

## Sigma's 29th International Nursing Research Congress

### A Multi-Modal Approach to Address Test Anxiety in Students in an Accelerated Nursing Program

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#### **Purpose**

The aim of this project is to reduce test anxiety and improve scores of nursing exams and NCLEX-RN pass rates through the use of multiple interventions including aromatherapy, cognitive based therapy, and peer mentoring. The program's overarching goal is to promote academic success and emotional well-being for our nursing students through the identification and reduction of test anxiety in our nursing students.

#### **Methodology**

All the accelerated nursing students who will be attending the spring (Spr), summer (S), and fall (F) semesters of 2018 at Phillips School of Nursing at Mount Sinai Beth Israel will be participants in the study. Approval from the institutional review board will be obtained. Participation in all activities will be voluntary. Students will be screened for contraindications to essential oils and written informed consent will be obtained at the beginning of the study.

Aroma therapy, cognitive behavioral therapy (CBT) and peer mentoring will be offered to students as test anxiety lowering interventions. The students will be given a choice to participate in one or more of the provided strategies. Pre and posttest questionnaires will be administered to all the students. The initial questionnaire will include a question for the students to indicate whether students had participated in the intervention(s) or not. In addition, the exam grades and the NCLEX results will be monitored for improvement.

In previous studies the essential oils were diffused in the classrooms (Johnson, 2014). However, that method will not be available to the students when they are to take the NCLEX exam. The essential oil could be applied to the student's wrists, under their noses, or the students could be provided with a paper strip (FLORMOON Fragrance Test Strips) impregnated with essential oils for direct delivering the fragrance to the nose (Schneider, 2015). After the initial questionnaires are completed, the participants will be prompted to inhale the fragrance immediately before and throughout the exam.

The CBT will be offered by two faculty members who will be trained by expert consultants. Written materials will be provided to the participants with related topics. The therapy will be implemented via small group sessions and individual sessions throughout the semesters based on the individual needs of students. The group sessions will provide lectures and exercises introducing the students to CBT and emotion regulating strategies. The individual session will be focused on the "application of cognitive and behavioral strategies such as cognitive restructuring, assertive communication, and stress management" (Chand et al., 2017).

The peer mentoring activity will provide students with peer-led stress prevention seminars throughout the semesters. The mentors will be selected via volunteer process and trained. The selection will be based on the applicant's GPA and professional conduct in the school. The Phillips Fellows will be also involved

as mentors. The seminar sessions will include teaching of the basic knowledge of stress, stress reduction, coping techniques, and time management. Discussions among the participants will be encouraged and small group activities will be implemented to enhance the process (Bugaj et al., 2016). Each seminar will be evaluated with a questionnaire.

## **Results**

A needs assessment was performed on the nursing school on the need for a crisis management program. This needs assessment was intended to identify the psychosocial needs of current and future nursing students, program responsibilities for meeting those needs, and faculty knowledge gaps.

Gaps identified in the assessment included: (a) the need for implementing policies on addressing crisis intervention on the campus and clinical setting; (b) addressing the needs of a widely diverse student body; (c) addressing student interest in onsite counseling, crisis intervention, and accessibility of program services; and (d) faculty training in recognizing, identifying, and intervening with individuals in distress. It was also identified that students report a significant amount of test anxiety. A great deal of this anxiety can also be attributed to personal stressors and mental health related issues experienced by students.

Success of the project will be determined by evaluation of student and staff feedback. Specific information on student report of decreased anxiety post interventions, student report of satisfaction with the interventions, student performance on exams, and student overall success in the nursing program and NCLEX pass-rates will be collected. Depending on periodic evaluation results, the project will be amended; and if the program is successful, the school will continue the program.

## **Conclusion**

The proposed program responds to challenges in the teaching and learning environment that are inherent in today's nursing classrooms. One of the rising concerns in nursing students that could negatively impact their navigation through a nursing program is the presence of test anxiety. Test anxiety has been shown to negatively impact a student's academic performance and has become one of the most debilitating stressors in nursing students. In spite of these challenges, schools of nursing present great opportunities for the identification, management, and improvement in the prevention of test anxiety in nursing students.

The literature revealed that utilizing strategies such as biofeedback-assisted relaxation alone was not enough to have a significant impact on students' test anxiety. It was discovered, however, that incorporating multiple strategies such as aromatherapy, cognitive based therapy, and/or peer mentoring may help to reduce test-anxiety in nursing students. Additionally, the proposed project supports PSON's mission to improve student learning in higher education by piloting a crisis management program that will promote academic success and emotional well-being for nursing students. The proposed project will enable faculty to develop a policy of interventions that effectively deal with students who experience test-anxiety in the classroom and in the clinical setting. Anticipated benefits include a reduction in test anxiety, improved academic performance, and improved NCLEX pass-rates.

