269 |
| Sig. (2-tailed) | 0.000 |  | 0.049 |
| N | 54 | 54 | 54 |
| --------------------- | ------------ | ------------- | ---------------------- |
| **Social** |  |  |  |
| Pearson Correlation | 0.242 | 0.269\* | 1 |
| Sig (2-tailed) | 0.078 | 0.049 |  |
| N | 54 | 54 | 54 |

\*Correlation is significant at the 0.01 level (2-tailed)

\*\*Correlation is significant at the 0.05 level (2-tailed)

**State Anxiety-Linear Regression**

|  |  |  |  |
| --- | --- | --- | --- |
| **Model** | **R** | **R Squared** | **Adjusted R Squared** |
| 1 | 0.408 | 0.166 | 0.111 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Unstandardized B** | **Standardized Coefficients** | **T** | **Sig.** | **Tolerance** | **VIF** |
| **(Constant)** | 75.256 |  | 10.869 | 0.000 |  |  |
| **Approach** | 1.075 | 0.972 | 1.106 | 0.275 | 0.783 | 1.278 |
| **Avoidance** | -6.347 | -0.455 | -2.980 | 0.005 | 0.795 | 1.257 |
| **Social** | 0.446 | 0.055 | 0.400 | 0.691 | 0.964 | 1.037 |

**Trait Anxiety-Linear Regression**

|  |  |  |  |
| --- | --- | --- | --- |
| **Model** | **R** | **R Squared** | **Adjusted R Square** |
| 1 | 0.094 | 0.009 | -0.060 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Unstandardized B** | **Standardized Coefficients** | **T** | **Sig** | **Tolerance** | **VIF** |
| **(Constant)** | 52.214 |  | 3.478 | 0.001 |  |  |
| **Approach** | -0.086 | -0.007 | -0.041 | 0.968 | 0.799 | 1.252 |
| **Avoidance** | 0.934 | 0.034 | 0.201 | 0.842 | 0.811 | 1.234 |
| **Social** | 1.362 | 0.083 | 0.527 | 0.601 | 0.929 | 1.076 |