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### **Title:**

A Multi-Modal Approach to Address Test Anxiety in Students in an Accelerated Nursing Program

### **Keywords:**

Accelerated Nursing Programs, Nursing Education and Test Anxiety

### **References:**

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### **Abstract Summary:**

The authors describe a multi-modal approach to reducing test anxiety through the use of aroma therapy, cognitive behavioral therapy, and peer mentoring for students in accelerated nursing programs.

### **Content Outline:**

#### I. Introduction

- a. Extensive research has been conducted over the years on the prevalence of burnout in nurses due to the increasing demands of the profession. Evidence suggests that burnout can be identified as early as when individuals are in nursing school related to the rigorous and complex nature of the curriculum and the expectations placed on nursing student both in the classroom and in the clinical setting (Rudman & Gustavsson, 2012).
- b. One of the rising concerns in nursing students that could negatively impact their navigation through a nursing program is the presence of test anxiety. Test anxiety has been shown to negatively impact a student's academic performance and has become one of the most debilitating stressors in nursing students. It becomes even more prevalent for students undergoing a nursing program that is accelerated. More than 60% of nursing students in an accelerated program report extreme stress throughout their education (Augner, 2015).

#### II. Background

- a. This project relates to a significant increase in test anxiety and poor academic performance among nursing students in both the accelerated AAS and BSN programs. The high-stakes nature of nursing study in addition to the stressors related to personal issues experienced by nursing students often lead to increased levels of test-anxiety in nursing students (Stenlund et al., 2017).

- b. It should be noted that undergraduate nursing students are traditionally held to higher standards than many other majors (Harrison, 2009). Similar to many other nursing programs, at Phillips School of Nursing at Mount Sinai Beth Israel (PSON), students are required to earn a minimum passing grade of C+ in all nursing courses in order to progress to the next semester of courses. At PSON, the failure of two courses during the program (nursing and/or liberal arts/sciences) will result in academic dismissal. Additionally, while developing the crisis management program, it was noted that issues with mental health such as depression and anxiety also play a significant role in test-anxiety (Bugaj et al., 2016). As a result, the faculty has collaborated in order to investigate the prospect of developing and implementing an innovative approach to managing test-anxiety for nursing students both in the classroom and clinical setting.

### III. Purpose of Project

1. The aim of this project is to reduce test anxiety and improve scores of nursing exams and NCLEX-RN pass rates through the use of multiple interventions including aromatherapy, cognitive based therapy, and peer mentoring.
2. The program's overarching goal is to promote academic success and emotional well-being for our nursing students through the identification and reduction of test anxiety in our nursing students.

### IV. Literature Review

- a. The use of aromatherapy has had a positive effect in reducing test anxiety among nursing students. Using Cognitive Test Anxiety Survey (CTAS) scores to measure test anxiety, a quantitative study showed a decrease in CTAS scores after the use of aromatherapy compared to the control group, which remained in a classroom without aromatherapy (Johnson, 2014). This technique is not only cost-effective but a safe alternative method to reduce test anxiety.
- b. Prato and Yucha (2013) attempted to decrease test anxiety in nursing students using biofeedback-assisted relaxation techniques (BART). While students were able to decrease their respiratory rates and heart rates using BART, there weren't significant changes in test anxiety. This suggests that a single intervention focusing on physiologic aspects of anxiety alone is insufficient in addressing test anxiety.
- c. While many educators understand test anxiety as a consequence of negative experiences with exams, results from Augner (2015) indicate that the reverse is possible, where test anxiety causes poor academic performance. There are multiple factors that can lead to test anxiety. The cross-sectional pilot study identified depressive symptoms and perceived chronic stress to be highly associated with test anxiety in nursing students. Nursing students who perceived higher levels of chronic stress and decreased emotional stability had higher levels of test anxiety (Augner, 2015). Students who have depressive symptoms and perceived chronic stress can benefit from cognitive based therapy. Alleviating these factors could then help to decrease anxiety during examinations.
- d. A quasi-experimental study tested the effectiveness of a peer-mentoring program on nursing student's ability to cope with stress especially of that related to their nursing education. Mentees reported the use of nursing peer mentors as helpful. Improvements in self-confidence levels, self-awareness levels, and ability to cope with stress were shown (Demir, Demir, Bulut, & Hisar, 2014). Addressing the stress will also further contribute to decreasing test anxiety.

### V. Methodology

- a. All the accelerated nursing students who will be attending the spring, summer, and fall semesters of 2018 at Phillips School of Nursing at Mount Sinai Beth Israel will be participants in the study. Approval from the institutional review board will be obtained. Participation in all activities will be voluntary. Students will be screened for contraindications to essential oils and written informed consent will be obtained at the beginning of the study.
- b. Aroma therapy, cognitive behavioral therapy (CBT) and peer mentoring will be offered to students as test anxiety lowering interventions. The students will be given a choice to participate in one or

more of the provided strategies. Pre- and post-test questionnaires will be administered to all the students. The initial questionnaire will include a question for the students to indicate whether they had participated in the intervention(s) or not. In addition, the exam grades and the NCLEX results will be monitored for improvement.

- c. In previous studies the essential oils were diffused in the classrooms (Johnson, 2014). However, that method will not be available to the students when they are to take the NCLEX exam. The essential oil could be applied to the student's wrists, under their noses, or the students could be provided with a paper strip (FLORMOON Fragrance Test Strips) impregnated with essential oils for direct delivering of the fragrance to the nose (Schneider, 2015). After the initial questionnaires are completed, the participants will be prompted to inhale the fragrance immediately before and throughout the exam.
- d. The CBT will be offered by two faculty members who will be trained by expert consultants. Written materials will be provided to the participants with related topics. The therapy will be implemented via small group sessions and individual sessions throughout the semesters based on the individual needs of students. The group sessions will provide lectures and exercises introducing the students to CBT and emotion regulating strategies. The individual session will be focused on the "application of cognitive and behavioral strategies such as cognitive restructuring, assertive communication, and stress management."(Chand et al, 2017)
- e. The peer mentoring activity will provide students with peer-led stress prevention seminars throughout the semesters. The mentors will be selected via volunteer process and trained. The selection will be based on the applicant's GPA and professional conduct in the school. The seminar sessions will include teaching of the basic knowledge of stress, stress reduction, coping techniques, and time management. Discussions among the participants will be encouraged and small group activities will be implemented to enhance the process (Bugaj et al, 2016). Each seminar will be evaluated with a questionnaire.

## VI. Expected Outcomes/Results

- a. A needs assessment was performed at PSON nursing school for the need of a crisis management program. This needs assessment was intended to identify the psychosocial needs of current and future nursing students, program responsibilities for meeting those needs, and faculty knowledge gaps.
- b. Gaps identified in the assessment included: (a) the need for implementing policies on addressing crisis intervention on the campus and clinical setting; (b) addressing the needs of a widely diverse student body; (c) addressing student interest in onsite counseling, crisis intervention, and accessibility of program services; and (d) faculty training in recognizing, identifying, and intervening with individuals in distress. It was also identified that students report a significant amount of test anxiety. A great deal of this anxiety can also be attributed to personal stressors and mental health related issues experienced by students.
- c. Success of the project will be determined by evaluation of student and staff feedback. Specific information on student report of decreased anxiety post interventions, student report of satisfaction with the interventions, student performance on exams, and student overall success in the nursing program and NCLEX pass-rates will be evaluated.
- d. Depending on periodic evaluation results, the project will be amended; and if the program is successful, the school will continue the program.

## VII. Conclusion

- a. The proposed program responds to challenges in the teaching and learning environment that are inherent in today's nursing classrooms. One of the rising concerns in nursing students that could negatively impact their navigation through a nursing program is the presence of test anxiety. Test anxiety has been shown to negatively impact a student's academic performance and has become one of the most debilitating stressors in nursing students. In spite of these challenges, schools of nursing present great opportunities for the identification, management, and improvement in the prevention of test anxiety in nursing students.

- b. The literature revealed that utilizing strategies such as biofeedback-assisted relaxation alone was not enough to have a significant impact on students' test anxiety. It was discovered, however, that incorporating multiple strategies such as aromatherapy, CBT, and/or peer mentoring may help to reduce test-anxiety in nursing students. Additionally, the proposed project supports PSON's mission to improve student learning in higher education by piloting a crisis management program that will promote academic success and emotional well-being for nursing students. The proposed project will enable faculty to develop a policy of interventions that effectively deal with students who experience test-anxiety in the classroom and in the clinical setting. Anticipated benefits include a reduction in test anxiety, improved academic performance, and improved NCLEX pass-rates.

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**Author Summary:** Carleen Graham is the program coordinator for baccalaureate programs at PSON. She has over 20 years of professional clinical experience and her clinical specialties are mental health and emergency nursing. She is a past recipient of the Jonas Center for Nursing Excellence Scholarship.

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